

## Specialty Ball Bearings

# NICE®

Providing custom-engineered bearing solutions  
to industry for over 100 years



**RBC**®  
BEARINGS

ISO 9001:2008

[www.rbcbearings.com](http://www.rbcbearings.com)  
800.390.3300

RBC Bearings has had a long tradition of innovation, commitment, and quality since the company was founded in 1919. Today, RBC Bearings has grown into a world-class manufacturer of standard and custom-engineered bearings and related products, with a product focus on research, testing, and development of the best product for specific applications.

## What We Manufacture

RBC Bearings, with facilities throughout North America and Europe, provides bearings and precision products for applications in the construction, mining, material handling, transportation and off-highway equipment, robotics and automation, farming, machine tool, and semiconductor equipment industries. Through RBC Aerospace Bearings, the company is a major manufacturer of highly-engineered bearings and precision products for military, defense, and commercial aerospace applications.

RBC's high-quality bearings include:

- **Heavy Duty Needle Roller Bearings** - Pitchlign® caged heavy duty needle roller bearings, inner rings, type TJ TandemRoller® bearings for long life.
- **Spherical Plain Bearings** - Radial, angular, contact, high misalignment, extended inner ring, DuraLube™ maintenance-free spherical plain bearings, QuadLube® long life bearings, ImpactTuff® case carburized bearings, ShimPack® double-acting angular contact bearings, CrossLube® lubrication groove systems, and SpreadLock® Seal.
- **Cam Followers and Yoke Rollers** - Standard stud, heavy stud, yoke type, caged roller followers, RBC Roller® long life cam followers, HexLube® universal cam followers, airframe track rollers. Mastguide rollers and carriage rollers, chain sheaves (for leaf chain), toothless sprockets (for roller chain), and heavy-duty roller bearing construction.
- **Rod Ends** - Commercial and aerospace, precision, Mil-Spec series, self-lubricating, inch and metric. Heim®, Unibal®, and Spherco® brands.
- **Self-Lubricating Bearings** - Radial, thrust, rod ends, spherical plain bearings, high temperature, high loads, inch and metric. Fiberglide®.
- **Thin Section Ball Bearings** - Standard cross sections to one inch. Sizes to 40 inches. Stainless steel and other materials available. Seals available on all sizes and standard cross sections.
- **Airframe Control Bearings** - Ball bearing types, self-lubricating types, needle roller track rollers.
- **Ground, Semiground, and Unground Ball Bearings** - Full complement, utilizes design and burnished races for higher loads, long life, and smooth operation.
- **Dowel Pins, Loose Needle Rollers, Shafts**
- **Tapered Roller Bearings** - Case-hardened and through-hardened in a variety of sizes, used in Class 8 heavy truck and trailer wheel bearings, final drive transmissions and gear boxes.
- **Tapered Roller Thrust Bearings** - Case-hardened. Sealed and unsealed for truck, tractor, and construction equipment steer axles, and Class 8 trailer landing gear.
- **Custom Designed Bearings** - RBC produces a wide range of custom bearings in various materials for specific applications.

## Nice Precision Ground Product

In 1902, William Nice founded one of the first "anti-friction" bearing manufacturing plants. Starting with unground ball types and developing into the ground field, Nice today produces a complete line of precision ground, semi-ground, and unground bearings and bearing assemblies. They are made in easy-to-use inch dimensions and are recommended for medium loads with speeds up to 5000 rpm. They are available with nylon retainers as standard with steel and stainless steel retainers optional. They are also available with a variety of seal and shield combinations. Metric ball bearings are also made for customers with special requirements. Focus industries for Nice Ball Bearings include the automotive, agricultural, lawn equipment, semiconductor, medical and material handling markets.

## Exclusive Designations Of Nice Bearing Products

Over the last several decades the NICE® bearing designations (for example 1621™, 1630™, 1635™ and 1641™) and Series designations (for example Series 1600™ and Series 500®) have acquired distinctiveness to the NICE® ball bearing business and the only unique identifier of genuine high quality NICE® ball bearings. These trademarks originally acquired their fame prior to 1960 through the original owner of the NICE® ball bearing business. These trademarks guaranty that you are getting the unique source of bearing products, namely the original high quality NICE® bearing product.

## Nice Unground Industrial Product

Nice Ball Bearings produces a complete line of unground radial, thrust, and combination radial and thrust ball bearings for applications where the speeds are low and the precision of a ground bearing is not cost effective. These are available with full ball complements, no retainer, and unitized assembly for ease of installation.

## How We Can Serve You

RBC has implemented a total quality control system that uses statistical quality control at all facilities, and manufactures in high volume to a just-in-time program.

To serve the ongoing needs of customers, RBC has a network of over 2,400 distributors and sales engineers throughout North and South America and Europe, with authorized agents worldwide. For assistance with your bearing application, contact:

**Customer Service - 800.390.3300**

## Warranty

RBC products are warranted for material and workmanship for a period not to exceed 90 days from shipment and for a value not to exceed purchase price. No other warranty is in effect.

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# TABLE of Contents



|   |              |                         |
|---|--------------|-------------------------|
| <b>Product Selection Guide</b>  | <b>4</b>     | <b>SELECTION GUIDE</b>  |
| <b>Product Features</b>   | <b>5</b>     | <b>PRODUCT FEATURES</b> |
| <b>1600 Series™</b><br>Precision Ground Radial Bearings   | <b>6-9</b>   | <b>1600 SERIES™</b>     |
| <b>3000 Series®</b><br>Semi-Ground Radial Bearings  | <b>10-13</b> | <b>3000 SERIES®</b>     |
| <b>6900 Series™</b><br>Semi-Ground Radial Bearings, Extended Inner with Flanged Housing                   | <b>14-15</b> | <b>6900 SERIES™</b>     |
| <b>7500 Series™</b><br>Heavy Duty Precision Ground Radial Bearings  | <b>16-17</b> | <b>7500 SERIES™</b>     |
| <b>7600 Series™</b><br>Heavy Duty Precision Ground Radial Bearings with Extended Inner Ring               | <b>18-21</b> | <b>7600 SERIES™</b>     |
| <b>ER Series</b><br>Precision Ground Radial Bearings with Extended Inner Ring and Metric Outside Diameter | <b>22-23</b> | <b>ER SERIES</b>        |
| <b>400 Series®</b><br>Single Row Unground Radial Bearings   | <b>24-27</b> | <b>400 SERIES®</b>      |
| <b>5000 Series®</b><br>Single Row Unground Flanged Radial Bearings  | <b>28-31</b> | <b>5000 SERIES®</b>     |
| <b>500 Series®</b><br>Single Row Unground Combination Radial and Thrust Bearings                          | <b>32-35</b> | <b>500 SERIES®</b>      |
| <b>600 Series™</b><br>Unground Thrust Bearings  | <b>36-39</b> | <b>600 SERIES™</b>      |
| <b>Engineering Data</b>   | <b>40-44</b> | <b>ENG. DATA</b>        |
| <b>Special Nice® Bearings</b>   | <b>45-53</b> | <b>SPECIALS</b>         |



# PRODUCT Selection Guide

RBC Nice® Bearings, Inc., produces a full line of ground, semi-ground, and unground bearing assemblies. To choose the exact bearing you need, start with the Nice® line of standard inch-dimension, radial, angular contact and thrust ball bearings. Standard series bearings can be customized to include many features that can satisfy the demands of many special applications. They are available with special bores, modified outer ring shapes, extended inner rings, locking devices, and flanged housings. Standards can be ordered sealed, shielded, or open, and are offered in ground and semi-ground grades to deliver the most cost effective solution for your application.

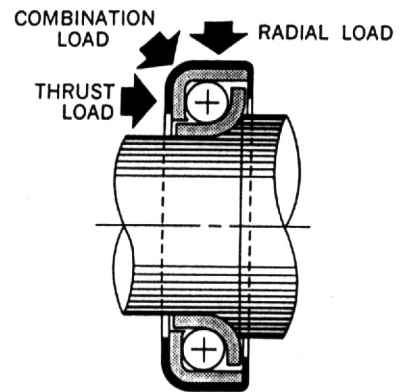
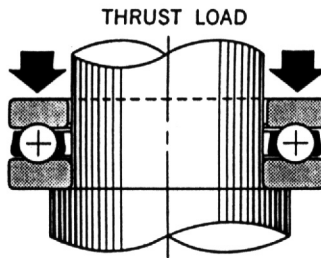
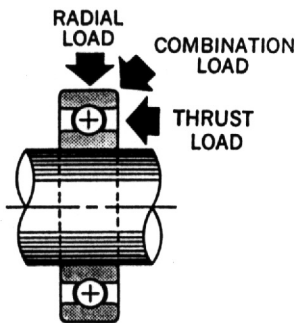
If you are now designing with only ABEC-1 level or higher bearings, chances are there may be a more economical solution to your application. A Nice® Ball Bearings application engineer can help you determine the exact precision your design requires, and show you how to take advantage of the savings, selection and special features available in our standard series. Even when a standard isn't the answer, our engineers can deliver an economical, modified standard design that meets your needs.

## Nice® Standard Product Line

| Class                           | Series     | Type   | Ground Surfaces                  | Bore Range                   |
|---------------------------------|------------|--|----------------------------------|------------------------------|
| Ground                          | 1600™      | (Retainer) Radial  | Raceways<br>Bore, O.D.,<br>Faces | 3/16"-1 5/16"<br>4.76-49.21  |
|                                 | 7500™      | Radial   |                                  | 1/2"-1 1/4"<br>12.70-31.75   |
|                                 | 7600™      | Radial Extended Inner  |                                  | 1/2"-1 1/4"<br>12.70-31.75   |
|                                 | ER         | Radial Extended Inner Metric O.D.                            |                                  | 5/8"-1 15/16"<br>15.86-49.21 |
| Semi-Ground                     | 6900™      | Radial Flanged Extended Inner                                | Raceways, O.D., Faces            | 3/8"-1"<br>9.53-25.40        |
|                                 | 3000®      | (Retainer) Radial  | Outer Raceways, O.D., Faces      | 3/16"-1"<br>4.76-25.40       |
| Unground                        | 400®/5000® | (Full Complement) Radial                                     | None                             | 3/16"-2"<br>4.76-50.80       |
|                                 | 500®       | Radial/Thrust  |                                  | 1/4"-2 1/4"<br>6.35-57.15    |
|                                 | 600™       | Thrust   |                                  | 1/4"-1 1/2"<br>6.35-38.10    |
| Modified Standards and Specials | All        | Radial<br>Retainer and Full Types<br>Thrust<br>Radial/Thrust | Any Combination                  | 3/16"-2"<br>4.76-50.80       |

## DESIGN

Three basic ball bearing types are illustrated to assist in proper design selection



1. Radial bearings are designed primarily to carry loads perpendicular to the axis of the bearing bore. They will also accommodate limited thrust loading or a combination radial and thrust load.
2. Thrust bearings carry loads applied parallel to the axis of the bearing bore. They are not designed to accommodate radial loads.
3. Combination radial and thrust bearings are designed for simultaneously applied thrust and radial loads. Combination assemblies will also carry pure thrust loading; however, they are not recommended for straight radial loads unless provisions are made to keep the inner rings and outer rings in proper contact with the balls.

Many sizes and types of the three basic designs illustrated are available for selection from this catalog. However, if you have an unusual application problem, Nice® Ball Bearings field and factory engineers will be glad to give you the benefit of their specialized training and

# PRODUCT Features

## Modified Standards

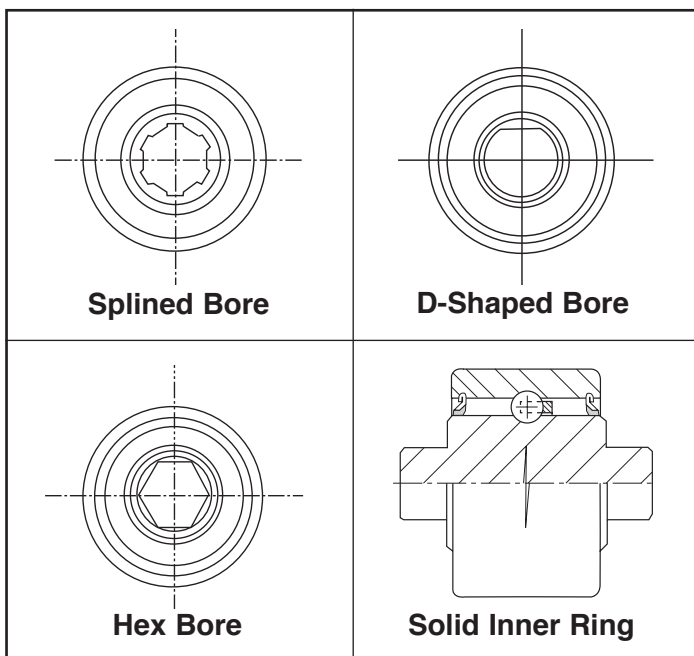
**M**odified standard bearings feature a standard cage and ball complement or a full ball complement, with custom engineered modifications to the other bearing components. The exact inner and outer ring dimensions and designs can be combined with a wide range of seals, shields, special greases, special materials and special finishes.

Modification instead of full customizing gives the user the benefits of a fully custom bearing with lower costs and faster delivery times. Prototype lots are readily affordable and available for testing and evaluation.

Modified standard bearings offer the greatest value for your bearing dollar by offering custom bearings at standard prices. Here are some of the many ways we can modify standard ball bearings to fit any application.

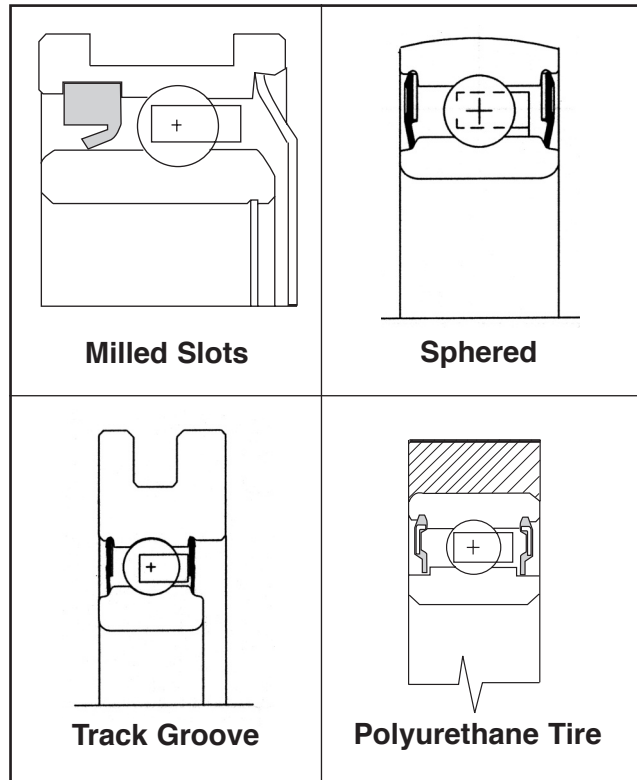
## Inner Rings

A variety of bore shapes and sizes can be custom engineered to simplify mounting procedures, reduce assembly costs, and allow misalignment.



## Outer Rings

Outer rings can be custom engineered to include milled slots, snap rings, track grooves, or even a variety of plastic tires. Add to this flanges or pulley units and a variety of custom solutions are readily available.



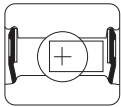
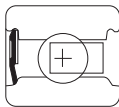
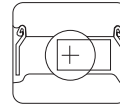
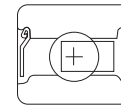
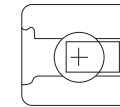
## Materials and Finishes

Nice® Ball Bearings has extensive experience with a variety of special materials and finishes developed to stand up to various contaminants or to take unusually hard wear. Nice® bearings are made from steels of various chemical compositions. Carburizing grades are case hardened to desired depths and hardness values for wear and breakdown resistance. High carbon chrome alloy steels are through hardened for high wear and fatigue resistance. Stainless steels are available for corrosion resistance and food service applications. Special platings and finishes such as zinc, black oxide, and thin dense chrome are available for special applications. Nice® Ball Bearing application engineers can assist in bearing selection for special material applications.

# 1600 Series™ Precision Ground Radial Bearings

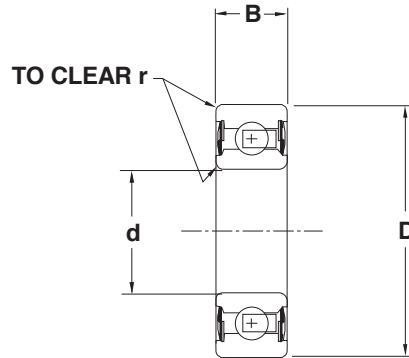
Precision ground 1600 Series™ bearings are specially designed to provide a line of low cost yet high quality bearings for adaptation to a majority of precision bearing applications. They are made in easy to use inch dimensions and are recommended for medium loads and for maximum speeds in the range of 5000 rpm.

The 1600 Series™ bearings are precision ground on all surfaces with exceptional care given to the ball grooves. Careful heat treatment provides a uniform and exact degree of hardness for maximum life. A ball retainer, or separator, is used to increase the range of allowable speeds by reducing ball-to-ball contact friction. The 1600 Series™ radial bearings are available open, single or doubled shielded, or single or double sealed. Double sealed and double shielded bearings are supplied grease packed as standard. Open and single closure bearings can be supplied greased on request.

| BEARING | SUFFIX  |   |   |   |   | PRINCIPLE DIMENSIONS                |                                     |  |
|---------|---|---|---|---|---|-------------------------------------|-------------------------------------|--|
|         |  DOUBLE SEAL |  SINGLE SEAL |  DOUBLE SHIELD |  SINGLE SHIELD |  OPEN | BORE<br>d<br>(in)<br>(mm)           | O.D.<br>D<br>(in)<br>(mm)           |  |
|         |   |   |   |   |   | +0.0000<br>+.000<br>-.0005<br>-.013 | +0.0000<br>+.000<br>-.0005<br>-.013 |  |
| 1602™   | DC <sup>5</sup>   | SC <sup>5</sup>   | DS  | SS  | NS  | 0.2500<br>6.350                     | 0.6875<br>17.463                    |  |
| 1603™   | DC  | SC  | DS  | SS  | NS  | 0.3125<br>7.938                     | 0.8750<br>22.225                    |  |
| 1604™   | DC  | SC  | DS  | SS  | NS  | 0.3750<br>9.525                     | 0.8750<br>22.225                    |  |
| 1605™   | DC  | SC  | DS  | SS  | NS  | 0.3125<br>7.938                     | 0.9063<br>23.020                    |  |
| 1606™   | DC  | SC  | DS  | SS  | NS  | 0.3750<br>9.525                     | 0.9063<br>23.020                    |  |
| 1607™   | DC  | SC  | DS  | SS  | NS  | 0.4375<br>11.113                    | 0.9063<br>23.020                    |  |
| 1614™   | DC  | SC  | DS  | SS  | NS  | 0.3750<br>9.525                     | 1.1250<br>28.575                    |  |
| 1615™   | DC  | SC  | DS  | SS  | NS  | 0.4375<br>11.113                    | 1.1250<br>28.575                    |  |
| 1616™   | DC  | SC  | DS  | SS  | NS  | 0.5000<br>12.700                    | 1.1250<br>28.575                    |  |
| 1620™   | DC  | SC  | DS  | SS  | NS  | 0.4375<br>11.113                    | 1.3750<br>34.925                    |  |
| 1621™   | DC  | SC  | DS  | SS  | NS  | 0.5000<br>12.700                    | 1.3750<br>34.925                    |  |

- ① Width for sealed versions = 0.3125 (7.938)
- ② Width for sealed versions = 0.3438 (8.733)
- ③ Weights given are for greased and sealed versions
- ④ 1638 and larger +.0000/-.0006 (+.000/-0.015)
- ⑤ Multi-part seal see page 42

# 1600 Series™ Precision Ground Radial Bearings

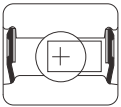
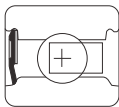
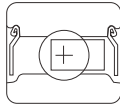
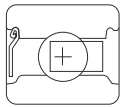
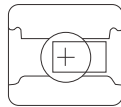


|  |                              | BASIC LOAD RATINGS                       |                                 | WEIGHT                             | ABUTMENT AND FILLET DIMENSIONS     |                       |  |
|--|------------------------------|--|---------------------------------|------------------------------------|------------------------------------|-----------------------|--|
| WIDTH<br>B<br>(in)<br>(mm)<br>+.000<br>+.00<br>-.005<br>-.13 | DYNAMIC<br>C<br>(lbs)<br>(N) | STATIC<br>C <sub>0</sub><br>(lbs)<br>(N) | W <sup>3</sup><br>(lbs)<br>(kg) | d <sub>a</sub> min<br>(in)<br>(mm) | D <sub>a</sub> max<br>(in)<br>(mm) | r max<br>(in)<br>(mm) |  |
| 0.2500 <sup>1</sup><br>6.350                                 | 511<br>2274                  | 170<br>757                               | 0.02<br>0.01                    | 0.330<br>8.38                      | 0.614<br>15.60                     | 0.012<br>0.30         |  |
| 0.2813 <sup>2</sup><br>7.150                                 | 644<br>2866                  | 255<br>1135                              | 0.03<br>0.01                    | 0.474<br>12.04                     | 0.778<br>19.76                     | 0.012<br>0.30         |  |
| 0.2813 <sup>2</sup><br>7.150                                 | 644<br>2866                  | 255<br>1135                              | 0.03<br>0.01                    | 0.474<br>12.04                     | 0.778<br>19.76                     | 0.015<br>0.38         |  |
| 0.3125<br>7.938  | 698<br>3106                  | 300<br>1335                              | 0.04<br>0.02                    | 0.503<br>12.78                     | 0.778<br>19.76                     | 0.012<br>0.30         |  |
| 0.3125<br>7.938  | 698<br>3106                  | 300<br>1335                              | 0.04<br>0.02                    | 0.517<br>13.13                     | 0.778<br>19.76                     | 0.015<br>0.38         |  |
| 0.3125<br>7.938  | 698<br>3106                  | 300<br>1335                              | 0.03<br>0.01                    | 0.517<br>13.13                     | 0.778<br>19.76                     | 0.015<br>0.38         |  |
| 0.3750<br>9.525  | 1200<br>5340                 | 475<br>2114                              | 0.06<br>0.03                    | 0.595<br>15.11                     | 1.014<br>25.76                     | 0.025<br>0.64         |  |
| 0.3750<br>9.525  | 1200<br>5340                 | 475<br>2114                              | 0.06<br>0.03                    | 0.622<br>15.80                     | 1.014<br>25.76                     | 0.025<br>0.64         |  |
| 0.3750<br>9.525  | 1200<br>5340                 | 475<br>2114                              | 0.06<br>0.03                    | 0.622<br>15.80                     | 1.014<br>25.76                     | 0.025<br>0.64         |  |
| 0.4375<br>11.113   | 1878<br>8357                 | 850<br>3783                              | 0.12<br>0.05                    | 0.658<br>16.71                     | 1.203<br>30.56                     | 0.025<br>0.64         |  |
| 0.4375<br>11.113   | 1878<br>8357                 | 850<br>3783                              | 0.11<br>0.05                    | 0.720<br>18.29                     | 1.203<br>30.56                     | 0.025<br>0.64         |  |

# 1600 Series™ Precision Ground Radial Bearings (con't)

Precision ground 1600 Series™ bearings are specially designed to provide a line of low cost yet high quality bearings for adaptation to a majority of precision bearing applications. They are made in easy to use inch dimensions and are recommended for medium loads and for maximum speeds in the range of 5000 rpm.

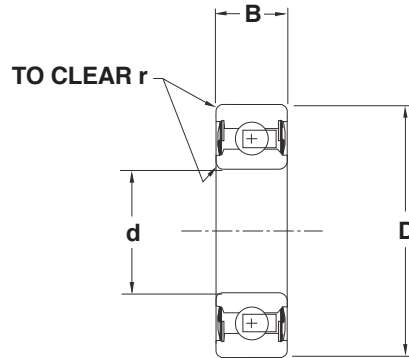
The 1600 Series™ bearings are precision ground on all surfaces with exceptional care given to the ball grooves. Careful heat treatment provides a uniform and exact degree of hardness for maximum life. A ball retainer, or separator, is used to increase the range of allowable speeds by reducing ball-to-ball contact friction. The 1600 Series™ radial bearings are available open, single or doubled shielded, or single or double sealed. Double sealed and double shielded bearings are supplied grease packed as standard. Open and single closure bearings can be supplied greased on request.

| BEARING | SUFFIX  |   |   |   |   | PRINCIPLE DIMENSIONS  |   |  |
|---------|---|---|---|---|---|---|---|--|
|         |  DOUBLE SEAL |  SINGLE SEAL |  DOUBLE SHIELD |  SINGLE SHIELD |  OPEN | BORE<br>d<br>(in)<br>(mm)<br>+.0000<br>+.000<br>-.0005<br>-.013 | O.D.<br>D<br>(in)<br>(mm)<br>+.0000<br>+.000<br>-.0005<br>-.013 |  |
| 1623™   | DC  | SC  | DS  | SS  | NS  | 0.6250<br>15.875  | 1.3750<br>34.925  |  |
| 1628™   | DC  | SC  | DS  | SS  | NS  | 0.6250<br>15.875  | 1.6250<br>41.275  |  |
| 1630™   | DC  | SC  | DS  | SS  | NS  | 0.7500<br>19.050  | 1.6250<br>41.275  |  |
| 1633™   | DC  | SC  | DS  | SS  | NS  | 0.6250<br>15.875  | 1.7500<br>44.450  |  |
| 1635™   | DC  | SC  | DS  | SS  | NS  | 0.7500<br>19.050  | 1.7500<br>44.450  |  |
| 1638™   | DC ④  | SC  | DS  | SS  | NS  | 0.7500<br>19.050  | 2.0000<br>50.800  |  |
| 1640™   | DC ④  | SC  | DS  | SS  | NS  | 0.8750<br>22.225  | 2.0000<br>50.800  |  |
| 1641™   | DC ④  | SC  | DS  | SS  | NS  | 1.0000<br>25.400  | 2.0000<br>50.800  |  |
| 1652™   | DC ④ ⑤  | SC  | DS  | SS  | NS  | 1.1250<br>28.575  | 2.5000<br>63.500  |  |
| 1654™   | DC ④ ⑤  | SC  | DS  | SS  | NS  | 1.2500<br>31.750  | 2.5000<br>63.500  |  |
| 1657™   | DC ④ ⑤  | SC  | DS  | SS  | NS  | 1.2500<br>31.750  | 2.5625<br>65.088  |  |

- ① Width for sealed versions = 0.3125 (7.938)
- ② Width for sealed versions = 0.3438 (8.733)
- ③ Weights given are for greased and sealed versions
- ④ 1638 and larger +.0000/-.0006 (+.000/-0.015)
- ⑤ Multi-part seal see page 42



# 1600 Series™ Precision Ground Radial Bearings (con't)

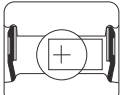
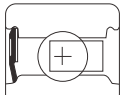
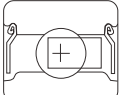
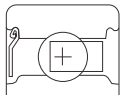
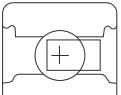


| WIDTH<br><b>B</b><br>(in)<br>(mm)<br>+.000<br>+.00<br>-.005<br>-.13 | BASIC LOAD RATINGS                  |  | WEIGHT                                | ABUTMENT AND FILLET DIMENSIONS           |  |                              |
|---|-------------------------------------|--|---------------------------------------|--|--|------------------------------|
|   | DYNAMIC<br><b>C</b><br>(lbs)<br>(N) | STATIC<br><b>C<sub>0</sub></b><br>(lbs)<br>(N) | <b>W<sup>3</sup></b><br>(lbs)<br>(kg) | <b>d<sub>a</sub> min</b><br>(in)<br>(mm) | <b>D<sub>a</sub> max</b><br>(in)<br>(mm) | <b>r max</b><br>(in)<br>(mm) |
| 0.4375<br>11.113  | 1878<br>8357                        | 850<br>3783                                    | 0.10<br>0.05                          | 0.753<br>19.13                           | 1.203<br>30.56                           | 0.025<br>0.64                |
| 0.5000<br>12.700  | 2595<br>11548                       | 1010<br>4495                                   | 0.18<br>0.08                          | 0.845<br>21.46                           | 1.446<br>36.73                           | 0.025<br>0.64                |
| 0.5000<br>12.700  | 2595<br>11548                       | 1010<br>4495                                   | 0.16<br>0.07                          | 0.965<br>24.51                           | 1.446<br>36.73                           | 0.025<br>0.64                |
| 0.5000<br>12.700  | 2593<br>11539                       | 1025<br>4561                                   | 0.22<br>0.10                          | 0.845<br>21.46                           | 1.530<br>38.86                           | 0.025<br>0.64                |
| 0.5000<br>12.700  | 2593<br>11539                       | 1025<br>4561                                   | 0.20<br>0.09                          | 0.965<br>24.51                           | 1.530<br>38.86                           | 0.025<br>0.64                |
| 0.5625<br>14.288  | 2967<br>13203                       | 1350<br>6008                                   | 0.32<br>0.15                          | 0.988<br>25.10                           | 1.760<br>44.70                           | 0.035<br>0.89                |
| 0.5625<br>14.288  | 2967<br>13203                       | 1350<br>6008                                   | 0.29<br>0.13                          | 1.113<br>28.27                           | 1.760<br>44.70                           | 0.035<br>0.89                |
| 0.5625<br>14.288  | 2967<br>13203                       | 1350<br>6008                                   | 0.26<br>0.12                          | 1.197<br>30.40                           | 1.760<br>44.70                           | 0.035<br>0.89                |
| 0.6250<br>15.875  | 3864<br>17195                       | 2120<br>9434                                   | 0.38<br>0.17                          | 1.375<br>34.93                           | 2.244<br>57.00                           | 0.035<br>0.89                |
| 0.6250<br>15.875  | 3864<br>17195                       | 2120<br>9434                                   | 0.46<br>0.21                          | 1.500<br>38.10                           | 2.244<br>57.00                           | 0.035<br>0.89                |
| 0.6875<br>17.463  | 5360<br>23852                       | 2620<br>11659                                  | 0.51<br>0.23                          | 1.500<br>38.10                           | 2.314<br>58.78                           | 0.035<br>0.89                |

# 3000 Series® Semi-Ground Radial Bearings

- **PRECISION GROUND ON ALL CONTACT SURFACES EXCEPT BORE**
- **EASY TO USE INCH DIMENSIONS**
- **ECONOMICAL BEARING FOR LIGHTER LOADS THAN THE 1600 SERIES™ BEARINGS**
- **MAX SPEED RANGE - 2500 - 3000 RPM**
- **HARDENED BEARING STEEL**
- **NYLON RETAINER STANDARD**
- **GREASED, DOUBLE SEALED OR DOUBLE SHIELDED STANDARD**
- **AVAILABLE SINGLE SEALED OR SINGLE SHIELDED, OPEN, AND WITH OR WITHOUT GREASE**



| BEARING | SUFFIX   |  |  |  |  | PRINCIPLE DIMENSIONS   |  |  |
|---------|--|--|--|--|--|--|--|--|
|         |  DOUBLE SEAL |  SINGLE SEAL |  DOUBLE SHIELD |  SINGLE SHIELD |  OPEN | BORE<br><b>d</b><br>(in)<br>(mm)<br>+0.005<br><b>+0.13</b><br>-0.000<br><b>-0.00</b> | O.D.<br><b>D</b><br>(in)<br>(mm)<br>+0.0000<br><b>+0.00</b><br>-0.0005 <sup>4</sup><br><b>-0.013</b> |  |
| 3002™   | DC   | SC   | DS   | SS   | NS   | 0.2500<br><b>6.350</b>   | 0.6875<br><b>17.463</b>  |  |
| 3003™   | DC   | SC   | DS   | SS   | NS   | 0.3125<br><b>7.938</b>   | 0.8750<br><b>22.225</b>  |  |
| 3004™   | DC   | SC   | DS   | SS   | NS   | 0.3750<br><b>9.525</b>   | 0.8750<br><b>22.225</b>  |  |
| 3005™   | DC   | SC   | DS   | SS   | NS   | 0.3125<br><b>7.938</b>   | 0.9063<br><b>23.020</b>  |  |
| 3006™   | DC   | SC   | DS   | SS   | NS   | 0.3750<br><b>9.525</b>   | 0.9063<br><b>23.020</b>  |  |
| 3007™   | DC   | SC   | DS   | SS   | NS   | 0.4375<br><b>11.113</b>  | 0.9063<br><b>23.020</b>  |  |
| 3014™   | DC   | SC   | DS   | SS   | NS   | 0.3750<br><b>9.525</b>   | 1.1250<br><b>28.575</b>  |  |
| 3015™   | DC   | SC   | DS   | SS   | NS   | 0.4375<br><b>11.113</b>  | 1.1250<br><b>28.575</b>  |  |
| 3016™   | DC   | SC   | DS   | SS   | NS   | 0.5000<br><b>12.700</b>  | 1.1250<br><b>28.575</b>  |  |

<sup>1</sup> Width for sealed versions = 0.3125 (7.938)

<sup>2</sup> Width for sealed versions = 0.3438 (8.733)

<sup>3</sup> Weights given are for greased and sealed versions

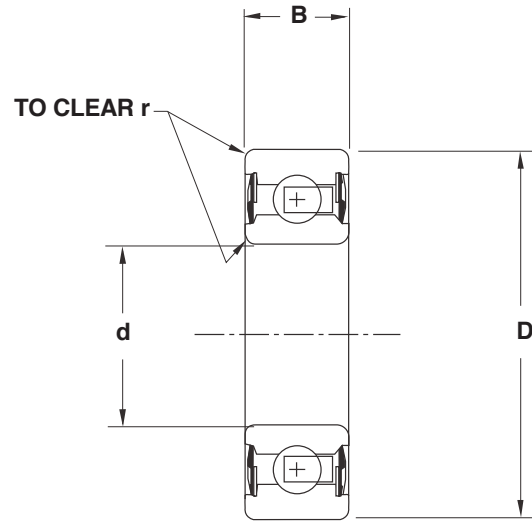
<sup>4</sup> 3038 and larger +0.0000/-0.0006 (+0.000/-0.015)

All bearing designations listed herein are trademarks of RBC Nice® Bearings.

# 3000 Series® Semi-Ground Radial Bearings

**S**emi-ground 3000 Series® bearings are specially designed to provide a line of economical bearings for lighter loads than the 1600 Series™ bearings and speeds to approximately 2500 rpm. The 3000 Series® bearings are dimensionally the same as the 1600 Series™ bearings, except for the precision of the inner ring (as machined tolerances). Careful heat treatment provides a uniform and exact degree of hardness for maximum life.

The 3000 Series® bearings are precision ground to the same close tolerances on the O.D. as the 1600 Series™ bearings with exceptional care given to the ball grooves. A ball retainer, or separator, is employed to increase the range of allowable speeds by reducing ball contact friction. The 3000 Series® radial bearing is available open, single or doubled shielded, or single or double sealed. The double shielded and double sealed versions are grease packed as standard. Open and single closure bearings can be furnished with or without grease as desired.

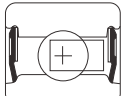
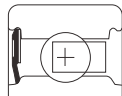
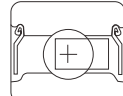
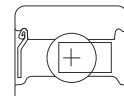
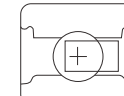


| WIDTH<br><b>B</b><br>(in)<br>(mm)<br>+.005<br>+.00<br>-.005<br>-.13 | BASIC LOAD RATINGS                  |                                     | WEIGHT<br><b>W</b> <sup>3</sup><br>(lbs)<br>(kg) | ABUTMENT AND FILLET DIMENSIONS           |  |                              |
|---|-------------------------------------|-------------------------------------|--|--|--|------------------------------|
|   | DYNAMIC<br><b>C</b><br>(lbs)<br>(N) | STATIC<br><b>Co</b><br>(lbs)<br>(N) |  | <b>d<sub>a</sub> min</b><br>(in)<br>(mm) | <b>D<sub>a</sub> max</b><br>(in)<br>(mm) | <b>r max</b><br>(in)<br>(mm) |
| 0.2500 <b>1</b><br>6.350  | 255<br>1135                         | 170<br>757                          | 0.02<br>0.01                                     | 0.330<br>8.38                            | 0.614<br>15.60                           | 0.012<br>0.30                |
| 0.2813 <b>2</b><br>7.1450   | 325<br>1446                         | 255<br>1135                         | 0.03<br>0.01                                     | 0.474<br>12.04                           | 0.778<br>19.76                           | 0.012<br>0.30                |
| 0.2813 <b>2</b><br>7.1450   | 325<br>1446                         | 255<br>1135                         | 0.03<br>0.01                                     | 0.474<br>12.04                           | 0.778<br>19.76                           | 0.015<br>0.38                |
| 0.3125<br>7.938   | 350<br>1558                         | 300<br>1335                         | 0.04<br>0.02                                     | 0.503<br>12.78                           | 0.778<br>19.76                           | 0.012<br>0.30                |
| 0.3125<br>7.938   | 350<br>1558                         | 300<br>1335                         | 0.04<br>0.02                                     | 0.517<br>13.13                           | 0.778<br>19.76                           | 0.015<br>0.38                |
| 0.3125<br>7.938   | 350<br>1558                         | 300<br>1335                         | 0.03<br>0.01                                     | 0.517<br>13.13                           | 0.778<br>19.76                           | 0.015<br>0.38                |
| 0.3750<br>9.525   | 600<br>2670                         | 475<br>2114                         | 0.06<br>0.03                                     | 0.595<br>15.11                           | 1.014<br>25.76                           | 0.025<br>0.64                |
| 0.3750<br>9.525   | 600<br>2670                         | 475<br>2114                         | 0.06<br>0.03                                     | 0.622<br>15.80                           | 1.014<br>25.76                           | 0.025<br>0.64                |
| 0.3750<br>9.525   | 600<br>2670                         | 475<br>2114                         | 0.06<br>0.03                                     | 0.622<br>15.80                           | 1.014<br>25.76                           | 0.025<br>0.64                |

## 3000 Series® Semi-Ground Radial Bearings (con't)

- **PRECISION GROUND ON ALL CONTACT SURFACES EXCEPT BORE**
- **EASY TO USE INCH DIMENSIONS**
- **ECONOMICAL BEARING FOR LIGHTER LOADS THAN THE 1600 SERIES™ BEARINGS**
- **MAX SPEED RANGE - 2500 - 3000 RPM**
- **HARDENED BEARING STEEL**
- **NYLON RETAINER STANDARD**
- **GREASED, DOUBLE SEALED OR DOUBLE SHIELDED STANDARD**
- **AVAILABLE SINGLE SEALED OR SINGLE SHIELDED, OPEN, AND WITH OR WITHOUT GREASE**



| BEARING | SUFFIX   |  |  |  |  | PRINCIPLE DIMENSIONS  |   |  |
|---------|--|--|--|--|--|---|---|--|
|         |  DOUBLE SEAL |  SINGLE SEAL |  DOUBLE SHIELD |  SINGLE SHIELD |  OPEN | BORE<br>d<br>(in)<br>(mm)<br>+0.005<br>+0.13<br>-0.000<br>-0.00 | O.D.<br>D<br>(in)<br>(mm)<br>+0.0000<br>+0.00<br>-0.0005 <sup>4</sup><br>-0.013 |  |
| 3020™   | DC   | SC   | DS   | SS   | NS   | 0.4375<br>11.113  | 1.3750<br>34.925  |  |
| 3021™   | DC   | SC   | DS   | SS   | NS   | 0.5000<br>12.700  | 1.3750<br>34.925  |  |
| 3023™   | DC   | SC   | DS   | SS   | NS   | 0.6250<br>15.875  | 1.3750<br>34.925  |  |
| 3028™   | DC   | SC   | DS   | SS   | NS   | 0.6250<br>15.875  | 1.6250<br>41.275  |  |
| 3030™   | DC   | SC   | DS   | SS   | NS   | 0.7500<br>19.050  | 1.6250<br>41.275  |  |
| 3033™   | DC   | SC   | DS   | SS   | NS   | 0.6250<br>15.875  | 1.7500<br>44.450  |  |
| 3035™   | DC   | SC   | DS   | SS   | NS   | 0.7500<br>19.050  | 1.7500<br>44.450  |  |
| 3038™   | DC <sup>4</sup>  | SC   | DS   | SS   | NS   | 0.7500<br>19.050  | 2.0000<br>50.800  |  |
| 3040™   | DC <sup>4</sup>  | SC   | DS   | SS   | NS   | 0.8750<br>22.225  | 2.0000<br>50.800  |  |
| 3041™   | DC <sup>4</sup>  | SC   | DS   | SS   | NS   | 1.0000<br>25.400  | 2.0000<br>50.800  |  |

<sup>1</sup> Width for sealed versions = 0.3125 (7.938)

<sup>3</sup> Weights given are for greased and sealed versions

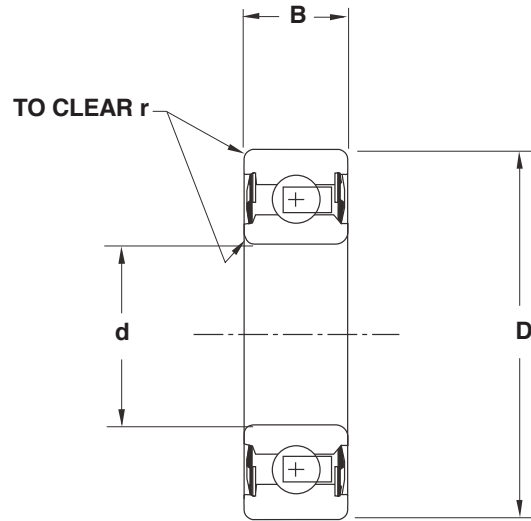
<sup>2</sup> Width for sealed versions = 0.3438 (8.733)

<sup>4</sup> 3038 and larger +0.0000/-0.0006 (+0.000/-0.015)

# 3000 Series® Semi-Ground Radial Bearings (con't)

**S**emi-ground 3000 Series® bearings are specially designed to provide a line of economical bearings for lighter loads than the 1600 Series™ bearings and speeds to approximately 2500 rpm. The 3000 Series® bearings are dimensionally the same as the 1600 Series™ bearings, except for the precision of the inner ring (as machined tolerances). Careful heat treatment provides a uniform and exact degree of hardness for maximum life.

The 3000 Series® bearings are precision ground to the same close tolerances on the O.D. as the 1600 Series™ bearings with exceptional care given to the ball grooves. A ball retainer, or separator, is employed to increase the range of allowable speeds by reducing ball contact friction. The 3000 Series® radial bearing is available open, single or doubled shielded, or single or double sealed. The double shielded and double sealed versions are grease packed as standard. Open and single closure bearings can be furnished with or without grease as desired.



| WIDTH<br><b>B</b><br>(in)<br>(mm)<br>+.005<br>+.00<br>-.005<br>-.13 | BASIC LOAD RATINGS                  |                                     | WEIGHT<br><b>W</b> <sup>3</sup><br>(lbs)<br>(kg) | ABUTMENT AND FILLET DIMENSIONS           |  |                              |
|---|-------------------------------------|-------------------------------------|--|--|--|------------------------------|
|   | DYNAMIC<br><b>C</b><br>(lbs)<br>(N) | STATIC<br><b>Co</b><br>(lbs)<br>(N) |  | <b>d<sub>a</sub> min</b><br>(in)<br>(mm) | <b>D<sub>a</sub> max</b><br>(in)<br>(mm) | <b>r max</b><br>(in)<br>(mm) |
| 0.4375<br>11.113  | 940<br>4183                         | 850<br>3783                         | 0.12<br>0.05                                     | 0.658<br>16.71                           | 1.203<br>30.56                           | 0.025<br>0.64                |
| 0.4375<br>11.113  | 940<br>4183                         | 850<br>3783                         | 0.11<br>0.05                                     | 0.720<br>18.29                           | 1.203<br>30.56                           | 0.025<br>0.64                |
| 0.4375<br>11.113  | 940<br>4183                         | 850<br>3783                         | 0.10<br>0.05                                     | 0.753<br>19.13                           | 1.203<br>30.56                           | 0.025<br>0.64                |
| 0.5000<br>12.700  | 1300<br>5785                        | 1010<br>4495                        | 0.18<br>0.08                                     | 0.845<br>21.46                           | 1.446<br>36.73                           | 0.025<br>0.64                |
| 0.5000<br>12.700  | 1300<br>5785                        | 1010<br>4495                        | 0.16<br>0.07                                     | 0.965<br>24.51                           | 1.446<br>36.73                           | 0.025<br>0.64                |
| 0.5000<br>12.700  | 1300<br>5785                        | 1025<br>4561                        | 0.22<br>0.10                                     | 0.845<br>21.46                           | 1.530<br>38.86                           | 0.025<br>0.64                |
| 0.5000<br>12.700  | 1300<br>5785                        | 1025<br>4561                        | 0.20<br>0.09                                     | 0.965<br>24.51                           | 1.530<br>38.86                           | 0.025<br>0.64                |
| 0.5625<br>14.288  | 1480<br>6586                        | 1350<br>6008                        | 0.32<br>0.15                                     | 0.988<br>25.10                           | 1.760<br>44.70                           | 0.035<br>0.89                |
| 0.5625<br>14.288  | 1480<br>6586                        | 1350<br>6008                        | 0.29<br>0.13                                     | 1.113<br>28.27                           | 1.760<br>44.70                           | 0.035<br>0.89                |
| 0.5625<br>14.288  | 1480<br>6586                        | 1350<br>6008                        | 0.26<br>0.12                                     | 1.197<br>30.40                           | 1.760<br>44.70                           | 0.035<br>0.89                |



**Series™ Semi-Ground Radial Bearings, Extended Inner with Flanged Housing**

- **EASY TO USE INCH DIMENSIONS**
- **MEDIUM LOADS**
- **MAX SPEED RANGE - 2500 - 3000 RPM**
- **THROUGH HARDENED**
- **RETAINER DESIGN**
- **NYLON RETAINER STANDARD**
- **DOUBLE SEALED STANDARD**
- **EXTENDED INNER RING WITH TWO SET SCREWS**
- **BEARINGS ARE AVAILABLE WITH OR WITHOUT FLANGE**



| BEARING ①           |                 | PRINCIPLE DIMENSIONS      |                              |                            |                            |                   |                   |                                      |                   |
|---------------------|-----------------|---------------------------|------------------------------|----------------------------|----------------------------|-------------------|-------------------|--------------------------------------|-------------------|
|                     |                 | Bore<br>d<br>(in)<br>(mm) | O.D.<br>D<br>(in)<br>(mm)    | Width<br>B<br>(in)<br>(mm) | Width<br>C<br>(in)<br>(mm) | E<br>(in)<br>(mm) | F<br>(in)<br>(mm) | G<br>(in)<br>(mm)<br>Bolt<br>Centers | H<br>(in)<br>(mm) |
| FLANGED<br>UNIT     | BEARING<br>ONLY | +0.005<br>+.13            | +0.000<br>+.00               | +0.000<br>+.00             |                            |                   |                   |                                      |                   |
|                     | SUFFIX          | -.000<br>-.00             | -.0005 <sup>②</sup><br>-.013 | -.005<br>-.13              |                            |                   |                   |                                      |                   |
| N6906™              | B               | 0.375<br>9.53             | 0.9063<br>23.020             | 0.313<br>7.94              | 0.688<br>17.46             | 0.555<br>14.10    | 0.375<br>9.53     | 1.875<br>47.63                       | 2.500<br>63.50    |
| N6908™              | B               | 0.500<br>12.70            | 1.6250<br>41.28              | 0.500<br>12.70             | 1.000<br>25.40             | 0.955<br>24.26    | 0.500<br>12.70    | 2.875<br>73.03                       | 3.750<br>95.25    |
| N6910™              | B               | 0.625<br>15.875           | 1.6250<br>41.28              | 0.500<br>12.70             | 1.000<br>25.40             | 0.955<br>24.26    | 0.500<br>12.70    | 2.875<br>73.03                       | 3.750<br>95.25    |
| N6912™ <sup>②</sup> | B <sup>②</sup>  | .750<br>19.05             | 2.0000<br>50.80              | 0.563<br>14.29             | 1.063<br>26.99             | 1.293<br>32.84    | 0.500<br>12.70    | 3.250<br>82.55                       | 4.125<br>104.78   |
| N6916™ <sup>②</sup> | B <sup>②</sup>  | 1.000<br>25.40            | 2.0000<br>50.80              | 0.563<br>14.29             | 1.063<br>26.99             | 1.293<br>32.84    | 0.500<br>12.70    | 3.250<br>82.55                       | 4.125<br>104.78   |

① When Ordering specify whether assembly or bearing only is required. Bearings are stamped with designation and suffix B; for example 6904™B. Housings no longer carry part numbers.

② Tolerance for 6912 and larger is +.0000/-.0006 (+000/-.015)

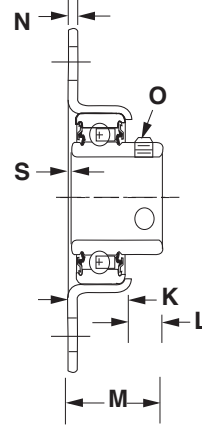
③ Weights given are for greased and sealed version with flange mount.

# 6900 Series™ Semi-Ground Radial Bearings, Extended Inner with Flanged Housing

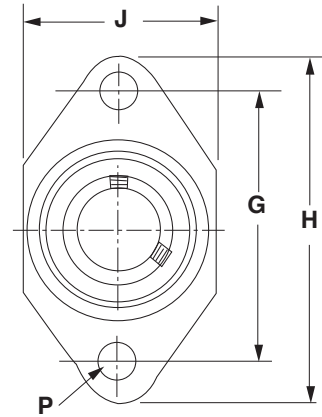
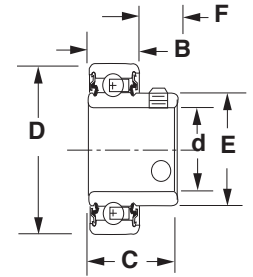
The 6900 Series™ bearing consists of a double sealed, semi-ground bearing with an extended inner ring. It is provided with two set screws and a flanged housing designed for flush mounting. Bearings are supplied assembled in the housing. Flanged and non-flanged units are available from stock.

The pressed steel flanged housing provides a secure yet inexpensive means for holding the bearing in place. Although these units are not of the self-aligning type, they will accommodate a limited amount of angular misalignment.

FLANGED UNIT



BEARING ONLY



| PRINCIPLE DIMENSIONS               |                   |                   |                   |                   |                      |                                   |                   |                   | BASIC LOAD RATINGS             |                                 | WEIGHT |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|----------------------|-----------------------------------|-------------------|-------------------|--------------------------------|---------------------------------|--------|
| J<br>(in)<br>(mm)<br>Overall Width | K<br>(in)<br>(mm) | L<br>(in)<br>(mm) | M<br>(in)<br>(mm) | N<br>(in)<br>(mm) | O<br>2-Set<br>Screws | P<br>(in)<br>(mm)<br>Hole<br>Dia. | S<br>(in)<br>(mm) | C<br>(lbs)<br>(N) | C <sub>0</sub><br>(lbs)<br>(N) | W <sup>③</sup><br>(lbs)<br>(kg) |        |
| 1.125<br>28.58                     | 0.344<br>8.73     | 0.344<br>8.73     | 0.688<br>17.46    | 0.035<br>0.89     | 8-32                 | 0.3125<br>7.94                    | 0.000<br>0.00     | 580<br>2581       | 300<br>1335                    | 0.07<br>0.03                    |        |
| 1.875<br>47.63                     | 0.438<br>11.11    | 0.688<br>17.46    | 1.000<br>25.40    | 0.062<br>1.57     | 1/4-28               | 0.4375<br>11.11                   | 0.010<br>0.25     | 1610<br>7165      | 1010<br>4495                   | 0.35<br>0.16                    |        |
| 1.875<br>47.63                     | 0.438<br>11.11    | 0.688<br>17.46    | 1.000<br>25.40    | 0.062<br>1.57     | 1/4-28               | 0.4375<br>11.11                   | 0.010<br>0.25     | 1610<br>7165      | 1010<br>4495                   | 0.32<br>0.15                    |        |
| 2.250<br>57.15                     | 0.438<br>11.11    | 0.688<br>17.46    | 1.125<br>28.58    | 0.062<br>1.57     | 1/4-28               | 0.4375<br>11.11                   | 0.062<br>1.57     | 1870<br>8322      | 1350<br>6008                   | 0.55<br>0.25                    |        |
| 2.250<br>57.15                     | 0.438<br>11.11    | 0.688<br>17.46    | 1.125<br>28.58    | 0.062<br>1.57     | 10-32                | 0.4375<br>11.11                   | 0.062<br>1.57     | 1870<br>8322      | 1350<br>6008                   | 0.33<br>0.15                    |        |

# 7500 Series™ Heavy Duty Precision Ground Radial Bearings

- **PRECISION GROUND ON ALL CONTACT SURFACES, SIMILAR TO THE 1600 SERIES™ BEARINGS**
- **EASY TO USE INCH DIMENSIONS**
- **MEDIUM LOADS**
- **MAX SPEED RANGE - 5000 - 6000 RPM**
- **THROUGH HARDENED BEARING STEEL**
- **RETAINER DESIGN**
- **NYLON RETAINER STANDARD**
- **DOUBLE SEALED STANDARD**
- **HIGHLY EFFECTIVE SINGLE LIP CONTACT SEAL WITH TRASH GUARD**
- **AVAILABLE SINGLE SEALED OR OPEN**
- **ALL BEARINGS HAVE A SNAP RING GROOVE (SNAP RING ASSEMBLED AS AN OPTION)**
- **RECOMMENDED FOR APPLICATIONS WHERE ACCURATE, QUIET PERFORMANCE AND SUPERIOR SEALING ARE REQUIRED**



| BEARING ① | PRINCIPLE DIMENSIONS                                 |  |  |                       |                                     |                       |  |
|-----------|--|--|--|-----------------------|-------------------------------------|-----------------------|--|
|           | BORE   | O.D.   | WIDTH  | A                     | INNER WIDTH                         | F                     |  |
|           | d<br>(in)<br>(mm)                                    | D<br>(in)<br>(mm)                                      | B<br>(in)<br>(mm)                                | (in)<br>(mm)          | C<br>(in)<br>(mm)                   | (in)<br>(mm)          |  |
|           | +0.0000<br><b>+0.000</b><br>-0.0005<br><b>-0.013</b> | +0.0000<br><b>+0.000</b><br>-0.0005 ②<br><b>-0.013</b> | +0.000<br><b>+0.00</b><br>-0.005<br><b>-0.13</b> |                       | +0.000/-0.005<br><b>+0.00/-0.13</b> |                       |  |
| 7508™     | .5000<br><b>12.70</b>                                | 1.7500<br><b>44.45</b>                                 | 0.6250<br><b>15.88</b>                           | 0.0625<br><b>1.59</b> | .7500<br><b>19.05</b>               | 1.009<br><b>25.63</b> |  |
| 7510™     | 0.6250<br><b>15.88</b>                               | 1.7500<br><b>44.45</b>                                 | 0.6250<br><b>15.88</b>                           | 0.0625<br><b>1.59</b> | .7500<br><b>19.05</b>               | 1.009<br><b>25.63</b> |  |
| 7512™     | .7500<br><b>19.05</b>                                | 1.7500<br><b>44.45</b>                                 | 0.6250<br><b>15.88</b>                           | 0.0625<br><b>1.59</b> | .7500<br><b>19.05</b>               | 1.009<br><b>25.63</b> |  |
| 7514™ ②   | 0.8750<br><b>22.23</b>                               | 2.0000<br><b>50.80</b>                                 | 0.6250<br><b>15.88</b>                           | 0.0625<br><b>1.59</b> | .7500<br><b>19.05</b>               | 1.306<br><b>33.17</b> |  |
| 7516™ ②   | 1.0000<br><b>25.40</b>                               | 2.0000<br><b>50.80</b>                                 | 0.6250<br><b>15.88</b>                           | 0.0625<br><b>1.59</b> | .7500<br><b>19.05</b>               | 1.306<br><b>33.17</b> |  |
| 7518™ ②   | 1.1250<br><b>28.58</b>                               | 2.5625<br><b>65.09</b>                                 | .7500<br><b>19.05</b>                            | 0.0625<br><b>1.59</b> | 0.8750<br><b>22.23</b>              | 1.672<br><b>42.47</b> |  |
| 7520™ ②   | 1.2500<br><b>31.75</b>                               | 2.5625<br><b>65.09</b>                                 | .7500<br><b>19.05</b>                            | 0.0625<br><b>1.59</b> | 0.8750<br><b>22.23</b>              | 1.672<br><b>42.47</b> |  |

① When ordering please indicate designation and style letters of bearing desired (i.e. DL or DLG)      ③ Radius R indicates the maximum fillet radius in housing or shaft which bearing will clear

② Tolerance for 7514™ and larger is +0.0000/-0.0006 (**+0.000/-0.015**)      ④ Weights given are for greased and sealed versions

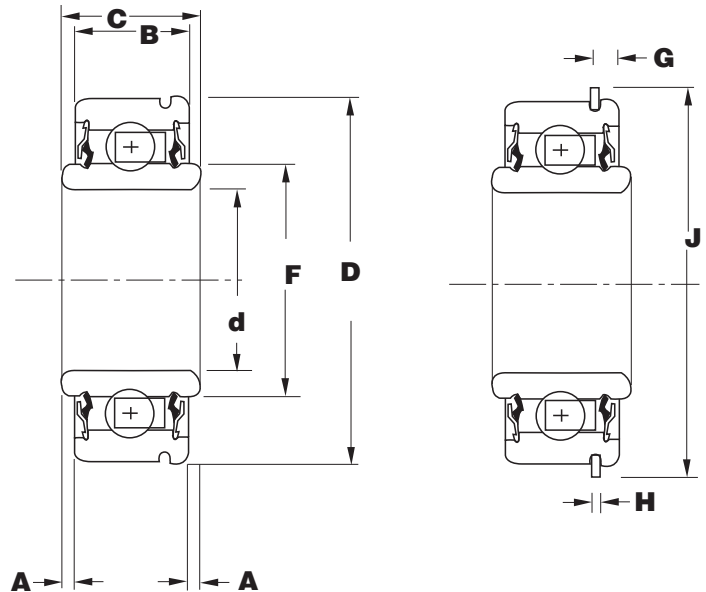
All bearing designations listed herein are trademarks of RBC Nice® Bearings.

# 7500 Series™ Heavy Duty Precision Ground Radial Bearings

The 7500 Series™ bearings are single row retainer type radial bearings, similar in construction to the 1600 Series™ bearings. They incorporate a highly effective single lip contact seal, with metal guard. The inner and outer rings are turned from chrome steel and after careful heat treatment the through hardened rings are accurately ground to close tolerances.

The 7500 Series™ bearings are recommended for applications requiring the accuracy of rotation and quiet performance of close tolerance precision grade bearings, and where a superior seal is required to retain lubricant and keep the bearing free from dust and dirt.

Normally double sealed (type DL), the 7500 Series™ bearings can be produced to order with seals on one side only (type SL) or without seals (type NL). Double sealed bearings are grease packed as standard; however, all types can be furnished with or without grease packing as desired. All types are provided with a snap ring groove, with the snap ring assembled on the bearing as an option.



| PRINCIPLE DIMENSIONS                              |                   |                   |  | BASIC LOAD RATINGS           |  | WEIGHT                          | ABUTMENT AND FILLET DIMENSIONS |                        |                       |
|---|-------------------|-------------------|--|------------------------------|--|---------------------------------|--------------------------------|------------------------|-----------------------|
| G<br>(in)<br>(mm)<br>+.000<br>-.005<br>+.00/- .13 | H<br>(in)<br>(mm) | J<br>(in)<br>(mm) | R<br>(in)<br>(mm)<br>Radius <sup>3</sup> | Dynamic<br>C<br>(lbs)<br>(N) | Static<br>C <sub>0</sub><br>(lbs)<br>(N) | W <sup>4</sup><br>(lbs)<br>(kg) | da min<br>(in)<br>(mm)         | Da max<br>(in)<br>(mm) | r max<br>(in)<br>(mm) |
| 0.136<br>3.45                                     | 0.042<br>1.07     | 1.9219<br>48.82   | 0.035<br>0.89                            | 2595<br>11548                | 1025<br>4561                             | 0.33<br>0.15                    | 0.750<br>19.05                 | 1.500<br>38.10         | 0.035<br>0.89         |
| 0.136<br>3.45                                     | 0.042<br>1.07     | 1.9219<br>48.82   | 0.035<br>0.89                            | 2595<br>11548                | 1025<br>4561                             | 0.29<br>0.13                    | 0.875<br>22.23                 | 1.500<br>38.10         | 0.035<br>0.89         |
| 0.136<br>3.45                                     | 0.042<br>1.07     | 1.9219<br>48.82   | 0.035<br>0.89                            | 2595<br>11548                | 1025<br>4561                             | 0.31<br>0.14                    | 1.000<br>25.40                 | 1.500<br>38.10         | 0.035<br>0.89         |
| 0.136<br>3.45                                     | 0.042<br>1.07     | 2.1563<br>54.77   | 0.035<br>0.89                            | 2970<br>13217                | 1350<br>6008                             | 0.36<br>0.16                    | 1.125<br>28.58                 | 1.750<br>44.45         | 0.035<br>0.89         |
| 0.136<br>3.45                                     | 0.042<br>1.07     | 2.1563<br>54.77   | 0.035<br>0.89                            | 2970<br>13217                | 1350<br>6008                             | 0.33<br>0.15                    | 1.250<br>31.75                 | 1.750<br>44.45         | 0.035<br>0.89         |
| 0.190<br>4.83                                     | 0.065<br>1.65     | 2.7656<br>70.25   | 0.035<br>0.89                            | 5360<br>23852                | 2620<br>11659                            | 0.80<br>0.36                    | 1.375<br>34.93                 | 2.312<br>58.72         | 0.035<br>0.89         |
| 0.190<br>4.83                                     | 0.065<br>1.65     | 2.7656<br>70.25   | 0.035<br>0.89                            | 5360<br>23852                | 2620<br>11659                            | 0.57<br>0.26                    | 1.500<br>38.10                 | 2.312<br>58.72         | 0.035<br>0.89         |

Series™ Heavy Duty Precision Ground Radial Bearings with Extended Inner Ring

- PRECISION GROUND ON ALL CONTACT SURFACES, SIMILAR TO THE 1600 SERIES™ BEARINGS
- EASY TO USE INCH DIMENSIONS
- MEDIUM LOADS
- MAX SPEED RANGE - 5000 - 6000 RPM
- THROUGH HARDENED
- CAGED DESIGN
- NYLON CAGE STANDARD
- DOUBLE SEALED STANDARD
- HIGHLY EFFICIENT SINGLE LIP CONTACT SEAL
- AVAILABLE SINGLE SEALED OR OPEN
- EXTENDED INNER RING WITH SET SCREWS
- ALL BEARINGS HAVE A SNAP RING GROOVE, SNAP RING ASSEMBLED AS AN OPTION
- RECOMMENDED FOR APPLICATIONS WHERE ACCURATE, QUIET PERFORMANCE AND SUPERIOR SEALING ARE REQUIRED



| BEARING ① | PRINCIPLE DIMENSIONS  |   |  |                   |                   |   |
|-----------|---|---|--|-------------------|-------------------|---|
|           | BORE<br>d<br>(in)<br>(mm)<br>+.0008<br>+.020<br>-.0000<br>-.000 | O.D.<br>D<br>(in)<br>(mm)<br>+.0000<br>+.000<br>-.0005 ②<br>-.013 | WIDTH<br>B<br>(in)<br>(mm)<br>+.000<br>+.00<br>-.005<br>-.13 | A<br>(in)<br>(mm) | F<br>(in)<br>(mm) | G<br>(in)<br>(mm)<br>+.005<br>+.13<br>-.005<br>-.13 |
| 7608™     | .5000<br>12.70  | 1.7500<br>44.45   | 0.6250<br>15.88  | 0.0625<br>1.59    | 1.009<br>25.63    | 0.136<br>3.45                                       |
| 7609™     | .5625<br>14.29  | 1.7500<br>44.45   | 0.6250<br>15.88  | 0.0625<br>1.59    | 1.009<br>25.63    | 0.136<br>3.45                                       |
| 7610™     | .6250<br>15.88  | 1.7500<br>44.45   | 0.6250<br>15.88  | 0.0625<br>1.59    | 1.009<br>25.63    | 0.136<br>3.45                                       |
| 7611™     | .6875<br>17.46  | 1.7500<br>44.45   | 0.6250<br>15.88  | 0.0625<br>1.59    | 1.009<br>25.63    | 0.136<br>3.45                                       |
| 7612™     | .7500<br>19.05  | 1.7500<br>44.45   | 0.6250<br>15.88  | 0.0625<br>1.59    | 1.009<br>25.63    | 0.136<br>3.45                                       |
| 7613™ ②   | .8125<br>20.64  | 2.0000<br>50.80   | 0.6250<br>15.88  | 0.0625<br>1.59    | 1.306<br>33.17    | 0.136<br>3.45                                       |

① When ordering please indicate designation and style letters of bearing desired (i.e. DL or DLG)

③ Radius R indicates the maximum fillet radius in housing or shaft which bearing will clear

② Tolerance for 7613™ and larger is +.0000/-.0006 (+.000/-.015)

④ Weights given are for greased and sealed versions

All bearing designations listed herein are trademarks of RBC Nice® Bearings.



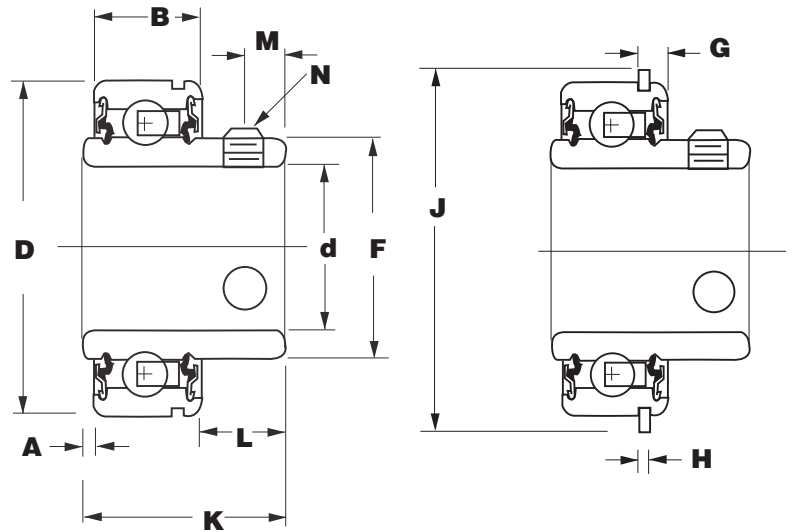
# 7600

## Series™ Heavy Duty Precision Ground Radial Bearings with Extended Inner Ring

The 7600 Series™ bearings are single row retainer type radial bearings similar in construction to the 1600 Series™ bearings. They incorporate a highly efficient single lip contact seal with metal guard. The inner and outer rings are turned from chrome steel and after careful heat treatment the through hardened rings are accurately ground to close tolerances. The inner ring is extended and contains set screws whereas the 7500 Series™ bearing does not.

The 7600 Series™ bearings are recommended for applications requiring the accuracy of rotation and quiet performance of close limit precision grade bearings, and where a superior seal is required to retain lubricant and keep the bearing free from dust and dirt.

Normally double sealed (type DL), the 7600 Series™ bearings can be produced to order with seals on one side only (type SL) or without seals (type NL). Double sealed bearings are grease packed as standard; however, all types can be furnished with or without grease packing as desired. All types are provided with a snap ring groove, with the snap ring assembled on the bearing as an option.



| PRINCIPLE DIMENSIONS |                   |   |                   |                   |                      |  | BASIC LOAD RATINGS           |  | WEIGHT                          |
|----------------------|-------------------|---|-------------------|-------------------|----------------------|--|------------------------------|--|---------------------------------|
| H<br>(in)<br>(mm)    | J<br>(in)<br>(mm) | K<br>(in)<br>(mm)<br>+.000<br>+.00<br>-.005<br>-.13 | L<br>(in)<br>(mm) | M<br>(in)<br>(mm) | N<br>2 set<br>screws | Radius <sup>3</sup><br>R<br>(in)<br>(mm) | Dynamic<br>C<br>(lbs)<br>(N) | Static<br>C <sub>0</sub><br>(lbs)<br>(N) | W <sup>4</sup><br>(lbs)<br>(kg) |
| 0.042<br>1.07        | 1.922<br>48.82    | 1.092<br>27.74                                      | 0.405<br>10.29    | 0.233<br>5.92     | 10-32                | 0.035<br>0.89                            | 2595<br>11548                | 1025<br>4561                             | 0.36<br>0.16                    |
| 0.042<br>1.07        | 1.922<br>48.82    | 1.092<br>27.74                                      | 0.405<br>10.29    | 0.233<br>5.92     | 10-32                | 0.035<br>0.89                            | 2595<br>11548                | 1025<br>4561                             | 0.34<br>0.15                    |
| 0.042<br>1.07        | 1.922<br>48.82    | 1.092<br>27.74                                      | 0.405<br>10.29    | 0.233<br>5.92     | 10-32                | 0.035<br>0.89                            | 2595<br>11548                | 1025<br>4561                             | 0.32<br>0.15                    |
| 0.042<br>1.07        | 1.922<br>48.82    | 1.092<br>27.74                                      | 0.405<br>10.29    | 0.233<br>5.92     | 10-32                | 0.035<br>0.89                            | 2595<br>11548                | 1025<br>4561                             | 0.30<br>0.14                    |
| 0.042<br>1.07        | 1.922<br>48.82    | 1.092<br>27.74                                      | 0.405<br>10.29    | 0.233<br>5.92     | 10-32                | 0.035<br>0.89                            | 2595<br>11548                | 1025<br>4561                             | 0.28<br>0.13                    |
| 0.042<br>1.07        | 2.156<br>54.77    | 1.179<br>29.95                                      | 0.492<br>12.50    | 0.261<br>6.63     | 1/4-28               | 0.035<br>0.89                            | 2970<br>13217                | 1350<br>6008                             | 0.45<br>0.20                    |

Series™ Heavy Duty Precision Ground Radial Bearings with Extended Inner Ring (con't)

- PRECISION GROUND ON ALL CONTACT SURFACES, SIMILAR TO THE 1600 SERIES™ BEARINGS
- EASY TO USE INCH DIMENSIONS
- MEDIUM LOADS
- MAX SPEED RANGE - 5000 - 6000 RPM
- THROUGH HARDENED
- CAGED DESIGN
- NYLON CAGE STANDARD
- DOUBLE SEALED STANDARD
- HIGHLY EFFICIENT SINGLE LIP CONTACT SEAL
- AVAILABLE SINGLE SEALED OR OPEN
- EXTENDED INNER RING WITH SET SCREWS
- ALL BEARINGS HAVE A SNAP RING GROOVE, SNAP RING ASSEMBLED AS AN OPTION
- RECOMMENDED FOR APPLICATIONS WHERE ACCURATE, QUIET PERFORMANCE AND SUPERIOR SEALING ARE REQUIRED



| BEARING ① | PRINCIPLE DIMENSIONS  |   |  |                   |                   |   |
|-----------|---|---|--|-------------------|-------------------|---|
|           | BORE<br>d<br>(in)<br>(mm)<br>+0.0008<br>+0.020<br>-0.0000<br>-0.000 | O.D.<br>D<br>(in)<br>(mm)<br>+0.0000<br>+0.000<br>-0.0005 ②<br>-0.013 | WIDTH<br>B<br>(in)<br>(mm)<br>+0.000<br>+0.00<br>-0.005<br>-0.13 | A<br>(in)<br>(mm) | F<br>(in)<br>(mm) | G<br>(in)<br>(mm)<br>+0.005<br>+0.13<br>-0.005<br>-0.13 |
| 7614™ ②   | .8750<br>22.23  | 2.0000<br>50.80   | 0.6250<br>15.88  | 0.0625<br>1.59    | 1.306<br>33.17    | 0.136<br>3.45   |
| 7615™ ②   | .9375<br>23.81  | 2.0000<br>50.80   | 0.6250<br>15.88  | 0.0625<br>1.59    | 1.306<br>33.17    | 0.136<br>3.45   |
| 7616™ ②   | 1.0000<br>25.40   | 2.0000<br>50.80   | 0.6250<br>15.88  | 0.0625<br>1.59    | 1.306<br>33.17    | 0.136<br>3.45   |
| 7617™ ②   | 1.0625<br>26.99   | 2.5625<br>65.09   | .7500<br>19.05   | 0.0625<br>1.59    | 1.672<br>42.47    | 0.190<br>4.83   |
| 7618™ ②   | 1.1250<br>28.58   | 2.5625<br>65.09   | .7500<br>19.05   | 0.0625<br>1.59    | 1.672<br>42.47    | 0.190<br>4.83   |
| 7620™ ②   | 1.2500<br>31.75   | 2.5625<br>65.09   | .7500<br>19.05   | 0.0625<br>1.59    | 1.672<br>42.47    | 0.190<br>4.83   |

① When ordering please indicate bearing designation and style letters of bearing desired (i.e. DL or DLG)

③ Radius R indicates the maximum fillet radius in housing or shaft which bearing will clear

② Tolerance for 7613™ and larger is +0.0000/-0.0006 (+0.000/-0.015)

④ Weights given are for greased and sealed versions

All bearing designations listed herein are trademarks of RBC Nice® Bearings.

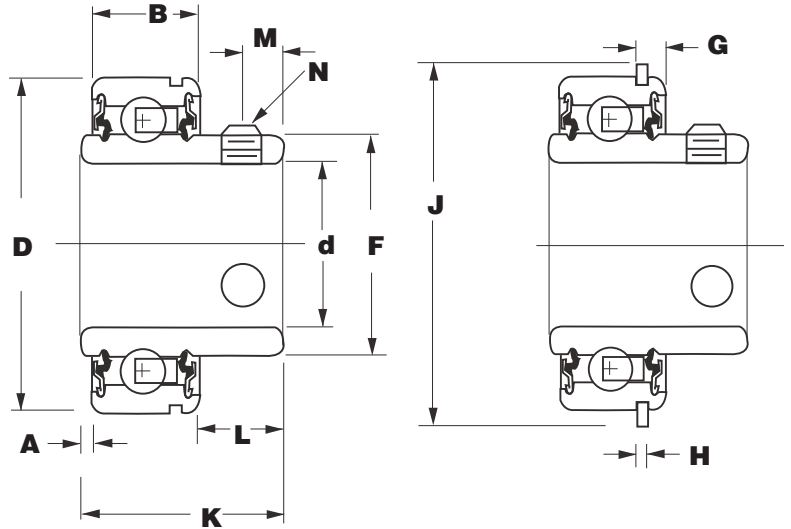
# 7600

## Series™ Heavy Duty Precision Ground Radial Bearings with Extended Inner Ring (con't)

The 7600 Series™ bearings are single row retainer type radial bearings similar in construction to the 1600 Series™ bearings. They incorporate a highly efficient single lip contact seal with metal guard. The inner and outer rings are turned from chrome steel and after careful heat treatment the through hardened rings are accurately ground to close tolerances. The inner ring is extended and contains set screws whereas the 7500 Series™ bearing does not.

The 7600 Series™ bearings are recommended for applications requiring the accuracy of rotation and quiet performance of close limit precision grade bearings, and where a superior seal is required to retain lubricant and keep the bearing free from dust and dirt.

Normally double sealed (type DL), the 7600 Series™ bearings can be produced to order with seals on one side only (type SL) or without seals (type NL). Double sealed bearings are grease packed as standard; however, all types can be furnished with or without grease packing as desired. All types are provided with a snap ring groove, with the snap ring assembled on the bearing as an option.

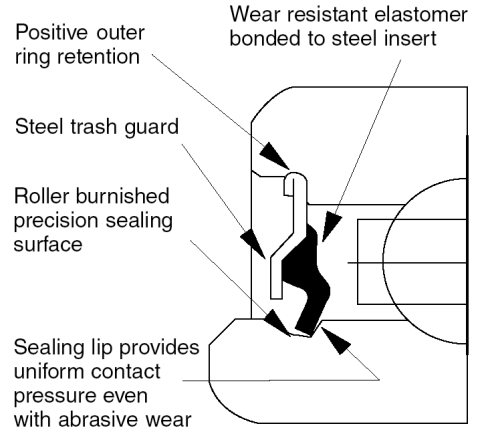


| PRINCIPLE DIMENSIONS |                   |   |                   |                   |                      |  | BASIC LOAD RATINGS           |  | WEIGHT                          |
|----------------------|-------------------|---|-------------------|-------------------|----------------------|--|------------------------------|--|---------------------------------|
| H<br>(in)<br>(mm)    | J<br>(in)<br>(mm) | K<br>(in)<br>(mm)<br>+.000<br>+.00<br>-.005<br>-.13 | L<br>(in)<br>(mm) | M<br>(in)<br>(mm) | N<br>2 set<br>screws | Radius <sup>3</sup><br>R<br>(in)<br>(mm) | Dynamic<br>C<br>(lbs)<br>(N) | Static<br>C <sub>0</sub><br>(lbs)<br>(N) | W <sup>4</sup><br>(lbs)<br>(kg) |
| 0.042<br>1.07        | 2.156<br>54.77    | 1.179<br>29.95                                      | 0.492<br>12.50    | 0.261<br>6.63     | 1/4-28               | 0.035<br>0.89                            | 2970<br>13217                | 1350<br>6008                             | 0.43<br>0.20                    |
| 0.042<br>1.07        | 2.156<br>54.77    | 1.179<br>29.95                                      | 0.492<br>12.50    | 0.261<br>6.63     | 1/4-28               | 0.035<br>0.89                            | 2970<br>13217                | 1350<br>6008                             | 0.40<br>0.18                    |
| 0.042<br>1.07        | 2.156<br>54.77    | 1.179<br>29.95                                      | 0.492<br>12.50    | 0.261<br>6.63     | 1/4-28               | 0.035<br>0.89                            | 2970<br>13217                | 1350<br>6008                             | 0.36<br>0.16                    |
| 0.065<br>1.65        | 2.766<br>70.25    | 1.417<br>35.99                                      | 0.605<br>15.37    | 0.261<br>6.63     | 1/4-28               | 0.035<br>0.89                            | 5360<br>23852                | 2620<br>11659                            | 0.84<br>0.38                    |
| 0.065<br>1.65        | 2.766<br>70.25    | 1.417<br>35.99                                      | 0.605<br>15.37    | 0.261<br>6.63     | 1/4-28               | 0.035<br>0.89                            | 5360<br>23852                | 2620<br>11659                            | 0.80<br>0.36                    |
| 0.065<br>1.65        | 2.766<br>70.25    | 1.417<br>35.99                                      | 0.605<br>15.37    | 0.261<br>6.63     | 1/4-28               | 0.035<br>0.89                            | 5360<br>23852                | 2620<br>11659                            | 0.71<br>0.32                    |

# Series Precision Ground Radial Bearings with Extended Inner Ring and Metric Outside Diameter

- **EXCLUSIVE, HEAVY DUTY “DL” SEALS**
  - **PERMANENTLY SEALED AND PRELUBRICATED FOR LONG LIFE**
  - **STEEL TRASH GUARD AND INNER RING LABYRINTH GROOVE PROVIDE SUPERIOR PROTECTION**
  - **BETTER PROTECTION IN WET/MOIST ENVIRONMENTS**
  - ↳ **OPTIONAL LOW-TORQUE SEAL IS AVAILABLE**
- **TWO LUBRICATION HOLES ALLOW FOR RE-GREASING**
- **TWO KNURLED CUP POINT SET SCREWS OFFER EXCELLENT RESISTANCE TO LOOSENING UNDER VIBRATORY CONDITIONS**
- **FULLY GROUND, SAE 52100 CHROME ALLOY STEEL RACES**
- **BLACK OXIDE FINISH PROVIDES ADDED CORROSION RESISTANCE**

### DL Seal

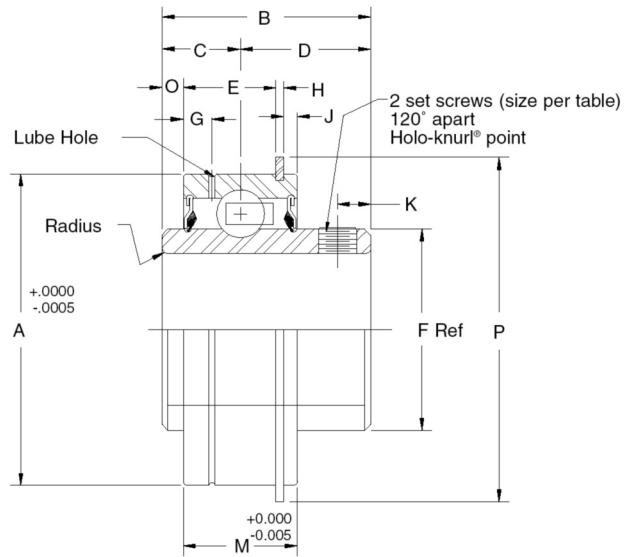


| BASIC BEARING NUMBER | PRINCIPLE DIMENSIONS       |  |                                    |                |                 |                                    |                  |               |                                    |              |              |                 |                                    | WIDTH M (in) (mm) | RADIUS (in) (mm) |
|----------------------|----------------------------|--|------------------------------------|----------------|-----------------|------------------------------------|------------------|---------------|------------------------------------|--------------|--------------|-----------------|------------------------------------|-------------------|------------------|
|                      | SHAFT ① DIAMETER (in) (mm) | OD A (in) (mm)                         | WIDTH B (in) (mm)                  | C (in) (mm)    | D (in) (mm)     | E (in) (mm)                        | F (in) (mm)      | G (in) (mm)   | H (in) (mm)                        | J (in) (mm)  | K (in) (mm)  | M (in) (mm)     |                                    |                   |                  |
|                      |                            | +0.0000<br>+0.000<br>-0.0005<br>-0.013 | +0.000<br>+0.00<br>-0.005<br>-0.13 |                |                 | +0.005<br>+0.13<br>-0.005<br>-0.13 |                  |               | +0.000<br>+0.00<br>-0.005<br>-0.13 |              |              |                 | +0.000<br>+0.00<br>-0.005<br>-0.13 |                   |                  |
| ER10 ②               | 5/8<br>15.88               | 1.8504<br>47                           | 1 7/32<br>30.96                    | 13/32<br>10.32 | 13/16<br>9.17   | 31/64<br>12.30                     | 1 7/64<br>28.18  | 9/64<br>3.57  | 3/64<br>1.19                       | 3/32<br>2.38 | 3/16<br>4.76 | 5/8<br>15.88    | 0.040<br>1.02                      |                   |                  |
| ER12 ②               | 3/4<br>19.05               | 1.8504<br>47                           | 1 7/32<br>30.96                    | 13/32<br>10.32 | 13/16<br>9.17   | 31/64<br>12.30                     | 1 7/64<br>28.18  | 9/64<br>3.57  | 3/64<br>1.19                       | 3/32<br>2.38 | 3/16<br>4.76 | 5/8<br>15.88    | 0.040<br>1.02                      |                   |                  |
| ER16 ②               | 1<br>25.40                 | 2.0472<br>52                           | 1 3/8<br>34.93                     | 33/64<br>13.10 | 55/64<br>21.83  | 39/64<br>15.48                     | 1 21/64<br>33.73 | 3/16<br>4.76  | 3/64<br>1.19                       | 3/32<br>2.38 | 7/32<br>5.56 | 3/4<br>19.05    | 0.040<br>1.02                      |                   |                  |
| ER19 ②               | 1 3/16<br>30.16            | 2.4409<br>62                           | 1 1/2<br>38.10                     | 5/8<br>15.88   | 7/8<br>22.23    | 11/16<br>17.46                     | 1 9/16<br>39.69  | 7/32<br>5.56  | 1/16<br>1.59                       | 1/8<br>3.18  | 7/32<br>5.56 | 7/8<br>22.23    | 0.040<br>1.02                      |                   |                  |
| ER20 ②               | 1 1/4<br>31.75             | 2.8346<br>72                           | 1 11/16<br>42.86                   | 11/16<br>17.46 | 1<br>25.40      | 3/4<br>19.05                       | 1 13/16<br>46.04 | 7/32<br>5.56  | 1/16<br>1.59                       | 1/8<br>3.18  | 1/4<br>6.35  | 15/16<br>23.81  | 0.040<br>1.02                      |                   |                  |
| ER23 ②               | 1 7/16<br>36.51            | 2.8346<br>72                           | 1 11/16<br>42.86                   | 11/16<br>17.46 | 1<br>25.40      | 3/4<br>19.05                       | 1 13/16<br>46.04 | 7/32<br>5.56  | 1/16<br>1.59                       | 1/8<br>3.18  | 1/4<br>6.35  | 15/16<br>23.81  | 0.040<br>1.02                      |                   |                  |
| ER24 ②               | 1 1/2<br>38.10             | 3.1496<br>80                           | 1 15/16<br>49.21                   | 3/4<br>19.05   | 1 3/16<br>30.16 | 29/32<br>23.02                     | 2 3/64<br>51.99  | 1/4<br>6.35   | 1/16<br>1.59                       | 1/8<br>3.18  | 5/16<br>7.94 | 1 3/32<br>27.78 | 0.062<br>1.57                      |                   |                  |
| ER31 ②               | 1 15/16<br>49.21           | 3.5433<br>90                           | 2 1/32<br>51.59                    | 3/4<br>19.05   | 1 9/32<br>32.54 | 29/32<br>23.02                     | 2 15/32<br>62.71 | 19/64<br>7.54 | 3/32<br>2.38                       | 1/8<br>3.18  | 3/8<br>9.53  | 1 1/8<br>28.58  | 0.062<br>1.57                      |                   |                  |

① Shaft tolerance +0.0000/-0.0005 (+0.000/-0.013)

② For low torque version add suffix “SFR”

# Series Precision Ground Radial Bearings with Extended Inner Ring and Metric Outside Diameter



|                   |                   |                 |   |   |                        | RADIAL CAPACITY     |                     |                     |                      |                      |                      |                      |                    | WEIGHT |
|-------------------|-------------------|-----------------|---|---|------------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|--------------------|--------|
| O<br>(in)<br>(mm) | P<br>(in)<br>(mm) | 2-SET<br>SCREWS | BASIC LOAD<br>RATING<br>C<br>(lbs)<br>(N) | STATIC LOAD<br>RATING<br>Co<br>(lbs)<br>(N) | REVOLUTIONS PER MINUTE |                     |                     |                     |                      |                      |                      |                      | W<br>(lbs)<br>(kg) |        |
|                   |                   |                 |   |   | 50<br>(lbs)<br>(N)     | 150<br>(lbs)<br>(N) | 300<br>(lbs)<br>(N) | 500<br>(lbs)<br>(N) | 1200<br>(lbs)<br>(N) | 1800<br>(lbs)<br>(N) | 2500<br>(lbs)<br>(N) | 5000<br>(lbs)<br>(N) |                    |        |
| 0.094<br>2.39     | 2 1/16<br>52.39   | 10-32           | 2860<br>12727                             | 1480<br>6586                                | 921<br>4098            | 638<br>2839         | 506<br>2252         | 427<br>1900         | 319<br>1420          | 278<br>1237          | 250<br>1113          | 198<br>881           | 0.56<br>0.25       |        |
| 0.094<br>2.39     | 2 1/16<br>52.39   | 10-32           | 2860<br>12727                             | 1480<br>6586                                | 921<br>4098            | 638<br>2839         | 506<br>2252         | 427<br>1900         | 319<br>1420          | 278<br>1237          | 250<br>1113          | 198<br>881           | 0.56<br>0.25       |        |
| 0.141<br>3.58     | 2 17/64<br>57.55  | 1/4-28          | 3145<br>13995                             | 1770<br>7877                                | 1012<br>4503           | 702<br>3124         | 557<br>2479         | 469<br>2087         | 351<br>1562          | 306<br>1362          | 274<br>1219          | 218<br>970           | 0.68<br>0.31       |        |
| 0.188<br>4.78     | 2 21/32<br>67.47  | 1/4-28          | 4360<br>19402                             | 2535<br>11281                               | 1403<br>6243           | 973<br>4330         | 772<br>3435         | 651<br>2897         | 486<br>2163          | 425<br>1891          | 381<br>1695          | 302<br>1344          | 0.93<br>0.42       |        |
| 0.219<br>5.56     | 3 5/64<br>78.18   | 1/4-28          | 5755<br>25610                             | 3450<br>15353                               | 1852<br>8241           | 1284<br>5714        | 1019<br>4535        | 859<br>3823         | 642<br>2857          | 561<br>2496          | 502<br>2234          | 399<br>1776          | 0.93<br>0.42       |        |
| 0.219<br>5.56     | 3 5/64<br>78.18   | 1/4-28          | 5755<br>25610                             | 3450<br>15353                               | 1852<br>8241           | 1284<br>5714        | 1019<br>4535        | 859<br>3823         | 642<br>2857          | 561<br>2496          | 502<br>2234          | 399<br>1776          | 1.37<br>0.62       |        |
| 0.203<br>5.16     | 3 13/32<br>86.52  | 5/16-24         | 6535<br>29081                             | 4025<br>17911                               | 2103<br>9358           | 1458<br>6488        | 1157<br>5149        | 976<br>4343         | 729<br>3244          | 637<br>2835          | 571<br>2541          | 453<br>2016          | 2.00<br>0.91       |        |
| 0.187<br>4.75     | 3 25/32<br>96.04  | 3/8-24          | 7900<br>35155                             | 5250<br>23363                               | 2542<br>11312          | 1762<br>7841        | 1399<br>6226        | 1180<br>5251        | 881<br>3920          | 770<br>3427          | 690<br>3071          | 547<br>2434          | 2.43<br>1.10       |        |



# 400 Series® Single Row Unground Radial Bearings

- **RADIAL UNGROUND BEARING**
- **EASY TO USE INCH DIMENSIONS**
- **MODERATE LOADS**
- **MAX SPEED RANGE - 1000 - 1200 RPM**
- **HARDENED RINGS**
- **FULL COMPLEMENT OF BALLS**
- **FULLY UNITIZED ASSEMBLY**
- **BEARING SUPPLIED PRE-GREASED STANDARD**



| BEARING | SUFFIX | BEARING DIMENSIONAL DATA                                 |  |   |   |                       |              |
|---------|--------|--|--|---|---|-----------------------|--------------|
|         |        | A<br>BORE<br>(in)<br>(mm)<br>+0.005/-0.000<br>+.13/- .00 | B<br>O.D.<br>(in)<br>(mm)<br>+0.005/-0.000<br>+.13/- .00 | C<br>WIDTH<br>(in)<br>(mm)<br>+0.010/-0.010<br>+.25/- .25 | D<br>WIDTH<br>(in)<br>(mm)<br>Reference | BALLS<br>(in)<br>(mm) |              |
|         |        | No.  | Size   |   |   |                       |              |
| 402™    | 2V     | 0.250<br>6.35  | 0.687<br>17.45   | 0.250<br>6.35   | 0.250<br>6.35                           | 10                    | 1/8<br>3.18  |
| 400™    | 4V     | 0.250<br>6.35  | 0.875<br>22.23   | 0.250<br>6.35   | 0.250<br>6.35                           | 14                    | 1/8<br>3.18  |
| 400™    | 5V     | 0.312<br>7.92  | 0.875<br>22.23   | 0.250<br>6.35   | 0.250<br>6.35                           | 14                    | 1/8<br>3.18  |
| 400™    | 6V     | 0.375<br>9.53  | 0.875<br>22.23   | 0.250<br>6.35   | 0.250<br>6.35                           | 14                    | 1/8<br>3.18  |
| 400™    | 12V    | 0.375<br>9.53  | 0.937<br>23.80   | 0.312<br>7.92   | 0.312<br>7.92                           | 15                    | 1/8<br>3.18  |
| 400™    | 14V    | 0.250<br>6.35  | 1.062<br>26.97   | 0.250<br>6.35   | 0.250<br>6.35                           | 16                    | 1/8<br>3.18  |
| 404™    | 16V    | 0.375<br>9.53  | 1.062<br>26.97   | 0.250<br>6.35   | 0.250<br>6.35                           | 16                    | 1/8<br>3.18  |
| 400™    | 18V    | 0.375<br>9.53  | 1.062<br>26.97   | 0.375<br>9.53   | 0.375<br>9.53                           | 16                    | 1/8<br>3.18  |
| 400™    | 20V    | 0.375<br>9.53  | 1.125<br>28.58   | 0.375<br>9.53   | 0.375<br>9.53                           | 18                    | 1/8<br>3.18  |
| 400™    | 21V    | 0.437<br>11.10   | 1.125<br>28.58   | 0.375<br>9.53   | 0.375<br>9.53                           | 18                    | 1/8<br>3.18  |
| 407™    | 22V    | 0.500<br>12.70   | 1.125<br>28.58   | 0.370<br>9.40   | 0.406<br>10.31                          | 15                    | 5/32<br>3.97 |
| 400™    | 23V    | 0.312<br>7.92  | 1.281<br>32.54   | 0.312<br>7.92   | 0.312<br>7.92                           | 16                    | 5/32<br>3.97 |
| 400™    | 24V    | 0.375<br>9.53  | 1.281<br>32.54   | 0.312<br>7.92   | 0.312<br>7.92                           | 16                    | 5/32<br>3.97 |

**Notes**

Balls - Carbon Steel Grade 200

Bands - 1010 Carbon Steel, Soft

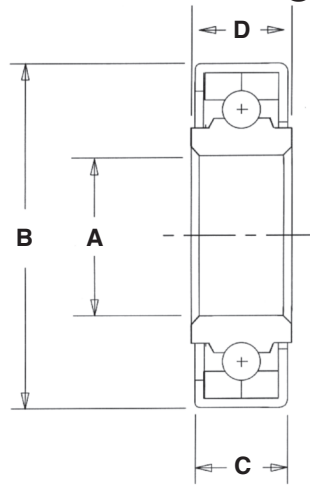
Rings - Carbon Steel, Case Hardened

Bearings supplied prelubricated with grease

All bearing designations listed herein are trademarks of RBC Nice® Bearings.

# 400 Series® Single Row Unground Radial Bearings

The 400 Series® of unground radial ball bearings are designed for moderate loads and speeds where running accuracy and noise level requirements do not warrant the more expensive precision ground bearings. This series of bearings feature a full ball complement without a retainer and a soft steel band on the outer ring. This permits the bearing to be pressed into a housing without the necessity of close housing tolerances. The bearings are designed for use in applications with speeds not exceeding 1200 rpm.



|                    |  | RADIAL CAPACITY        |                     |                     |                     |                     |                      |
|--------------------|--|------------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| WEIGHT             |  | REVOLUTIONS PER MINUTE |                     |                     |                     |                     |                      |
| W<br>(lbs)<br>(kg) |  | 50<br>(lbs)<br>(N)     | 100<br>(lbs)<br>(N) | 200<br>(lbs)<br>(N) | 300<br>(lbs)<br>(N) | 600<br>(lbs)<br>(N) | 1200<br>(lbs)<br>(N) |
| 0.02               |  | 110                    | 77                  | 53                  | 43                  | 30                  | 21                   |
| 0.01               |  | 490                    | 343                 | 236                 | 191                 | 134                 | 93                   |
| 0.03               |  | 156                    | 108                 | 75                  | 60                  | 42                  | 30                   |
| 0.01               |  | 694                    | 481                 | 334                 | 267                 | 187                 | 134                  |
| 0.03               |  | 156                    | 108                 | 75                  | 60                  | 42                  | 30                   |
| 0.01               |  | 694                    | 481                 | 334                 | 267                 | 187                 | 134                  |
| 0.03               |  | 156                    | 108                 | 75                  | 60                  | 42                  | 30                   |
| 0.01               |  | 694                    | 481                 | 334                 | 267                 | 187                 | 134                  |
| 0.04               |  | 167                    | 116                 | 80                  | 65                  | 45                  | 32                   |
| 0.02               |  | 743                    | 516                 | 356                 | 289                 | 200                 | 142                  |
| 0.05               |  | 178                    | 124                 | 85                  | 69                  | 48                  | 34                   |
| 0.02               |  | 792                    | 552                 | 378                 | 307                 | 214                 | 151                  |
| 0.04               |  | 178                    | 124                 | 85                  | 69                  | 48                  | 34                   |
| 0.02               |  | 792                    | 552                 | 378                 | 307                 | 214                 | 151                  |
| 0.05               |  | 178                    | 124                 | 85                  | 69                  | 48                  | 34                   |
| 0.02               |  | 792                    | 552                 | 378                 | 307                 | 214                 | 151                  |
| 0.08               |  | 200                    | 139                 | 96                  | 78                  | 54                  | 38                   |
| 0.04               |  | 890                    | 619                 | 427                 | 347                 | 240                 | 169                  |
| 0.07               |  | 200                    | 139                 | 96                  | 78                  | 54                  | 38                   |
| 0.03               |  | 890                    | 619                 | 427                 | 347                 | 240                 | 169                  |
| 0.07               |  | 200                    | 139                 | 96                  | 78                  | 54                  | 38                   |
| 0.03               |  | 890                    | 619                 | 427                 | 347                 | 240                 | 169                  |
| 0.09               |  | 275                    | 193                 | 133                 | 107                 | 75                  | 52                   |
| 0.04               |  | 1224                   | 859                 | 592                 | 476                 | 334                 | 231                  |
| 0.09               |  | 275                    | 193                 | 133                 | 107                 | 75                  | 52                   |
| 0.04               |  | 1224                   | 859                 | 592                 | 476                 | 334                 | 231                  |

# 400 Series® Single Row Unground Radial Bearings (con't)

- RADIAL UNGROUND BEARING
- EASY TO USE INCH DIMENSIONS
- MODERATE LOADS
- MAX SPEED RANGE - 1000 - 1200 RPM
- HARDENED RINGS
- FULL COMPLEMENT OF BALLS
- FULLY UNITIZED ASSEMBLY
- BEARING SUPPLIED PRE-GREASED STANDARD



| BEARING | SUFFIX | BEARING DIMENSIONAL DATA                       |  |   |   |                       |               |
|---------|--------|--|--|---|---|-----------------------|---------------|
|         |        | A<br>BORE<br>(in)<br>(mm)<br>+0.005/-<br>0.000 | B<br>O.D.<br>(in)<br>(mm)<br>+0.005/-0.000<br>+.13/- .00 | C<br>WIDTH<br>(in)<br>(mm)<br>+0.010/-0.010<br>+.25/- .25 | D<br>WIDTH<br>(in)<br>(mm)<br>Reference | BALLS<br>(in)<br>(mm) |               |
|         |        | No.  | Size   |   |   |                       |               |
| 400™    | 26V    | 0.500<br>12.70                                 | 1.281<br>32.54   | 0.312<br>7.92   | 0.312<br>7.92                           | 16                    | 5/32<br>3.97  |
| 408™    | 28V    | 0.500<br>12.70                                 | 1.375<br>34.93   | 0.470<br>11.94  | 0.500<br>12.70                          | 16                    | 3/16<br>4.76  |
| 410™    | 30V    | 0.625<br>15.88                                 | 1.375<br>34.93   | 0.470<br>11.94  | 0.500<br>12.70                          | 16                    | 3/16<br>4.76  |
| 400™    | 31V    | 0.500<br>12.70                                 | 1.500<br>38.10   | 0.437<br>11.10  | 0.500<br>12.70                          | 17                    | 3/16<br>4.76  |
| 400™    | 33V    | 0.625<br>15.88                                 | 1.500<br>38.10   | 0.437<br>11.10  | 0.500<br>12.70                          | 17                    | 3/16<br>4.76  |
| 412™    | 35V    | 0.750<br>19.05                                 | 1.625<br>41.28   | 0.375<br>9.53   | 0.375<br>9.53                           | 18                    | 3/16<br>4.76  |
| 400™    | 36V    | 0.750<br>19.05                                 | 1.750<br>44.45   | 0.562<br>14.27  | 0.562<br>14.27                          | 14                    | 1/4<br>6.35   |
| 416™    | 41V    | 1.000<br>25.40                                 | 2.000<br>50.80   | 0.572<br>14.53  | 0.625<br>15.88                          | 17                    | 1/4<br>6.35   |
| 400™    | 47V    | 1.250<br>31.75                                 | 2.625<br>66.68   | 0.687<br>17.45  | 0.687<br>17.45                          | 23                    | 1/4<br>6.35   |
| 424™    | 51V    | 1.500<br>38.10                                 | 2.750<br>69.85   | 0.750<br>19.05  | 0.750<br>19.05                          | 20                    | 5/16<br>7.94  |
| 400™    | 55V    | 1.750<br>44.45                                 | 3.093<br>78.56   | 0.875<br>22.23  | 0.875<br>22.23                          | 21                    | 11/32<br>8.73 |
| 400™    | 59V    | 2.000<br>50.80                                 | 3.375<br>85.73   | 0.937<br>23.80  | 0.937<br>23.80                          | 21                    | 3/8<br>9.53   |

**Notes**

Balls - Carbon Steel Grade 200

Bands - 1010 Carbon Steel, Soft

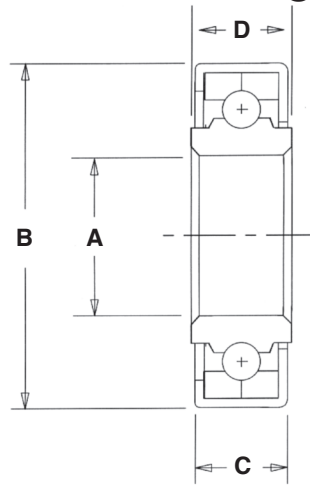
Rings - Carbon Steel, Case Hardened

Bearings supplied prelubricated with grease

All bearing designations listed herein are trademarks of RBC Nice® Bearings.

# 400 Series® Single Row Unground Radial Bearings (con't)

The 400 Series® of unground radial ball bearings are designed for moderate loads and speeds where running accuracy and noise level requirements do not warrant the more expensive precision ground bearings. This series of bearings feature a full ball complement without a retainer and a soft steel band on the outer ring. This permits the bearing to be pressed into a housing without the necessity of close housing tolerances. The bearings are designed for use in applications with speeds not exceeding 1200 rpm.



|                    |  | RADIAL CAPACITY        |                     |                     |                     |                     |                      |
|--------------------|--|------------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| WEIGHT             |  | REVOLUTIONS PER MINUTE |                     |                     |                     |                     |                      |
| W<br>(lbs)<br>(kg) |  | 50<br>(lbs)<br>(N)     | 100<br>(lbs)<br>(N) | 200<br>(lbs)<br>(N) | 300<br>(lbs)<br>(N) | 600<br>(lbs)<br>(N) | 1200<br>(lbs)<br>(N) |
| 0.09               |  | 275                    | 193                 | 133                 | 107                 | 75                  | 52                   |
| 0.04               |  | 1224                   | 859                 | 592                 | 476                 | 334                 | 231                  |
| 0.12               |  | 375                    | 261                 | 180                 | 145                 | 101                 | 71                   |
| 0.05               |  | 1669                   | 1161                | 801                 | 645                 | 449                 | 316                  |
| 0.10               |  | 375                    | 261                 | 180                 | 145                 | 101                 | 71                   |
| 0.05               |  | 1669                   | 1161                | 801                 | 645                 | 449                 | 316                  |
| 0.16               |  | 400                    | 279                 | 192                 | 155                 | 108                 | 76                   |
| 0.07               |  | 1780                   | 1242                | 854                 | 690                 | 481                 | 338                  |
| 0.14               |  | 400                    | 279                 | 192                 | 155                 | 108                 | 76                   |
| 0.06               |  | 1780                   | 1242                | 854                 | 690                 | 481                 | 338                  |
| 0.14               |  | 450                    | 313                 | 216                 | 174                 | 121                 | 85                   |
| 0.06               |  | 2003                   | 1393                | 961                 | 774                 | 538                 | 378                  |
| 0.22               |  | 625                    | 430                 | 300                 | 240                 | 168                 | 117                  |
| 0.10               |  | 2781                   | 1914                | 1335                | 1068                | 748                 | 521                  |
| 0.30               |  | 757                    | 525                 | 362                 | 293                 | 204                 | 142                  |
| 0.14               |  | 3369                   | 2336                | 1611                | 1304                | 908                 | 632                  |
| 0.75               |  | 1020                   | 710                 | 490                 | 395                 | 275                 | 193                  |
| 0.34               |  | 4539                   | 3160                | 2181                | 1758                | 1224                | 859                  |
| 0.80               |  | 1390                   | 967                 | 670                 | 540                 | 376                 | 264                  |
| 0.36               |  | 6186                   | 4303                | 2982                | 2403                | 1673                | 1175                 |
| 1.10               |  | 1770                   | 1225                | 847                 | 683                 | 477                 | 332                  |
| 0.50               |  | 7877                   | 5451                | 3769                | 3039                | 2123                | 1477                 |
| 1.35               |  | 2100                   | 1458                | 1010                | 817                 | 567                 | 396                  |
| 0.61               |  | 9345                   | 6488                | 4495                | 3636                | 2523                | 1762                 |

# 5000 Series® Single Row Unground Flanged Radial Bearings

- **RADIAL UNGROUND BEARING**
- **EASY TO USE INCH DIMENSIONS**
- **MODERATE LOADS**
- **MAX SPEED RANGE - 1000 - 1200 RPM**
- **HARDENED RINGS**
- **FULL COMPLEMENT OF BALLS**
- **FULLY UNITIZED ASSEMBLY**
- **FLANGE ON O.D. LOCATES BEARING IN TUBE OR HOUSING**
- **BEARING SUPPLIED PRE-GREASED STANDARD**



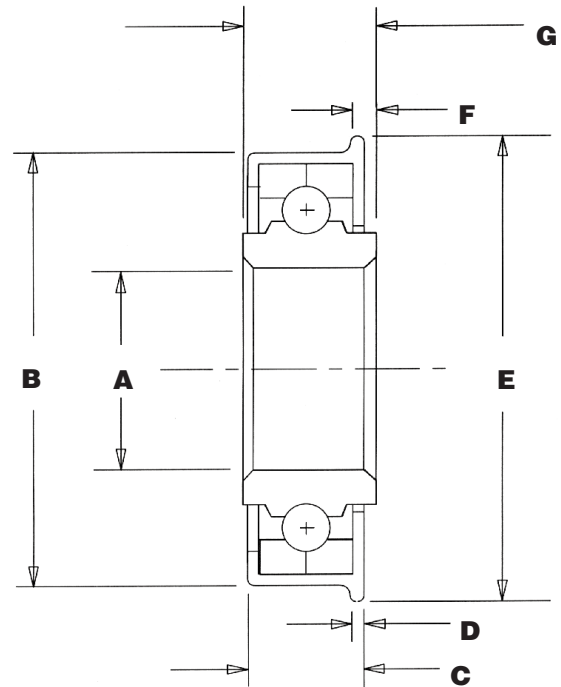
| BEARING | SUFFIX | BEARING DIMENSIONAL DATA                                |   |  |                   |                   |                   |   |  |
|---------|--------|---|---|--|-------------------|-------------------|-------------------|---|--|
|         |        | BORE<br>A<br>(in)<br>(mm)<br>+0.005/-0.000<br>+.13/-.00 | O.D.<br>B<br>(in)<br>(mm)<br>+0.005/-0.000<br>+.13/-.00 | WIDTH<br>C<br>(in)<br>(mm)<br>+0.010/-0.010<br>+.25/-.25 | D<br>(in)<br>(mm) | E<br>(in)<br>(mm) | F<br>(in)<br>(mm) | G<br>(in)<br>(mm)<br>+0.010/-0.010<br>+.25/-.25 |  |
| 5561™   | V      | 0.250<br>6.35   | 0.687<br>17.45  | 0.250<br>6.35  | 0.050<br>1.27     | 0.750<br>19.05    | 0.050<br>1.27     | 0.250<br>6.35                                   |  |
| 5543™   | V      | 0.375<br>9.53   | 0.906<br>23.01  | 0.315<br>8.00  | 0.040<br>1.02     | 1.000<br>25.40    | 0.088<br>2.24     | 0.350<br>8.89                                   |  |
| 5507™   | V      | 0.312<br>7.92   | 1.125<br>28.58  | 0.385<br>9.78  | 0.062<br>1.57     | 1.250<br>31.75    | 0.125<br>3.18     | 0.437<br>11.10                                  |  |
| 5368™   | V      | 0.375<br>9.53   | 1.125<br>28.58  | 0.385<br>9.78  | 0.062<br>1.57     | 1.250<br>31.75    | 0.125<br>3.18     | 0.437<br>11.10                                  |  |
| 5491™   | V      | 0.500<br>12.70  | 1.125<br>28.58  | 0.385<br>9.78  | 0.062<br>1.57     | 1.250<br>31.75    | 0.125<br>3.18     | 0.437<br>11.10                                  |  |
| 5881™   | V      | 0.500<br>12.70  | 1.375<br>34.93  | 0.463<br>11.76   | 0.062<br>1.57     | 1.500<br>38.10    | 0.125<br>3.18     | 0.546<br>13.87                                  |  |

**Notes**

Balls - Carbon Steel Grade 200  
 Rings - Carbon Steel, Case Hardened  
 Bands - 1010 Carbon Steel, Soft  
 Bearings supplied prelubricated with grease  
 All bearing designations listed herein are trademarks of RBC Nice® Bearings.

# 5000 Series® Single Row Unground Flanged Radial Bearings

The 5000 Series® of bearings is similar in construction to the 400 Series® bearing except it has a flange on the outer ring to locate the bearing when pressed into a tube or housing, thus eliminating the need for an external mounting device. The bearings are designed for moderate loads and speeds where running accuracy and noise level requirements do not warrant the more expensive precision ground bearings. This series of bearings feature a full ball complement without a retainer. The rings are case hardened and the soft steel band on the outer ring of the unitized assembly allows the bearing to be pressed into a housing without the necessity of close housing tolerances. The bearings are supplied pre-greased as a standard. The bearings are designed for use in applications with speeds not exceeding 1200 rpm.



|                       |      | WEIGHT             | RADIAL CAPACITY        |                     |                     |                     |                     |                      |  |
|-----------------------|------|--------------------|------------------------|---------------------|---------------------|---------------------|---------------------|----------------------|--|
| BALLS<br>(in)<br>(mm) |      | W<br>(lbs)<br>(kg) | REVOLUTIONS PER MINUTE |                     |                     |                     |                     |                      |  |
| NO.                   | SIZE |                    | 50<br>(lbs)<br>(N)     | 100<br>(lbs)<br>(N) | 200<br>(lbs)<br>(N) | 300<br>(lbs)<br>(N) | 600<br>(lbs)<br>(N) | 1200<br>(lbs)<br>(N) |  |
| 10                    | 1/8  | 0.02               | 110                    | 77                  | 53                  | 43                  | 30                  | 21                   |  |
|                       | 3.18 | 0.01               | 490                    | 343                 | 236                 | 191                 | 134                 | 93                   |  |
| 15                    | 1/8  | 0.04               | 167                    | 116                 | 80                  | 65                  | 45                  | 32                   |  |
|                       | 3.18 | 0.02               | 743                    | 516                 | 356                 | 289                 | 200                 | 142                  |  |
| 15                    | 5/32 | 0.08               | 200                    | 139                 | 96                  | 78                  | 54                  | 38                   |  |
|                       | 3.97 | 0.04               | 890                    | 619                 | 427                 | 347                 | 240                 | 169                  |  |
| 15                    | 5/32 | 0.07               | 200                    | 139                 | 96                  | 78                  | 54                  | 38                   |  |
|                       | 3.97 | 0.03               | 890                    | 619                 | 427                 | 347                 | 240                 | 169                  |  |
| 15                    | 5/32 | 0.07               | 200                    | 139                 | 96                  | 78                  | 54                  | 38                   |  |
|                       | 3.97 | 0.03               | 890                    | 619                 | 427                 | 347                 | 240                 | 169                  |  |
| 16                    | 3/16 | 0.12               | 375                    | 261                 | 180                 | 145                 | 101                 | 71                   |  |
|                       | 4.76 | 0.05               | 1669                   | 1161                | 801                 | 645                 | 449                 | 316                  |  |



**Series® Single Row Unground Flanged Radial Bearings (con't)**



- **RADIAL UNGROUND BEARING**
- **EASY TO USE INCH DIMENSIONS**
- **MODERATE LOADS**
- **MAX SPEED RANGE - 1000 - 1200 RPM**
- **HARDENED RINGS**
- **FULL COMPLEMENT OF BALLS**
- **FULLY UNITIZED ASSEMBLY**
- **FLANGE ON O.D. LOCATES BEARING IN TUBE OR HOUSING**
- **BEARING SUPPLIED PRE-GREASED STANDARD**

| BEARING | SUFFIX | BEARING DIMENSIONAL DATA                                 |  |   |                   |                   |                   |  |  |
|---------|--------|--|--|---|-------------------|-------------------|-------------------|--|--|
|         |        | BORE<br>A<br>(in)<br>(mm)<br>+0.005/-0.000<br>+.13/-0.00 | O.D.<br>B<br>(in)<br>(mm)<br>+0.005/-0.000<br>+.13/-0.00 | WIDTH<br>C<br>(in)<br>(mm)<br>+0.010/-0.010<br>+.25/-0.25 | D<br>(in)<br>(mm) | E<br>(in)<br>(mm) | F<br>(in)<br>(mm) | G<br>(in)<br>(mm)<br>+0.010/-0.010<br>+.25/-0.25 |  |
| 5273™   | V      | 0.625<br>15.88   | 1.375<br>34.93   | 0.463<br>11.76  | 0.062<br>1.57     | 1.500<br>38.10    | 0.125<br>3.18     | 0.546<br>13.87                                   |  |
| 5327™   | V      | 0.500<br>12.70   | 1.500<br>38.10   | 0.447<br>11.35  | 0.062<br>1.57     | 1.656<br>42.06    | 0.125<br>3.18     | 0.531<br>13.49                                   |  |
| 5281™   | V      | 0.500<br>12.70   | 1.578<br>40.08   | 0.515<br>13.08  | 0.140<br>3.56     | 1.687<br>42.85    | 0.234<br>5.94     | 0.609<br>15.47                                   |  |
| 5891™   | V      | 0.750<br>19.05   | 1.750<br>44.45   | 0.595<br>15.11  | 0.093<br>2.36     | 1.875<br>47.63    | 0.156<br>3.96     | 0.687<br>17.45                                   |  |
| 5875™   | V      | 0.750<br>19.05   | 2.000<br>50.80   | 0.572<br>14.53  | 0.093<br>2.36     | 2.125<br>53.98    | 0.218<br>5.54     | 0.718<br>18.24                                   |  |
| 5418™   | V      | 1.000<br>25.40   | 2.000<br>50.80   | 0.572<br>14.53  | 0.093<br>2.36     | 2.125<br>53.98    | 0.218<br>5.54     | 0.718<br>18.24                                   |  |

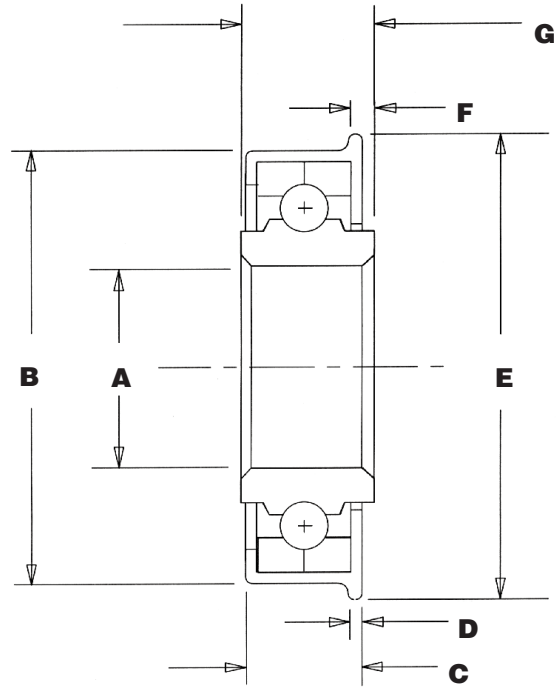
**Notes**

- Balls - Carbon Steel Grade 200
- Rings - Carbon Steel, Case Hardened
- Bands - 1010 Carbon Steel, Soft
- Bearings supplied prelubricated with grease
- All bearing designations listed herein are trademarks of RBC Nice® Bearings.

5000

Series® Single Row Unground Flanged Radial Bearings (con't)

The 5000 Series® of bearings is similar in construction to the 400 Series® bearing except it has a flange on the outer ring to locate the bearing when pressed into a tube or housing, thus eliminating the need for an external mounting device. The bearings are designed for moderate loads and speeds where running accuracy and noise level requirements do not warrant the more expensive precision ground bearings. This series of bearings feature a full ball complement without a retainer. The rings are case hardened and the soft steel band on the outer ring of the unitized assembly allows the bearing to be pressed into a housing without the necessity of close housing tolerances. The bearings are supplied pre-greased as a standard. The bearings are designed for use in applications with speeds not exceeding 1200 rpm.



|       |      | WEIGHT | RADIAL CAPACITY    |                        |                     |                     |                     |                     |                      |  |
|-------|------|--------|--------------------|------------------------|---------------------|---------------------|---------------------|---------------------|----------------------|--|
| BALLS |      |        | W<br>(lbs)<br>(kg) | REVOLUTIONS PER MINUTE |                     |                     |                     |                     |                      |  |
| NO.   | SIZE |        |                    | 50<br>(lbs)<br>(N)     | 100<br>(lbs)<br>(N) | 200<br>(lbs)<br>(N) | 300<br>(lbs)<br>(N) | 600<br>(lbs)<br>(N) | 1200<br>(lbs)<br>(N) |  |
| 16    | 3/16 | 0.10   | 375                | 261                    | 180                 | 145                 | 101                 | 71                  |                      |  |
|       | 4.76 | 0.05   | 1669               | 1161                   | 801                 | 645                 | 449                 | 316                 |                      |  |
| 17    | 3/16 | 0.16   | 492                | 342                    | 236                 | 190                 | 132                 | 92                  |                      |  |
|       | 4.76 | 0.07   | 2189               | 1522                   | 1050                | 846                 | 587                 | 409                 |                      |  |
| 12    | 1/4  | 0.23   | 535                | 367                    | 258                 | 206                 | 144                 | 100                 |                      |  |
|       | 6.35 | 0.10   | 2381               | 1633                   | 1148                | 917                 | 641                 | 445                 |                      |  |
| 15    | 1/4  | 0.28   | 625                | 430                    | 300                 | 240                 | 168                 | 117                 |                      |  |
|       | 6.35 | 0.13   | 2781               | 1914                   | 1335                | 1068                | 748                 | 521                 |                      |  |
| 17    | 1/4  | 0.32   | 757                | 525                    | 362                 | 293                 | 204                 | 142                 |                      |  |
|       | 6.35 | 0.15   | 3369               | 2336                   | 1611                | 1304                | 908                 | 632                 |                      |  |
| 17    | 1/4  | 0.30   | 757                | 525                    | 362                 | 293                 | 204                 | 142                 |                      |  |
|       | 6.35 | 0.14   | 3369               | 2336                   | 1611                | 1304                | 908                 | 632                 |                      |  |

**Series® Single Row Unground Combination  
Radial and Thrust Bearings**

- **ANGULAR CONTACT UNGROUND BEARING**
- **EASY TO USE INCH DIMENSIONS**
- **MODERATE LOADS**
- **MAX SPEED RANGE - 1000 - 1200 RPM**
- **HARDENED RINGS**
- **FULL COMPLEMENT OF BALLS**
- **FULLY UNITIZED ASSEMBLY**



| BEARING     | BEARING DIMENSIONAL DATA          |                                   |                                  |                                  |                |               |              |              |                         | COMBINED RADIAL        |                   |                   |                   |
|-------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|----------------|---------------|--------------|--------------|-------------------------|------------------------|-------------------|-------------------|-------------------|
|             | A                                 | B                                 | C                                | D                                | E              | R ①           | BALLS        |              | WEIGHT<br>(lbs)<br>(kg) | REVOLUTIONS PER MINUTE |                   |                   |                   |
|             | BORE                              | O.D.                              | WIDTH                            |                                  |                | RADIUS        | (in)<br>(mm) |              |                         | 10                     |                   | 50                |                   |
|             | (in)<br>(mm)                      | (in)<br>(mm)                      | (in)<br>(mm)                     | (in)<br>(mm)                     | (in)<br>(mm)   | (in)<br>(mm)  | No.          | Size         |                         | R<br>(lbs)<br>(N)      | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) |
|             | +0.005<br>+0.13<br>-0.000<br>-.00 | +0.005<br>+0.13<br>-0.000<br>-.00 | +0.010<br>+.25<br>-0.010<br>-.25 | +0.015<br>+.38<br>-0.015<br>-.38 |                |               |              |              |                         |                        |                   |                   |                   |
| <b>501™</b> | 0.250<br>6.35                     | 0.687<br>17.45                    | 0.250<br>6.35                    | 0.219<br>5.56                    | 0.500<br>12.70 | 0.094<br>2.38 | 11           | 1/8<br>3.18  | 0.01<br>0.00            | 72<br>320              | 48<br>214         | 50<br>223         | 33<br>147         |
| <b>503™</b> | 0.375<br>9.53                     | 1.062<br>26.97                    | 0.406<br>10.31                   | 0.344<br>8.73                    | 0.719<br>18.26 | 0.172<br>4.37 | 11           | 3/16<br>4.76 | 0.06<br>0.03            | 162<br>721             | 108<br>481        | 115<br>512        | 77<br>343         |
| <b>504™</b> | 0.437<br>11.10                    | 0.812<br>20.62                    | 0.219<br>5.56                    | 0.187<br>4.75                    | 0.625<br>15.88 | 0.078<br>1.98 | 20           | 3/32<br>2.38 | 0.01<br>0.01            | 73<br>325              | 49<br>218         | 52<br>231         | 35<br>156         |
| <b>505™</b> | 0.437<br>11.10                    | 0.906<br>23.01                    | 0.281<br>7.14                    | 0.250<br>6.35                    | 0.688<br>17.46 | 0.094<br>2.38 | 16           | 1/8<br>3.18  | 0.04<br>0.02            | 105<br>467             | 70<br>312         | 73<br>325         | 49<br>218         |
| <b>507™</b> | 0.437<br>11.10                    | 1.047<br>26.59                    | 0.359<br>9.13                    | 0.312<br>7.92                    | 0.750<br>19.05 | 0.172<br>4.37 | 11           | 3/16<br>4.76 | 0.04<br>0.02            | 177<br>788             | 118<br>525        | 125<br>556        | 83<br>369         |
| <b>508™</b> | 0.500<br>12.70                    | 1.125<br>28.58                    | 0.344<br>8.74                    | 0.312<br>7.92                    | 0.875<br>22.23 | 0.141<br>3.57 | 13           | 3/16<br>4.76 | 0.06<br>0.03            | 190<br>846             | 127<br>565        | 136<br>605        | 91<br>405         |
| <b>511™</b> | 0.625<br>15.88                    | 1.359<br>34.52                    | 0.422<br>10.72                   | 0.375<br>9.53                    | 1.047<br>26.59 | 0.172<br>4.37 | 16           | 3/16<br>4.76 | 0.08<br>0.03            | 235<br>1046            | 157<br>699        | 167<br>743        | 111<br>494        |

① Maximum fillet radius on shaft which the bearing will clear

② SPECIAL TOLERANCES

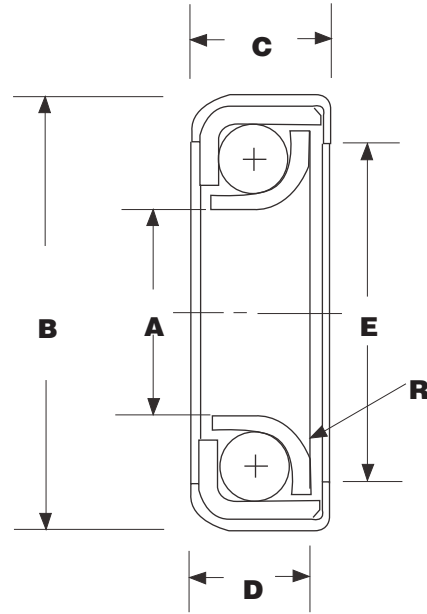
T8 = +.008/-0.000 (+.20/-0.00)

T10 = +.010/-0.000 (+.25/-0.00)

All bearing designations listed herein are trademarks of RBC Nice® Bearings.

# 500 Series® Single Row Unground Combination Radial and Thrust Bearings

The 500 Series® of unground combination radial and thrust bearings are designed for applications where a pure radial bearing or a pure thrust bearing would be unsuitable. The 500 Series® is an angular contact bearing designed for applications where thrust and/or radial load carrying capability is required.



| AND THRUST CAPACITY    |                   |                   |                   |                   |                   |                   |                   |                   | THRUST CAPACITY        |                   |                   |                   |                   |  |
|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------------|-------------------|-------------------|-------------------|-------------------|--|
| REVOLUTIONS PER MINUTE |                   |                   |                   |                   |                   |                   |                   |                   | REVOLUTIONS PER MINUTE |                   |                   |                   |                   |  |
| 100                    |                   | 250               |                   | 500               |                   | 1000              |                   | 10                | 50                     | 100               | 250               | 500               | 1000              |  |
| R<br>(lbs)<br>(N)      | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N)      | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) |  |
| 35                     | 23                | 23                | 15                | 16                | 11                | 10                | 7                 | 71                | 58                     | 43                | 25                | 18                | 15                |  |
| 156                    | 102               | 102               | 67                | 71                | 49                | 45                | 31                | 316               | 258                    | 191               | 111               | 80                | 67                |  |
| 80                     | 53                | 51                | 34                | 35                | 23                | 25                | 17                | 161               | 130                    | 96                | 56                | 40                | 34                |  |
| 356                    | 236               | 227               | 151               | 156               | 102               | 111               | 76                | 716               | 579                    | 427               | 249               | 178               | 151               |  |
| 25                     | 17                | 23                | 15                | 16                | 11                | 10                | 7                 | 73                | 59                     | 44                | 25                | 18                | 15                |  |
| 111                    | 76                | 102               | 67                | 71                | 49                | 45                | 31                | 325               | 263                    | 196               | 111               | 80                | 67                |  |
| 52                     | 35                | 33                | 22                | 22                | 15                | 16                | 11                | 104               | 84                     | 62                | 36                | 26                | 22                |  |
| 231                    | 156               | 147               | 98                | 98                | 67                | 71                | 49                | 463               | 374                    | 276               | 160               | 116               | 98                |  |
| 88                     | 59                | 56                | 37                | 40                | 27                | 27                | 18                | 176               | 142                    | 105               | 61                | 44                | 37                |  |
| 392                    | 263               | 249               | 165               | 178               | 120               | 120               | 80                | 783               | 632                    | 467               | 271               | 196               | 165               |  |
| 98                     | 65                | 61                | 40                | 42                | 28                | 31                | 21                | 190               | 154                    | 113               | 66                | 48                | 40                |  |
| 436                    | 289               | 271               | 178               | 187               | 125               | 138               | 93                | 846               | 685                    | 503               | 294               | 214               | 178               |  |
| 117                    | 78                | 74                | 50                | 52                | 35                | 37                | 25                | 234               | 189                    | 140               | 81                | 59                | 49                |  |
| 521                    | 347               | 329               | 223               | 231               | 156               | 165               | 111               | 1041              | 841                    | 623               | 360               | 263               | 218               |  |

**Notes**

- Balls - Carbon Steel Grade 200
- Rings - Carbon Steel, Case Hardened
- Bands - 1010 Carbon Steel, Soft
- Bearings supplied prelubricated with grease

**Series® Single Row Unground Combination  
Radial and Thrust Bearings (con't)**

- **ANGULAR CONTACT UNGROUND BEARING**
- **EASY TO USE INCH DIMENSIONS**
- **MODERATE LOADS**
- **MAX SPEED RANGE - 1000 - 1200 RPM**
- **HARDENED RINGS**
- **FULL COMPLEMENT OF BALLS**
- **FULLY UNITIZED ASSEMBLY**



| BEARING | BEARING DIMENSIONAL DATA |            |        |        |       |        |       |      |        | COMBINED RADIAL        |      |       |       |       |       |
|---------|--------------------------|------------|--------|--------|-------|--------|-------|------|--------|------------------------|------|-------|-------|-------|-------|
|         | A                        | B          | C      | D      | E     | R 1    | BALLS |      | WEIGHT | REVOLUTIONS PER MINUTE |      |       |       |       |       |
|         | BORE                     | O.D.       | WIDTH  |        |       | RADIUS | (in)  |      |        | 10                     |      | 50    |       |       |       |
|         | (in)                     | (in)       | (in)   | (in)   | (in)  | (in)   | (in)  | (in) | (in)   | No.                    | Size | (lbs) | (lbs) | (lbs) | (lbs) |
|         | +0.005                   | +0.005     | +0.010 | +0.015 |       |        |       |      |        |                        |      |       |       |       |       |
|         | +0.13                    | +0.13      | +.25   | +.38   |       |        |       |      |        |                        |      |       |       |       |       |
|         | -0.000                   | -0.000     | -0.010 | -0.015 |       |        |       |      |        |                        |      |       |       |       |       |
|         | -.00                     | -.00       | -.25   | -.38   |       |        |       |      |        |                        |      |       |       |       |       |
| 512™    | 0.750                    | 1.594      | 0.500  | 0.422  | 1.250 | 0.203  | 14    | 1/4  | 0.14   | 366                    | 244  | 260   | 173   |       |       |
|         | 19.05                    | 40.49      | 12.70  | 10.72  | 31.75 | 5.16   |       | 6.35 | 0.06   | 1629                   | 1086 | 1157  | 770   |       |       |
| 513™    | 0.875                    | 1.687      | 0.469  | 0.422  | 1.281 | 0.188  | 15    | 1/4  | 0.08   | 393                    | 262  | 273   | 182   |       |       |
|         | 22.23                    | 42.85      | 11.91  | 10.72  | 32.54 | 4.76   |       | 6.35 | 0.04   | 1749                   | 1166 | 1215  | 810   |       |       |
| 515™ 2  | 1.000 T8                 | 2.047      | 0.609  | 0.547  | 1.625 | 0.219  | 14    | 5/16 | 0.25   | 573                    | 382  | 400   | 267   |       |       |
|         | 25.40 T8                 | 51.99      | 15.48  | 13.89  | 41.28 | 5.56   |       | 7.94 | 0.11   | 2550                   | 1700 | 1780  | 1188  |       |       |
| 516™ 2  | 1.125 T10                | 2.812      | 0.422  | 0.344  | 1.438 | 0.141  | 24    | 3/16 | 0.10   | 354                    | 236  | 250   | 167   |       |       |
|         | 28.56 T10                | 71.42      | 10.72  | 8.73   | 36.53 | 3.57   |       | 4.76 | 0.05   | 1575                   | 1050 | 1113  | 743   |       |       |
| 517™ 2  | 1.250 T10                | 2.3075 T10 | 0.594  | 0.547  | 1.844 | 0.250  | 17    | 5/16 | 0.28   | 696                    | 464  | 490   | 327   |       |       |
|         | 31.75 T10                | 58.611 T10 | 15.08  | 13.89  | 46.84 | 6.35   |       | 7.94 | 0.13   | 3097                   | 2065 | 2181  | 1455  |       |       |
| 518™ 2  | 1.312 T10                | 2.3075 T10 | 0.609  | 0.531  | 1.844 | 0.234  | 19    | 9/32 | 0.30   | 630                    | 420  | 442   | 295   |       |       |
|         | 33.33 T10                | 58.611 T10 | 15.48  | 13.49  | 46.84 | 5.95   |       | 7.14 | 0.14   | 2804                   | 1869 | 1967  | 1313  |       |       |

1 Maximum fillet radius on shaft which the bearing will clear

2 SPECIAL TOLERANCES

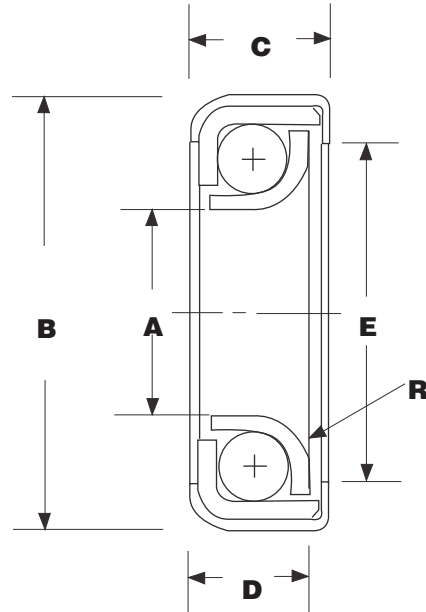
T8 = +.008/-0.000 (+.20/-0.00)

T10 = +.010/-0.000 (+.25/-0.00)

All bearing designations listed herein are trademarks of RBC Nice® Bearings.

Series® Single Row Unground Combination Radial and Thrust Bearings (con't)

The 500 Series® of unground combination radial and thrust bearings are designed for applications where a pure radial bearing or a pure thrust bearing would be unsuitable. The 500 Series® is an angular contact bearing designed for applications where thrust and/or radial load carrying capability is required.



| AND THRUST CAPACITY    |                   |                   |                   |                   |                   |                   |                   |                   | THRUST CAPACITY        |                   |                   |                   |                   |  |
|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------------|-------------------|-------------------|-------------------|-------------------|--|
| REVOLUTIONS PER MINUTE |                   |                   |                   |                   |                   |                   |                   |                   | REVOLUTIONS PER MINUTE |                   |                   |                   |                   |  |
| 100                    |                   | 250               |                   | 500               |                   | 1000              |                   | 10                | 50                     | 100               | 250               | 500               | 1000              |  |
| R<br>(lbs)<br>(N)      | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N)      | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) | R<br>(lbs)<br>(N) | T<br>(lbs)<br>(N) |  |
| 182                    | 121               | 116               | 77                | 82                | 55                | 58                | 39                | 364               | 294                    | 217               | 126               | 91                | 76                |  |
| 810                    | 538               | 516               | 343               | 365               | 245               | 258               | 174               | 1620              | 1308                   | 966               | 561               | 405               | 338               |  |
| 196                    | 131               | 124               | 83                | 85                | 57                | 60                | 40                | 390               | 315                    | 233               | 135               | 98                | 81                |  |
| 872                    | 583               | 552               | 369               | 378               | 254               | 267               | 178               | 1736              | 1402                   | 1037              | 601               | 436               | 360               |  |
| 284                    | 189               | 181               | 121               | 127               | 85                | 90                | 60                | 569               | 459                    | 339               | 197               | 142               | 118               |  |
| 1264                   | 841               | 805               | 538               | 565               | 378               | 401               | 267               | 2532              | 2043                   | 1509              | 877               | 632               | 525               |  |
| 177                    | 118               | 112               | 74                | 79                | 53                | 57                | 38                | 351               | 284                    | 209               | 122               | 88                | 73                |  |
| 788                    | 525               | 498               | 329               | 352               | 236               | 254               | 169               | 1562              | 1264                   | 930               | 543               | 392               | 325               |  |
| 345                    | 230               | 220               | 147               | 156               | 104               | 109               | 73                | 691               | 558                    | 412               | 239               | 173               | 144               |  |
| 1535                   | 1024              | 979               | 654               | 694               | 463               | 485               | 325               | 3075              | 2483                   | 1833              | 1064              | 770               | 641               |  |
| 312                    | 208               | 199               | 133               | 139               | 93                | 99                | 66                | 625               | 505                    | 373               | 217               | 156               | 130               |  |
| 1388                   | 926               | 886               | 592               | 619               | 414               | 441               | 294               | 2781              | 2247                   | 1660              | 966               | 694               | 579               |  |

Notes

- Balls - Carbon Steel Grade 200
- Rings - Carbon Steel, Case Hardened
- Bands - 1010 Carbon Steel, Soft
- Bearings supplied prelubricated with grease



# 600 Series™ Unground Thrust Bearings

- **UNGROUND THRUST BEARING**
- **EASY TO USE INCH DIMENSIONS**
- **MODERATE LOADS**
- **MAX SPEED RANGE - 1000 - 1200 RPM**
- **HARDENED RINGS**
- **FULL COMPLEMENT OF BALLS**
- **SOFT STEEL BAND OFFERS EASE OF INSTALLATION**
- **UPPER RING IS FREE TO ROTATE AND HAS CLOSE FIT FOR SHAFTS**
- **LOWER RING IS FIXED AND HAS SHAFT CLEARANCE IN THE BORE**



## BEARING DIMENSIONAL DATA

| BEARING | SUFFIX  | A BORE                                   | A1 BORE                             | B O.D.                              | C HEIGHT                            | BALLS |              | WEIGHT<br>(lbs)<br>(kg) |
|---------|---------|--|-------------------------------------|-------------------------------------|-------------------------------------|-------|--------------|-------------------------|
|         |         | (in)<br>(mm)<br>+.010/-.000<br>+.25/-.00 | (in)<br>(mm)<br>+/- .010<br>+/- .25 | (in)<br>(mm)<br>+/- .010<br>+/- .79 | (in)<br>(mm)<br>+/- .010<br>+/- .25 | No.   | Size         |                         |
| 601™    | V       | .250<br>6.35                             | .275<br>6.99                        | 27/32<br>21.43                      | .333<br>8.46                        | 10    | 5/32<br>3.97 | 0.03<br>0.01            |
| 602™    | V       | .375<br>9.53                             | .400<br>10.16                       | 1 3/64<br>26.59                     | .359<br>9.12                        | 14    | 5/32<br>3.97 | 0.06<br>0.03            |
| 602™    | 3/4 - V | .453<br>11.51                            | .478<br>12.14                       | 55/64<br>21.83                      | .281<br>7.14                        | 15    | 1/8<br>45.72 | 0.03<br>0.01            |
| 603™    | V       | .500<br>12.70                            | .525<br>13.34                       | 1 17/64<br>32.15                    | .437<br>11.10                       | 10    | 1/4<br>35.56 | 0.09<br>0.04            |
| 603™    | 1/4 -V  | .500<br>12.70                            | .525<br>13.34                       | 1<br>25.40                          | .344<br>8.74                        | 12    | 3/16<br>4.76 | 0.04<br>0.02            |
| 605™    | V       | .625<br>15.88                            | .656<br>16.66                       | 1 1/8<br>28.58                      | .344<br>8.74                        | 16    | 5/32<br>3.97 | 0.04<br>0.02            |
| 606™    | V       | .625<br>15.88                            | .656<br>16.66                       | 1 27/64<br>36.12                    | .453<br>11.51                       | 12    | 1/4<br>6.35  | 0.12<br>0.05            |
| 607™    | V       | .750<br>19.05                            | .775<br>19.69                       | 1 21/32<br>42.07                    | .545<br>13.84                       | 15    | 1/4<br>6.35  | 0.19<br>0.09            |
| 608™    | V       | .875<br>22.23                            | .900<br>22.86                       | 1 57/64<br>48.02                    | .594<br>15.09                       | 17    | 1/4<br>6.35  | 0.28<br>0.13            |
| 608™    | 1/4 -V  | .984<br>24.99                            | 1.031<br>26.19                      | 1 3/4<br>44.45                      | .625<br>15.87                       | 16    | 1/4<br>6.35  | 0.19<br>0.09            |

**Notes**

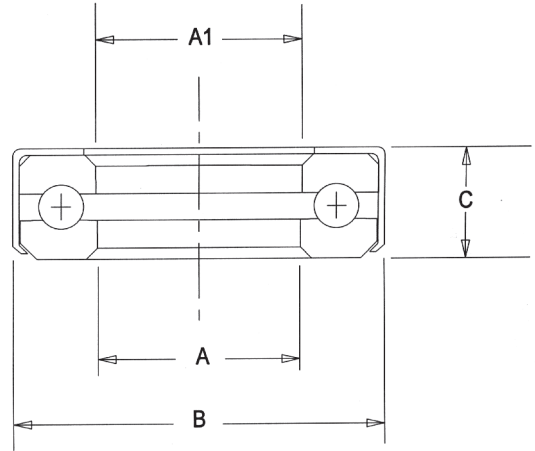
Bands - Carbon Steel Soft  
 Balls - Carbon Steel Grade 200  
 Washers - Carbon Steel Case Hard  
 Bearings Oiled with a Rust Preventative  
 All Bearings Marked on Band with "Designation Nice USA" as Shown"

All bearing designations listed herein are trademarks of RBC Nice® Bearings.

# 600 Series™ Unground Thrust Bearings

The 600 Series™ bearing is designed for moderate speeds and medium thrust loads. These bearings utilize a full ball complement. Rings are cold forged from hardenable strip steel and are carefully heat treated. These bearings may be plated or manufactured from stainless steel upon request.

The entire assembly is housed in a soft steel band which lends itself to an easy press fit into a housing. The band also serves as a dust shield and helps retain the bearing lubricant. The upper ring is free to rotate in the band and has a close fit in the bore for the shaft. The lower ring is fixed in the band and has a shaft clearance in the bore.



## THRUST CAPACITY

|  | REVOLUTIONS PER MINUTE |                    |                     |                     |                     |                      |
|--|------------------------|--------------------|---------------------|---------------------|---------------------|----------------------|
|  | 10<br>(lbs)<br>(N)     | 50<br>(lbs)<br>(N) | 100<br>(lbs)<br>(N) | 250<br>(lbs)<br>(N) | 500<br>(lbs)<br>(N) | 1000<br>(lbs)<br>(N) |
|  | 304<br>1353            | 246<br>1095        | 182<br>810          | 98<br>436           | 71<br>316           | 51<br>227            |
|  | 426<br>1896            | 344<br>1531        | 254<br>1130         | 138<br>614          | 100<br>445          | 71<br>316            |
|  | 292<br>1299            | 236<br>1050        | 174<br>774          | 94<br>418           | 68<br>303           | 48<br>214            |
|  | 780<br>3471            | 630<br>2804        | 465<br>2069         | 252<br>1121         | 182<br>810          | 129<br>574           |
|  | 526<br>2341            | 425<br>1891        | 314<br>1397         | 170<br>757          | 123<br>547          | 87<br>387            |
|  | 858<br>3818            | 693<br>3084        | 511<br>2274         | 277<br>1233         | 200<br>890          | 143<br>636           |
|  | 936<br>4165            | 750<br>3338        | 558<br>2483         | 302<br>1344         | 218<br>970          | 155<br>690           |
|  | 1170<br>5207           | 945<br>4205        | 698<br>3106         | 378<br>1682         | 273<br>1215         | 194<br>863           |
|  | 1326<br>5901           | 1071<br>4766       | 791<br>3520         | 428<br>1905         | 309<br>1375         | 220<br>979           |
|  | 1248<br>5551           | 1008<br>4484       | 744<br>3309         | 403<br>1793         | 291<br>1294         | 207<br>921           |

# 600 Series™ Unground Thrust Bearings (con't)

- **UNGROUND THRUST BEARING**
- **EASY TO USE INCH DIMENSIONS**
- **MODERATE LOADS**
- **MAX SPEED RANGE - 1000 - 1200 RPM**
- **HARDENED RINGS**
- **FULL COMPLEMENT OF BALLS**
- **SOFT STEEL BAND OFFERS EASE OF INSTALLATION**
- **UPPER RING IS FREE TO ROTATE AND HAS CLOSE FIT FOR SHAFTS**
- **LOWER RING IS FIXED AND HAS SHAFT CLEARANCE IN THE BORE**



## BEARING DIMENSIONAL DATA

| BEARING | SUFFIX | A  | A1                                  | B                                   | C                                   | BALLS        |             | WEIGHT<br>(lbs)<br>(kg) |
|---------|--------|--|-------------------------------------|-------------------------------------|-------------------------------------|--------------|-------------|-------------------------|
|         |        | BORE                                     | BORE                                | O.D.                                | HEIGHT                              | (in)<br>(mm) |             |                         |
|         |        | (in)<br>(mm)<br>+.010/-.000<br>+.25/-.00 | (in)<br>(mm)<br>+/- .010<br>+/- .25 | (in)<br>(mm)<br>+/- .010<br>+/- .79 | (in)<br>(mm)<br>+/- .010<br>+/- .25 | No.          | Size        |                         |
| 609™    | V      | 1.000<br>25.40                           | 1.075<br>27.31                      | 2<br>50.80                          | .630<br>16.00                       | 12           | 3/8<br>9.53 | 0.30<br>0.14            |
| 610™    | V      | 1.000<br>25.40                           | 1.031<br>26.19                      | 1 31/32<br>50.01                    | .625<br>15.88                       | 18           | 1/4<br>6.35 | 0.29<br>0.13            |
| 610™    | 1/4 -V | 1.016<br>25.81                           | 1.031<br>26.19                      | 1 3/4<br>44.45                      | .625<br>15.88                       | 16           | 1/4<br>6.35 | 0.21<br>0.10            |
| 611™    | V      | 1.063<br>27.00                           | 1.094<br>27.79                      | 1 31/32<br>50.01                    | .625<br>15.88                       | 18           | 1/4<br>6.35 | 0.26<br>0.12            |
| 613™    | V      | 1.125<br>28.58                           | 1.150<br>29.21                      | 2 3/32<br>53.18                     | .625<br>15.88                       | 19           | 1/4<br>6.35 | 0.31<br>0.14            |
| 614™    | V      | 1.187<br>30.15                           | 1.212<br>30.78                      | 2 3/32<br>55.56                     | .625<br>15.88                       | 19           | 1/4<br>6.35 | 0.32<br>0.15            |
| 616™    | V      | 1.25<br>31.75                            | 1.275<br>32.39                      | 2 11/32<br>59.53                    | .625<br>15.88                       | 23           | 1/4<br>6.35 | 0.4<br>0.18             |
| 618™    | V      | 1.375<br>34.92                           | 1.400<br>35.56                      | 2 15/32<br>62.71                    | .625<br>15.88                       | 23           | 1/4<br>6.35 | 0.45<br>0.20            |
| 619™    | V      | 1.437<br>36.50                           | 1.462<br>37.13                      | 2 15/32<br>62.71                    | .625<br>15.88                       | 23           | 1/4<br>6.35 | 0.43<br>0.20            |
| 621™    | V      | 1.500<br>38.10                           | 1.525<br>38.74                      | 2 19/32<br>65.88                    | .625<br>15.88                       | 25           | 1/4<br>6.35 | 0.45<br>0.20            |

**Notes**

Balls - Carbon Steel Grade 200

Bands - Carbon Steel Soft

Washers - Carbon Steel Case Hard

Bearings Oiled with a Rust Preventative

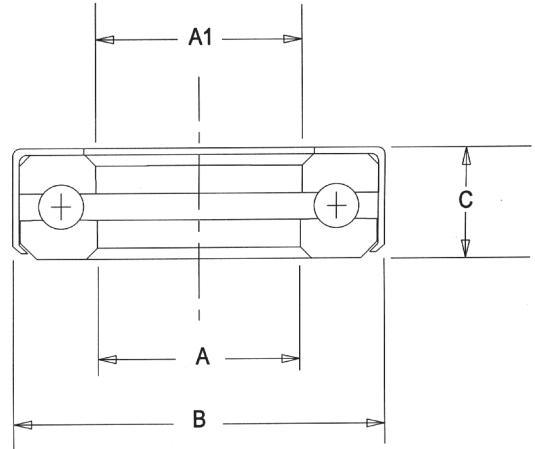
All Bearings Marked on Band with "Designation Nice USA" as Shown"

All bearing designations listed herein are trademarks of RBC Nice® Bearings.

# 600 Series™ Unground Thrust Bearings (con't)

The 600 Series™ bearing is designed for moderate speeds and medium thrust loads. These bearings utilize a full ball complement. Rings are cold forged from hardenable strip steel and are carefully heat treated. These bearings may be plated or manufactured from stainless steel upon request.

The entire assembly is housed in a soft steel band which lends itself to an easy press fit into a housing. The band also serves as a dust shield and helps retain the bearing lubricant. The upper ring is free to rotate in the band and has a close fit in the bore for the shaft. The lower ring is fixed in the band and has a shaft clearance in the bore.



## THRUST CAPACITY

|  | REVOLUTIONS PER MINUTE |                    |                     |                     |                     |                      |
|--|------------------------|--------------------|---------------------|---------------------|---------------------|----------------------|
|  | 10<br>(lbs)<br>(N)     | 50<br>(lbs)<br>(N) | 100<br>(lbs)<br>(N) | 250<br>(lbs)<br>(N) | 500<br>(lbs)<br>(N) | 1000<br>(lbs)<br>(N) |
|  | 1706<br>7592           | 1378<br>6132       | 1017<br>4526        | 551<br>2452         | 398<br>1771         | 284<br>1264          |
|  | 1404<br>6248           | 1134<br>5046       | 837<br>3725         | 454<br>2020         | 328<br>1460         | 233<br>1037          |
|  | 1248<br>5554           | 1008<br>4486       | 744<br>3311         | 403<br>1793         | 291<br>1295         | 207<br>921           |
|  | 1404<br>6248           | 1134<br>5046       | 837<br>3725         | 454<br>2020         | 328<br>1460         | 233<br>1037          |
|  | 1482<br>6595           | 1197<br>5327       | 883<br>3929         | 479<br>2132         | 346<br>1540         | 246<br>1095          |
|  | 1482<br>6592           | 1197<br>5325       | 883<br>3928         | 479<br>2131         | 346<br>1539         | 246<br>1094          |
|  | 1794<br>7983           | 1449<br>6448       | 1069<br>4757        | 579<br>2577         | 419<br>1865         | 298<br>1326          |
|  | 1794<br>7980           | 1449<br>6445       | 1069<br>4755        | 579<br>2576         | 419<br>1864         | 298<br>1326          |
|  | 1794<br>7983           | 1449<br>6448       | 1069<br>4757        | 579<br>2577         | 419<br>1865         | 298<br>1326          |
|  | 1950<br>8678           | 1575<br>7009       | 1162<br>5171        | 630<br>2804         | 455<br>2025         | 324<br>1442          |

# BEARING Engineering Data

The methods, equations, and technical data presented in this section allow the user to select the correct bearings and estimate their performance for a wide range of applications. These calculations apply to the Nice® selection of ground and semi-ground product lines, namely the 1600™, 3000®, 6900™, 7500™, and 7600 Series™ bearings. For applications with unusual operating conditions, Nice® can provide engineering assistance and recommend the most suitable bearing design.

Where standard bearings cannot be used, RBC® can meet the application requirements with a special bearing design specifically tailored for optimum performance. Contact your RBC sales engineer for special sizes, materials, application requirements, dimensions, and tolerances.

## Capacity and Fatigue Life of Ball Bearings

The BASIC DYNAMIC LOAD RATING,  $C$ , or "dynamic capacity," for a ball bearing is that calculated, constant radial load at which a group of apparently identical bearings with a stationary outer ring can statistically endure one million revolutions of the inner ring.

The BASIC STATIC LOAD RATING,  $C_0$ , or "static capacity," is that uniformly distributed load, which produces a maximum theoretical contact stress on the most heavily loaded ball of 609,000 psi. At this contact stress, a permanent deformation of ball and raceway occurs. This deformation is approximately 0.01% of the ball diameter in inches.

The RATING LIFE  $L_{10}$ , is a statistical measure of the life which 90% of a group of apparently identical ball bearings will achieve or exceed. For a single bearing  $L_{10}$  also refers to the life associated with 90% reliability. Median Life,  $L_{50}$ , is the life which 50% of the group of ball bearings will achieve or exceed. Median life is usually not greater than five times the rating life.

The relationship between rating life, load rating and load is:

$$L_{10} = (C/P)^3$$

with  $L_{10}$  = rating life (10<sup>6</sup> rev)  
 $C$  = basic load rating (lb)  
 $P$  = equivalent radial load (lb)

To obtain the rating life in hours, use:

$$L_{10} \text{ hrs} = 16667/N * (C/P)^3$$

with  $N$  = speed (rpm)

The Equivalent Radial Load is defined as:

$$P = XF_r + YF_a$$

with  $F_r$  = radial load (lb)  
 $F_a$  = axial load (lb)  
 $X$  = see table below  
 $Y$  = see table below

For radial contact ball bearings calculate  $P$  with  $X = 1.0$  and  $Y = 1.0$ . Then recalculate  $P$  with  $X = 0.56$  and  $Y$  from the chart below. Use the larger value of  $P$  to determine  $L_{10}$  life.

| $\frac{F_a}{nd^2}$ | $Y$  |
|--------------------|------|
| 25                 | 2.30 |
| 50                 | 1.99 |
| 100                | 1.71 |
| 150                | 1.55 |
| 200                | 1.45 |
| 300                | 1.31 |
| 500                | 1.15 |
| 750                | 1.04 |
| 1000               | 1.00 |

with  $n$  = number of balls  
 $d$  = diameter of balls

# BEARING Engineering Data

## Operating Temperature

Maximum recommended operating temperatures for Nice® ball bearings is a function of the bearing cage, seal, and grease materials used in the final assembly. For the Nice® standard precision product series (1600™, 3000®, 7500™, 7600™, ER, and 6900™) the maximum recommended operating temperature is 250°F (121°C). Operation at temperatures as high as 300°F (149°C) can be tolerated intermittently. When operating at the extremes of allowable temperatures, grease may purge out between the seal lip and the bearing inner ring. If this is unacceptable for a particular application, other design arrangements might be necessary.

Nice® full complement unground series bearings (400®, 5000®, 500®, and 600™) can operate at higher temperatures than above, and will be limited only by choice of lubricant. However, RBC® engineering should be consulted for application verification.

## Limiting Speeds

Limiting operating speed is dependent upon the materials used in construction and the internal design and finishing of the bearing. For the Nice® standard selection of ball bearings the recommended speed limits are as follows:

| Bearing Series | Limiting Speed (rpm) |
|----------------|----------------------|
| 1600™          | 5000                 |
| 3000®          | 2500                 |
| 7500™          | 5000                 |
| 7600™          | 5000                 |
| 6900™          | 2500-3000            |
| ER             | 5000                 |
| 400®           | 1200                 |
| 5000®          | 1200                 |
| 500®           | 1000                 |
| 600™           | 1000                 |

## Lubrication

All Nice® double sealed and double shielded precision ground bearings (1600™, 3000®, 7500™, 7600™, 6900™, and ER series) are supplied pre-greased 33% full with Shell Gadus #2 grease.

Shell Gadus #2 is a general purpose lithium soap grease with a useful temperature range of -40°F (-40°C) to +280°F (138°C). Single closure and open bearings are supplied slushed with a rust preservative. RBC® can supply bearings with a wide variety of greases by special order, some of which are listed below. Contact RBC® engineering for details.

### GREASES

| Manufacturer | Product Trade Name | Temperature Range °F (°C) |
|--------------|--------------------|---------------------------|
| Chemtool     | Duralube EP 2      | -20 to +250 (-29 to +121) |
| Chevron      | Ultra Duty#1       | -20 to +350 (-29 to +177) |
| Chevron      | SRI-2              | -22 to +347 (-30 to +175) |
| Dupont       | Krytox 240 AC      | -30 to +550 (-34 to +288) |
| Exxon        | Unirex #2          | -40 to +400 (-40 to +204) |
| Exxon        | Nebula EP2         | -20 to +250 (-29 to +121) |
| Exxon        | Polyrex EM         | -40 to +300 (-40 to +149) |
| Mobil        | Mobilgrease 28     | -65 to +250 (-54 to +121) |
| Shell        | Gadus #2           | -40 to +284 (-40 to +140) |
| Shell        | Gadus #3           | -40 to +284 (-40 to +140) |
| Shell        | Darina EP2         | -40 to +320 (-40 to +160) |
| Shell        | Aeroshell 14       | -65 to +250 (-54 to +121) |

## Retainers/ Cages

Nice® precision ground ball bearings of standard production are fitted with snap-in ball riding retaining cages made from heat stabilized polyamide 6/6. For special applications or design requirements cages made of special materials can be supplied. These include pressed steel or stainless steel, glass reinforced polyamide 6/6, and brass. Availability of bearings fitted with non-standard cages should be checked before ordering.

## Axial Load Capacity

Deep groove ball bearings by nature of their design can carry axial loads either alone or in combination with radial loads. Axial load capacity of standard bearings is 0.5 times the Basic Static Load Rating, C<sub>O</sub> of that bearing. Smaller bearings should not be subject to a load greater than 0.25 times C<sub>O</sub>. Excessive axial loads can lead to serious reduction of bearing service life.



# BEARING Engineering Data

## Misalignment

Radial deep groove ball bearings do have the ability to accommodate a limited amount of angular misalignment. The amount of angular misalignment that can be tolerated before adversely affecting bearing performance is a function of a variety of parameters. Internal radial clearance, internal design, applied loads, and the size of the bearing all play a role in determining the bearing's misalignment capability. Because of this, exact values for allowable misalignment are not provided. Under normal operating conditions, a safe estimate of permissible angular misalignment is usually between .0005 in/in (.013 mm/mm) and .003 in/in (.08 mm/mm). Noise levels may increase when the bearing is operating misaligned.

## Finish and Accuracy

Nice® ball bearings are available in several different finish and accuracy grades that may be selected to suit the functionality of a particular application.

Nice® fully ground precision bearings are available in single row radial configurations. Boundary dimensions and internal fit-up are held to exacting tolerances by precision grinding of all external surfaces and both ball grooves. These bearings are recommended for applications requiring quiet running, higher speeds, and applied loads. Normal tolerances for series 1600™, 7500™, 7600™, and ER bearings range from .0005" (.013 mm) to .001" (.03 mm). See product tables for exact tolerances.

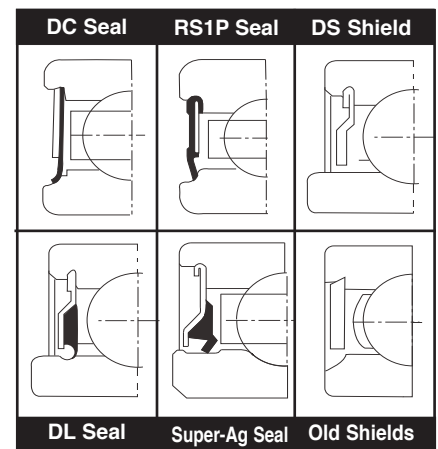
Nice® functional precision and unground bearings are designed for those applications where speeds and loads are moderate, and running accuracy and noise requirements do not warrant a fully ground precision bearing. Single row radial, single row angular contact, and thrust ball bearings can be supplied in semi-ground or unground accuracy. Series 3000®, 6900™, 400®, 5000®, 500®, and 600™ bearings are available with functional tolerances that range from .005" (.13 mm) to .010" (.25 mm). See product tables for exact tolerances.

## Seals and Shields

Contact seals are used on bearings to prevent solid contaminants and moisture from entering the bearing while retaining the lubricant in the bearing. Nice® design and field experience has resulted in a variety of heavy duty and effective sealing designs.

The Nice® RS1P seal, which is standard on the 1600™, 3000®, and 6900™ Series Bearings, is made of oil and wear resistant synthetic rubber with a steel reinforcement. The sealing action is accomplished via interference (deflection) of the seal lip against a recess in the inner ring shoulder. The outside diameter of the seal is retained in a recess groove cut into the outer ring. The DC seal is an old style multi-part assembly consisting of a nylon seal insert held in place with a metal shield. It is a cost effective seal used only on a few sizes and specials. The Nice® DL and Super Ag seals are special high efficiency contact seals for heavy duty applications. They are constructed of synthetic rubber molded to the back of a metal shroud or guard. The seal lip rides in a labyrinth groove for reduced seal drag and lower torque against the inner ring land surface.

Bearings fitted with non-contacting metal shields are primarily intended for applications where the inner ring rotates and low drag torque is a requirement. They retain the grease at normal operating speeds and temperatures while protecting the bearing from contamination. Metal shields are also utilized in applications where contaminants may pose a threat to the seal materials.



# BEARING Engineering Data

## Radial Internal Clearance

All Nice® single row deep groove ball bearings are designed and produced with radial internal clearance to provide for optimum performance. Nice® ball bearings are supplied with "normal" radial clearance as standard, but can be ordered with radial clearance tighter than normal or looser than normal as a special item. The values listed in the table below apply to bearings before mounting and under no load and are supplied as a design guide. Consult RBC® engineering when ordering other than normal radial clearance.

| RADIAL INTERNAL CLEARANCE (.0001) INCH (.001) mm |                     |                    |                    |                          |
|--|---------------------|--------------------|--------------------|--------------------------|
| PRECISION LEVEL<br>SERIES / TYPE                 | NORMAL<br>MIN.-MAX. | TIGHT<br>MIN.-MAX. | LOOSE<br>MIN.-MAX. | EXTRA LOOSE<br>MIN.-MAX. |
| 1600™/GROUND                                     | 2 - 12              | 2 - 6              | 7 - 22             | 10 - 25                  |
|  | 5 - 30              | 5 - 15             | 18 - 56            | 25 - 64                  |
| 7500™/GROUND                                     | 2 - 12              | 2 - 6              | 7 - 22             | 10 - 25                  |
|  | 5 - 30              | 5 - 15             | 2 - 56             | 25 - 64                  |
| 7600™/GROUND                                     | 2 - 12              | 2 - 6              | 7 - 22             | 10 - 25                  |
|  | 5 - 30              | 5 - 15             | 2 - 56             | 25 - 64                  |
| ER/GROUND  | 8 - 18              | 2 - 6              | 7 - 22             | 10 - 25                  |
|  | 20 - 46             | 5 - 15             | 2 - 56             | 25 - 64                  |
| 3000®/SEMI-GROUND                                | 10 - 50             | 10 - 40            | 10 - 60            | 10 - 70                  |
|  | 25 - 127            | 25 - 102           | 25 - 152           | 25 - 178                 |
| 6900™/SEMI-GROUND                                | 10 - 30             | 10 - 20            | 10 - 40            | 10 - 25                  |
|  | 25 - 76             | 25 - 51            | 25 - 102           | 25 - 64                  |
| 400®/5000®<br>UNGROUND                           | 10 - 70             | ---                | ---                | ---                      |
|  | 25 - 178            | ---                | ---                | ---                      |
| 500®/SEMI-GROUND                                 | 10 - 70             | ---                | ---                | ---                      |
|  | 25 - 178            | ---                | ---                | ---                      |

## Recommended Housing Fits - ER Series

| Bearing | Outside Diameter of Bearing |        | Rotating Housing |        |               |        | Stationary Housing |        |               |        |
|---------|-----------------------------|--------|------------------|--------|---------------|--------|--------------------|--------|---------------|--------|
|         | Min.                        | Max.   | Diameter         |        | Resultant Fit |        | Diameter           |        | Resultant Fit |        |
|         | (in)                        | (in)   | Min.             | Max.   | Loose         | Tight  | Min.               | Max.   | Loose         | Tight  |
|         | (mm)                        | (mm)   | (in)             | (in)   | (in)          | (in)   | (in)               | (in)   | (in)          | (in)   |
| ER10    | 1.8499                      | 1.8504 | 1.8494           | 1.8504 | 0.0005        | 0.0006 | 1.8503             | 1.8509 | 0.0010        | 0.0001 |
|         | 46.987                      | 47.000 | 46.975           | 47.000 | 0.013         | 0.015  | 46.998             | 47.013 | 0.025         | 0.003  |
| ER12    | 1.8499                      | 1.8504 | 1.8494           | 1.8504 | 0.0005        | 0.0006 | 1.8503             | 1.8509 | 0.0010        | 0.0001 |
|         | 46.987                      | 47.000 | 46.975           | 47.000 | 0.013         | 0.015  | 46.998             | 47.013 | 0.025         | 0.003  |
| ER16    | 2.0466                      | 2.0472 | 2.0466           | 2.0471 | 0.0005        | 0.0006 | 2.0471             | 2.0476 | 0.0010        | 0.0001 |
|         | 51.984                      | 51.999 | 51.984           | 51.996 | 0.013         | 0.015  | 51.996             | 52.009 | 0.025         | 0.003  |
| ER19    | 2.4403                      | 2.4409 | 2.4403           | 2.4408 | 0.0005        | 0.0006 | 2.4408             | 2.4413 | 0.0010        | 0.0001 |
|         | 61.984                      | 61.999 | 61.984           | 61.996 | 0.013         | 0.015  | 61.996             | 62.009 | 0.025         | 0.003  |
| ER20    | 2.8340                      | 2.8346 | 2.8340           | 2.8345 | 0.0005        | 0.0006 | 2.8345             | 2.8350 | 0.0010        | 0.0001 |
|         | 71.984                      | 71.999 | 71.984           | 71.996 | 0.013         | 0.015  | 71.996             | 72.009 | 0.025         | 0.003  |
| ER23    | 2.8340                      | 2.8346 | 2.8340           | 2.8345 | 0.0005        | 0.0006 | 2.8345             | 2.8350 | 0.0010        | 0.0001 |
|         | 71.984                      | 71.999 | 71.984           | 71.996 | 0.013         | 0.015  | 71.996             | 72.009 | 0.025         | 0.003  |
| ER24    | 3.1490                      | 3.1496 | 3.1490           | 3.1495 | 0.0005        | 0.0006 | 3.1495             | 3.1500 | 0.0010        | 0.0001 |
|         | 79.985                      | 80.000 | 79.985           | 79.997 | 0.013         | 0.015  | 79.997             | 80.010 | 0.025         | 0.003  |
| ER31    | 3.5425                      | 3.5433 | 3.5426           | 3.5432 | 0.0007        | 0.0007 | 3.5432             | 3.5438 | 0.0013        | 0.0001 |
|         | 89.980                      | 90.000 | 89.982           | 89.997 | 0.018         | 0.018  | 89.997             | 90.013 | 0.033         | 0.003  |

# BEARING Engineering Data

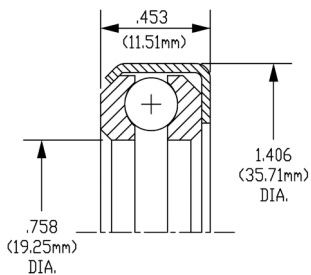
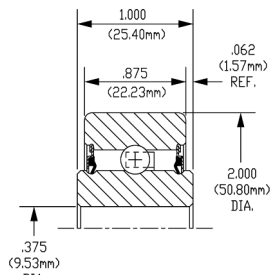
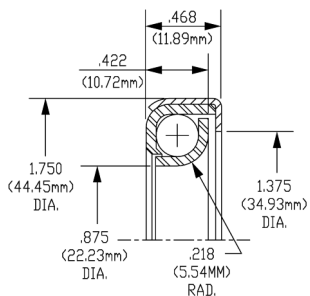
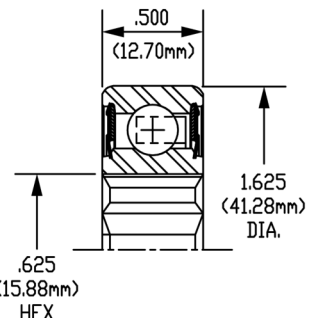
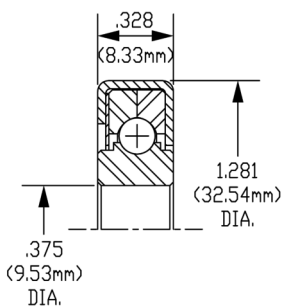
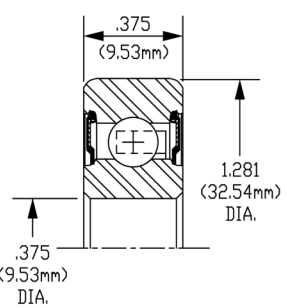
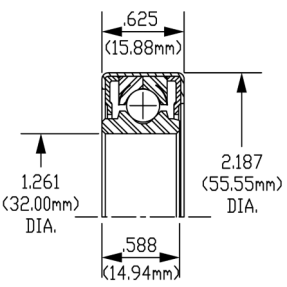
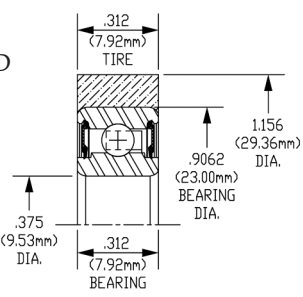
## Recommended Shaft and Housing Fits

Proper mounting fits of ball bearings to shafts and in housings are critical to their performance. Excessively tight or excessively loose fits can result in premature bearing failures. Recommended fit values have been established which will facilitate optimum bearing performance.

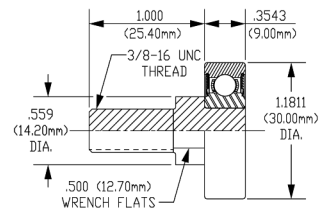
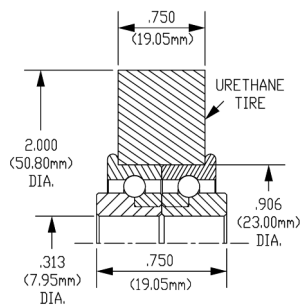
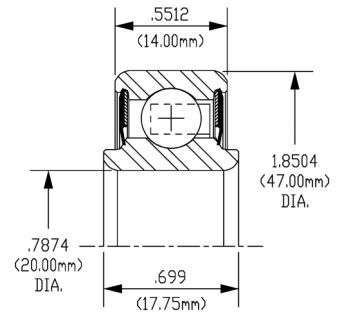
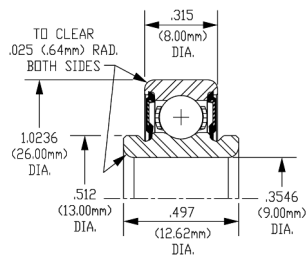
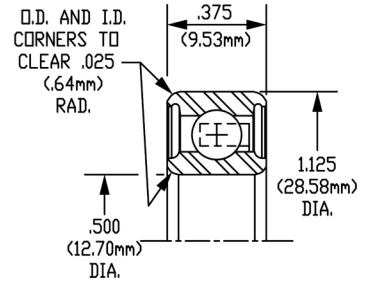
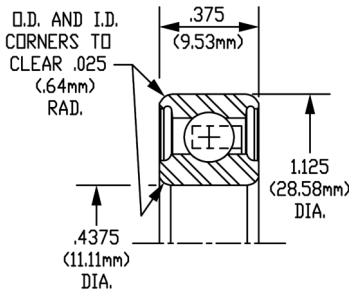
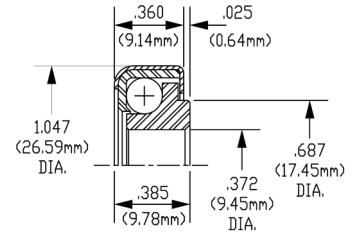
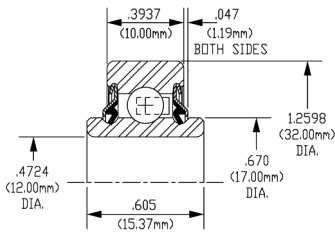
The shaft and housing fits listed below apply to the 1600 Series™ and 7500 Series™ bearings. They may also be used for the housing fits only on the 3000 Series®, 7600 Series™, and 6900 Series™ bearings.

| HOUSING FITS             |        |                    |        |                 |        |                    |        |                 |        |
|--------------------------|--------|--------------------|--------|-----------------|--------|--------------------|--------|-----------------|--------|
| Bearing Outside Diameter |        | Housing Rotating   |        |                 |        | Housing Stationary |        |                 |        |
|                          |        | Housing Inside Dia |        | Theoretical Fit |        | Housing Inside Dia |        | Theoretical Fit |        |
| MAX                      | MIN    | MAX                | MIN    | TIGHT           | LOOSE  | MAX                | MIN    | TIGHT           | LOOSE  |
| 0.6250                   | 0.6245 | 0.6252             | 0.6245 | 0.0005          | 0.0007 | 0.6255             | 0.6250 | 0.0000          | 0.0010 |
| 15.875                   | 15.862 | 15.880             | 15.862 | 0.013           | 0.018  | 15.888             | 15.875 | 0.000           | 0.025  |
| 0.6875                   | 0.6870 | 0.6887             | 0.6870 | 0.0005          | 0.0007 | 0.6880             | 0.6875 | 0.0000          | 0.0010 |
| 17.463                   | 17.450 | 17.493             | 17.450 | 0.013           | 0.018  | 17.475             | 17.463 | 0.000           | 0.025  |
| 0.7500                   | 0.7495 | 0.7502             | 0.7495 | 0.0005          | 0.0007 | 0.7505             | 0.7500 | 0.0000          | 0.0010 |
| 19.050                   | 19.037 | 19.055             | 19.037 | 0.013           | 0.018  | 19.063             | 19.050 | 0.000           | 0.025  |
| 0.8750                   | 0.8745 | 0.8752             | 0.8745 | 0.0005          | 0.0007 | 0.8755             | 0.8750 | 0.0000          | 0.0010 |
| 22.225                   | 22.212 | 22.230             | 22.212 | 0.013           | 0.018  | 22.238             | 22.225 | 0.000           | 0.025  |
| 0.9063                   | 0.9058 | 0.9065             | 0.9058 | 0.0005          | 0.0007 | 0.9068             | 0.9063 | 0.0000          | 0.0010 |
| 23.020                   | 23.007 | 23.025             | 23.007 | 0.013           | 0.018  | 23.033             | 23.020 | 0.000           | 0.025  |
| 1.1250                   | 1.1245 | 1.1252             | 1.1242 | 0.0008          | 0.0007 | 1.1255             | 1.1250 | 0.0000          | 0.0010 |
| 28.575                   | 28.562 | 28.580             | 28.555 | 0.020           | 0.018  | 28.588             | 28.575 | 0.000           | 0.025  |
| 1.3750                   | 1.3745 | 1.3752             | 1.3742 | 0.0008          | 0.0007 | 1.3755             | 1.3750 | 0.0000          | 0.0010 |
| 34.925                   | 34.912 | 34.930             | 34.905 | 0.020           | 0.018  | 34.938             | 34.925 | 0.000           | 0.025  |
| 1.6250                   | 1.6245 | 1.6252             | 1.6242 | 0.0008          | 0.0007 | 1.6258             | 1.6250 | 0.0000          | 0.0013 |
| 41.275                   | 41.262 | 41.280             | 41.255 | 0.020           | 0.018  | 41.295             | 41.275 | 0.000           | 0.033  |
| 1.7500                   | 1.7495 | 1.7502             | 1.7492 | 0.0008          | 0.0007 | 1.7508             | 1.7500 | 0.0000          | 0.0013 |
| 44.450                   | 44.437 | 44.455             | 44.430 | 0.020           | 0.018  | 44.470             | 44.450 | 0.000           | 0.033  |
| 1.8750                   | 1.8745 | 1.8752             | 1.8742 | 0.0008          | 0.0008 | 1.8758             | 1.8750 | 0.0000          | 0.0013 |
| 47.625                   | 47.612 | 47.630             | 47.605 | 0.020           | 0.020  | 47.645             | 47.625 | 0.000           | 0.033  |
| 2.0000                   | 1.9994 | 2.0002             | 1.9990 | 0.0010          | 0.0008 | 2.0010             | 2.0000 | 0.0000          | 0.0016 |
| 50.800                   | 50.785 | 50.805             | 50.775 | 0.025           | 0.020  | 50.825             | 50.800 | 0.000           | 0.041  |
| 2.1250                   | 2.1244 | 2.1252             | 2.1240 | 0.0010          | 0.0008 | 2.1260             | 2.1250 | 0.0000          | 0.0016 |
| 53.975                   | 53.960 | 53.980             | 53.950 | 0.025           | 0.020  | 54.000             | 53.975 | 0.000           | 0.041  |
| 2.2500                   | 2.2494 | 2.2502             | 2.2490 | 0.0010          | 0.0008 | 2.2510             | 2.2500 | 0.0000          | 0.0016 |
| 57.150                   | 57.135 | 57.155             | 57.125 | 0.025           | 0.020  | 64.033             | 57.150 | 0.000           | 0.041  |
| 2.5000                   | 2.4994 | 2.5002             | 2.4990 | 0.0010          | 0.0008 | 2.5010             | 2.5000 | 0.0000          | 0.0016 |
| 63.500                   | 63.485 | 63.505             | 63.475 | 0.025           | 0.020  | 63.525             | 63.500 | 0.000           | 0.041  |
| 2.5625                   | 2.5619 | 2.5627             | 2.5615 | 0.0010          | 0.0008 | 2.5635             | 2.5625 | 0.0000          | 0.0016 |
| 65.088                   | 65.072 | 65.093             | 65.062 | 0.025           | 0.020  | 65.113             | 65.088 | 0.000           | 0.041  |

| SHAFT FITS            |        |                |        |                 |        |                  |        |                 |        |
|-----------------------|--------|----------------|--------|-----------------|--------|------------------|--------|-----------------|--------|
| Bearing Bore Diameter |        | Shaft Rotating |        |                 |        | Shaft Stationary |        |                 |        |
|                       |        | Shaft Dia      |        | Theoretical Fit |        | Shaft Dia        |        | Theoretical Fit |        |
| MAX                   | MIN    | MAX            | MIN    | TIGHT           | LOOSE  | MAX              | MIN    | TIGHT           | LOOSE  |
| 0.1875                | 0.1865 | 0.1870         | 0.1865 | 0.0005          | 0.0010 | 0.1870           | 0.1865 | 0.0005          | 0.0010 |
| 4.763                 | 4.737  | 4.750          | 4.737  | 0.013           | 0.025  | 4.750            | 4.737  | 0.013           | 0.025  |
| 0.2500                | 0.2495 | 0.2500         | 0.2495 | 0.0005          | 0.0005 | 0.2495           | 0.2490 | 0.0000          | 0.0010 |
| 6.350                 | 6.337  | 6.350          | 6.337  | 0.013           | 0.013  | 6.337            | 6.325  | 0.000           | 0.025  |
| 0.3125                | 0.3120 | 0.3125         | 0.3120 | 0.0005          | 0.0005 | 0.3120           | 0.3115 | 0.0000          | 0.0010 |
| 7.938                 | 7.925  | 7.938          | 7.925  | 0.013           | 0.013  | 7.925            | 7.912  | 0.000           | 0.025  |
| 0.3750                | 0.3745 | 0.3750         | 0.3745 | 0.0005          | 0.0005 | 0.3745           | 0.3740 | 0.0000          | 0.0010 |
| 9.525                 | 9.512  | 9.525          | 9.512  | 0.013           | 0.013  | 9.512            | 9.500  | 0.000           | 0.025  |
| 0.4375                | 0.4370 | 0.4375         | 0.4370 | 0.0005          | 0.0005 | 0.4370           | 0.4365 | 0.0000          | 0.0010 |
| 11.113                | 11.100 | 11.113         | 11.100 | 0.013           | 0.013  | 11.100           | 11.087 | 0.000           | 0.025  |
| 0.5000                | 0.4995 | 0.5000         | 0.4995 | 0.0005          | 0.0005 | 0.4995           | 0.4990 | 0.0000          | 0.0010 |
| 12.700                | 12.687 | 12.700         | 12.687 | 0.013           | 0.013  | 12.687           | 12.675 | 0.000           | 0.025  |
| 0.5625                | 0.5620 | 0.5625         | 0.5620 | 0.0005          | 0.0000 | 0.5620           | 0.5615 | 0.0000          | 0.0010 |
| 14.288                | 14.275 | 14.288         | 14.275 | 0.013           | 0.000  | 14.275           | 14.262 | 0.000           | 0.025  |
| 0.6250                | 0.6245 | 0.6250         | 0.6245 | 0.0005          | 0.0005 | 0.6245           | 0.6240 | 0.0000          | 0.0010 |
| 15.875                | 15.862 | 15.875         | 15.862 | 0.013           | 0.013  | 15.862           | 15.850 | 0.000           | 0.025  |
| 0.7500                | 0.7495 | 0.7500         | 0.7495 | 0.0005          | 0.0005 | 0.7495           | 0.7490 | 0.0000          | 0.0010 |
| 19.050                | 19.037 | 19.050         | 19.037 | 0.013           | 0.013  | 19.037           | 19.025 | 0.000           | 0.025  |
| 0.8750                | 0.8745 | 0.8752         | 0.8747 | 0.0007          | 0.0003 | 0.8745           | 0.8740 | 0.0000          | 0.0010 |
| 22.225                | 22.212 | 22.230         | 22.217 | 0.018           | 0.008  | 22.212           | 22.200 | 0.000           | 0.025  |
| 1.0000                | 0.9995 | 1.0002         | 0.9997 | 0.0007          | 0.0003 | 0.9995           | 0.9990 | 0.0000          | 0.0010 |
| 25.400                | 25.387 | 25.405         | 25.392 | 0.018           | 0.008  | 25.387           | 25.375 | 0.000           | 0.025  |
| 1.1250                | 1.1245 | 1.1252         | 1.1247 | 0.0007          | 0.0003 | 1.1245           | 1.1240 | 0.0000          | 0.0010 |
| 28.575                | 28.562 | 28.580         | 28.567 | 0.018           | 0.008  | 28.562           | 28.550 | 0.000           | 0.025  |
| 1.2500                | 1.2495 | 1.2502         | 1.2497 | 0.0007          | 0.0003 | 1.2495           | 1.2490 | 0.0000          | 0.0010 |
| 31.750                | 31.737 | 31.755         | 31.742 | 0.018           | 0.008  | 31.737           | 31.725 | 0.000           | 0.025  |
| 1.3125                | 1.3120 | 1.3127         | 1.3122 | 0.0007          | 0.0003 | 1.3120           | 1.3115 | 0.0000          | 0.0010 |
| 33.338                | 33.325 | 33.343         | 33.330 | 0.018           | 0.008  | 33.325           | 33.312 | 0.000           | 0.025  |
| 1.3750                | 1.3740 | 1.3752         | 1.3747 | 0.0007          | 0.0003 | 1.3740           | 1.3740 | 0.0000          | 0.0010 |
| 34.925                | 34.900 | 34.930         | 34.917 | 0.018           | 0.008  | 34.900           | 34.900 | 0.000           | 0.025  |

|   |  |
|---|--|
| <p>Designation: 6359™<br/>VBF18</p> <p>Special Features:<br/>Ball Thrust Bearing<br/>Zinc Plated Band</p> <p>Grease:<br/>Rust Preservative</p> <p>Typical Applications:<br/>Crane hook swivel</p>                                        | <p>Designation: 6990™<br/>TNTG18</p> <p>Special Features:<br/>Heavy section<br/>High capacity</p> <p>Grease:<br/>Shell Gadus 2</p> <p>Typical Applications:<br/>Chain Bearing</p>                       |
| <p>Designation: 7401™<br/>VHA00</p> <p>Grease:<br/>Exxon Polyrex EM</p> <p>Typical Applications:<br/>Commercial washing machine brake solenoid</p>    | <p>Designation: 7436™<br/>TNTG18</p> <p>Special Features:<br/>5/8" Hex Bore</p> <p>Grease:<br/>Shell Gadus 2</p> <p>Typical Applications:<br/>Commercial mower drives</p>                              |
| <p>Designation: 8070™<br/>VTE00</p> <p>Special Features:<br/>Radial Ball Bearing<br/>Zinc Plated</p> <p>Grease:<br/>Shell Gadus Grease 2 - 1/3 Full</p> <p>Typical Applications:<br/>Moveable carriage sections<br/>for meat saws</p>  | <p>Designation: 8220™<br/>TNBF18</p> <p>Special Features:<br/>Stainless steel</p> <p>Grease:<br/>Rust Preservative</p> <p>Typical Applications:<br/>Moveable carriage sections<br/>for meat saws</p>  |
| <p>Designation: 8025™<br/>VTE18</p> <p>Special Features:<br/>Full complement radial ball brg</p> <p>Grease:<br/>Shell Gadus 2</p> <p>Typical Applications:<br/>Lawn mower</p>    | <p>Designation: 8317™<br/>TNTG00</p> <p>Special Features:<br/>Polyurethane molded tire on OD</p> <p>Grease:<br/>Shell Gadus 2</p> <p>Typical Applications:<br/>Bottle inspection machinery</p>        |

|   |  |
|---|--|
| <p>Designation: 8406™<br/>1TNPS18</p> <p>Special Features:<br/>Stainless steel races<br/>Heavy duty seals</p> <p>Grease:<br/>Exxon Nebula #2 Grease</p> <p>Typical Applications:<br/>Compacter roll for<br/>textile machinery</p> | <p>Designation: 8435™<br/>VBF00</p> <p>Special Features:<br/>Single row unground<br/>Combination Radial<br/>&amp; Thrust Bearing<br/>Machined inner ring</p> <p>Grease:<br/>Rust Preservative</p> <p>Typical Applications:<br/>Mechanical door closers</p> |
| <p>Designation: 8425™<br/>TNRLDBF00</p> <p>Special Features:<br/>Special internal<br/>clearance</p> <p>Grease:<br/>Rust preservative</p>  | <p>Designation: 8426™<br/>TNRLCBF00</p> <p>Special Features:<br/>Special internal<br/>clearance</p> <p>Grease:<br/>Rust Preservative</p>   |
| <p>Designation: 8457™<br/>JUE00</p> <p>Special Features:</p> <p>Grease:<br/>Chevron SRI</p> <p>Typical Applications:<br/>Locomotive fuel solenoid</p>   | <p>Designation: 8458™<br/>TNUE00</p> <p>Steel retainer Grease:<br/>Chevron SRI</p> <p>Typical Applications:<br/>Locomotive fuel solenoid</p>   |
| <p>Designation: 8736™<br/>AXX71</p> <p>Special Features:<br/>Urethane tire<br/>Zinc plated</p> <p>Typical Applications:<br/>Packing machine</p>   | <p>Designation: 8755™<br/>ADCXX00</p> <p>Grease:<br/>Chevron SRI</p> <p>Typical Applications:<br/>Drawer guides</p>  |



Designation: 8224™  
TNTT00

Special Features:  
Track wheel configuration  
on the OD.  
4 point angular contact

Grease:  
Chevron Dura-Lith EP2

Typical Applications:  
Guide bearing for radial arm saw

Designation: 8433™  
2TNTG00

Special Features:  
Low torque  
PTFT™ seals

Grease:  
Shell Gadus 2

Typical Applications:  
Wire guide

Designation: 8438™  
2TNTG00

Special Features:  
Low torque  
Teflon™ seals

Grease:  
Shell Gadus 2

Typical Applications:  
Wire guide

Designation: 8459™  
DSTNHA00

Grease:  
Exxon Polyrex EM

Typical Applications:  
Track roller for automatic  
sliding doors

Designation: 8490™  
TNTT00

Special Features:  
Track wheel configuration  
on the OD.  
4 point angular contact

Grease:  
Chevron Dura-Lith EP2

Typical Applications:  
Guide bearing for radial arm saw

Designation: 8727™  
DCJN20XX24

Special Features:  
Steel retainer

Grease:  
Solid polymer lubrication

Typical Applications:  
TIG welder wire guide

Designation: 8741™  
ADSUD24

Special Features:  
Harden outer

Grease:  
Mobilgrease 28

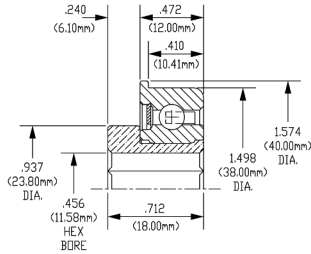
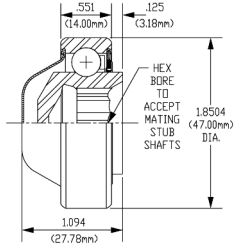
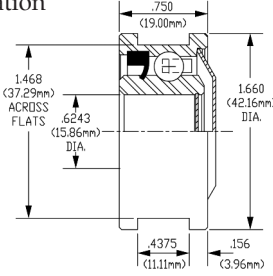
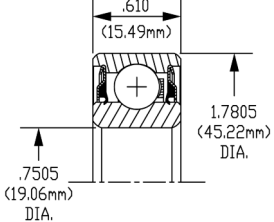
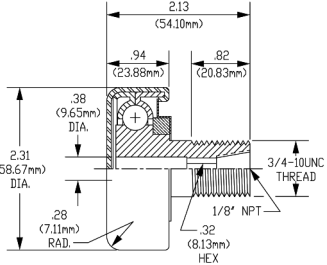
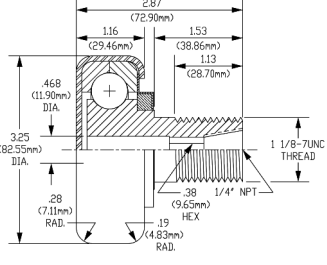
Typical Applications:  
Wire pulley for medical imaging machines

Designation: 8752™  
ADCN65XX24

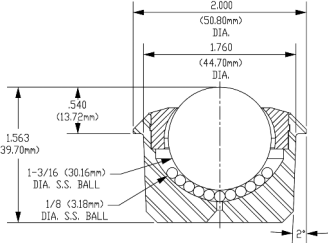
Special Features:  
Hard chrome plating

Typical Applications:  
Wire guide

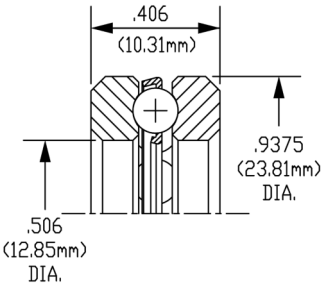
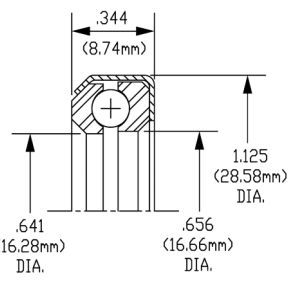
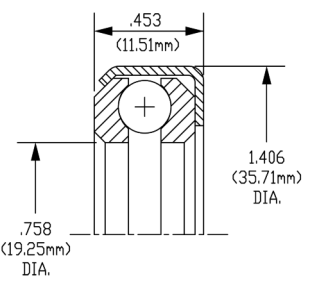
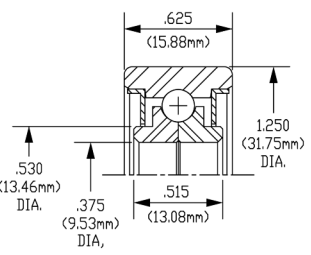
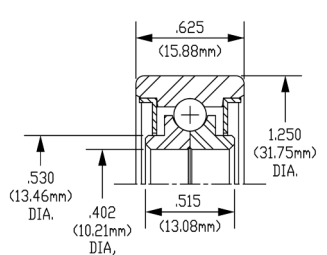
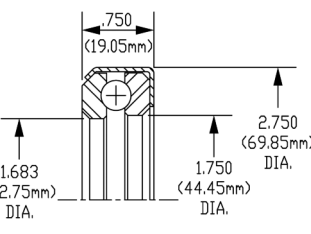
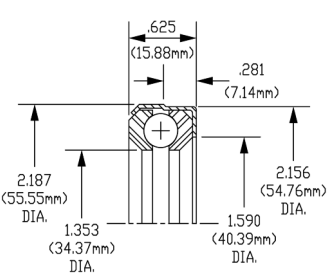
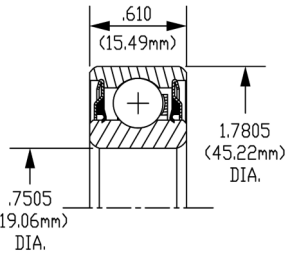


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|---|---|
| <p>Designation: CB142TNTG18<br/>                 Special Features:<br/>                 .456" Hex Bore<br/>                 Self Aligning<br/>                 Black Oxide Finish<br/>                 Grease:<br/>                 Shell Gadus 2<br/>                 Typical Applications:<br/>                 Warehouse Conveyor Rolls</p>  <p>Interchanges:<br/>                 Kilian® P/N: CB14-2</p>  | <p>Designation: CB504TNTE93<br/>                 Special Features:<br/>                 .719" hexagonal bore</p>  <p>Interchanges:<br/>                 MRC® P/N: CONV5043<br/>                 Schatz P/N: CS3574X5</p>   |
| <p>Designation: CONV3Y4TNTE70<br/>                 Special Features:<br/>                 Milled slot in OD for easy installation<br/>                 Fully enclosed dust shield<br/>                 Sealed for life<br/>                 High Load rating<br/>                 Zinc Plated Outer Ring<br/>                 Grease:<br/>                 Shell Gadus 2<br/>                 Typical Applications:<br/>                 Material handling applications</p>   | <p>Designation: 7488™<br/>                 8TNMJ18<br/>                 Special Features:<br/>                 Low torque seals<br/>                 75% grease fill<br/>                 Grease:<br/>                 Shell Gadus 3 - 3/4 Full<br/>                 Typical Applications:<br/>                 Conveying equipment<br/>                 3/4" Sprocket Idler Bearing</p>  <p>Interchanges:<br/>                 MRC® P/N: CONV4SZZ2<br/>                 NDH® P/N: Z9504B<br/>                 Schatz P/N: CS3564X3<br/>                 Fafnir® P/N: 204RR6</p> |
| <p>Designation: 6939™<br/>                 VBF00<br/>                 Special Features:<br/>                 Stainless steel band<br/>                 &amp; dust shield &amp; dust shield<br/>                 Full complement<br/>                 3/32" x 45 threaded stud<br/>                 1/4" pipe tap in stud end<br/>                 Grease:<br/>                 Rust Preservative<br/>                 Typical Applications:<br/>                 Bulk material knife gate valve</p>  | <p>Designation: 7213™<br/>                 VBF00<br/>                 Special Features:<br/>                 Stainless steel band<br/>                 Full complement<br/>                 3/32" x 45 threaded stud<br/>                 1/4" pipe tap in stud end<br/>                 Grease:<br/>                 Rust Preservative<br/>                 Typical Applications:<br/>                 Bulk material knife gate valve</p>    |

Designation: 8749™  
 VN35BF73  
 Special Features:  
 1 piece cup made of bearing quality steel  
 Increased cross section  
 Stainless steel balls  
 Corrosion resistant coating  
 Grease:  
 Rust Preservative  
 Typical Applications:  
 Ball transfer decks for cargo handling



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|  |   |
|--|---|
| <p>Designation: 5971™<br/>JBF03</p> <p>Special Features:<br/>Ball Thrust Bearing<br/>Retainer version</p> <p>Grease:<br/>Rust Preservative</p>    | <p>Designation: 6051™<br/>VBF53</p> <p>Special Features:<br/>Ball Thrust Bearing</p> <p>Grease:<br/>Rust Preservative</p>    |
| <p>Designation: 6359™<br/>V4L4L00</p> <p>Special Features:<br/>Ball Thrust Bearing<br/>Zinc Plated Band</p> <p>Grease:<br/>Shell Gadus 2</p> <p>Typical Applications:<br/>Hay baler</p>  | <p>Designation: 7031™<br/>9VPS18</p> <p>Grease:<br/>Exxon Nebula #2</p>   |
| <p>Designation: 7031™<br/>10VPS18</p> <p>Special Features:<br/>Black oxide coated inner ring</p> <p>Grease:<br/>Exxon Nebula #2</p> <p>Typical Applications:<br/>Hay baler</p>          | <p>Designation: 7114™<br/>4VMJ18</p> <p>Special Features:<br/>Ball thrust bearing<br/>Full complement</p> <p>Grease:<br/>Shell Gadus 3</p> <p>Typical Applications:<br/>Hay baler</p>    |
| <p>Designation: 7484™<br/>VBF00</p> <p>Special Features:<br/>Ball thrust bearing<br/>Full complement</p> <p>Typical Applications:<br/>Hay baler</p>                                     | <p>Designation: 7488™<br/>8TNNRLDMJ18</p> <p>Special Features:<br/>3/4" ground bore<br/>Single lip seal with steel shield<br/>Radial play .0014" - .0018</p> <p>Grease:<br/>Shell Gadus 2 - 3/4 Full</p> <p>Typical Applications:<br/>Mower spindle</p>  |

Designation: 7842™  
7TNHB18

Special Features:  
Extended inner ring version  
Carburized steel inner ring

Grease:  
Exxon Polyrex EM

Typical Applications:  
Hay baler

Designation: 7868™  
5TNHR53

Special Features:  
Extended inner ring version  
Contact seals with steel shield

Grease:  
Exxon Unirex N2

Typical Applications:  
5/8" Sprocket idler bearing

Designation: 7997™  
VTG00

Special Features:  
Extended inner ring  
Pin holes for installation

Grease:  
Shell Gadus 2

Designation: 8191™  
TNTE18

Special Features:  
9/16" Hex Bore

Grease:  
Shell Gadus 2

Typical Applications:  
Mowing Equipment

Designation: 8212™  
1TNMJ00

Special Features:  
Extend inner ring  
2 11/16" dia holes 180° apart

Grease:  
Shell Gadus 3

Typical Applications:  
Hay baler rake tine bar shaft support

Designation: 8280™  
TNMR00

Special Features:

Grease:  
Eastern Oils - Ford M1C233A

Typical Applications:  
Steering

Designation: 8386™  
TNGMBMJ00

Special Features:  
Grooved outer ring  
Zinc plated

Grease:  
Shell Gadus 3

Typical Applications:  
Hay baler wire guide

Designation: 8418™  
TNMJ18

Special Features:  
Flanged radial ball bearing

Grease:  
Shell Gadus 3

Typical Applications:  
Lawn mower drives

Fafnir is a registered trademark of Timken. BCA is a registered trademark of NTN.

Designation: 8738™  
VBF00

Special Features:  
Acetyl 500 outer ring  
Stainless steel inner ring

Grease:  
Rust Preservative

Typical Applications:  
Carriage assembly chicken processing equipment

Designation: 7031™  
3VPS18

Special Features:  
3/8" -24 UNF 2 Threads  
Straight OD

Grease:  
Exxon Nebula #2

Typical Applications:  
Hay baler

Designation: 7031™  
6VPS18

Special Features:  
Ball bearing cam follower  
3/8" -24 UNF 2A Threads  
Straight OD

Grease:  
Exxon Nebula #2

Typical Applications:  
Hay baler

Designation: 7227™  
5TNTE86

Special Features:  
Ball bearing cam follower  
3/4" -16 UNF 2A Threads  
Internal 3/8" hex slot in stud

Grease:  
Shell Gadus 2

Typical Applications:  
Hay rake tine bar

Designation: 8237™  
TNTE86

Special Features:  
Ball bearing cam follower  
Internal 3/8" hex slot in stud  
3/4" -16 UNF 2A Threads

Grease:  
Shell Gadus 2

Typical Applications:  
Hay baler

Designation: 8389™  
ATNPS00

Special Features:  
Ball bearing cam follower  
3/8" -24 UNF 2A Threads  
Straight OD

Grease:  
Exxon Nebula #2

Typical Applications:  
Hay rake tine bar

Designation: 8403™  
1VPS00

Special Features:  
Ball bearing cam follower  
1/2" -20 UNF 2A Threads  
Crowned OD to accommodate misalignment

Grease:  
Exxon Nebula #2

Typical Applications:  
Hay rake tine bar

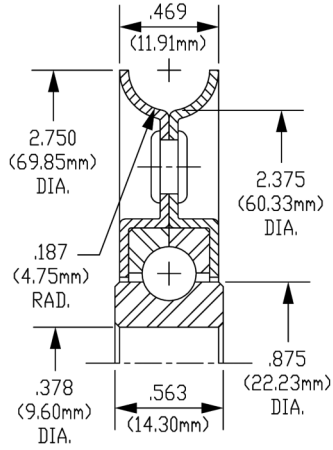
Designation: 8469™  
VTE00

Special Features:  
Ball bearing cam follower  
Internal 3/8" hex slot in stud  
3/4" -16 UNF 2A Threads

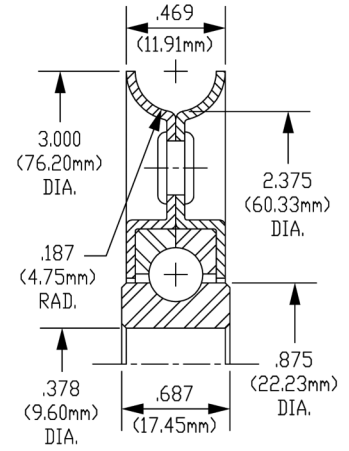
Grease:  
Shell Gadus 2

Typical Applications:  
Hay rake tine bar

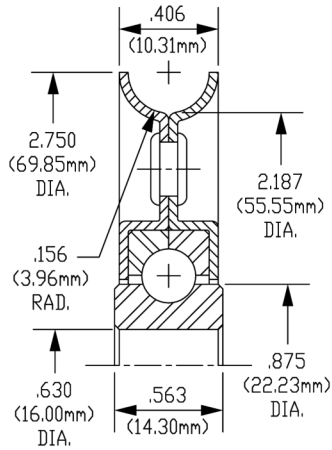
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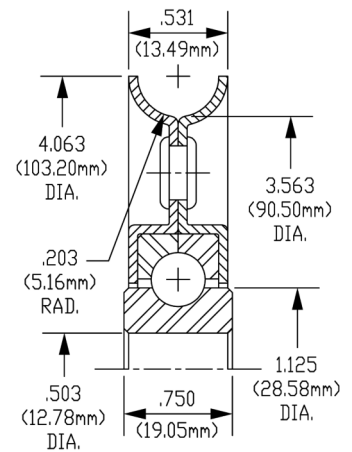
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BVBF18



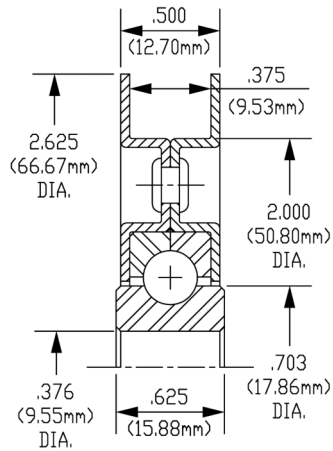
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VBF18



Designation: 2025™  
VBF18

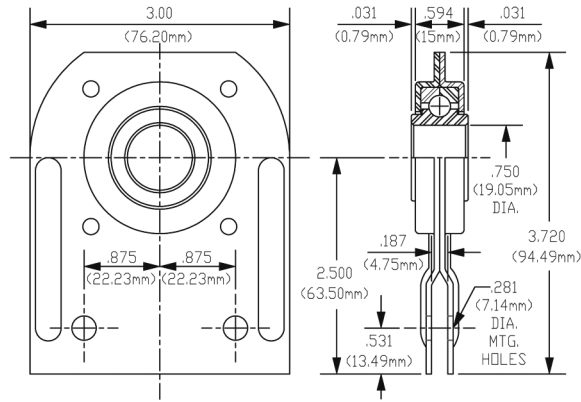


Designation: 2106™  
VBF53

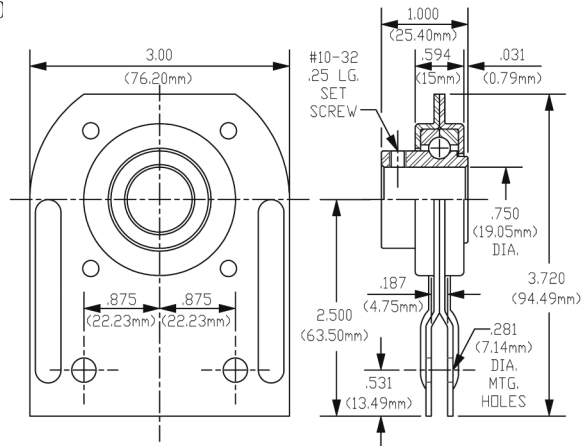


NICE® Hanger Bearing

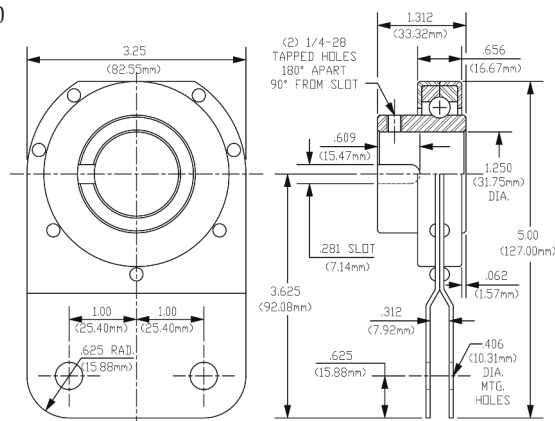
Designation: 6530™  
VBF00



Designation: 8320™  
VBF0



Designation: 8400™  
VBF00









# Innovation. Commitment. Quality.

RBC has been producing bearings in the USA since 1919. In addition to unique custom bearings, RBC offers a full line of standard industrial and aerospace bearings, including:



## Tapered Roller Thrust Bearings

Case-hardened tapered roller thrust bearings for oilfield top drives and swivels. Available in full compliment - maximum capacity versions.



## Needle Roller Bearings

**Pitchlign**® caged heavy duty needle roller bearings ideal for cross head bearings applications. These double row bearings are available in single row and **TandemRoller**® versions.



## Cylindrical Roller Bearings

Cylindrical roller bearings designed for mud pump pinion and eccentric positions. Fully interchangeable to industry standards.



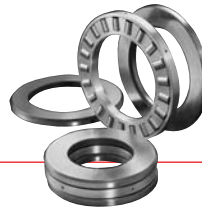
## Tapered Roller Bearings

Single, double, & multi row versions available for main bearing positions in mud pumps, gear boxes, etc. Bearings are constructed of case hardened steel washers and rollers with bore size of 11" or greater.



## Cam Followers

Standard stud, heavy stud, yoke type, caged roller followers. Patented **RBC Roller**® cylindrical roller cam followers, **HexLube**® universal cam followers, airframe track rollers.



## TP Series Bearings

RBC's TP Series cylindrical roller thrust bearings ideal for crane hooks, oil well swivels, winch systems, and gear boxes. Fully interchangeable with industry standard offering.



## Lubron® Bearings

**Lubron**® self-lubricating bearings designed and custom manufactured in most any size, material and bearing configuration. Applications include hydro power and water control, nuclear power generation, infrastructure, architecture, offshore marine, industrial, machinery and heavy equipment.



## Self-Lubricating Bearings

Radial, thrust, rod ends, spherical bearings, high temperature, high loads. Available in inch and metric sizes. **Fiberglide**® self-lubricating bearings.



## Spherical Plain Bearings

Radial, angular contact, extended inner ring, high misalignment. **QuadLube**®, **ImpactTuff**®, **SpreadLock**® Seal, **CrossLube**®, **DuraLube**™, and self-lubricating bearings. Available in inch and metric sizes.



## Commercial Rod Ends

Commercial and industrial, precision, Mil-Spec series, self-lubricating, and aircraft. Sold under the **Heim**®, **Unibal**®, and **Spherco**® names. Available in inch and metric sizes.



## Thin Section Ball Bearings

Standard cross sections to one inch. Bore sizes to 40 inches. Stainless steel and other materials are available. Seals are available on all sizes and standard cross sections. Super duplex configurations.



## Ball Bearings

Precision ground, semiground, unground. High loads, long life, smooth operation. **Nice**® branded products are offered in caged and full complement configurations.



## Specials

RBC manufactures many specialty bearings for the aerospace, oil and energy, semiconductor equipment, packaging, transportation, and other industries.