

RBC Roller[®], HexLube[®], CamCentric[®]

Cam Followers

A wide array of products including patented RBC Roller[®] cylindrical roller and needle roller cam followers - both stud and yoke styles.



RBC Division

**www.rbcbearings.com
800.390.3300**

RBC Bearings Incorporated (RBC Bearings, RBC) 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® brand.
- **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 rollers, 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 and Tapered Thrust 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.
- **Custom Designed Bearings** - RBC produces a wide range of custom bearings in various materials for specific applications.

RBC Cam Followers

RBC produces an extensive cam follower product line from 1/2 inch roller O.D. to 10 inch roller O.D. Standard stud, heavy stud, and yoke types are made in sealed and unsealed configurations. The caged SRF roller is popular in applications requiring oil bath lubrication, high speed, or in applications greased for life.

RBC heavy duty roller type mast guide and chain sheaves are used in a variety of lifting mechanisms - lift trucks, auto lift and specialty lift.

RBC produces metric cam followers where volume permits. Contact RBC for availability.

Type NBC, NBF, and NBL aircraft track rollers are also listed in this catalog. These bearings are used in aircraft wing flaps and slats, as door latches, landing gear door hinges, and in a variety of industrial applications requiring plated bearings.

Unique cam follower products offered include:

- **RBC Roller®** - A long life cam follower, the RBC Roller (Patent No. 5531137) has been developed for use in applications that cannot be compromised. The RBC Roller offers an average 400% life improvement over needle bearing cam follower designs and can substantially reduce operating costs.
- **HexLube®** - RBC stud type cam followers have a new HexLube feature and come equipped with a grease fitting installed in the roller end, thus permitting relubrication. HexLube can reduce inventory by 50% by consolidating other varieties of cam followers and interchanging them with HexLube.
- **CamCentric®** - The RBC CamCentric cam follower allows the user to adjust the height at which the cam follower rides along the track.

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 1,600 distributors and sales engineers throughout the US, Europe, and South America, 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.

Disclaimer and Intellectual Property Statement





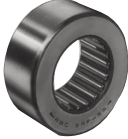



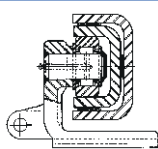
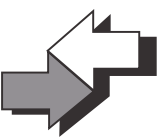

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CAM FOLLOWER SELECTION

RBC Cam Followers are presented in five groups: Needle Roller Cam Followers; Caged Roller Followers; RBC Roller® Long Life Cam Followers; Material Handling Rollers and Sheaves; and Airframe Track Rollers and Needle Bearings. RBC also produces a wide range of custom designed cam followers and track rollers. Designers and users with unusual application requirements should contact RBC to discuss custom designed cam followers.

Savings at Every Turn!

RBC Bearings produces the most innovative line of cam followers in the industry. The entire line is made from bearing quality steel for optimum performance. From the patented, long-life, RBC Roller® Cam Follower to the inventory reducing HexLube® line, RBC achieves cost savings and provides features that are unmatched by competitors. If you have a special application that is not served by the exhaustive list of products shown in this catalog, RBC has the engineering resources to create custom designed cam followers that will meet your needs.

RBC Roller®

The patented RBC Roller® is the leading cost-saver in the industry. This long-life cam follower lasts up to 400% longer than standard cam followers, with no maintenance! You can calculate your savings at our interactive website www.rbcbearings.com.

The RBC Roller® is dimensionally interchangeable with needle roller cam followers. The RBC Roller® is a good selection for production machinery applications where down time is critical and must be avoided, or where cam followers are not readily accessible for relubrication or replacement. They are available in stud type (page 8) and yoke type (page 10) configurations.

Two paths of end-guided, cylindrical rollers provide substantial increases in fatigue life and limiting speed. They can tolerate higher thrust loads than needle roller cam followers. Standard contacting lip seals offer enhanced protection against contaminants and positive grease retention. A large internal grease cavity assures maintenance-free service. Hex sockets are a standard feature. Crowned outer rings are available as an option.

HexLube®

RBC's new Universal HexLube® line of cam followers can reduce your inventory by about 50%! This innovative line can eliminate the need for you to stock screwdriver slot or unsealed cam followers. Find out how much your inventory can be reduced at www.rbcbearings.com.

The new HexLube® feature allows hex head cam followers to be relubricated through the hex head – a great convenience in tight spaces or when stud access is impossible. This feature is now available in sizes from 3/4" to 7"

with either a standard stud or heavy stud. Eccentric and crowned versions are also available. Standard hex head cam followers are available in smaller sizes starting at 1/2".

Needle Roller Cam Followers

Needle Roller Cam Followers have a heavy outer ring cross section and a full complement of needle rollers. They offer high dynamic and static load carrying capability, and anti-friction performance, in a compact design. They are used as track rollers, cam followers, and in a wide range of linear motion systems.

Standard Stud cam followers (page 14) offer the mounting convenience of a threaded stud and are designed to accommodate moderate loads. They are available with and without seals. Standard stud cam followers are also available with crowned outer rings (page 16) for applications where misalignment is a problem.

Heavy Stud cam followers (page 20) are designed to provide additional stud strength for applications with high loading or shock loads. Heavy stud cam followers are available with and without seals, and with crowned outer rings (page 22).

Yoke Type cam followers (page 24) are intended primarily for applications where loading conditions exceed the capabilities of stud type cam followers, or where clevis mounting is desired. Clevis mounting provides support on both sides of the cam follower and permits use of a high strength pin. Yoke type cam followers are available with and without seals, and with crowned outer rings.

CamCentric® adjustable cam followers (page 18) are used where accurate positioning is required. They are particularly useful for reducing clearance or backlash in opposed arrangements, and for assuring load sharing in multiple cam follower installations. Seals and hex socket are standard features of CamCentric® adjustable cam followers. Crowned outer rings are also available.

Crowned Outer Rings are used to minimize outer ring thrusting in applications where the axis of the cam follower is not parallel to the surface of the track or is skewed relative to the direction of travel. Crowned outer rings are a good selection for use with curved or circular tracks. In well aligned applications, crowned outer rings can cause accelerated track wear.

Caged Roller Followers

Caged roller followers (page 26) provide large internal grease storage capacity for applications where relubrication is infrequent. Cage guided rollers and a very heavy outer ring cross section permit operation at high loads and high speeds. Caged roller followers are available with and without seals. The unsealed design provides the additional advantages of very low friction to prevent skidding in lightly loaded

Cam Follower Selection Guide

| Application Requirements | | Needle Roller Cam Followers | | | | | Caged Roller Follower | RBC® Roller |
|--------------------------|------------|-----------------------------|------------|-----------|--------------|--------------------|-----------------------|-------------|
| | | Standard stud | Heavy stud | Yoke type | Cam-Centric™ | Crowned Outer Ring | | |
| Dynamic loading | MODERATE | ✓ | | | ✓ | | | ✓ |
| | HEAVY | | ✓ | | | | ✓ | |
| | VERY HEAVY | | | ✓ | | | | |
| Shock loading | | | ✓ | ✓ | | | | |
| High static loads | | | ✓ | ✓ | | | | |
| Contamination | | | | | | | | ✓ |
| Maintenance free | | | | | | | | ✓ |
| Long life | | | | | | | ✓ | ✓ |
| Misalignment | | | | | | ✓ | | ✓ |
| Load sharing | | | | | ✓ | | | |
| Adjustability | | | | | ✓ | | | |
| High speed | | | | | | | ✓ | ✓ |
| Low friction | | | | | | | ✓ | |
| Circular track | | | | | | ✓ | | |
| See pages ➡ | | 14 - 15 | 20 - 21 | 24 - 25 | 18 - 19 | * | 26 - 29 | 6 - 11 |

* Standard stud - page 16

Heavy stud - page 22

Yoke type - page 24

applications and provides for flow-through lubrication.

Caged roller followers normally mount directly on a hardened and ground pin. RBC offers a line of Precision Ground Inner Rings (page 28) to simplify application of caged roller followers. More information on shaft and mounting considerations is provided in part 5.4 of the technical section (page 45).

Material Handling Rollers and Sheaves

RBC offers a wide range of rollers and sheaves specifically designed for material handling applications—lifting, conveying, and power transmission. All RBC rollers and sheaves use heavy duty roller bearing construction which provides maximum dynamic and shock capacity for longer service life than ball bearing designs.

Lift Truck, Crane and Conveyor Rollers (page 30, 31) commonly referred to as mast guide rollers or carriage rollers, are used in lift truck masts and carriages, travelling cranes, and conveyor lines, where maximum capacity in an anti-friction roller is required. Sealed, lubricated-for-life versions are available.

Chain Sheave and Sprocket Idlers (page 32, 33) for BL-leaf and ANSI “rollerless” roller hoisting chain are essential components of hoisting systems such as lift

trucks and car lifts. They are also used as track rollers and as tensioners in power transmission chain drives.

Airframe Track Rollers and Needle Bearings

Airframe track rollers and needle bearings are designed for high load carrying capability, light weight, and slow rotation or oscillatory motion. The exposed surfaces are plated to provide corrosion resistance. They are used in aircraft flap, slat and control applications, and in numerous non-aircraft applications.

Series NBC needle bearings (page 34) offer high capacity, thin cross section and unitized construction. They are commonly used in pivots and linkages.

Series NBE and NBK needle bearings (page 36, 37) provide a spherical aligning outer ring to allow for misalignment. Applications and performance characteristics are otherwise similar to series NBC.

Series NBF and NBL track rollers (page 38, 39) are designed with heavy outer ring cross section for track roller applications. They offer a corrosion resistant alternative to conventional yoke type cam followers.

RBC ROLLER®

Stud and Yoke Type



The RBC Roller® was developed for customers needing a high degree of assurance of long cam follower life. It can be used to great advantage in conveyors, automotive transfer lines or process industries—food, beverage, plastics, glass and others. The RBC Roller® is also attractive for defense applications, where system reliability and maintainability are primary design goals. The internal design and construction differ from typical needle bearing, ball bearing, and tapered roller bearing cam followers. The RBC Roller® design is unique and is covered by Patent 5531137.

Two paths of cylindrical rollers create stable outer ring support. The comparatively large diameter of the rollers provides substantially increased dynamic capacity and fatigue life. On a size by size basis, the RBC Roller® offers at least twice, and up to nine times the fatigue life of conventional needle roller bearing cam followers.

A center thrust ring in the RBC Roller® imparts end guidance to the two paths of rollers. Conventional needle roller bearing cam followers rely on outer ring curvature and controlled circumferential clearance for roller guidance. The needle rollers often skew during normal operation, generating unnecessary heat which can lead to premature failure. When compared to needle roller bearing cam followers, end-guided cylindrical rollers allow the RBC Roller® to run at lower operating temperatures and higher speeds.

Thrust loading in the RBC Roller® is accommodated through contact between outer ring flanges and roller ends, and contact between roller ends and the center thrust ring. This provides the RBC Roller® with superior thrust capability. As a result, the RBC Roller® is tolerant of tracking misalignment and axial loads that would overwhelm other designs.

Contacting lip seals are a standard feature of the RBC Roller®. These seals ride on smooth ground surfaces on the inner ring or stud. This sealing system provides positive exclusion of solid and liquid contaminants, and excellent lubricant retention. When compared to clearance seals typical of most cam follower designs, the RBC Roller® contacting lip seals ensure superior protection in demanding environments.

The RBC Roller® is pre-lubricated at the factory with a high quality mineral oil, NLGI grade 2 grease. The space between the two paths of rollers which is created by the center thrust ring provides a large grease storage cavity. This larger than normal ability to store lubricant, in combination with excellent grease retention of the contacting lip seals, makes the RBC Roller® virtually maintenance-free. Under most operating conditions relubrication is not necessary.

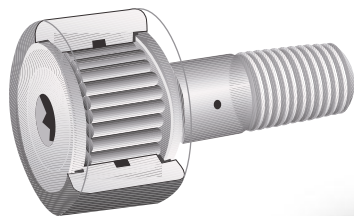
The design of the RBC Roller® provides the additional benefit of positive, unitized construction. Conventional cam followers rely on swaging or staking, particularly in yoke type configurations, to maintain integrity of the assembly. If adequate axial clamping is not provided, these designs can drift apart and cause catastrophic failure. During assembly of the RBC Roller®, the center thrust ring permanently engages a circumferential groove in the stud or inner ring. This design feature ensures integrity of the assembly during handling and operation, and simplifies mounting design.

The RBC Roller® is available in stud and yoke type configurations. Standard sizes range from 1 1/4 inches outside diameter to 10 inches outside diameter. The RBC Roller® is dimensionally interchangeable with standard needle roller bearing cam follower designs.

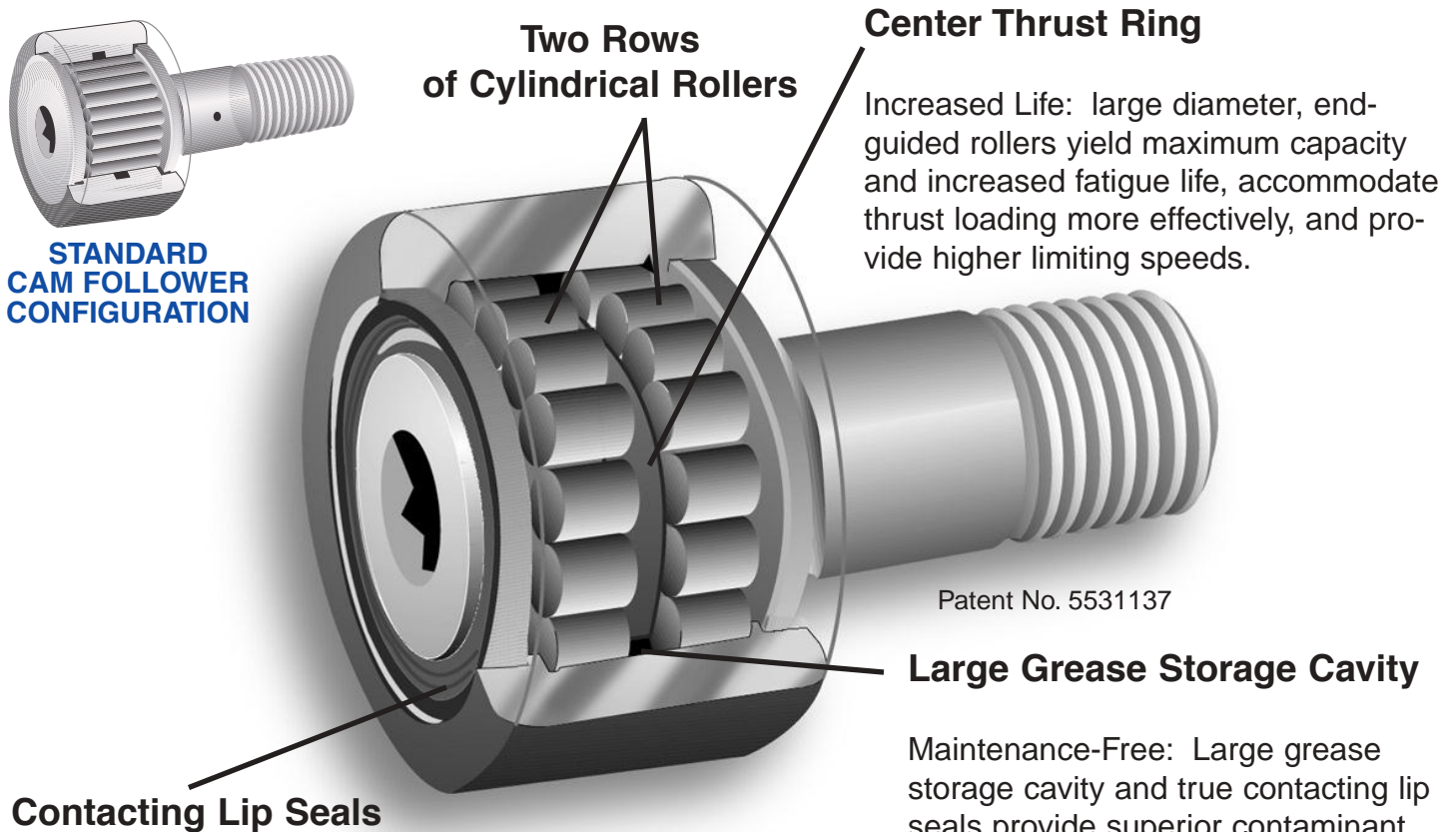


FEATURED PRODUCT

The RBC ROLLER[®] Cam Follower



**STANDARD
CAM FOLLOWER
CONFIGURATION**



**Two Rows
of Cylindrical Rollers**

Center Thrust Ring

Increased Life: large diameter, end-guided rollers yield maximum capacity and increased fatigue life, accommodate thrust loading more effectively, and provide higher limiting speeds.

Patent No. 5531137

Large Grease Storage Cavity

Maintenance-Free: Large grease storage cavity and true contacting lip seals provide superior contaminant exclusion and lubricant retention for maintenance-free operation.

Contacting Lip Seals

THE RBC ROLLER[®] — A PROVEN COST-SAVER!

- ✓ Lasts up to 4 times longer than standard cam followers
 - Saves replacement costs
 - Saves downtime costs
- ✓ Maintenance-Free
 - Saves maintenance costs
 - Saves lubrication costs
 - Saves time
- ✓ Increased speeds
 - Boosts productivity
- ✓ Lower running temperature—approximately 50°F cooler.
- ✓ Interchangeable with Needle Bearing Cam Followers

RBC Roller®

Long Life Cam Followers



Series RBC

| PART NUMBER | ROLLER | | STUD | | | | | Approx. Weight [lbs] |
|-------------|---------------------|---------------------|----------------------|--------------------|------------------------|--------------------------|-----------------|----------------------|
| | D +.000 -.001 | B +.000 -.005 | SD +.001 -.000 | SL Shank Length | K Shoulder Diameter | TL Eff. Thread Length | Thread Class 2A | |
| RBC 1 | 1.000 | .625 | .4375 | 1.000 | .500 | .500 | 7/16-20 | .16 |
| RBC 1 1/8 | 1.125 | .625 | .4375 | 1.000 | .500 | .500 | 7/16-20 | .19 |
| RBC 1 1/4 | 1.250 | .750 | .5000 | 1.250 | .625 | .625 | 1/2-20 | .29 |
| RBC 1 3/8 | 1.375 | .750 | .5000 | 1.250 | .625 | .625 | 1/2-20 | .34 |
| RBC 1 1/2 | 1.500 | .875 | .6250 | 1.500 | .750 | .750 | 5/8-18 | .51 |
| RBC 1 5/8 | 1.625 | .875 | .6250 | 1.500 | .750 | .750 | 5/8-18 | .61 |
| RBC 1 3/4 | 1.750 | 1.000 | .7500 | 1.750 | 1.000 | .875 | 3/4-16 | .83 |
| RBC 1 7/8 | 1.875 | 1.000 | .7500 | 1.750 | 1.000 | .875 | 3/4-16 | .92 |
| RBC 2 | 2.000 | 1.250 | .8750 | 2.000 | 1.125 | 1.000 | 7/8-14 | 1.32 |
| RBC 2 1/4 | 2.250 | 1.250 | .8750 | 2.000 | 1.125 | 1.000 | 7/8-14 | 1.61 |
| RBC 2 1/2 | 2.500 | 1.500 | 1.0000 | 2.250 | 1.250 | 1.125 | 1-14 | 2.48 |
| RBC 2 3/4 | 2.750 | 1.500 | 1.0000 | 2.250 | 1.250 | 1.125 | 1-14 | 2.83 |
| RBC 3 | 3.000 | 1.750 | 1.2500 | 2.500 | 1.500 | 1.250 | 1 1/4-12 | 4.04 |
| RBC 3 1/4 | 3.250 | 1.750 | 1.2500 | 2.500 | 1.500 | 1.250 | 1 1/4-12 | 4.75 |
| RBC 3 1/2 | 3.500 | 2.000 | 1.3750 | 2.750 | 1.625 | 1.375 | 1 3/8-12 | 6.22 |
| RBC 4 | 4.000 | 2.250 | 1.5000 | 3.500 | 1.750 | 1.500 | 1 1/2-12 | 7.44 |
| RBC 5 | 5.000 | 2.750 | 2.0000 | 5.062 | 2.250 | 2.562 | 2-12 | 18.70 |
| RBC 6 | 6.000 | 3.250 | 2.5000 | 6.000 | 3.000 | 3.000 | 2 1/2-12 | 32.90 |
| RBC 7 | 7.000 | 3.750 | 3.0000 | 7.688 | 3.750 | 4.125 | 3-12 | 53.50 |
| RBC 8 | 8.000 | 4.250 | 3.2500 | 8.500 | 4.000 | 4.250 | 3 1/4-4 | 73.60 |
| RBC 9 | 9.000 | 4.750 | 3.7500 | 9.500 | 4.500 | 4.750 | 3 1/2-4 | 102.70 |
| RBC 10 | 10.000 | 5.250 | 4.2500 | 10.000 | 5.000 | 4.750 | 3 1/2-4 | 137.00 |

All dimensions are in inches.

To specify RBC Roller® with lubrication holes, add OH suffix (example: RBC 1 1/2 OH).

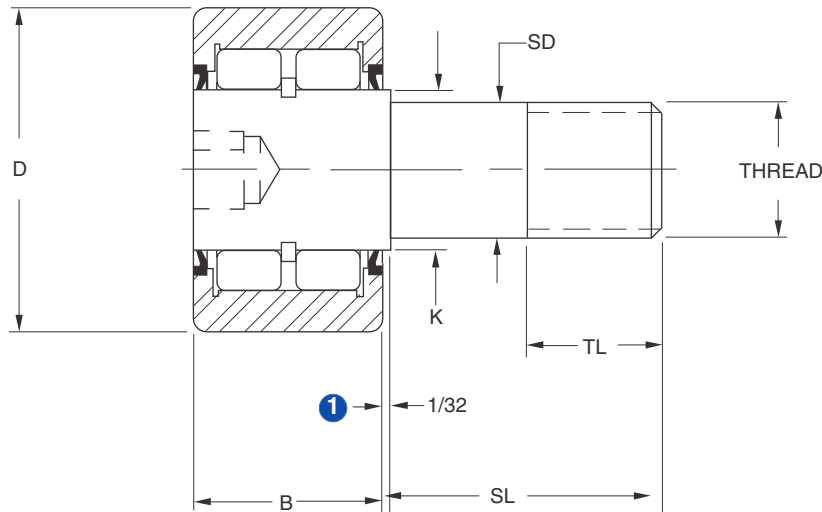
Seals can be removed for flow-through lubrication.

To specify RBC Roller® without seals, add NS suffix (example: RBC 4 NS).

To specify RBC Roller® with crowned outer ring, add C prefix (example: CRBC 2 1/2).
Refer to page 16 for crown radius.

RBC Roller®

Long Life Cam Followers



| | Socket Head Wrench Size | Speed Limit [rpm] | CAPACITIES | | | | MOUNTING DATA | | PART NUMBER |
|--|-------------------------|-------------------|--------------------------|--|---------------------------|------------------------------|---------------------------------|-------------------------|-------------|
| | | | Dynamic Capacity C [lbf] | Static Capacity C ₀ [lbf] ③ | Maximum Allow. Load [lbf] | Track Capacity @ 40 Rc [lbf] | Max. Clamping Torque [in*lbf] ② | Hsg Bore +.0005 - .0002 | |
| | 1/4 | 9,400 | 3,000 | 3,200 | 1,400 | 1,660 | 100 | .4375 | RBC 1 |
| | 1/4 | 9,400 | 3,000 | 3,200 | 1,700 | 1,870 | 100 | .4375 | RBC 1 1/8 |
| | 1/4 | 7,500 | 4,100 | 4,300 | 1,500 | 2,440 | 180 | .5000 | RBC 1 1/4 |
| | 1/4 | 7,500 | 4,100 | 4,300 | 1,850 | 2,680 | 180 | .5000 | RBC 1 3/8 |
| | 5/16 | 6,200 | 6,200 | 7,000 | 2,400 | 3,320 | 390 | .6250 | RBC 1 1/2 |
| | 5/16 | 6,200 | 6,200 | 7,000 | 2,800 | 3,600 | 390 | .6250 | RBC 1 5/8 |
| | 5/16 | 4,700 | 8,200 | 10,500 | 3,150 | 4,550 | 750 | .7500 | RBC 1 3/4 |
| | 5/16 | 4,700 | 8,200 | 10,500 | 3,800 | 4,900 | 750 | .7500 | RBC 1 7/8 |
| | 7/16 | 4,100 | 12,400 | 17,200 | 5,500 | 6,500 | 900 | .8750 | RBC 2 |
| | 7/16 | 4,100 | 12,400 | 17,200 | 7,000 | 7,300 | 900 | .8750 | RBC 2 1/4 |
| | 1/2 | 3,700 | 16,800 | 22,800 | 9,100 | 9,400 | 1,300 | 1.0000 | RBC 2 1/2 |
| | 1/2 | 3,700 | 16,800 | 22,800 | 10,900 | 10,400 | 1,300 | 1.0000 | RBC 2 3/4 |
| | 5/8 | 3,100 | 28,900 | 39,100 | 15,000 | 13,300 | 2,000 | 1.2500 | RBC 3 |
| | 5/8 | 3,100 | 28,900 | 39,100 | 17,800 | 14,400 | 2,000 | 1.2500 | RBC 3 1/4 |
| | 5/8 | 2,900 | 36,100 | 53,000 | 21,200 | 17,300 | 2,500 | 1.3750 | RBC 3 1/2 |
| | 3/4 | 2,600 | 45,600 | 68,000 | 23,700 | 22,000 | 3,000 | 1.5000 | RBC 4 |
| | 7/8 | 2,000 | 71,000 | 110,000 | 43,700 | 35,000 | 3,000 | 2.0000 | RBC 5 |
| | 1 | 1,500 | 102,000 | 170,000 | 60,000 | 51,000 | 3,000 | 2.5000 | RBC 6 |
| | 1 1/4 | 1,200 | 135,000 | 218,000 | 70,000 | 61,000 | 3,000 | 3.0000 | RBC 7 |
| | 1 1/4 | 1,100 | 175,000 | 272,000 | 98,000 | 70,000 | 3,000 | 3.2500 | RBC 8 |
| | 1 1/4 | 1,000 | 221,000 | 352,000 | 127,000 | 79,000 | 3,000 | 3.7500 | RBC 9 |
| | 1 1/4 | 900 | 272,000 | 441,000 | 159,000 | 88,000 | 3,000 | 4.2500 | RBC 10 |

Excessive clamping torque may cause shoulder K to dig into housing.

- ① 1/16 inch for sizes RBC 5 and larger.
- ② Torque may be doubled for completely dry threads.
- ③ Bearing Static Capacity provided for comparison only.

RBC Roller®

Long Life Yoke Rollers



Series RBY

| PART NUMBER | ROLLER | | d Inside Diameter | | | B Overall Width +.005 -.010 | F Shaft Shoulder (Ref) | Approx. Weight [lbs] |
|-------------|---------------------|----------------------------------|----------------------|--------|--------|--------------------------------------|------------------------------|-------------------------|
| | D +.000 -.001 | B ₁ +.000 -.005 | Nom. | Min. | Max. | | | |
| | RBY 1 | 1.000 | .625 | 5/16 | .3121 | | | |
| RBY 1 1/8 | 1.125 | .625 | 5/16 | .3121 | .3127 | .6925 | .500 | .150 |
| RBY 1 1/4 | 1.250 | .750 | 3/8 | .3746 | .3752 | .8125 | .625 | .230 |
| RBY 1 3/8 | 1.375 | .750 | 3/8 | .3746 | .3752 | .8125 | .625 | .280 |
| RBY 1 1/2 | 1.500 | .875 | 7/16 | .4371 | .4377 | .9375 | .750 | .370 |
| RBY 1 5/8 | 1.625 | .875 | 7/16 | .4371 | .4377 | .9375 | .750 | .440 |
| RBY 1 3/4 | 1.750 | 1.000 | 1/2 | .4996 | .5002 | 1.0625 | 1.000 | .580 |
| RBY 1 7/8 | 1.875 | 1.000 | 1/2 | .4996 | .5002 | 1.0625 | 1.000 | .670 |
| RBY 2 | 2.000 | 1.250 | 5/8 | .6246 | .6252 | 1.3125 | 1.125 | .920 |
| RBY 2 1/4 | 2.250 | 1.250 | 5/8 | .6246 | .6252 | 1.3125 | 1.125 | 1.20 |
| RBY 2 1/2 | 2.500 | 1.500 | 3/4 | .7496 | .7502 | 1.5625 | 1.250 | 1.75 |
| RBY 2 3/4 | 2.750 | 1.500 | 3/4 | .7496 | .7502 | 1.5625 | 1.250 | 2.15 |
| RBY 3 | 3.000 | 1.750 | 1 | .9995 | 1.0001 | 1.8125 | 1.500 | 2.87 |
| RBY 3 1/4 | 3.250 | 1.750 | 1 | .9995 | 1.0001 | 1.8125 | 1.500 | 3.43 |
| RBY 3 1/2 | 3.500 | 2.000 | 1 1/8 | 1.1245 | 1.1251 | 2.0625 | 1.625 | 4.50 |
| RBY 4 | 4.000 | 2.250 | 1 1/4 | 1.2495 | 1.2501 | 2.3125 | 1.750 | 6.65 |
| RBY 5 | 5.000 | 2.750 | 1 3/4 | 1.7495 | 1.7501 | 2.8750 | 2.250 | 12.30 |
| RBY 6 | 6.000 | 3.250 | 2 1/4 | 2.2495 | 2.2501 | 3.3750 | 3.000 | 20.60 |
| RBY 7 | 7.000 | 3.750 | 2 3/4 | 2.7495 | 2.7501 | 3.8750 | 3.750 | 31.80 |
| RBY 8 | 8.000 | 4.250 | 3 1/4 | 3.2550 | 3.2560 | 4.5000 | 4.000 | 46.50 |
| RBY 9 | 9.000 | 4.750 | 3 3/4 | 3.7550 | 3.7560 | 5.0000 | 4.500 | 65.00 |
| RBY 10 | 10.000 | 5.250 | 4 1/4 | 4.2550 | 4.2560 | 5.5000 | 5.000 | 88.00 |

All dimensions are in inches.

To specify RBC Roller® with lubrication holes, add OH suffix (example: RBY 1 3/4 OH).

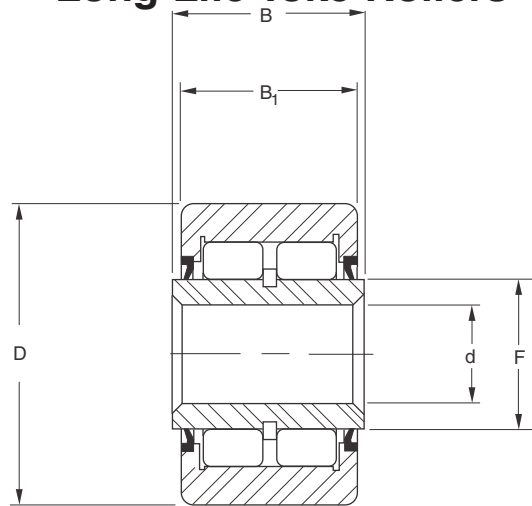
Seals can be removed for flow-through lubrication.

To specify RBC Roller® without seals, add NS suffix (example: RBY 3 1/2 NS).

To specify RBC Roller® with crowned outer ring, add C prefix (example: CRBY 1 7/8).
Refer to page 24 for crown radius.

RBC Roller®

Long Life Yoke Rollers



| Speed Limit [rpm] | CAPACITIES | | | | | MOUNTING DATA | | | | PART NUMBER |
|-------------------|--------------------------|--|---------------------------|------------------------------|----------------|---------------|-----------|--------|------------------|-------------|
| | Dynamic Capacity C [lbf] | Static Capacity C _o [lbf] ① | Maximum Allow. Load [lbf] | Track Capacity @ 40 Rc [lbf] | Transition Fit | | Press Fit | | | |
| | | | | | Max. | Min. | Max. | Min. | | |
| 9,400 | 3,000 | 3,200 | 1,400 | 1,660 | .3122 | .3118 | .3130 | .3126 | RBY 1 | |
| 9,400 | 3,000 | 3,200 | 1,700 | 1,870 | .3122 | .3118 | .3130 | .3126 | RBY 1 1/8 | |
| 7,500 | 4,100 | 4,300 | 1,500 | 2,440 | .3747 | .3743 | .3755 | .3751 | RBY 1 1/4 | |
| 7,500 | 4,100 | 4,300 | 1,850 | 2,680 | .3747 | .3743 | .3755 | .3751 | RBY 1 3/8 | |
| 6,200 | 6,200 | 7,000 | 2,400 | 3,320 | .4372 | .4368 | .4380 | .4376 | RBY 1 1/2 | |
| 6,200 | 6,200 | 7,000 | 2,800 | 3,600 | .4372 | .4368 | .4380 | .4376 | RBY 1 5/8 | |
| 4,700 | 8,200 | 10,500 | 3,150 | 4,550 | .4997 | .4993 | .5007 | .5003 | RBY 1 3/4 | |
| 4,700 | 8,200 | 10,500 | 3,800 | 4,900 | .4997 | .4993 | .5007 | .5003 | RBY 1 7/8 | |
| 4,100 | 12,400 | 17,200 | 5,500 | 6,500 | .6247 | .6243 | .6257 | .6253 | RBY 2 | |
| 4,100 | 12,400 | 17,200 | 7,000 | 7,300 | .6247 | .6243 | .6257 | .6253 | RBY 2 1/4 | |
| 3,700 | 16,800 | 22,800 | 9,100 | 9,400 | .7497 | .7493 | .7507 | .7503 | RBY 2 1/2 | |
| 3,700 | 16,800 | 22,800 | 10,900 | 10,400 | .7497 | .7493 | .7507 | .7503 | RBY 2 3/4 | |
| 3,100 | 28,900 | 39,100 | 15,000 | 13,300 | .9996 | .9991 | 1.0008 | 1.0003 | RBY 3 | |
| 3,100 | 28,900 | 39,100 | 17,800 | 14,400 | .9996 | .9991 | 1.0008 | 1.0003 | RBY 3 1/4 | |
| 2,900 | 36,100 | 53,000 | 21,200 | 17,300 | 1.1246 | 1.1241 | 1.1258 | 1.1253 | RBY 3 1/2 | |
| 2,600 | 45,600 | 68,000 | 23,700 | 22,000 | 1.2496 | 1.2491 | 1.2508 | 1.2503 | RBY 4 | |
| 2,000 | 71,000 | 110,000 | 43,700 | 35,000 | 1.7496 | 1.7491 | 1.7508 | 1.7503 | RBY 5 | |
| 1,500 | 102,000 | 170,000 | 60,000 | 52,000 | 2.2496 | 2.2491 | 2.2508 | 2.2503 | RBY 6 | |
| 1,200 | 135,600 | 218,000 | 70,000 | 61,000 | 2.7496 | 2.7491 | 2.7508 | 2.7503 | RBY 7 | |
| 1,100 | 175,400 | 272,000 | 98,000 | 70,000 | 3.2550 | 3.2540 | 3.2570 | 3.2560 | RBY 8 | |
| 1,000 | 221,000 | 352,000 | 127,000 | 79,000 | 3.7550 | 3.7540 | 3.7570 | 3.7560 | RBY 9 | |
| 900 | 272,000 | 441,000 | 159,000 | 88,000 | 4.2550 | 4.2540 | 4.2570 | 4.2560 | RBY 10 | |

① Bearing Static Capacity provided for comparison only.

HexLube® Universal Cam Follower



RBC Bearings offers the new HexLube® Universal line of cam followers, designed with a unique lubricating feature. The RBC HexLube® Universal Cam Follower allows for relubrication through the hexagonal head of the cam follower, making relubrication in tight spots possible. In addition, the universal design of the RBC HexLube® Cam Follower can eliminate the need to stock both screwdriver slot and unsealed cam followers. RBC expects that most customers can reduce their inventory on stud type cam followers by 50% using this new universal line. The complete line is available in sizes with an outside diameter from 3/4 inch to 7 inches.

The RBC HexLube® Universal Cam Follower design provides the easiest and fastest way to relubricate cam followers in hard to reach places or in applications where stud access is limited. A cam follower that is properly maintained and lubricated will last longer than a cam follower that is neglected

Relubricate through head!

due to the difficulties posed by relubrication.

Companies looking to sharply reduce their inventory levels will recognize the value of RBC's universal design of the new HexLube® Cam Follower. By stocking the RBC HexLube® line, companies will no longer need to carry inventories of either screwdriver slot or unsealed cam followers.

The entire line of RBC HexLube® Universal Cam Followers is dimensionally interchangeable with other needle bearing cam followers. The RBC HexLube® Universal Cam Follower is available in both eccentric and crowned versions. Both standard studs and heavy studs are available as well.

RBC HexLube® Universal Cam Followers are designed for applications such as automation and production equipment, bottling and canning, printing machinery, material handling, construction equipment, transfer lines, food processing, and packaging equipment.

HexLube®

HexLube®

The Universal Cam Follower Line by RBC

RBC developed the Universal Cam Follower product line to replace standard cam followers, and delivered two obvious benefits. First, it is possible to relubricate the hex head cam follower through the head. The hex head feature is the preferred mounting method for stud-type cam followers, and now it can be relubricated in tight spots or when stud access is restricted. Second, the HexLube® can eliminate the need to stock both screwdriver slot and unsealed cam followers. Your inventory can be reduced by about 50%!

RBC looked at the cam follower market and found 358 line items and five manufacturers (1790 line items!) The challenge was to reduce the number of part numbers needed to satisfy the market without sacrificing features and benefits. The answer was the "Universal Cam Follower Product Line." The HexLube® cam follower allows lubrication through the head of the cam follower, eliminating the need to stock the screwdriver slot series. Also eliminated from the line were all unsealed cam followers. Reducing your inventory by this large amount results in real savings. The end result is a product line with just 186 line items!

Relubricate
through
Hex Head



THE RBC HexLube®

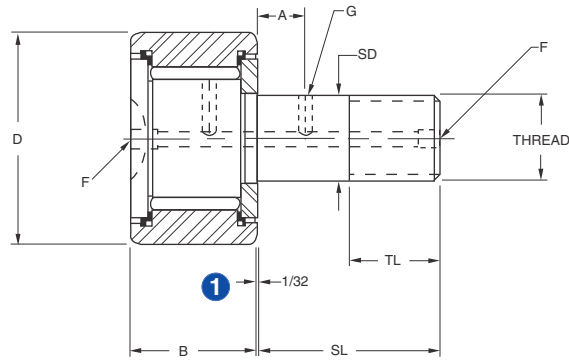
SAVINGS AT EVERY TURN!



- ✓ Inventory Reduction of About 50%
- ✓ Allows Relubrication in tight spots or when stud access is limited
- ✓ HexLube® Universal Cam Follower can eliminate the need to stock screwdriver slots or unsealed cam followers
- ✓ Sizes from 3/4" to 7" O.D.
- ✓ Eccentric and Crowned versions
- ✓ Available in Standard Stud and Heavy Stud

Cam Followers

Standard Stud



with
Glide-A-Seal®



without
seal

Series S, S-L

| Nominal Size | PART NUMBER | | | ROLLER | | STUD | | | | Approx. Weight [lbs] |
|--------------|--------------|-----------------------|-------------------------------|---------------------|---------------------|----------------------|--------------------|--------------------------|-----------------|----------------------|
| | Slotted Head | Slotted Head & Sealed | Hexlube™ Socket Head & Sealed | D +.000 -.001 | B +.000 -.005 | SD +.001 -.000 | SL Shank Length | TL Eff. Thread Length | Thread Class 2A | |
| 1/2 | S 16 | S 16 L | S 16 LW | .5000 | .375 | .1900 | .625 | .250 | 10-32 | .023 |
| 9/16 | S 18 | S 18 L | S 18 LW | .5625 | .375 | .1900 | .625 | .250 | 10-32 | .031 |
| 5/8 | S 20 | S 20 L | S 20 LW | .6250 | .438 | .2500 | .750 | .313 | 1/4-28 | .048 |
| 11/16 | S 22 | S 22 L | S 22 LW | .6875 | .438 | .2500 | .750 | .313 | 1/4-28 | .051 |
| 3/4 | S 24 | S 24 L | S 24 LW | .7500 | .500 | .3750 | .875 | .375 | 3/8-24 | .076 |
| 7/8 | S 28 | S 28 L | S 28 LW | .8750 | .500 | .3750 | .875 | .375 | 3/8-24 | .100 |
| 1 | S 32 | S 32 L | S 32 LW | 1.0000 | .625 | .4375 | 1.000 | .500 | 7/16-20 | .160 |
| 1 1/8 | S 36 | S 36 L | S 36 LW | 1.1250 | .625 | .4375 | 1.000 | .500 | 7/16-20 | .190 |
| 1 1/4 | S 40 | S 40 L | S 40 LW | 1.2500 | .750 | .5000 | 1.250 | .625 | 1/2-20 | .290 |
| 1 3/8 | S 44 | S 44 L | S 44 LW | 1.3750 | .750 | .5000 | 1.250 | .625 | 1/2-20 | .340 |
| 1 1/2 | S 48 | S 48 L | S 48 LW | 1.5000 | .875 | .6250 | 1.500 | .750 | 5/8-18 | .510 |
| 1 5/8 | S 52 | S 52 L | S 52 LW | 1.6250 | .875 | .6250 | 1.500 | .750 | 5/8-18 | .610 |
| 1 3/4 | S 56 | S 56 L | S 56 LW | 1.7500 | 1.000 | .7500 | 1.750 | .875 | 3/4-16 | .830 |
| 1 7/8 | S 60 | S 60 L | S 60 LW | 1.8750 | 1.000 | .7500 | 1.750 | .875 | 3/4-16 | .920 |
| 2 | S 64 | S 64 L | S 64 LW | 2.0000 | 1.250 | .8750 | 2.000 | 1.000 | 7/8-14 | 1.320 |
| 2 1/4 | S 72 | S 72 L | S 72 LW | 2.2500 | 1.250 | .8750 | 2.000 | 1.000 | 7/8-14 | 1.610 |
| 2 1/2 | S 80 | S 80 L | S 80 LW | 2.5000 | 1.500 | 1.0000 | 2.250 | 1.125 | 1-14 | 2.480 |
| 2 3/4 | S 88 | S 88 L | S 88 LW | 2.7500 | 1.500 | 1.0000 | 2.250 | 1.125 | 1-14 | 2.830 |
| 3 | S 96 | S 96 L | S 96 LW | 3.0000 | 1.750 | 1.2500 | 2.500 | 1.250 | 1 1/4-12 | 4.040 |
| 3 1/4 | S 104 | S 104 L | S 104 LW | 3.2500 | 1.750 | 1.2500 | 2.500 | 1.250 | 1 1/4-12 | 4.750 |
| 3 1/2 | S 112 | S 112 L | S 112 LW | 3.5000 | 2.000 | 1.3750 | 2.750 | 1.375 | 1 3/8-12 | 6.220 |
| 4 | S 128 | S 128 L | S 128 LW | 4.0000 | 2.250 | 1.5000 | 3.500 | 1.500 | 1 1/2-12 | 7.440 |
| 5 | - | - | S 160 LW | 5.0000 | 2.750 | 2.0000 | 5.062 | 2.562 | 2-12 | 18.700 |
| 6 | - | - | S 192 LW | 6.0000 | 3.250 | 2.5000 | 6.000 | 3.000 | 2 1/2-12 | 32.900 |
| 7 | - | - | S 224 LW | 7.0000 | 3.750 | 3.0000 | 7.688 | 4.125 | 3-12 | 53.900 |

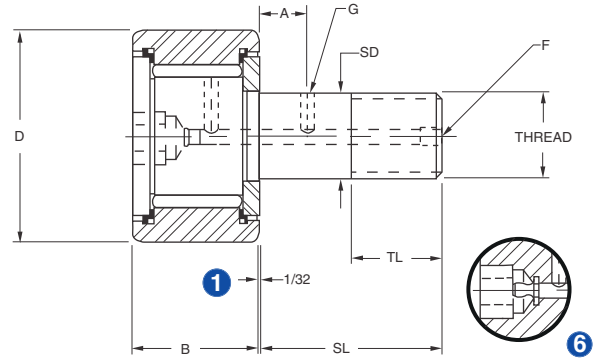
All dimensions are in inches.

① 1/16" for sizes S 160 LW and larger.

HexLube® Universal Cam Followers

Standard Stud

Relubricate through Hex Head



Series S--LW

| F Lube Fitting ③ | A Loc. | G Dia. | Socket Head Wrench Size | Speed Limit [rpm] | CAPACITIES | | | | MOUNTING DATA | | | Basic Number |
|---------------------|--------|--------|-------------------------|-------------------|--------------------------|--|------------------------|-------------------------------|---------------------------------|-----------------------------|----------------|--------------|
| | | | | | Dynamic Capacity C [lbf] | Static Capacity C ₀ [lbf] ⑤ | Max. Allow. Load [lbf] | Track Capacity at 40 Rc [lbf] | Max. ④ Clamping Torque [in*lbf] | Housing Bore +.0005 - .0000 | Min. Boss Dia. | |
| ② | - | - | 1/8 | 5,000 | 770 | 1,100 | 310 | 430 | 7.5 | .1900 | .29 | -16 |
| ② | - | - | 1/8 | 5,000 | 770 | 1,100 | 310 | 480 | 7.5 | .1900 | .29 | -18 |
| ② | - | - | 1/8 | 5,000 | 1,060 | 1,700 | 610 | 770 | 20 | .2500 | .36 | -20 |
| ② | - | - | 1/8 | 5,000 | 1,060 | 1,700 | 610 | 850 | 20 | .2500 | .36 | -22 |
| 3/16 | .250 | .093 | 3/16 | 5,000 | 1,800 | 3,100 | 1,840 | 880 | 55 | .3750 | .50 | -24 |
| 3/16 | .250 | .093 | 3/16 | 5,000 | 1,800 | 3,100 | 1,840 | 1,030 | 55 | .3750 | .50 | -28 |
| 3/16 | .250 | .093 | 1/4 | 4,500 | 2,300 | 4,800 | 2,390 | 1,690 | 150 | .4375 | .64 | -32 |
| 3/16 | .250 | .093 | 1/4 | 4,500 | 2,300 | 4,800 | 2,390 | 1,900 | 150 | .4375 | .64 | -36 |
| 3/16 | .312 | .093 | 1/4 | 3,900 | 4,200 | 6,600 | 3,000 | 2,440 | 200 | .5000 | .76 | -40 |
| 3/16 | .312 | .093 | 1/4 | 3,900 | 4,200 | 6,600 | 3,000 | 2,680 | 200 | .5000 | .76 | -44 |
| 3/16 | .375 | .093 | 5/16 | 3,100 | 5,000 | 8,800 | 5,100 | 3,320 | 390 | .6250 | .89 | -48 |
| 3/16 | .375 | .093 | 5/16 | 3,100 | 5,000 | 8,800 | 5,100 | 3,600 | 390 | .6250 | .89 | -52 |
| 3/16 | .437 | .125 | 5/16 | 2,600 | 6,400 | 12,400 | 7,800 | 4,550 | 750 | .7500 | 1.05 | -56 |
| 3/16 | .437 | .125 | 5/16 | 2,600 | 6,400 | 12,400 | 7,800 | 4,900 | 750 | .7500 | 1.05 | -60 |
| 3/16 | .500 | .125 | 7/16 | 2,200 | 9,600 | 16,700 | 10,000 | 6,500 | 900 | .8750 | 1.20 | -64 |
| 3/16 | .500 | .125 | 7/16 | 2,200 | 9,600 | 16,700 | 10,000 | 7,300 | 900 | .8750 | 1.20 | -72 |
| 3/16 | .562 | .125 | 1/2 | 2,000 | 12,800 | 25,400 | 12,500 | 9,400 | 1,300 | 1.0000 | 1.31 | -80 |
| 3/16 | .562 | .125 | 1/2 | 2,000 | 12,800 | 25,400 | 12,500 | 10,400 | 1,300 | 1.0000 | 1.31 | -88 |
| 1/4 | .625 | .187 | 5/8 | 1,600 | 17,000 | 40,000 | 21,000 | 13,300 | 2,000 | 1.2500 | 2.00 | -96 |
| 1/4 | .625 | .187 | 5/8 | 1,600 | 17,000 | 40,000 | 21,000 | 14,400 | 2,000 | 1.2500 | 2.00 | -104 |
| 1/4 | .687 | .187 | 5/8 | 1,400 | 24,300 | 54,600 | 24,750 | 17,300 | 2,500 | 1.3750 | 2.39 | -112 |
| 1/4 | .750 | .187 | 3/4 | 1,300 | 30,000 | 73,100 | 28,500 | 22,000 | 3,000 | 1.5000 | 2.62 | -128 |
| 1/4 NPT | .875 | .187 | 7/8 | 1,000 | 47,200 | 102,000 | 55,000 | 35,000 | 3,000 | 2.0000 | 3.50 | -160 |
| 1/4 NPT | 1.000 | .187 | 1 | 800 | 62,900 | 165,500 | 90,000 | 52,000 | 3,000 | 2.5000 | 4.50 | -192 |
| 1/4 NPT | 1.250 | .187 | 1 1/4 | 700 | 79,400 | 237,800 | 139,000 | 71,000 | 3,000 | 3.0000 | 5.25 | -224 |

② Sizes S 16 through S 22 and S 16 L through S 22 L have a 1/8" hole at the flange end only.

③ Sizes S 16 LW through S 22 LW cannot be relubricated.

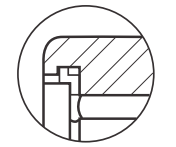
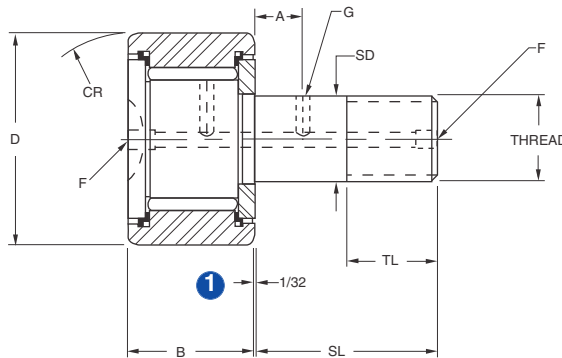
④ Torque may be doubled for completely dry threads.

⑤ Bearing Static Capacity provided for comparison only.

⑥ HexLube® Cam Followers can be regreased through the hex head using a Lincoln #5803 or Alemite #B6783 needle nozzle adapter.

Crowned Cam Followers

Standard Stud



with
Glide-A-Seal®



without
seal

Series CS--L

| Nominal Size | PART NUMBER | | ROLLER | | | STUD | | | | Approx. Weight [lbs] |
|--------------|-----------------------|-------------------------------|---------------------|---------------------|--------------------|----------------------|--------------------|--------------------------|-----------------|----------------------|
| | Slotted Head & Sealed | Hexlube® Socket Head & Sealed | D +.000 -.001 | B +.000 -.005 | CR Crown Radius | SD +.001 -.000 | SL Shank Length | TL Eff. Thread Length | Thread Class 2A | |
| 1/2 | CS 16 L | CS 16 LW | .5000 | .375 | 7 | .1900 | .625 | .250 | 10-32 | .023 |
| 9/16 | CS 18 L | CS 18 LW | .5625 | .375 | 7 | .1900 | .625 | .250 | 10-32 | .031 |
| 5/8 | CS 20 L | CS 20 LW | .6250 | .438 | 8 | .2500 | .750 | .313 | 1/4-28 | .048 |
| 11/16 | CS 22 L | CS 22 LW | .6875 | .438 | 8 | .2500 | .750 | .313 | 1/4-28 | .051 |
| 3/4 | CS 24 L | CS 24 LW | .7500 | .500 | 10 | .3750 | .875 | .375 | 3/8-24 | .076 |
| 7/8 | CS 28 L | CS 28 LW | .8750 | .500 | 10 | .3750 | .875 | .375 | 3/8-24 | .100 |
| 1 | CS 32 L | CS 32 LW | 1.0000 | .625 | 12 | .4375 | 1.000 | .500 | 7/16-20 | .160 |
| 1 1/8 | CS 36 L | CS 36 LW | 1.1250 | .625 | 12 | .4375 | 1.000 | .500 | 7/16-20 | .190 |
| 1 1/4 | CS 40 L | CS 40 LW | 1.2500 | .750 | 14 | .5000 | 1.250 | .625 | 1/2-20 | .290 |
| 1 3/8 | CS 44 L | CS 44 LW | 1.3750 | .750 | 14 | .5000 | 1.250 | .625 | 1/2-20 | .340 |
| 1 1/2 | CS 48 L | CS 48 LW | 1.5000 | .875 | 20 | .6250 | 1.500 | .750 | 5/8-18 | .510 |
| 1 5/8 | CS 52 L | CS 52 LW | 1.6250 | .875 | 20 | .6250 | 1.500 | .750 | 5/8-18 | .610 |
| 1 3/4 | CS 56 L | CS 56 LW | 1.7500 | 1.000 | 20 | .7500 | 1.750 | .875 | 3/4-16 | .830 |
| 1 7/8 | CS 60 L | CS 60 LW | 1.8750 | 1.000 | 20 | .7500 | 1.750 | .875 | 3/4-16 | .920 |
| 2 | CS 64 L | CS 64 LW | 2.0000 | 1.250 | 24 | .8750 | 2.000 | 1.000 | 7/8-14 | 1.320 |
| 2 1/4 | CS 72 L | CS 72 LW | 2.2500 | 1.250 | 24 | .8750 | 2.000 | 1.000 | 7/8-14 | 1.610 |
| 2 1/2 | CS 80 L | CS 80 LW | 2.5000 | 1.500 | 30 | 1.0000 | 2.250 | 1.125 | 1-14 | 2.480 |
| 2 3/4 | CS 88 L | CS 88 LW | 2.7500 | 1.500 | 30 | 1.0000 | 2.250 | 1.125 | 1-14 | 2.830 |
| 3 | CS 96 L | CS 96 LW | 3.0000 | 1.750 | 30 | 1.2500 | 2.500 | 1.250 | 1 1/4-12 | 4.040 |
| 3 1/4 | CS 104 L | CS 104 LW | 3.2500 | 1.750 | 30 | 1.2500 | 2.500 | 1.250 | 1 1/4-12 | 4.750 |
| 3 1/2 | CS 112 L | CS 112 LW | 3.5000 | 2.000 | 30 | 1.3750 | 2.750 | 1.375 | 1 3/8-12 | 6.220 |
| 4 | CS 128 L | CS 128 LW | 4.0000 | 2.250 | 30 | 1.5000 | 3.500 | 1.500 | 1 1/2-12 | 7.440 |
| 5 | - | CS 160 LW | 5.0000 | 2.750 | 48 | 2.0000 | 5.062 | 2.562 | 2-12 | 18.700 |
| 6 | - | CS 192 LW | 6.0000 | 3.250 | 56 | 2.5000 | 6.000 | 3.000 | 2 1/2-12 | 32.900 |
| 7 | - | CS 224 LW | 7.0000 | 3.750 | 60 | 3.0000 | 7.688 | 4.125 | 3-12 | 53.900 |

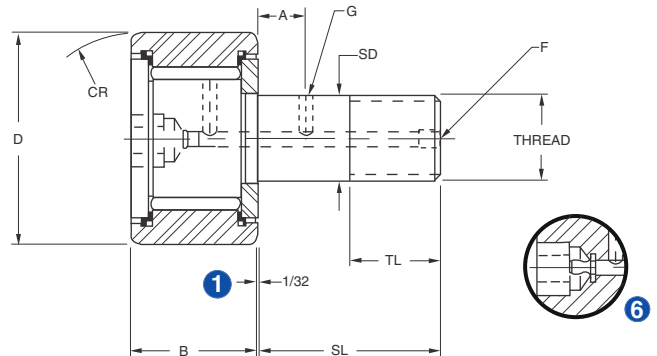
All dimensions are in inches.

① 1/16" for sizes CS 160 LW and larger.

HexLube® Universal Cam Followers

Standard Stud

Relubricate through Hex Head



Series CS--LW

| F Lube Fitting ③ | A Loc. | G Dia. | Socket Head Wrench Size | Speed Limit [rpm] | CAPACITIES | | | | MOUNTING DATA | | | Basic Number |
|---------------------------|-----------|-----------|----------------------------------|-------------------------|--------------------------------|--|---------------------------------|--|--|-------------------------------------|----------------------|-----------------|
| | | | | | Dynamic Capacity C [lbf] | Static Capacity C ₀ [lbf] ⑤ | Max. Allow. Load [lbf] | Track Capacity at 40 Rc [lbf] | Max. ④ Clamping Torque [in*lbf] | Housing Bore +.0005 -.0000 | Min. Boss Dia. | |
| ② | - | - | 1/8 | 5,000 | 770 | 1,100 | 310 | 430 | 7.5 | .1900 | .29 | -16 |
| ② | - | - | 1/8 | 5,000 | 770 | 1,100 | 310 | 480 | 7.5 | .1900 | .29 | -18 |
| ② | - | - | 1/8 | 5,000 | 1,060 | 1,700 | 610 | 770 | 20 | .2500 | .36 | -20 |
| ② | - | - | 1/8 | 5,000 | 1,060 | 1,700 | 610 | 850 | 20 | .2500 | .36 | -22 |
| 3/16 | .250 | .093 | 3/16 | 5,000 | 1,800 | 3,100 | 1,840 | 880 | 55 | .3750 | .50 | -24 |
| 3/16 | .250 | .093 | 3/16 | 5,000 | 1,800 | 3,100 | 1,840 | 1,030 | 55 | .3750 | .50 | -28 |
| 3/16 | .250 | .093 | 1/4 | 4,500 | 2,300 | 4,800 | 2,390 | 1,690 | 150 | .4375 | .64 | -32 |
| 3/16 | .250 | .093 | 1/4 | 4,500 | 2,300 | 4,800 | 2,390 | 1,900 | 150 | .4375 | .64 | -36 |
| 3/16 | .312 | .093 | 1/4 | 3,900 | 4,200 | 6,600 | 3,000 | 2,440 | 200 | .5000 | .76 | -40 |
| 3/16 | .312 | .093 | 1/4 | 3,900 | 4,200 | 6,600 | 3,000 | 2,680 | 200 | .5000 | .76 | -44 |
| 3/16 | .375 | .093 | 5/16 | 3,100 | 5,000 | 8,800 | 5,100 | 3,320 | 390 | .6250 | .89 | -48 |
| 3/16 | .375 | .093 | 5/16 | 3,100 | 5,000 | 8,800 | 5,100 | 3,600 | 390 | .6250 | .89 | -52 |
| 3/16 | .437 | .125 | 5/16 | 2,600 | 6,400 | 12,400 | 7,800 | 4,550 | 750 | .7500 | 1.05 | -56 |
| 3/16 | .437 | .125 | 5/16 | 2,600 | 6,400 | 12,400 | 7,800 | 4,900 | 750 | .7500 | 1.05 | -60 |
| 3/16 | .500 | .125 | 7/16 | 2,200 | 9,600 | 16,700 | 10,000 | 6,500 | 900 | .8750 | 1.20 | -64 |
| 3/16 | .500 | .125 | 7/16 | 2,200 | 9,600 | 16,700 | 10,000 | 7,300 | 900 | .8750 | 1.20 | -72 |
| 3/16 | .562 | .125 | 1/2 | 2,000 | 12,800 | 25,400 | 12,500 | 9,400 | 1,300 | 1.0000 | 1.31 | -80 |
| 3/16 | .562 | .125 | 1/2 | 2,000 | 12,800 | 25,400 | 12,500 | 10,400 | 1,300 | 1.0000 | 1.31 | -88 |
| 1/4 | .625 | .187 | 5/8 | 1,600 | 17,000 | 40,000 | 21,000 | 13,300 | 2,000 | 1.2500 | 2.00 | -96 |
| 1/4 | .625 | .187 | 5/8 | 1,600 | 17,000 | 40,000 | 21,000 | 14,400 | 2,000 | 1.2500 | 2.00 | -104 |
| 1/4 | .687 | .187 | 5/8 | 1,400 | 24,300 | 54,600 | 24,750 | 17,300 | 2,500 | 1.3750 | 2.39 | -112 |
| 1/4 | .750 | .187 | 3/4 | 1,300 | 30,000 | 73,100 | 28,500 | 22,000 | 3,000 | 1.5000 | 2.62 | -128 |
| 1/4 NPT | .875 | .187 | 7/8 | 1,000 | 47,200 | 102,000 | 55,000 | 35,000 | 3,000 | 2.0000 | 3.50 | -160 |
| 1/4 NPT | 1.000 | .187 | 1 | 800 | 62,900 | 165,500 | 90,000 | 52,000 | 3,000 | 2.5000 | 4.50 | -192 |
| 1/4 NPT | 1.250 | .187 | 1 1/4 | 700 | 79,400 | 237,800 | 139,000 | 71,000 | 3,000 | 3.0000 | 5.25 | -224 |

② Sizes CS 16 through CS 22 and CS 16 L through CS 22 L have a 1/8" hole at the flange end only.

③ Sizes CS 16 LW through CS 22 LW cannot be relubricated.

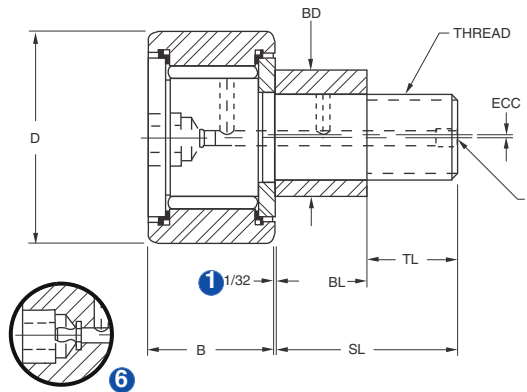
④ Torque may be doubled for completely dry threads.

⑤ Bearing Static Capacity provided for comparison only.

⑥ HexLube® Cam Followers can be regreased through the hex head using a Lincoln #5803 or Alemite #B6783 needle nozzle adapter.

CamCentric® Adjustable Cam Followers

Cylindrical and Crowned O.D.



with
Glide-A-Seal®



without
seal

Series S--LWX

| Nominal Size | PART NUMBER | | ROLLER | | | STUD | | | | | |
|--------------|------------------|--------------|---------------------|---------------------|-----------------------|----------------------|------------------------|--------------------------|-----------------------|--------------------------------|-----------------------|
| | Cylindrical O.D. | Crowned O.D. | D +.000 -.001 | B +.000 -.005 | CR Crown Radius | BD +.000 -.002 | BL +.000 -.010 ① | ECC Eccen- tricity | SL Shank Length | TL Eff. Thread Length | Thread Class 2A |
| 1/2 | S 16 LWX | CS 16 LWX | .5000 | .375 | 7 | .250 | .375 | .010 | .625 | .250 | 10-32 |
| 9/16 | S 18 LWX | CS 18 LWX | .5625 | .375 | 7 | .250 | .375 | .010 | .625 | .250 | 10-32 |
| 5/8 | S 20 LWX | CS 20 LWX | .6250 | .438 | 8 | .375 | .437 | .015 | .750 | .312 | 1/4-28 |
| 11/16 | S 22 LWX | CS 22 LWX | .6875 | .438 | 8 | .375 | .437 | .015 | .750 | .312 | 1/4-28 |
| 3/4 | S 24 LWX | CS 24 LWX | .7500 | .500 | 10 | .500 | .500 | .015 | .875 | .375 | 3/8-24 |
| 7/8 | S 28 LWX | CS 28 LWX | .8750 | .500 | 10 | .500 | .500 | .015 | .875 | .375 | 3/8-24 |
| 1 | S 32 LWX | CS 32 LWX | 1.0000 | .625 | 12 | .625 | .500 | .030 | 1.000 | .500 | 7/16-20 |
| 1 1/8 | S 36 LWX | CS 36 LWX | 1.1250 | .625 | 12 | .625 | .500 | .030 | 1.000 | .500 | 7/16-20 |
| 1 1/4 | S 40 LWX | CS 40 LWX | 1.2500 | .750 | 14 | .687 | .625 | .030 | 1.250 | .625 | 1/2-20 |
| 1 3/8 | S 44 LWX | CS 44 LWX | 1.3750 | .750 | 14 | .687 | .625 | .030 | 1.250 | .625 | 1/2-20 |
| 1 1/2 | S 48 LWX | CS 48 LWX | 1.5000 | .875 | 20 | .875 | .750 | .030 | 1.500 | .750 | 5/8-18 |
| 1 5/8 | S 52 LWX | CS 52 LWX | 1.6250 | .875 | 20 | .875 | .750 | .030 | 1.500 | .750 | 5/8-18 |
| 1 3/4 | S 56 LWX | CS 56 LWX | 1.7500 | 1.000 | 20 | 1.000 | .875 | .030 | 1.750 | .875 | 3/4-16 |
| 1 7/8 | S 60 LWX | CS 60 LWX | 1.8750 | 1.000 | 20 | 1.000 | .875 | .030 | 1.750 | .875 | 3/4-16 |
| 2 | S 64 LWX | CS 64 LWX | 2.0000 | 1.250 | 24 | 1.187 | 1.000 | .030 | 2.000 | 1.000 | 7/8-14 |
| 2 1/4 | S 72 LWX | CS 72 LWX | 2.2500 | 1.250 | 24 | 1.187 | 1.000 | .030 | 2.000 | 1.000 | 7/8-14 |
| 2 1/2 | S 80 LWX | CS 80 LWX | 2.5000 | 1.500 | 30 | 1.375 | 1.125 | .030 | 2.250 | 1.125 | 1-14 |
| 2 3/4 | S 88 LWX | CS 88 LWX | 2.7500 | 1.500 | 30 | 1.375 | 1.125 | .030 | 2.250 | 1.125 | 1-14 |
| 3 | S 96 LWX | CS 96 LWX | 3.0000 | 1.750 | 30 | 1.750 | 1.250 | .060 | 2.500 | 1.250 | 1 1/4-12 |
| 3 1/4 | S 104 LWX | CS 104 LWX | 3.2500 | 1.750 | 30 | 1.750 | 1.250 | .060 | 2.500 | 1.250 | 1 1/4-12 |
| 3 1/2 | S 112 LWX | CS 112 LWX | 3.5000 | 2.000 | 30 | 1.812 | 1.375 | .060 | 2.750 | 1.375 | 1 3/8-12 |
| 4 | S 128 LWX | CS 128 LWX | 4.0000 | 2.250 | 30 | 2.000 | 2.000 | .060 | 3.500 | 1.500 | 1 1/2-12 |

All dimensions are in inches.

Do not clamp eccentric bushing.

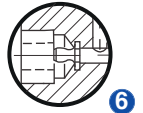
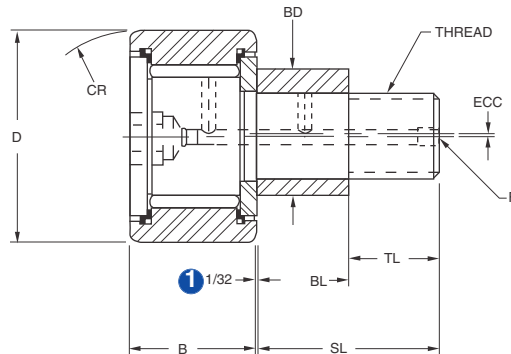
Eccentric bushing press fitted and not heat treated to permit dowel or set screw engagement.

① For positive clamping action use a housing thickness tolerance of +0.010/-0.000 inches.

CamCentric® Adjustable Cam Followers

Cylindrical and Crowned O.D.

Relubricate through Hex Head



Series CS--LWX

| | Approx Weight [lbs] | F Lube Fitting | Socket Head Wrench Size | Speed Limit [rpm] | CAPACITIES | | | | MOUNTING DATA | | Basic Number |
|--|---------------------|----------------|-------------------------|-------------------|--------------------------|--|------------------------|-------------------------------|--------------------------------|--------------------------|--------------|
| | | | | | Dynamic Capacity C [lbf] | Static Capacity C _o [lbf] ④ | Max. Allow. Load [lbf] | Track Capacity at 40 Rc [lbf] | Max. ③ Clamping Torque [in*lb] | Housing Bore +.002 +.001 | |
| | .025 | ② | 1/8 | 5,000 | 770 | 1,100 | 310 | 430 | 7.5 | .250 | -16 |
| | .033 | ② | 1/8 | 5,000 | 770 | 1,100 | 310 | 480 | 7.5 | .250 | -18 |
| | .056 | ② | 1/8 | 5,000 | 1,060 | 1,700 | 610 | 770 | 20 | .375 | -20 |
| | .059 | ② | 1/8 | 5,000 | 1,060 | 1,700 | 610 | 850 | 20 | .375 | -22 |
| | .088 | 3/16 | 3/16 | 5,000 | 1,800 | 3,100 | 1,840 | 880 | 55 | .500 | -24 |
| | .11 | 3/16 | 3/16 | 5,000 | 1,800 | 3,100 | 1,840 | 1,030 | 55 | .500 | -28 |
| | .18 | 3/16 | 1/4 | 4,500 | 2,300 | 4,800 | 2,390 | 1,690 | 150 | .625 | -32 |
| | .21 | 3/16 | 1/4 | 4,500 | 2,300 | 4,800 | 2,390 | 1,900 | 150 | .625 | -36 |
| | .32 | 3/16 | 1/4 | 3,900 | 4,200 | 6,600 | 3,000 | 2,440 | 200 | .687 | -40 |
| | .37 | 3/16 | 1/4 | 3,900 | 4,200 | 6,600 | 3,000 | 2,680 | 200 | .687 | -44 |
| | .57 | 3/16 | 5/16 | 3,100 | 5,000 | 8,800 | 5,100 | 3,320 | 390 | .875 | -48 |
| | .67 | 3/16 | 5/16 | 3,100 | 5,000 | 8,800 | 5,100 | 3,600 | 390 | .875 | -52 |
| | .92 | 3/16 | 5/16 | 2,600 | 6,400 | 12,400 | 7,800 | 4,550 | 750 | 1.000 | -56 |
| | 1.01 | 3/16 | 5/16 | 2,600 | 6,400 | 12,400 | 7,800 | 4,900 | 750 | 1.000 | -60 |
| | 1.46 | 3/16 | 7/16 | 2,200 | 9,600 | 16,700 | 10,000 | 6,500 | 900 | 1.187 | -64 |
| | 1.75 | 3/16 | 7/16 | 2,200 | 9,600 | 16,700 | 10,000 | 7,300 | 900 | 1.187 | -72 |
| | 2.70 | 3/16 | 1/2 | 2,000 | 12,800 | 25,400 | 12,500 | 9,400 | 1,300 | 1.375 | -80 |
| | 3.05 | 3/16 | 1/2 | 2,000 | 12,800 | 25,400 | 12,500 | 10,400 | 1,300 | 1.375 | -88 |
| | 4.46 | 1/4 | 5/8 | 1,600 | 17,000 | 40,000 | 21,000 | 13,300 | 2,000 | 1.750 | -96 |
| | 5.17 | 1/4 | 5/8 | 1,600 | 17,000 | 40,000 | 21,000 | 14,400 | 2,000 | 1.750 | -104 |
| | 6.65 | 1/4 | 5/8 | 1,400 | 24,300 | 54,600 | 24,750 | 17,300 | 2,500 | 1.812 | -112 |
| | 8.22 | 1/4 | 3/4 | 1,300 | 30,000 | 73,100 | 28,500 | 22,000 | 3,000 | 2.000 | -128 |

② Sizes S 16 LWX through S 22 LWX and CS 16 LWX through CS 22 LWX cannot be relubricated.

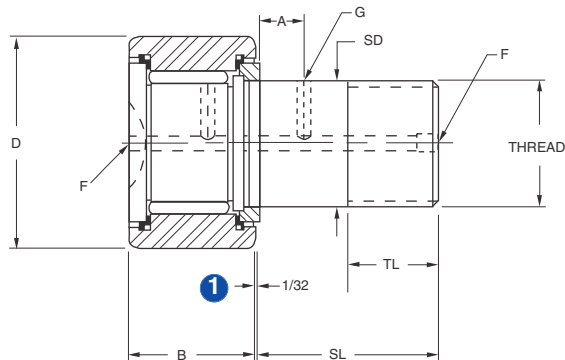
③ Torque may be doubled for completely dry threads.

④ Bearing Static Capacity provided for comparison only.

⑥ HexLube® Cam Followers can be regreased through the hex head using a Lincoln #5803 or Alemite #B6783 needle nozzle adapter.

Cam Followers

Heavy Stud



with
Glide-A-Seal®



without
seal

Series H, H-L

| Nominal Size | PART NUMBER | | | ROLLER | | STUD | | | | Approx. Weight [lbs] |
|--------------|--------------|-----------------------|-------------------------------|---------------------|---------------------|----------------------|--------------------|--------------------------|--------------------|----------------------|
| | Slotted Head | Slotted Head & Sealed | HexLube® Socket Head & Sealed | D +.000 -.001 | B +.000 -.005 | SD +.001 -.000 | SL Shank Length | TL Eff. Thread Length | Thread Class 2A | |
| 1/2 | H 16 | H 16 L | H 16 LW | .5000 | .375 | .2500 | .625 | .250 | 1/4-28 | .026 |
| 9/16 | H 18 | H 18 L | H 18 LW | .5625 | .375 | .2500 | .625 | .250 | 1/4-28 | .034 |
| 5/8 | H 20 | H 20 L | H 20 LW | .6250 | .438 | .3125 | .750 | .312 | 5/16-24 | .057 |
| 11/16 | H 22 | H 22 L | H 22 LW | .6875 | .438 | .3125 | .750 | .312 | 5/16-24 | .068 |
| 3/4 | H 24 | H 24 L | H 24 LW | .7500 | .500 | .4375 | .875 | .375 | 7/16-20 | .083 |
| 7/8 | H 28 | H 28 L | H 28 LW | .8750 | .500 | .4375 | .875 | .375 | 7/16-20 | .119 |
| 1 | H 32 | H 32 L | H 32 LW | 1.0000 | .625 | .6250 | 1.000 | .500 | 5/8-18 | .200 |
| 1 1/8 | H 36 | H 36 L | H 36 LW | 1.1250 | .625 | .6250 | 1.000 | .500 | 5/8-18 | .250 |
| 1 1/4 | H 40 | H 40 L | H 40 LW | 1.2500 | .750 | .7500 | 1.250 | .625 | 3/4-16 | .380 |
| 1 3/8 | H 44 | H 44 L | H 44 LW | 1.3750 | .750 | .7500 | 1.250 | .625 | 3/4-16 | .440 |
| 1 1/2 | H 48 | H 48 L | H 48 LW | 1.5000 | .875 | .8750 | 1.500 | .750 | 7/8-14 | .630 |
| 1 5/8 | H 52 | H 52 L | H 52 LW | 1.6250 | .875 | .8750 | 1.500 | .750 | 7/8-14 | .690 |
| 1 3/4 | H 56 | H 56 L | H 56 LW | 1.7500 | 1.000 | 1.0000 | 1.750 | .875 | 1-14 | .980 |
| 1 7/8 | H 60 | H 60 L | H 60 LW | 1.8750 | 1.000 | 1.0000 | 1.750 | .875 | 1-14 | 1.080 |
| 2 | H 64 | H 64 L | H 64 LW | 2.0000 | 1.250 | 1.1250 | 2.000 | 1.000 | 1 1/8-12 | 1.550 |
| 2 1/4 | H 72 | H 72 L | H 72 LW | 2.2500 | 1.250 | 1.1250 | 2.000 | 1.000 | 1 1/8-12 | 1.900 |
| 2 1/2 | H 80 | H 80 L | H 80 LW | 2.5000 | 1.500 | 1.2500 | 2.250 | 1.125 | 1 1/4-12 | 2.700 |
| 2 3/4 | H 88 | H 88 L | H 88 LW | 2.7500 | 1.500 | 1.2500 | 2.250 | 1.125 | 1 1/4-12 | 3.140 |
| 3 | H 96 | H 96 L | H 96 LW | 3.0000 | 1.750 | 1.5000 | 2.500 | 1.250 | 1 1/2-12 | 4.420 |
| 3 1/4 | H 104 | H 104 L | H 104 LW | 3.2500 | 1.750 | 1.5000 | 2.500 | 1.250 | 1 1/2-12 | 5.150 |
| 3 1/2 | H 112 | H 112 L | H 112 LW | 3.5000 | 2.000 | 1.7500 | 2.750 | 1.375 | 1 3/4-12 | 6.950 |
| 4 | H 128 | H 128 L | H 128 LW | 4.0000 | 2.250 | 2.0000 | 3.500 | 1.500 | 2-12 | 10.300 |
| 5 | - | - | H 160 LW | 5.0000 | 2.750 | 2.5000 | 5.062 | 2.562 | 2 1/2-12 | 21.400 |
| 6 | - | - | H 192 LW | 6.0000 | 3.250 | 3.0000 | 6.000 | 3.000 | 3-12 | 36.400 |
| 7 | - | - | H 224 LW | 7.0000 | 3.750 | 3.5000 | 7.688 | 4.125 | 3 1/2- 4 | 59.200 |

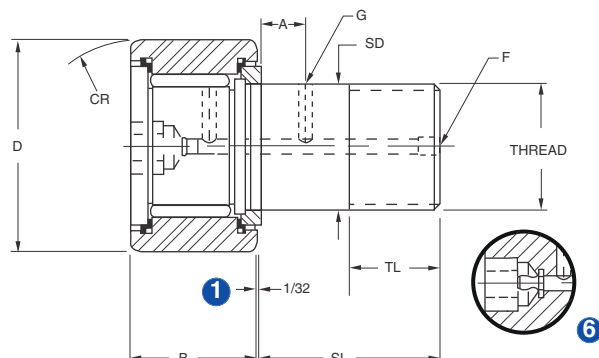
All dimensions are in inches.

① 1/16 inch for sizes H 160 LW and larger.

HexLube[®] Universal Cam Followers

Heavy Stud

Relubricate through Hex Head



Series H-LW

| F Lube Fitting ③ | A Loc. | G Dia. | Socket Head Wrench Size | Speed Limit [rpm] | CAPACITIES | | | | MOUNTING DATA | | | Basic Number |
|---------------------|--------|--------|-------------------------|-------------------|--------------------------|--|------------------------|-------------------------------|--------------------------------|-----------------------------|----------------|--------------|
| | | | | | Dynamic Capacity C [lbf] | Static Capacity C ₀ [lbf] ⑤ | Max. Allow. Load [lbf] | Track Capacity at 40 Rc [lbf] | Max. ④ Clamping Torque [in*lb] | Housing Bore +.0005 - .0000 | Min. Boss Dia. | |
| ② | - | - | 1/8 | 5,000 | 770 | 1,590 | 700 | 430 | 20 | .2500 | .34 | -16 |
| ② | - | - | 1/8 | 5,000 | 770 | 1,590 | 700 | 480 | 20 | .2500 | .34 | -18 |
| ② | - | - | 1/8 | 5,000 | 970 | 2,500 | 1,200 | 770 | 55 | .3125 | .47 | -20 |
| ② | - | - | 1/8 | 5,000 | 970 | 2,500 | 1,200 | 850 | 55 | .3125 | .47 | -22 |
| 3/16 | .250 | .093 | 3/16 | 5,000 | 1,800 | 4,150 | 2,920 | 1,070 | 150 | .4375 | .60 | -24 |
| 3/16 | .250 | .093 | 3/16 | 5,000 | 1,800 | 4,150 | 2,920 | 1,240 | 150 | .4375 | .60 | -28 |
| 3/16 | .250 | .093 | 1/4 | 4,500 | 2,300 | 6,150 | 4,100 | 1,690 | 390 | .6250 | .78 | -32 |
| 3/16 | .250 | .093 | 1/4 | 4,500 | 2,300 | 6,150 | 4,100 | 1,900 | 390 | .6250 | .78 | -36 |
| 3/16 | .312 | .093 | 1/4 | 3,900 | 4,000 | 8,500 | 5,800 | 2,440 | 750 | .7500 | 1.00 | -40 |
| 3/16 | .312 | .093 | 1/4 | 3,900 | 4,000 | 8,500 | 5,800 | 2,680 | 750 | .7500 | 1.00 | -44 |
| 3/16 | .375 | .093 | 5/16 | 3,100 | 4,900 | 11,300 | 7,900 | 3,320 | 900 | .8750 | 1.09 | -48 |
| 3/16 | .375 | .093 | 5/16 | 3,100 | 4,900 | 11,300 | 7,900 | 3,600 | 900 | .8750 | 1.09 | -52 |
| 3/16 | .437 | .125 | 5/16 | 2,600 | 6,400 | 15,850 | 11,400 | 4,550 | 1,350 | 1.0000 | 1.25 | -56 |
| 3/16 | .437 | .125 | 5/16 | 2,600 | 6,400 | 15,850 | 11,400 | 4,900 | 1,350 | 1.0000 | 1.25 | -60 |
| 3/16 | .500 | .125 | 7/16 | 2,200 | 9,600 | 21,200 | 16,700 | 6,500 | 1,700 | 1.1250 | 1.40 | -64 |
| 3/16 | .500 | .125 | 7/16 | 2,200 | 9,600 | 21,200 | 16,700 | 7,300 | 1,700 | 1.1250 | 1.40 | -72 |
| 3/16 | .562 | .125 | 1/2 | 2,000 | 12,900 | 33,000 | 25,400 | 9,400 | 2,050 | 1.2500 | 1.70 | -80 |
| 3/16 | .562 | .125 | 1/2 | 2,000 | 12,900 | 33,000 | 25,400 | 10,400 | 2,050 | 1.2500 | 1.70 | -88 |
| 1/4 | .625 | .187 | 5/8 | 1,600 | 17,000 | 49,900 | 36,600 | 13,300 | 3,000 | 1.5000 | 2.00 | -96 |
| 1/4 | .625 | .187 | 5/8 | 1,600 | 17,000 | 49,900 | 36,600 | 14,400 | 3,000 | 1.5000 | 2.00 | -104 |
| 1/4 | .687 | .187 | 5/8 | 1,400 | 24,300 | 63,250 | 51,000 | 17,300 | 3,000 | 1.7500 | 2.45 | -112 |
| 1/4 | .750 | .187 | 3/4 | 1,300 | 25,600 | 89,550 | 68,000 | 22,000 | 3,000 | 2.0000 | 2.75 | -128 |
| 1/4 NPT | .875 | .187 | 7/8 | 1,000 | 44,900 | 136,000 | 99,000 | 35,000 | 3,000 | 2.5000 | 3.25 | -160 |
| 1/4 NPT | 1.000 | .187 | 1 | 800 | 61,600 | 161,300 | 160,000 | 52,000 | 3,000 | 3.0000 | 4.00 | -192 |
| 1/4 NPT | 1.250 | .187 | 1 1/4 | 700 | 79,400 | 237,800 | 217,000 | 71,000 | 3,000 | 3.5000 | 4.50 | -224 |

② Sizes H 16 through H 22 and H 16 L through H 22 L have a 1/8" hole at the flange end only.

③ Sizes H 16 LW through H 22 LW cannot be relubricated.

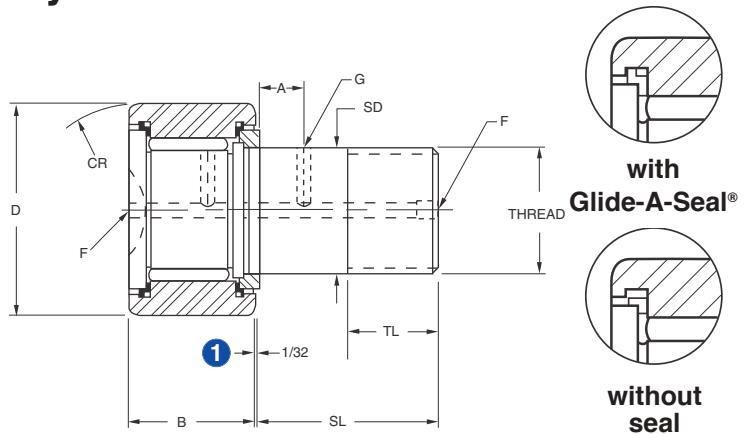
④ Torque may be doubled for completely dry threads.

⑤ Bearing Static Capacity provided for comparison only.

⑥ HexLube[®] Cam Followers can be regreased through the hex head using a Lincoln #5803 or Alemite #B6783 needle nozzle adapter.

Crowned Cam Followers

Heavy Stud



Series CH--L

| Nominal Size | PART NUMBER | | ROLLER | | | STUD | | | | Approx Weight [lbs] |
|--------------|-----------------------|-------------------------------|---------------------|---------------------|--------------------|----------------------|--------------------|--------------------------|-----------------|---------------------|
| | Slotted Head & Sealed | HexLube® Socket Head & Sealed | D +.000 -.001 | B +.000 -.005 | CR Crown Radius | SD +.001 -.000 | SL Shank Length | TL Eff. Thread Length | Thread Class 2A | |
| 1/2 | CH 16 L | CH 16 LW | .5000 | .375 | 7 | .2500 | .625 | .250 | 1/4-28 | .026 |
| 9/16 | CH 18 L | CH 18 LW | .5625 | .375 | 7 | .2500 | .625 | .250 | 1/4-28 | .034 |
| 5/8 | CH 20 L | CH 20 LW | .6250 | .438 | 8 | .3125 | .750 | .312 | 5/16-24 | .057 |
| 11/16 | CH 22 L | CH 22 LW | .6875 | .438 | 8 | .3125 | .750 | .312 | 5/16-24 | .068 |
| 3/4 | CH 24 L | CH 24 LW | .7500 | .500 | 10 | .4375 | .875 | .375 | 7/16-20 | .083 |
| 7/8 | CH 28 L | CH 28 LW | .8750 | .500 | 10 | .4375 | .875 | .375 | 7/16-20 | .119 |
| 1 | CH 32 L | CH 32 LW | 1.0000 | .625 | 12 | .6250 | 1.000 | .500 | 5/8-18 | .200 |
| 1 1/8 | CH 36 L | CH 36 LW | 1.1250 | .625 | 12 | .6250 | 1.000 | .500 | 5/8-18 | .250 |
| 1 1/4 | CH 40 L | CH 40 LW | 1.2500 | .750 | 14 | .7500 | 1.250 | .625 | 3/4-16 | .380 |
| 1 3/8 | CH 44 L | CH 44 LW | 1.3750 | .750 | 14 | .7500 | 1.250 | .625 | 3/4-16 | .440 |
| 1 1/2 | CH 48 L | CH 48 LW | 1.5000 | .875 | 20 | .8750 | 1.500 | .750 | 7/8-14 | .630 |
| 1 5/8 | CH 52 L | CH 52 LW | 1.6250 | .875 | 20 | .8750 | 1.500 | .750 | 7/8-14 | .690 |
| 1 3/4 | CH 56 L | CH 56 LW | 1.7500 | 1.000 | 20 | 1.0000 | 1.750 | .875 | 1-14 | .980 |
| 1 7/8 | CH 60 L | CH 60 LW | 1.8750 | 1.000 | 20 | 1.0000 | 1.750 | .875 | 1-14 | 1.080 |
| 2 | CH 64 L | CH 64 LW | 2.0000 | 1.250 | 24 | 1.1250 | 2.000 | 1.000 | 1 1/8-12 | 1.550 |
| 2 1/4 | CH 72 L | CH 72 LW | 2.2500 | 1.250 | 24 | 1.1250 | 2.000 | 1.000 | 1 1/8-12 | 1.900 |
| 2 1/2 | CH 80 L | CH 80 LW | 2.5000 | 1.500 | 30 | 1.2500 | 2.250 | 1.125 | 1 1/4-12 | 2.700 |
| 2 3/4 | CH 88 L | CH 88 LW | 2.7500 | 1.500 | 30 | 1.2500 | 2.250 | 1.125 | 1 1/4-12 | 3.140 |
| 3 | CH 96 L | CH 96 LW | 3.0000 | 1.750 | 30 | 1.5000 | 2.500 | 1.250 | 1 1/2-12 | 4.420 |
| 3 1/4 | CH 104 L | CH 104 LW | 3.2500 | 1.750 | 30 | 1.5000 | 2.500 | 1.250 | 1 1/2-12 | 5.150 |
| 3 1/2 | CH 112 L | CH 112 LW | 3.5000 | 2.000 | 30 | 1.7500 | 2.750 | 1.375 | 1 3/4-12 | 6.950 |
| 4 | CH 128 L | CH 128 LW | 4.0000 | 2.250 | 30 | 2.0000 | 3.500 | 1.500 | 2-12 | 10.300 |
| 5 | - | CH 160 LW | 5.0000 | 2.750 | 48 | 2.5000 | 5.062 | 2.562 | 2 1/2-12 | 21.400 |
| 6 | - | CH 192 LW | 6.0000 | 3.250 | 56 | 3.0000 | 6.000 | 3.000 | 3-12 | 36.400 |
| 7 | - | CH 224 LW | 7.0000 | 3.750 | 60 | 3.5000 | 7.688 | 4.125 | 3 1/2- 4 | 59.200 |

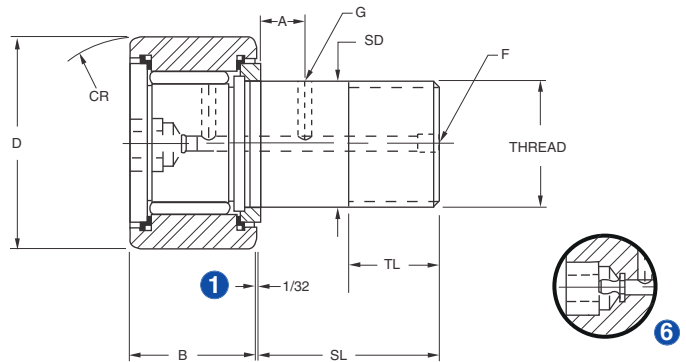
All dimensions are in inches.

1 1/16" for size CH 160 LW and larger.

HexLube® Universal Cam Followers

Heavy Stud

Relubricate through Hex Head



Series CH-LW

| F Lube Fitting ③ | A Loc. | G Dia. | Socket Head Wrench Size | Speed Limit [rpm] | CAPACITIES | | | | MOUNTING DATA | | | Basic Number |
|---------------------------|-----------|-----------|----------------------------------|-------------------------|--------------------------------|--|---------------------------------|--|---|-------------------------------------|----------------------|-----------------|
| | | | | | Dynamic Capacity C [lbf] | Static Capacity C ₀ [lbf] ⑤ | Max. Allow. Load [lbf] | Track Capacity at 40 Rc [lbf] | Max. ④ Clamping Torque [in*lb] | Housing Bore +.0005 -.0000 | Min. Boss Dia. | |
| ② | - | - | 1/8 | 5,000 | 770 | 1,590 | 700 | 430 | 20 | .2500 | .34 | -16 |
| ② | - | - | 1/8 | 5,000 | 770 | 1,590 | 700 | 480 | 20 | .2500 | .34 | -18 |
| ② | - | - | 1/8 | 5,000 | 970 | 2,500 | 1,200 | 770 | 55 | .3125 | .47 | -20 |
| ② | - | - | 1/8 | 5,000 | 970 | 2,500 | 1,200 | 850 | 55 | .3125 | .47 | -22 |
| 3/16 | .250 | .093 | 3/16 | 5,000 | 1,800 | 4,150 | 2,920 | 1,070 | 150 | .4375 | .60 | -24 |
| 3/16 | .250 | .093 | 3/16 | 5,000 | 1,800 | 4,150 | 2,920 | 1,240 | 150 | .4375 | .60 | -28 |
| 3/16 | .250 | .093 | 1/4 | 4,500 | 2,300 | 6,150 | 4,100 | 1,690 | 390 | .6250 | .78 | -32 |
| 3/16 | .250 | .093 | 1/4 | 4,500 | 2,300 | 6,150 | 4,100 | 1,900 | 390 | .6250 | .78 | -36 |
| 3/16 | .312 | .093 | 1/4 | 3,900 | 4,000 | 8,500 | 5,800 | 2,440 | 750 | .7500 | 1.00 | -40 |
| 3/16 | .312 | .093 | 1/4 | 3,900 | 4,000 | 8,500 | 5,800 | 2,680 | 750 | .7500 | 1.00 | -44 |
| 3/16 | .375 | .093 | 5/16 | 3,100 | 4,900 | 11,300 | 7,900 | 3,320 | 900 | .8750 | 1.09 | -48 |
| 3/16 | .375 | .093 | 5/16 | 3,100 | 4,900 | 11,300 | 7,900 | 3,600 | 900 | .8750 | 1.09 | -52 |
| 3/16 | .437 | .125 | 5/16 | 2,600 | 6,400 | 15,850 | 11,400 | 4,550 | 1,350 | 1.0000 | 1.25 | -56 |
| 3/16 | .437 | .125 | 5/16 | 2,600 | 6,400 | 15,850 | 11,400 | 4,900 | 1,350 | 1.0000 | 1.25 | -60 |
| 3/16 | .500 | .125 | 7/16 | 2,200 | 9,600 | 21,200 | 16,700 | 6,500 | 1,700 | 1.1250 | 1.40 | -64 |
| 3/16 | .500 | .125 | 7/16 | 2,200 | 9,600 | 21,200 | 16,700 | 7,300 | 1,700 | 1.1250 | 1.40 | -72 |
| 3/16 | .562 | .125 | 1/2 | 2,000 | 12,900 | 33,000 | 25,400 | 9,400 | 2,050 | 1.2500 | 1.70 | -80 |
| 3/16 | .562 | .125 | 1/2 | 2,000 | 12,900 | 33,000 | 25,400 | 10,400 | 2,050 | 1.2500 | 1.70 | -88 |
| 1/4 | .625 | .187 | 5/8 | 1,600 | 17,000 | 49,900 | 36,600 | 13,300 | 3,000 | 1.5000 | 2.00 | -96 |
| 1/4 | .625 | .187 | 5/8 | 1,600 | 17,000 | 49,900 | 36,600 | 14,400 | 3,000 | 1.5000 | 2.00 | -104 |
| 1/4 | .687 | .187 | 5/8 | 1,400 | 24,300 | 63,250 | 51,000 | 17,300 | 3,000 | 1.7500 | 2.45 | -112 |
| 1/4 | .750 | .187 | 3/4 | 1,300 | 25,600 | 89,550 | 68,000 | 22,000 | 3,000 | 2.0000 | 2.75 | -128 |
| 1/4 NPT | .875 | .187 | 7/8 | 1,000 | 44,900 | 136,000 | 99,000 | 35,000 | 3,000 | 2.5000 | 3.25 | -160 |
| 1/4 NPT | 1.000 | .187 | 1 | 800 | 61,600 | 161,300 | 160,000 | 52,000 | 3,000 | 3.0000 | 4.00 | -192 |
| 1/4 NPT | 1.250 | .187 | 1 1/4 | 700 | 79,400 | 237,800 | 217,000 | 71,000 | 3,000 | 3.5000 | 4.50 | -224 |

② Sizes CH 16 L through CH 22 L have a 1/8 inch hole at the flange end only.

③ Sizes CH 16 LW through CH 22 LW cannot be relubricated.

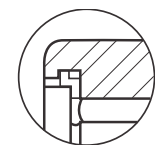
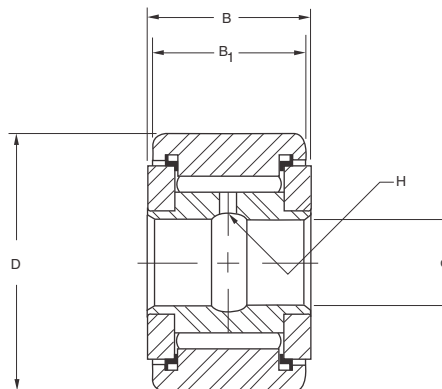
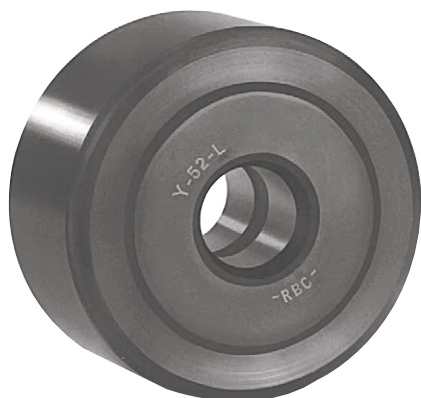
④ Torque may be doubled for completely dry threads.

⑤ Bearing Static Capacity provided for comparison only.

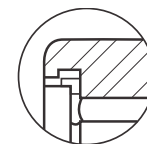
⑥ HexLube® Cam Followers can be regreased through the hex head using a Lincoln #5803 or Alemite #B6783 needle nozzle adapter.

Yoke Rollers

Cylindrical and Crowned O.D.



with
Glide-A-Seal®



without
seal

Series Y, Y-L

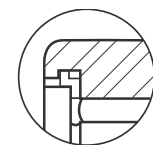
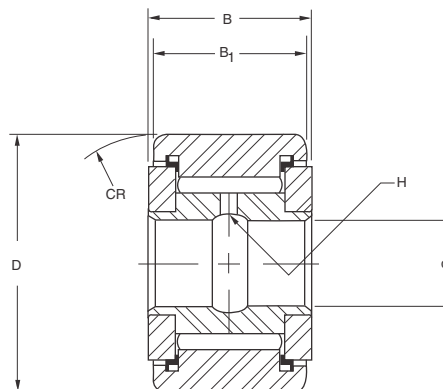
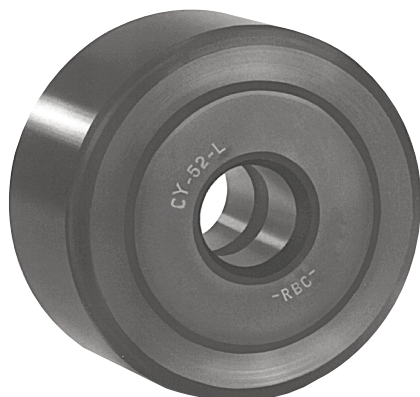
| Nominal Size | PART NUMBER | | | ROLLER | | | d INSIDE DIAMETER | | | B Overall Width +.005 -.010 | H Oil Hole |
|--------------|---------------|------------|-----------------------|---------------------|----------------------------------|--------------------|----------------------|--------|--------|--------------------------------------|---------------|
| | Without Seals | With Seals | Sealed & Crowned O.D. | D +.000 -.001 | B ₁ +.000 -.005 | CR Crown Radius | Nom. | Min. | Max. | | |
| 3/4 | Y 24 | Y 24 L | CY 24 L | .750 | .500 | 10 | 1/4 | .2496 | .2502 | .5625 | .093 |
| 7/8 | Y 28 | Y 28 L | CY 28 L | .875 | .500 | 10 | 1/4 | .2496 | .2502 | .5625 | .093 |
| 1 | Y 32 | Y 32 L | CY 32 L | 1.000 | .625 | 12 | 5/16 | .3121 | .3127 | .6875 | .093 |
| 1 1/8 | Y 36 | Y 36 L | CY 36 L | 1.125 | .625 | 12 | 5/16 | .3121 | .3127 | .6875 | .093 |
| 1 1/4 | Y 40 | Y 40 L | CY 40 L | 1.250 | .750 | 14 | 3/8 | .3746 | .3752 | .8125 | .093 |
| 1 3/8 | Y 44 | Y 44 L | CY 44 L | 1.375 | .750 | 14 | 3/8 | .3746 | .3752 | .8125 | .093 |
| 1 1/2 | Y 48 | Y 48 L | CY 48 L | 1.500 | .875 | 20 | 7/16 | .4371 | .4377 | .9375 | .093 |
| 1 5/8 | Y 52 | Y 52 L | CY 52 L | 1.625 | .875 | 20 | 7/16 | .4371 | .4377 | .9375 | .093 |
| 1 3/4 | Y 56 | Y 56 L | CY 56 L | 1.750 | 1.000 | 20 | 1/2 | .4996 | .5002 | 1.0625 | .093 |
| 1 7/8 | Y 60 | Y 60 L | CY 60 L | 1.875 | 1.000 | 20 | 1/2 | .4996 | .5002 | 1.0625 | .093 |
| 2 | Y 64 | Y 64 L | CY 64 L | 2.000 | 1.250 | 24 | 5/8 | .6246 | .6252 | 1.3125 | .093 |
| 2 1/4 | Y 72 | Y 72 L | CY 72 L | 2.250 | 1.250 | 24 | 5/8 | .6246 | .6252 | 1.3125 | .093 |
| 2 1/2 | Y 80 | Y 80 L | CY 80 L | 2.500 | 1.500 | 30 | 3/4 | .7496 | .7502 | 1.5625 | .125 |
| 2 3/4 | Y 88 | Y 88 L | CY 88 L | 2.750 | 1.500 | 30 | 3/4 | .7496 | .7502 | 1.5625 | .125 |
| 3 | Y 96 | Y 96 L | CY 96 L | 3.000 | 1.750 | 30 | 1 | .9995 | 1.0001 | 1.8125 | .125 |
| 3 1/4 | Y 104 | Y 104 L | CY 104 L | 3.250 | 1.750 | 30 | 1 | .9995 | 1.0001 | 1.8125 | .125 |
| 3 1/2 | Y 112 | Y 112 L | CY 112 L | 3.500 | 2.000 | 30 | 1 1/8 | 1.1245 | 1.1251 | 2.0625 | .125 |
| 4 | Y 128 | Y 128 L | CY 128 L | 4.000 | 2.250 | 30 | 1 1/4 | 1.2495 | 1.2501 | 2.3125 | .125 |
| 5 | Y 160 | Y 160 L | CY 160 L | 5.000 | 2.750 | 48 | 1 3/4 | 1.7495 | 1.7501 | 2.8750 | .187 |
| 6 | Y 192 | Y 192 L | CY 192 L | 6.000 | 3.250 | 56 | 2 1/4 | 2.2495 | 2.2501 | 3.3750 | .187 |
| 7 | Y 224 | Y 224 L | CY 224 L | 7.000 | 3.750 | 60 | 2 3/4 | 2.7495 | 2.7501 | 3.8750 | .187 |

All dimensions are in inches.

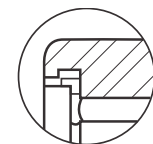
Axial clamping of the inner ring is recommended.

Yoke Rollers

Cylindrical and Crowned O.D.



with
Glide-A-Seal®



without
seal

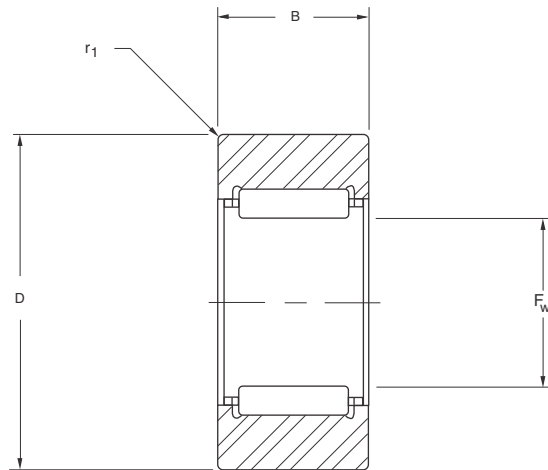
Series CY-L

| Speed Limit [rpm] | CAPACITIES | | | MOUNTING DATA | | | | Min. Boss Dia. | Approx. Weight [lbs] | Basic Number |
|-------------------|----------------------------|--|------------------------------|----------------|--------|-----------|--------|----------------|----------------------|--------------|
| | Dynamic Capacity C [lbf] ① | Static Capacity C _o [lbf] ② | Track Capacity @ 40 Rc [lbf] | Transition Fit | | Press Fit | | | | |
| | | | | Max. | Min. | Max. | Min. | | | |
| 3,930 | 1,800 | 4,150 | 880 | .2497 | .2493 | .2505 | .2501 | .50 | .051 | -24 |
| 3,930 | 1,800 | 4,150 | 1,030 | .2497 | .2493 | .2505 | .2501 | .50 | .067 | -28 |
| 3,140 | 2,300 | 6,150 | 1,690 | .3122 | .3118 | .3130 | .3126 | .64 | .115 | -32 |
| 3,140 | 2,300 | 6,150 | 1,900 | .3122 | .3118 | .3130 | .3126 | .64 | .150 | -36 |
| 2,620 | 4,200 | 8,500 | 2,440 | .3747 | .3743 | .3755 | .3751 | .76 | .200 | -40 |
| 2,620 | 4,200 | 8,500 | 2,680 | .3747 | .3743 | .3755 | .3751 | .76 | .260 | -44 |
| 2,250 | 5,000 | 11,300 | 3,320 | .4372 | .4368 | .4380 | .4376 | .89 | .350 | -48 |
| 2,250 | 5,000 | 11,300 | 3,600 | .4372 | .4368 | .4380 | .4376 | .89 | .440 | -52 |
| 1,970 | 6,400 | 15,850 | 4,550 | .4997 | .4993 | .5007 | .5003 | 1.05 | .580 | -56 |
| 1,970 | 6,400 | 15,850 | 4,900 | .4997 | .4993 | .5007 | .5003 | 1.05 | .670 | -60 |
| 1,570 | 9,600 | 21,200 | 6,500 | .6247 | .6243 | .6257 | .6253 | 1.20 | .920 | -64 |
| 1,570 | 9,600 | 21,200 | 7,300 | .6247 | .6243 | .6257 | .6253 | 1.20 | 1.230 | -72 |
| 1,310 | 12,800 | 33,000 | 9,400 | .7497 | .7493 | .7507 | .7503 | 1.31 | 1.750 | -80 |
| 1,310 | 12,800 | 33,000 | 10,400 | .7497 | .7493 | .7507 | .7503 | 1.31 | 2.200 | -88 |
| 1,060 | 17,000 | 49,900 | 13,300 | .9996 | .9991 | 1.0008 | 1.0003 | 2.00 | 2.880 | -96 |
| 1,060 | 17,000 | 49,900 | 14,400 | .9996 | .9991 | 1.0008 | 1.0003 | 2.00 | 3.490 | -104 |
| 980 | 24,300 | 63,250 | 17,300 | 1.1246 | 1.1241 | 1.1258 | 1.1253 | 2.39 | 4.520 | -112 |
| 940 | 30,000 | 89,550 | 22,000 | 1.2496 | 1.2491 | 1.2508 | 1.2503 | 2.62 | 6.760 | -128 |
| 720 | 47,200 | 136,000 | 35,000 | 1.7496 | 1.7491 | 1.7508 | 1.7503 | 3.50 | 12.700 | -160 |
| 590 | 62,900 | 165,500 | 52,000 | 2.2496 | 2.2491 | 2.2508 | 2.2503 | 4.50 | 21.400 | -192 |
| 520 | 79,400 | 237,800 | 71,000 | 2.7496 | 2.7491 | 2.7508 | 2.7503 | 5.25 | 34.200 | -224 |

① Normal operating loads should not exceed 50% of the bearing dynamic capacity.

② Bearing Static Capacity provided for comparison only.

Caged Roller Followers



Series SRF without seals

| PART NUMBER | ROLLER | | | F_w | | | r_1 Corner Radius | Approx. Weight [lbs] | Matching Inner Rings (See page 28) |
|-------------|--------|-------|---------------------|-----------------|--------|--------|------------------------|----------------------|------------------------------------|
| | D | | B +.000 -.005 | Inside Diameter | | | | | |
| | Max. | Min. | | Nominal | Min. | Max. | | | |
| SRF 20 | 1.000 | .999 | .495 | 1/2 | .5005 | .5014 | .04 | .066 | — |
| SRF 20 SS | 1.000 | .999 | .620 | 1/2 | .5005 | .5014 | .04 | .076 | — |
| SRF 25 | 1.250 | 1.249 | .620 | 5/8 | .6258 | .6267 | .06 | .129 | — |
| SRF 25 SS | 1.250 | 1.249 | .620 | 5/8 | .6258 | .6267 | .06 | .140 | — |
| SRF 30 | 1.500 | 1.499 | .745 | 3/4 | .7509 | .7518 | .06 | .230 | IR 7153, IR 7153 C |
| SRF 30 SS | 1.500 | 1.499 | .745 | 3/4 | .7509 | .7518 | .06 | .230 | IR 7153, IR 7153 C |
| SRF 35 | 1.750 | 1.749 | .745 | 7/8 | .8759 | .8768 | .06 | .320 | IR 7173, IR 7173 C |
| SRF 35 SS | 1.750 | 1.749 | .745 | 7/8 | .8759 | .8768 | .06 | .330 | IR 7173, IR 7173 C |
| SRF 40 | 2.000 | 1.999 | .995 | 1 | 1.0009 | 1.0018 | .08 | .590 | IR 7194, IR 7194 C |
| SRF 40 SS | 2.000 | 1.999 | .995 | 1 | 1.0009 | 1.0018 | .08 | .560 | IR 7194, IR 7194 C |
| SRF 45 | 2.250 | 2.249 | .995 | 1 1/4 | 1.2510 | 1.2519 | .08 | .690 | IR 7234 |
| SRF 45 SS | 2.250 | 2.249 | .995 | 1 1/4 | 1.2510 | 1.2519 | .08 | .580 | IR 7234 |
| SRF 50 | 2.500 | 2.499 | .995 | 1 3/8 | 1.3760 | 1.3769 | .08 | .860 | IR 7254, IR 7254 D |
| SRF 50 SS | 2.500 | 2.499 | .995 | 1 3/8 | 1.3760 | 1.3769 | .08 | .860 | IR 7254, IR 7254 D |
| SRF 55 | 2.750 | 2.749 | 1.245 | 1 1/2 | 1.5010 | 1.5019 | .08 | 1.340 | IR 7275, IR 7275 C |
| SRF 55 SS | 2.750 | 2.749 | 1.245 | 1 1/2 | 1.5010 | 1.5019 | .08 | 1.310 | IR 7275, IR 7275 C |
| SRF 60 | 3.000 | 2.999 | 1.245 | 1 5/8 | 1.6260 | 1.6269 | .08 | 1.610 | IR 7295, IR 7295 C |
| SRF 65 | 3.250 | 3.249 | 1.245 | 1 3/4 | 1.7510 | 1.7520 | .10 | 1.910 | IR 7315, IR 7315 C |
| SRF 70 | 3.500 | 3.499 | 1.245 | 1 7/8 | 1.8760 | 1.8770 | .10 | 2.230 | IR 7335 |
| SRF 75 | 3.750 | 3.749 | 1.245 | 2 | 2.0011 | 2.0021 | .10 | 2.590 | IR 7355, IR 7355 D |
| SRF 80 | 4.000 | 3.999 | 1.245 | 2 1/4 | 2.2511 | 2.2521 | .10 | 2.750 | IR 8405, IR 8405 D |

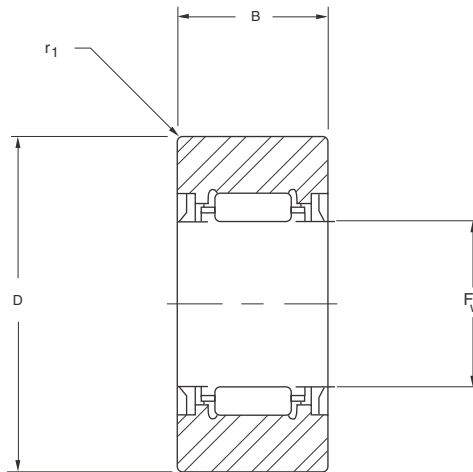
All dimensions are in inches.

Normal operating loads should not exceed the bearing dynamic capacity.

Roller followers used without inner rings require a shaft with minimum hardness of Rc 58 and surface finish of 16 rms or better.

Standard configuration of roller follower series SRF-- SS is with seal lips facing outward. To specify roller followers with seal lips facing inward, replace suffix -SS with suffix -RR. (example: SRF 30 RR).

Caged Roller Followers



Series SRF--SS with seals

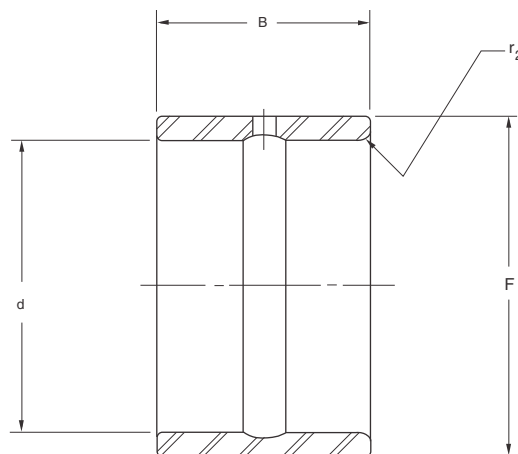
| | CAPACITIES | | | Critical Angle [deg] ② | Speed Limit (grease) [rpm] ③ | Recommended Shaft Diameter (without Inner Ring) | | PART NUMBER |
|--|--------------------------|--|------------------------------|------------------------|------------------------------|---|--------|-------------|
| | Dynamic Capacity C [lbf] | Static Capacity C ₀ [lbf] ① | Track Capacity @ 40 Rc [lbf] | | | Max. | Min. | |
| | | | | | | | | |
| | 1,200 | 1,300 | 1,650 | 60.0 | 7,600 | .5000 | .4996 | SRF 20 SS |
| | 2,700 | 3,300 | 1,950 | 60.1 | 8,700 | .6250 | .6246 | SRF 25 |
| | 1,600 | 1,600 | 1,950 | 60.1 | 6,100 | .6250 | .6246 | SRF 25 SS |
| | 4,400 | 5,900 | 2,900 | 50.5 | 7,200 | .7500 | .7496 | SRF 30 |
| | 2,300 | 2,700 | 2,900 | 51.2 | 5,100 | .7500 | .7496 | SRF 30 SS |
| | 4,700 | 6,500 | 3,400 | 47.5 | 6,200 | .8750 | .8745 | SRF 35 |
| | 2,400 | 3,000 | 3,400 | 48.1 | 4,400 | .8750 | .8746 | SRF 35 SS |
| | 6,900 | 11,300 | 5,200 | 41.8 | 5,400 | 1.0000 | .9995 | SRF 40 |
| | 5,000 | 7,500 | 5,200 | 41.8 | 3,800 | 1.0000 | .9995 | SRF 40 SS |
| | 7,800 | 13,900 | 5,800 | 35.6 | 4,300 | 1.2500 | 1.2495 | SRF 45 |
| | 4,900 | 8,400 | 5,800 | 36.0 | 3,100 | 1.2500 | 1.2495 | SRF 45 SS |
| | 8,300 | 15,700 | 6,450 | 32.3 | 3,900 | 1.3750 | 1.3745 | SRF 50 |
| | 5,100 | 8,900 | 6,450 | 34.4 | 2,800 | 1.3750 | 1.3745 | SRF 50 SS |
| | 11,500 | 22,800 | 9,250 | 32.3 | 3,600 | 1.5000 | 1.4995 | SRF 55 |
| | 8,000 | 15,800 | 9,250 | 31.2 | 2,500 | 1.5000 | 1.4995 | SRF 55 SS |
| | 9,400 | 20,700 | 10,100 | 30.1 | 3,300 | 1.6250 | 1.6245 | SRF 60 |
| | 12,500 | 26,600 | 10,500 | 28.5 | 3,000 | 1.7500 | 1.7495 | SRF 65 |
| | 10,100 | 23,800 | 11,300 | 26.8 | 2,800 | 1.8750 | 1.8745 | SRF 70 |
| | 10,600 | 25,800 | 12,100 | 24.9 | 2,700 | 2.0000 | 1.9994 | SRF 75 |
| | 12,700 | 26,700 | 12,950 | 28.8 | 2,300 | 2.2500 | 2.2494 | SRF 80 |

① Bearing Static Capacity provided for comparison only.

② For oscillatory application with angle of oscillation less than critical angle, consult RBC engineering department for revised fatigue calculation.

③ Speed limit of sealed roller followers is determined by maximum seal surface speed. For roller followers without seals, speed limit may be increased by 30% with oil lubrication.

Precision Ground Inner Rings For Use with Caged Roller Followers



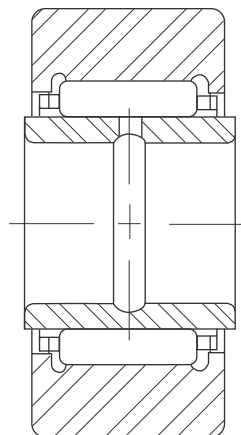
Series IR

| PART NUMBER | d Inside Diameter | | | F Outside Diameter | | | B Width + .000 - .005 | r ₂ Shaft Fillet Max |
|-------------|----------------------|--------|--------|-----------------------|--------|--------|--------------------------------|--|
| | Nominal | Min. | Max. | Nominal | Max. | Min. | | |
| IR 7153 | 1/2 | .4996 | .5000 | 3/4 | .7493 | .7488 | .760 | .04 |
| IR 7153 C | 9/16 | .5621 | .5625 | 3/4 | .7493 | .7488 | .760 | .04 |
| IR 7173 | 5/8 | .6246 | .6250 | 7/8 | .8743 | .8738 | .760 | .04 |
| IR 7173 C | 11/16 | .6871 | .6875 | 7/8 | .8743 | .8738 | .760 | .04 |
| IR 7194 | 3/4 | .7496 | .7500 | 1 | .9993 | .9988 | 1.010 | .04 |
| IR 7194 C | 13/16 | .8120 | .8125 | 1 | .9993 | .9988 | 1.010 | .04 |
| IR 7234 | 1 | .9995 | 1.0000 | 1 1/4 | 1.2491 | 1.2485 | 1.010 | .04 |
| IR 7254 D | 1 | .9995 | 1.0000 | 1 3/8 | 1.3741 | 1.3735 | 1.010 | .04 |
| IR 7254 | 1 1/8 | 1.1245 | 1.1250 | 1 3/8 | 1.3741 | 1.3735 | 1.010 | .04 |
| IR 7275 | 1 3/16 | 1.1870 | 1.1875 | 1 1/2 | 1.4990 | 1.4984 | 1.260 | .06 |
| IR 7275 C | 1 1/4 | 1.2495 | 1.2500 | 1 1/2 | 1.4990 | 1.4984 | 1.260 | .06 |
| IR 7295 | 1 5/16 | 1.3120 | 1.3125 | 1 5/8 | 1.6240 | 1.6234 | 1.260 | .06 |
| IR 7295 C | 1 3/8 | 1.3745 | 1.3750 | 1 5/8 | 1.6240 | 1.6234 | 1.260 | .06 |
| IR 7315 | 1 7/16 | 1.4370 | 1.4375 | 1 3/4 | 1.7490 | 1.7484 | 1.260 | .06 |
| IR 7315 C | 1 1/2 | 1.4995 | 1.5000 | 1 3/4 | 1.7490 | 1.7484 | 1.260 | .06 |
| IR 7335 | 1 9/16 | 1.5620 | 1.5625 | 1 7/8 | 1.8740 | 1.8734 | 1.260 | .06 |
| IR 7355 D | 1 5/8 | 1.6245 | 1.6250 | 2 | 1.9989 | 1.9982 | 1.260 | .06 |
| IR 7355 | 1 11/16 | 1.6870 | 1.6875 | 2 | 1.9989 | 1.9982 | 1.260 | .06 |
| IR 8405 D | 1 11/16 | 1.6870 | 1.6875 | 2 1/4 | 2.2489 | 2.2482 | 1.260 | .06 |
| IR 8405 | 1 3/4 | 1.7495 | 1.7500 | 2 1/4 | 2.2489 | 2.2482 | 1.260 | .06 |

All dimensions are in inches.

Precision Ground Inner Rings

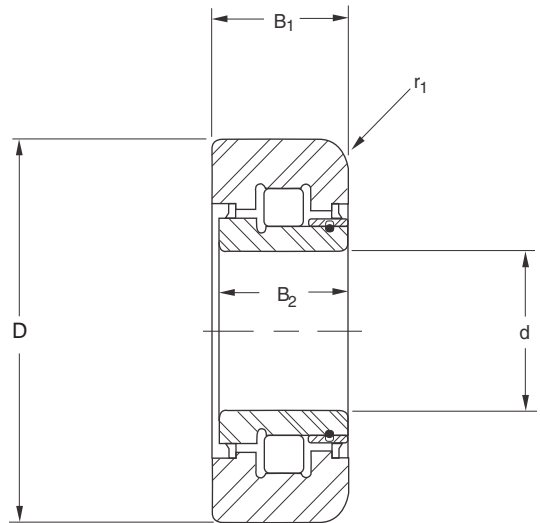
For Use with Caged Roller Followers



Series SRF with Inner Ring

| Approx. Weight [lbs] | Matching Roller Followers (See page 26) | RECOMMENDED SHAFT DIAMETER | | | | | | PART NUMBER |
|----------------------|---|----------------------------|--------|----------|--------------------|--------|----------|-------------|
| | | Transition Fit - ISO g6 | | | Press Fit - ISO m5 | | | |
| | | Max. | Min. | Mean Fit | Max. | Min. | Mean Fit | |
| .050 | SRF 30, SRF 30 SS | .4997 | .4993 | .0003L | .5006 | .5003 | .0006T | IR 7153 |
| .040 | SRF 30, SRF 30 SS | .5622 | .5618 | .0003L | .5631 | .5628 | .0006T | IR 7153 C |
| .059 | SRF 35, SRF 35 SS | .6247 | .6243 | .0003L | .6256 | .6253 | .0006T | IR 7173 |
| .046 | SRF 35, SRF 35 SS | .6872 | .6868 | .0003L | .6881 | .6878 | .0006T | IR 7173 C |
| .094 | SRF 40, SRF 40 SS | .7497 | .7492 | .0003L | .7507 | .7503 | .0007T | IR 7194 |
| .072 | SRF 40, SRF 40 SS | .8122 | .8117 | .0003L | .8132 | .8128 | .0007T | IR 7194 C |
| .121 | SRF 45, SRF 45 SS | .9997 | .9992 | .0003L | 1.0007 | 1.0003 | .0007T | IR 7234 |
| .192 | SRF 50, SRF 50 SS | .9997 | .9992 | .0003L | 1.0007 | 1.0003 | .0007T | IR 7254 D |
| .134 | SRF 50, SRF 50 SS | 1.1247 | 1.1242 | .0003L | 1.1257 | 1.1253 | .0008T | IR 7254 |
| .228 | SRF 55, SRF 55 SS | 1.1871 | 1.1865 | .0004L | 1.1883 | 1.1879 | .0008T | IR 7275 |
| .183 | SRF 55, SRF 55 SS | 1.2496 | 1.2490 | .0004L | 1.2508 | 1.2504 | .0008T | IR 7275 C |
| .247 | SRF 60 | 1.3121 | 1.3115 | .0004L | 1.3133 | 1.3129 | .0008T | IR 7295 |
| .201 | SRF 60 | 1.3746 | 1.3740 | .0004L | 1.3758 | 1.3754 | .0008T | IR 7295 C |
| .269 | SRF 65 | 1.4371 | 1.4365 | .0004L | 1.4383 | 1.4379 | .0008T | IR 7315 |
| .217 | SRF 65 | 1.4996 | 1.4990 | .0004L | 1.5008 | 1.5004 | .0008T | IR 7315 C |
| .288 | SRF 70 | 1.5621 | 1.5615 | .0004L | 1.5633 | 1.5629 | .0008T | IR 7335 |
| .366 | SRF 75 | 1.6246 | 1.6240 | .0004L | 1.6258 | 1.6254 | .0008T | IR 7355 D |
| .308 | SRF 75 | 1.6871 | 1.6865 | .0004L | 1.6883 | 1.6879 | .0008T | IR 7355 |
| .609 | SRF 80 | 1.6871 | 1.6865 | .0004L | 1.6883 | 1.6879 | .0008T | IR 8405 D |
| .544 | SRF 80 | 1.7496 | 1.7490 | .0004L | 1.7508 | 1.7504 | .0008T | IR 8405 |

Mast Guide and Carriage Rollers



| PART NUMBER | d Inside Diameter | | | D Outside Diameter | | B ₂ Inner Ring Width | B ₁ Outer Ring Width | r ₁ Corner Radius | Dynamic Capacity C [lbf] | Static Capacity C ₀ [lbf] |
|-------------|----------------------|-----------------|--------|-----------------------|--------|------------------------------------|------------------------------------|---------------------------------|--------------------------|--------------------------------------|
| | Nom. | Min. | Max. | Min. | Max. | | | | | |
| 75229 | 3/4 | 1/2 - 13 thread | | 2.2490 | 2.2500 | 1.4020 | 0.8120 | 0.12500 | 5,300 | 5,300 |
| 75066-10 | 3/4 | .7495 | .7500 | 1.8590 | 1.8600 | 0.5500 | 0.4890 | 0.04000 | 5,100 | 4,900 |
| 74392-2 | 3/4 | .7495 | .7500 | 2.2490 | 2.2500 | 0.9630 | 0.9950 | 0.18750 | 8,500 | 9,500 |
| 74444 | 20 mm | .7495 | .7500 | 2.2490 | 2.2500 | 0.7740 | 0.8120 | 0.12500 | 5,900 | 6,000 |
| T75342 | 7/8 | .7870 | .7874 | 2.2432 | 2.2440 | 0.5853 | 0.7283 | 0.02000 | 4,800 | 4,600 |
| T74780-10 | 25 mm | .8745 | .8750 | 2.2490 | 2.2500 | 1.7600 | 1.7400 | 0.12000 | 18,400 | 31,100 |
| T75016-10 | 1 | .9838 | .9843 | 2.9960 | 3.0060 | 1.0250 | 0.9750 | 0.33600 | 10,200 | 11,400 |
| T74970 | 1 | .9995 | 1.0000 | 2.4980 | 2.5000 | 1.2700 | 1.2500 | 0.08000 | 11,300 | 18,300 |
| T74962-10 | 30 mm | 1.0005 | 1.0010 | 2.2495 | 2.2500 | 1.2600 | 1.2500 | 0.04000 | 11,100 | 18,000 |
| T74879 | 1 1/4 | 1.1798 | 1.1803 | 2.7130 | 2.7280 | 1.0020 | 1.0020 | 0.03125 | 14,100 | 18,200 |
| T75016 | 1 1/4 | 1.2495 | 1.2500 | 2.9960 | 3.0060 | 1.0250 | 0.9750 | 0.33600 | 10,200 | 11,400 |
| 74501RR | 35 mm | 1.2494 | 1.2500 | 3.2450 | 3.2500 | 1.0000 | 1.0000 | 0.08000 | 11,700 | 15,300 |
| T74850-10 | 35 mm | 1.3775 | 1.3780 | 3.2200 | 3.2260 | 0.6690 | 1.0050 | 0.12000 | 10,000 | 10,300 |
| T74926 | 35 mm | 1.3775 | 1.3780 | 3.7170 | 3.7250 | 0.8600 | 1.0000 | 0.37500 | 12,800 | 14,000 |
| 74524 | 35 mm | 1.3775 | 1.3780 | 3.9700 | 3.9750 | 0.8270 | 1.1300 | 0.12500 | 14,600 | 16,500 |
| 74703 | 35 mm | 1.3775 | 1.3780 | 3.9700 | 3.9750 | 0.8270 | 1.3000 | 0.12000 | 10,100 | 9,500 |
| 74389 | 35 mm | 1.3775 | 1.3780 | 3.9990 | 4.0000 | 1.1850 | 1.1850 | 0.37500 | 18,600 | 23,400 |
| 74498 | 35 mm | 1.3775 | 1.3780 | 3.9990 | 4.0000 | 0.9050 | 1.1880 | 0.25000 | 14,600 | 16,500 |
| 74709 | 35 mm | 1.3775 | 1.3780 | 3.9990 | 4.0000 | 0.8270 | 1.2600 | 0.25000 | 15,000 | 16,100 |
| T75015-10 | 1 1/2 | 1.3775 | 1.3780 | 4.0000 | 4.0100 | 1.1370 | 1.0870 | 0.33600 | 14,300 | 15,700 |
| T74908 | 1 1/2 | 1.4995 | 1.5000 | 2.7400 | 2.7500 | 1.5350 | 1.7460 | 0.43500 | 18,300 | 32,100 |
| T75015 | | 1.4995 | 1.5000 | 4.0000 | 4.0100 | 1.1370 | 1.0870 | 0.33600 | 14,300 | 15,700 |

All dimensions are in inches, unless otherwise noted.

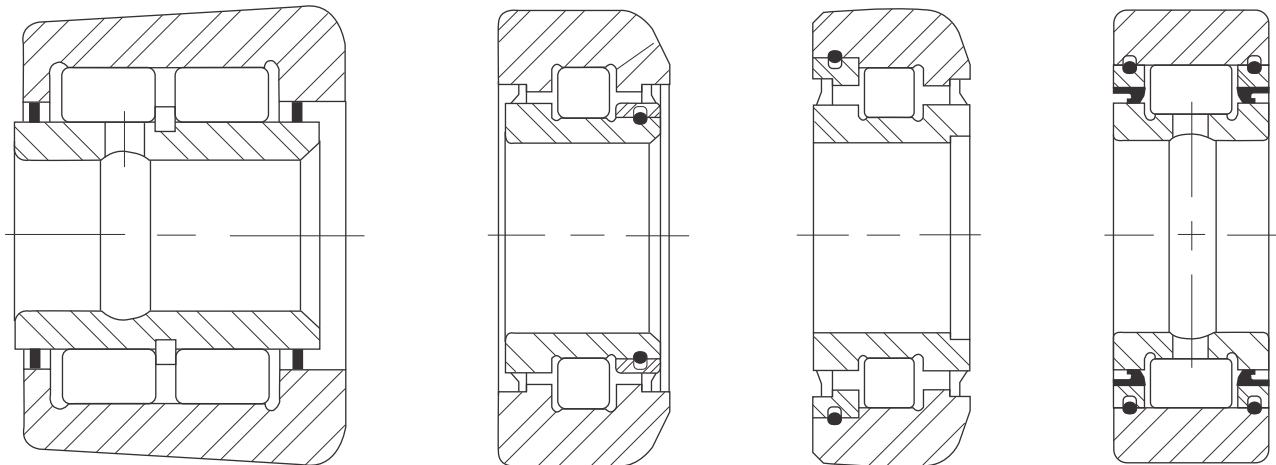
Designs vary and may not be interchangeable.

Confirm correct part number when ordering.

For sizes not listed above, contact RBC.

Contact RBC for additional design characteristics or for assistance with new applications.

Mast Guide and Carriage Rollers



Typical Mast Guide and Carriage Roller Configurations

| PART NUMBER | d Inside Diameter | | | D Outside Diameter | | B ₂ Inner Ring Width | B ₁ Outer Ring Width | r ₁ Corner Radius | Dynamic Capacity C [lbf] | Static Capacity C ₀ [lbf] |
|-------------|----------------------|--------|--------|-----------------------|--------|------------------------------------|------------------------------------|---------------------------------|--------------------------|--------------------------------------|
| | Nom. | Min. | Max. | Min. | Max. | | | | | |
| T74897 | 1 9/16 | 1.5599 | 1.5604 | 2.7400 | 2.7500 | 1.3750 | 1.6250 | 0.50000 | 18,600 | 33,200 |
| T74997-10 | 40 mm | 1.5743 | 1.5748 | 2.9700 | 2.9800 | 0.8750 | 1.0000 | 0.06000 | 13,800 | 20,000 |
| T74997 | 40 mm | 1.5743 | 1.5748 | 2.9700 | 2.9800 | 0.8750 | 1.0000 | 0.06000 | 13,800 | 20,000 |
| T75600 | 45 mm | 1.7712 | 1.7717 | 3.7200 | 3.7250 | 0.7480 | 1.0000 | 0.24000 | 16,200 | 18,400 |
| T74996 | 45 mm | 1.7712 | 1.7717 | 3.4700 | 3.4800 | 1.1250 | 1.2550 | 0.08000 | 19,500 | 26,100 |
| T74794-15 | 45 mm | 1.7712 | 1.7717 | 3.9850 | 3.9900 | 0.7480 | 1.1210 | 0.29000 | 16,200 | 18,400 |
| T74924 | 45 mm | 1.7712 | 1.7717 | 4.9975 | 5.0025 | 1.0400 | 1.2500 | 0.31250 | 19,500 | 23,500 |
| T74995 | 50 mm | 1.9680 | 1.9685 | 3.9720 | 3.9780 | 1.1250 | 1.2550 | 0.09375 | 24,100 | 31,700 |
| T74995-10 | 50 mm | 1.9680 | 1.9685 | 4.4720 | 4.4780 | 1.1250 | 1.2550 | 0.09375 | 24,100 | 31,700 |
| T74812-10 | 2 | 1.9995 | 2.0000 | 4.0575 | 4.0675 | 1.3420 | 1.2800 | 0.12500 | 19,200 | 24,900 |
| T74284 | 2 | 2.0000 | 2.0040 | 3.4700 | 3.4800 | 2.8440 | 1.0000 | 0.03125 | 20,100 | 49,500 |
| T75291 | 55 mm | 2.1648 | 2.1654 | 5.3700 | 5.3900 | 1.7250 | 1.8330 | 0.18750 | 43,700 | 56,500 |
| T74966 | 55 mm | 2.1648 | 2.1654 | 5.9970 | 6.0030 | 1.2300 | 1.5000 | 0.43750 | 37,200 | 42,900 |
| T74931 | 55 mm | 2.1648 | 2.1654 | 6.4300 | 6.4400 | 1.0620 | 2.1350 | 0.42700 | 51,600 | 75,500 |
| T74636-19 | 2 1/4 | 2.2494 | 2.2500 | 6.4300 | 6.4400 | 2.2500 | 2.2500 | 0.25000 | 45,300 | 54,900 |
| T75003 | 70 mm | 2.7553 | 2.7559 | 7.0530 | 7.0630 | 2.7500 | 3.1200 | 0.46000 | 76,800 | 122,900 |
| T74806 | 2 13/16 | 2.8119 | 2.8125 | 5.0370 | 5.0400 | 1.2500 | 1.2500 | 0.18750 | 23,900 | 38,800 |
| T74947-10 | 3 | 2.9994 | 3.0000 | 6.2700 | 6.3700 | 1.1420 | 1.5100 | 0.22500 | 34,200 | 45,000 |
| T74711 | 3 | 3.0494 | 3.0500 | 5.0080 | 5.0180 | 1.2500 | 1.2500 | 0.18750 | 26,200 | 47,600 |
| T75088 | 80 mm | 3.1490 | 3.1496 | 7.9970 | 8.0030 | 2.6300 | 3.3800 | 0.62500 | 68,200 | 112,300 |
| T74977 | 3 1/4 | 3.2494 | 3.2500 | 5.9900 | 6.0100 | 2.2500 | 2.2500 | 0.12500 | 59,900 | 91,400 |
| T74779-11 | 3 5/8 | 3.6240 | 3.6250 | 6.4300 | 6.4400 | 2.1250 | 2.250 | 0.31250 | 53,900 | 88,500 |

All dimensions are in inches, unless otherwise noted.

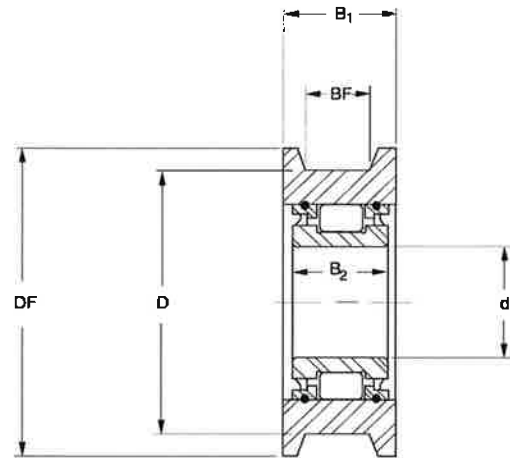
Designs vary and may not be interchangeable; some inner rings are not centered.

Confirm correct part number when ordering.

For sizes not listed above, contact RBC.

Contact RBC for additional design characteristics or for assistance with new applications.

Chain Sheaves



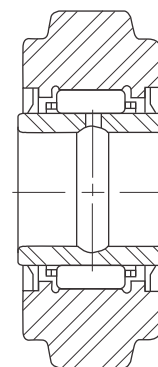
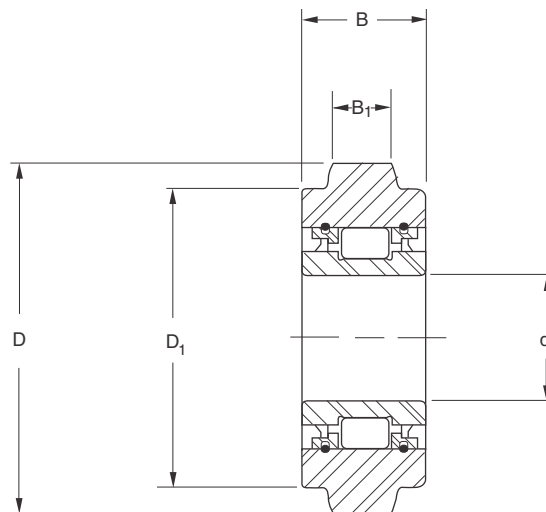
| PART NUMBER | d Inside Diameter | | D Outside Diameter Nom. | DF Flange Diameter Nom. | B ₂ Inner Ring Width Nom. | BF Width between Flanges Nom. | B ₁ Outer Ring Width Nom. | Dynamic Capacity C [lbf] | Static Capacity C ₀ [lbf] |
|-------------|-------------------|--------|----------------------------|----------------------------|---|----------------------------------|---|--------------------------|--------------------------------------|
| | Min. | Max. | | | | | | | |
| V75582 | 0.4996 | 0.5002 | 1.8930 | 2.4840 | 1.1180 | 0.7200 | 1.1200 | 7,800 | 10,000 |
| V75605 | 0.7496 | 0.7505 | 3.0000 | 3.3961 | 1.5669 | 1.1713 | 1.5201 | 13,200 | 26,400 |
| 74393-1 | 0.7498 | 0.7503 | 2.3000 | 2.6250 | 1.3700 | 1.0890 | 1.3120 | 11,400 | 14,300 |
| V75204 | 0.7500 | 0.7570 | 2.2500 | 2.6250 | 1.8800 | 1.4450 | 1.8150 | 15,900 | 33,500 |
| V75204-10 | 0.7500 | 0.7570 | 3.7500 | 4.1250 | 1.8800 | 1.4450 | 1.8150 | 17,100 | 40,300 |
| V75024 | 0.7870 | 0.7874 | 2.2430 | 3.0030 | 1.6870 | 1.1000 | 1.5670 | 15,900 | 21,400 |
| V75606 | 0.9837 | 0.9844 | 3.1555 | 3.8642 | 1.9291 | 1.2854 | 1.8701 | 27,200 | 36,100 |
| V74929-10 | 0.9839 | 0.9843 | 3.3850 | 3.8850 | 1.0000 | 0.9160 | 1.2080 | 12,800 | 14,000 |
| V75431 | 1.1453 | 1.1811 | 3.1614 | 3.5551 | 0.7480 | 1.0945 | 1.4291 | 11,900 | 12,300 |
| V75608 | 1.3774 | 1.3780 | 3.5492 | 4.2579 | 1.9291 | 1.2854 | 1.8701 | 21,100 | 26,800 |
| V75652 | 1.5743 | 1.5748 | 3.7600 | 4.2500 | 0.9055 | 1.0710 | 1.3520 | 15,400 | 18,400 |
| V74899 | 1.5743 | 1.5748 | 3.7600 | 4.2500 | 0.9060 | 1.0000 | 1.3120 | 13,600 | 15,600 |
| V74899-11 | 1.5743 | 1.5748 | 3.5100 | 4.0000 | 0.9060 | 0.8750 | 1.1250 | 13,600 | 15,600 |
| 74759 | 1.7495 | 1.7500 | 5.5050 | 6.1350 | 1.7600 | 1.3750 | 1.7600 | 44,400 | 57,800 |
| 74797 | 1.7495 | 1.7500 | 3.7250 | 4.3750 | 1.5630 | 1.3750 | 1.7600 | 27,000 | 32,500 |
| V74893 | 1.7495 | 1.7500 | 4.0050 | 4.3750 | 1.7850 | 1.3750 | 1.7600 | 27,000 | 32,500 |
| V75039 | 1.7712 | 1.7717 | 4.0100 | 4.3850 | 1.2500 | 1.3170 | 1.5000 | 23,100 | 25,400 |
| V75031-10 | 1.7712 | 1.7717 | 4.5720 | 5.0100 | 1.2500 | 1.8170 | 2.2120 | 24,800 | 28,100 |
| V74954-10 | 1.7712 | 1.7717 | 3.7280 | 4.3750 | 1.4400 | 1.3750 | 1.7500 | 27,000 | 32,500 |
| V75071-10 | 1.7712 | 1.7717 | 4.2600 | 4.5700 | 1.0000 | 1.0700 | 1.3500 | 22,600 | 25,000 |
| V74907 | 1.7712 | 1.7717 | 4.5100 | 5.1350 | 0.9840 | 1.3750 | 1.7600 | 22,600 | 25,000 |
| V75294 | 1.9680 | 1.9685 | 4.5100 | 5.0000 | 1.9250 | 1.3300 | 1.9600 | 32,300 | 39,600 |
| V74961 | 3.9993 | 4.0000 | 10.0100 | 11.0100 | 4.3850 | 3.6350 | 4.3850 | 179,000 | 299,400 |
| V75029 | 4.5000 | 4.5007 | 10.0100 | 11.0100 | 5.5000 | 4.7500 | 5.5000 | 201,700 | 360,000 |

All dimensions are in inches.

For sizes not listed above, contact RBC.

Contact RBC for additional design characteristics or for assistance with new applications.

Toothless Sprockets



Type A

Type B

| PART NUMBER | Type | d Inside Diameter +0.0000 - 0.0005 | D Outside Diameter +0.000 - 0.002 | B Width +0.00 - .010 | B ₁ Land Width +0.00 - .010 | D ₁ Shoulder Diameter +0.00 - .020 | Dynamic Capacity C [lbf] | Static Capacity C ₀ [lbf] | Suggested Roller Chain Number |
|---------------|------|---|--|-------------------------------|---|--|--------------------------|--------------------------------------|-------------------------------|
| 74925 | A | 1.2500 | 3.140 | 1.005 | .470 | 2.560 | 11,100 | 17,200 | 60 |
| SJ 74690 ① ② | B | 1.3750 | 3.427 | 1.250 ⑤ | .585 | 2.915 | 9,400 | 20,700 | 80 |
| SJ 74690 RR ② | B | 1.3750 | 3.427 | 1.250 ⑤ | .585 | 2.915 | 9,300 | 18,200 | 80 |
| 74698-10 | A | 1.3780 | 3.174 | .690 | .459 | 2.741 | 8,200 | 10,300 | 60 |
| 74499-10 | A | 1.5748 | 4.057 | .906 | .575 | 3.493 | 11,000 | 15,600 | 80 |
| SJ 74839 ① ③ | B | 1.7500 | 4.305 | 1.500 ⑤ | .692 | 3.641 | 15,100 | 33,800 | 100 |
| SJ 74839 SS ④ | B | 1.7500 | 4.305 | 1.500 ⑤ | .692 | 3.641 | 13,800 | 28,800 | 100 |
| 75060 | A | 1.7500 | 3.755 | 1.130 | .595 | 3.135 | 16,800 | 27,900 | 80 |
| 74990 | A | 1.7717 | 3.755 | 1.130 | .595 | 3.135 | 15,200 | 24,700 | 80 |
| 74991 | A | 1.7717 | 4.005 | 1.130 | .720 | 3.135 | 15,200 | 24,700 | 100 |
| 74809 | A | 1.7717 | 4.683 | .989 | .692 | 3.938 | 13,900 | 18,000 | 100 |
| 74992 ⑥ | A | 2.5000 | 4.895 | 1.255 | .940 | 4.045 | 20,000 | 38,300 | 120 |

All dimensions are in inches.

For sizes not listed above, contact RBC.

- ① Without seals.
- ② Inner ring part number IR 7295C must be ordered separately.
- ③ Inner ring part number IR 8406 H must be ordered separately.
- ④ Inner ring part number IR 7439 must be ordered separately.
- ⑤ Inner ring is 0.010 inches wider than outer ring.
- ⑥ Inner ring width 1.125 inches.

Airframe Needle Roller Bearings



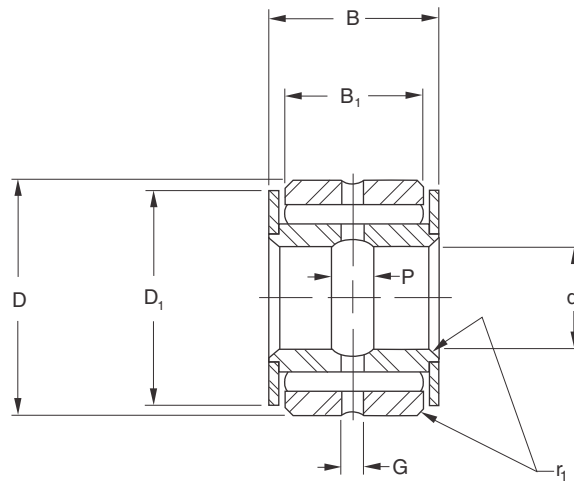
Series NBC

| PART NUMBER | d Inside Diameter | | | D Outside Diameter | | Width | | r ₁ Shaft & Housing Fillet | D1 End Plate Dia. | P Inner Ring Groove Width | G Outer Ring Groove Width |
|-----------------|----------------------|--------|--------|-----------------------|--------|--------------|------------------------------|--|----------------------|------------------------------|------------------------------|
| | Nom. | Max. | Min. | Max. | Min. | B Overall | B ₁ Outer ring | | | | |
| 4 NBC 612 ZP | 1/4 | .2500 | .2493 | .7500 | .7495 | .375 | .281 | .022 | .688 | - | .094 |
| 5 NBC 713 ZP | 5/16 | .3125 | .3118 | .8125 | .8120 | .437 | .344 | .022 | .750 | - | .094 |
| 6 NBC 914 YZP | 3/8 | .3750 | .3743 | .8750 | .8745 | .562 | .469 | .022 | .812 | .188 | .125 |
| 7 NBC 1015 YZP | 7/16 | .4375 | .4368 | .9375 | .9370 | .625 | .531 | .032 | .875 | .188 | .125 |
| 8 NBC 1218 YZP | 1/2 | .5000 | .4993 | 1.1250 | 1.1245 | .750 | .656 | .032 | 1.031 | .188 | .125 |
| 9 NBC 1419 YZP | 9/16 | .5625 | .5618 | 1.1875 | 1.1870 | .875 | .781 | .032 | 1.094 | .188 | .156 |
| 10 NBC 1620 YZP | 5/8 | .6250 | .6243 | 1.2500 | 1.2495 | 1.000 | .906 | .032 | 1.156 | .250 | .156 |
| 12 NBC 1822 YZP | 3/4 | .7500 | .7493 | 1.3750 | 1.3745 | 1.125 | 1.000 | .032 | 1.281 | .250 | .156 |
| 14 NBC 2026 YZP | 7/8 | .8750 | .8743 | 1.6250 | 1.6245 | 1.250 | 1.125 | .032 | 1.500 | .375 | .156 |
| 16 NBC 2028 YZP | 1 | 1.0000 | .9993 | 1.7500 | 1.7495 | 1.250 | 1.125 | .032 | 1.625 | .375 | .156 |
| 20 NBC 2032 YZP | 1 1/4 | 1.2500 | 1.2493 | 2.0000 | 1.9994 | 1.250 | 1.049 | .032 | 1.906 | .375 | .156 |
| 24 NBC 2036 YZP | 1 1/2 | 1.5000 | 1.4993 | 2.2500 | 2.2494 | 1.250 | 1.049 | .032 | 2.156 | .375 | .156 |
| 28 NBC 2040 YZP | 1 3/4 | 1.7500 | 1.7493 | 2.5000 | 2.4994 | 1.250 | 1.049 | .032 | 2.406 | .375 | .156 |
| 32 NBC 2044 YZP | 2 | 2.0000 | 1.9993 | 2.7500 | 2.7494 | 1.250 | 1.049 | .032 | 2.656 | .375 | .156 |
| 36 NBC 2048 YZP | 2 1/4 | 2.2500 | 2.2493 | 3.0000 | 2.9994 | 1.250 | 1.049 | .032 | 2.906 | .375 | .156 |
| 40 NBC 2052 YZP | 2 1/2 | 2.5000 | 2.4993 | 3.2500 | 3.2492 | 1.250 | 1.049 | .032 | 3.156 | .375 | .156 |
| 44 NBC 2056 YZP | 2 3/4 | 2.7500 | 2.7493 | 3.5000 | 3.4992 | 1.250 | 1.049 | .032 | 3.406 | .375 | .156 |
| 48 NBC 2060 YZP | 3 | 3.0000 | 2.9993 | 3.7500 | 3.7492 | 1.250 | 1.049 | .032 | 3.656 | .375 | .156 |
| 52 NBC 2064 YZP | 3 1/4 | 3.2500 | 3.2492 | 4.0000 | 3.9992 | 1.250 | 1.049 | .032 | 3.906 | .375 | .156 |
| 56 NBC 2070 YZP | 3 1/2 | 3.5000 | 3.4992 | 4.3750 | 4.3742 | 1.250 | 1.049 | .044 | 4.219 | .375 | .156 |
| 60 NBC 2074 YZP | 3 3/4 | 3.7500 | 3.7492 | 4.6250 | 4.6242 | 1.250 | 1.049 | .044 | 4.469 | .375 | .156 |
| 64 NBC 2078 YZP | 4 | 4.0000 | 3.9992 | 4.8750 | 4.8740 | 1.250 | 1.049 | .044 | 4.719 | .375 | .156 |

All dimensions are in inches

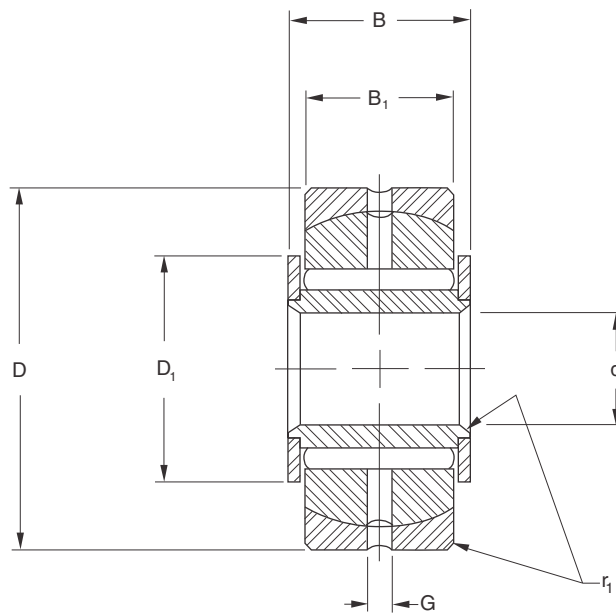
All exposed surfaces plated for corrosion resistance.

Airframe Needle Roller Bearings



| Approx. Weight [lbs] | Speed Limit [rpm] | Load Limit [lbf] | Recommended Shaft Diameter | | | | Recommended Housing Bore | | | | Boss Dia. Min. | Clamping Force Max. [lbf] |
|----------------------|-------------------|------------------|----------------------------|--------|------------------|--------|--------------------------|--------|------------------|--------|----------------|---------------------------|
| | | | Loose Fit ISO g6 | | Tight Fit ISO j6 | | Press Fit ISO N6 | | Loose Fit ISO H6 | | | |
| | | | Max. | Min. | Max. | Min. | Min. | Max. | Min. | Max. | | |
| .040 | 5,000 | 2,870 | .2498 | .2494 | .2503 | .2499 | .7491 | .7496 | .7500 | .7505 | .516 | 870 |
| .057 | 5,000 | 4,070 | .3123 | .3119 | .3128 | .3124 | .8116 | .8121 | .8125 | .8130 | .578 | 1,400 |
| .075 | 5,000 | 6,330 | .3748 | .3744 | .3753 | .3749 | .8741 | .8746 | .8750 | .8755 | .641 | 2,100 |
| .097 | 5,000 | 8,000 | .4373 | .4368 | .4378 | .4374 | .9366 | .9371 | .9375 | .9380 | .703 | 2,850 |
| .165 | 5,000 | 11,600 | .4998 | .4993 | .5003 | .4999 | 1.1241 | 1.1246 | 1.1250 | 1.1255 | .844 | 3,840 |
| .207 | 5,000 | 15,000 | .5623 | .5618 | .5628 | .5624 | 1.1864 | 1.1870 | 1.1875 | 1.1881 | .891 | 4,870 |
| .252 | 4,700 | 18,900 | .6248 | .6243 | .6253 | .6249 | 1.2489 | 1.2495 | 1.2500 | 1.2506 | .953 | 6,150 |
| .336 | 3,900 | 23,900 | .7497 | .7492 | .7504 | .7498 | 1.3739 | 1.3745 | 1.3750 | 1.3756 | 1.078 | 8,950 |
| .423 | 3,400 | 30,500 | .8747 | .8742 | .8754 | .8748 | 1.6239 | 1.6245 | 1.6250 | 1.6256 | 1.250 | 12,200 |
| .510 | 3,000 | 33,900 | .9997 | .9992 | 1.0004 | .9998 | 1.7489 | 1.7495 | 1.7500 | 1.7506 | 1.375 | 16,300 |
| .600 | 2,400 | 37,900 | 1.2496 | 1.2490 | 1.2504 | 1.2498 | 1.9987 | 1.9994 | 2.0000 | 2.0007 | 1.625 | 25,800 |
| .710 | 2,000 | 44,200 | 1.4996 | 1.4990 | 1.5004 | 1.4998 | 2.2487 | 2.2494 | 2.2500 | 2.2507 | 1.875 | 25,800 |
| .780 | 1,700 | 50,500 | 1.7496 | 1.7490 | 1.7504 | 1.7498 | 2.4987 | 2.4994 | 2.5000 | 2.5007 | 2.125 | 25,800 |
| .880 | 1,500 | 56,800 | 1.9996 | 1.9989 | 2.0005 | 1.9997 | 2.7487 | 2.7494 | 2.7500 | 2.7507 | 2.375 | 25,800 |
| .980 | 1,300 | 63,100 | 2.2496 | 2.2489 | 2.2505 | 2.2497 | 2.9987 | 2.9994 | 3.0000 | 3.0007 | 2.625 | 25,800 |
| 1.060 | 1,200 | 69,400 | 2.4996 | 2.4989 | 2.5005 | 2.4997 | 3.2485 | 3.2494 | 3.2500 | 3.2509 | 2.875 | 25,800 |
| 1.150 | 1,100 | 75,700 | 2.7496 | 2.7489 | 2.7505 | 2.7497 | 3.4985 | 3.4994 | 3.5000 | 3.5009 | 3.125 | 25,800 |
| 1.240 | 1,000 | 82,000 | 2.9996 | 2.9989 | 3.0005 | 2.9997 | 3.7485 | 3.7494 | 3.7500 | 3.7509 | 3.375 | 25,800 |
| 1.340 | 900 | 88,300 | 3.2495 | 3.2487 | 3.2505 | 3.2496 | 3.9985 | 3.9994 | 4.0000 | 4.0009 | 3.641 | 25,800 |
| 1.730 | 850 | 96,700 | 3.4995 | 3.4987 | 3.5005 | 3.4996 | 4.3735 | 4.3744 | 4.3750 | 4.3759 | 3.969 | 25,800 |
| 1.840 | 800 | 103,000 | 3.7495 | 3.7487 | 3.7505 | 3.7496 | 4.6235 | 4.6244 | 4.6250 | 4.6259 | 4.219 | 25,800 |
| 1.990 | 750 | 109,000 | 3.9995 | 3.9987 | 4.0005 | 3.9996 | 4.8732 | 4.8742 | 4.8750 | 4.8760 | 4.469 | 25,800 |

Airframe Needle Roller Bearings



Series NBE

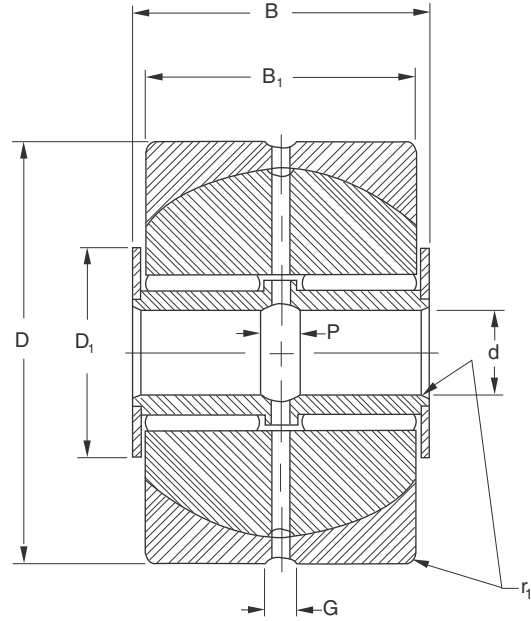
| PART NUMBER | d Inside Diameter | | | D Outside Dia. | | Width | | r ₁ Shaft & Housing Fillet Max. | D ₁ End Plate Dia. | P Inner Ring Groove Width | G Outer Ring Groove Width | Approx. Weight [lbs] |
|--------------|----------------------|-------|-------|-------------------|--------|--------------|------------------------------|---|----------------------------------|------------------------------|------------------------------|----------------------|
| | Nom. | Max. | Min. | Max. | Min. | B Overall | B ₁ Outer Ring | | | | | |
| 4 NBE 615 ZP | 1/4 | .2500 | .2493 | .9375 | .9370 | .375 | .281 | .022 | .688 | - | .094 | .053 |
| 5 NBE 717 ZP | 5/16 | .3125 | .3118 | 1.0625 | 1.0620 | .437 | .344 | .022 | .750 | - | .094 | .079 |

| | | | | | | | | | | | | |
|-----------------|-------|--------|--------|--------|--------|-------|-------|------|-------|------|------|-------|
| 6 NBK 919 YZP | 3/8 | .3750 | .3743 | 1.1875 | 1.1870 | .562 | .469 | .022 | .812 | .188 | .125 | .130 |
| 7 NBK 1021 YZP | 7/16 | .4375 | .4368 | 1.3125 | 1.3120 | .625 | .531 | .032 | .875 | .188 | .125 | .174 |
| 8 NBK 1224 YZP | 1/2 | .5000 | .4993 | 1.5000 | 1.4995 | .750 | .656 | .032 | 1.031 | .188 | .125 | .293 |
| 9 NBK 1427 YZP | 9/16 | .5625 | .5618 | 1.6875 | 1.6870 | .875 | .781 | .032 | 1.094 | .188 | .156 | .420 |
| 10 NBK 1628 YZP | 5/8 | .6250 | .6243 | 1.7500 | 1.7495 | 1.000 | .906 | .032 | 1.156 | .250 | .156 | .520 |
| 12 NBK 1830 YZP | 3/4 | .7500 | .7493 | 1.8750 | 1.8745 | 1.125 | 1.000 | .032 | 1.281 | .250 | .156 | .630 |
| 14 NBK 2034 YZP | 7/8 | .8750 | .8743 | 2.1250 | 2.1244 | 1.250 | 1.125 | .032 | 1.500 | .375 | .156 | .870 |
| 16 NBK 2036 YZP | 1 | 1.0000 | .9993 | 2.2500 | 2.2494 | 1.250 | 1.125 | .032 | 1.625 | .375 | .156 | .960 |
| 20 NBK 2040 YZP | 1 1/4 | 1.2500 | 1.2493 | 2.5000 | 2.4994 | 1.250 | 1.049 | .032 | 1.906 | .375 | .156 | 1.070 |
| 24 NBK 2044 YZP | 1 1/2 | 1.5000 | 1.4993 | 2.7500 | 2.7494 | 1.250 | 1.049 | .032 | 2.156 | .375 | .156 | 1.230 |
| 32 NBK 2052 YZP | 2 | 2.0000 | 1.9993 | 3.2500 | 3.2492 | 1.250 | 1.049 | .032 | 2.656 | .375 | .156 | 1.490 |
| 40 NBK 2060 YZP | 2 1/2 | 2.5000 | 2.4993 | 3.7500 | 3.7492 | 1.250 | 1.049 | .032 | 3.156 | .375 | .156 | 1.780 |
| 48 NBK 2068 YZP | 3 | 3.0000 | 2.9993 | 4.2500 | 4.2492 | 1.250 | 1.049 | .032 | 3.656 | .375 | .156 | 2.060 |
| 56 NBK 2078 YZP | 3 1/2 | 3.5000 | 3.4992 | 4.8750 | 4.8740 | 1.250 | 1.049 | .044 | 4.219 | .375 | .156 | 2.650 |

All dimensions are in inches

All exposed surfaces plated for corrosion resistance.

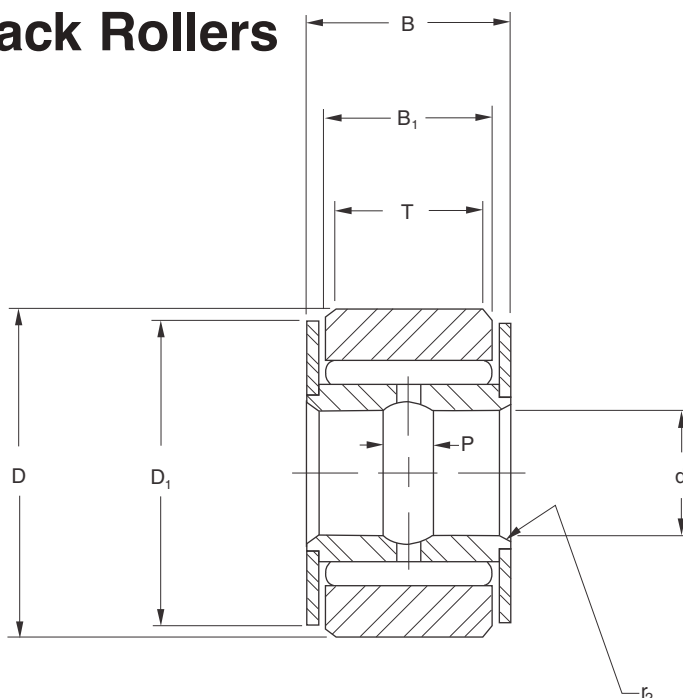
Airframe Needle Roller Bearings



Series NBK

| | Speed Limit [rpm] | Load Limit [lbf] | Recommended Shaft Diameter | | | | Recommended Housing Bore | | | | Boss Diameter | | Clamping Force Max. [lbf] |
|--|-------------------|------------------|----------------------------|--------|-----------------------------|--------|--------------------------|--------|------------------|--------|---------------|-------|---------------------------|
| | | | Loose Fit ISO f6 | | Tight Transition Fit ISO j6 | | Press Fit ISO N6 | | Loose Fit ISO H6 | | Max. | Min. | |
| | | | Max. | Min. | Max. | Min. | Min. | Max. | Min. | Max. | | | |
| | 5,000 | 2,870 | .2495 | .2491 | .2503 | .2499 | .9366 | .9371 | .9375 | .9380 | .688 | .516 | 870 |
| | 5,000 | 4,070 | .3120 | .3116 | .3128 | .3124 | 1.0616 | 1.0621 | 1.0625 | 1.0630 | .734 | .578 | 1,400 |
| | 5,000 | 4,530 | .3745 | .3741 | .3753 | .3749 | 1.1864 | 1.1870 | 1.1875 | 1.1881 | .781 | .641 | 2,100 |
| | 5,000 | 5,870 | .4369 | .4364 | .4378 | .4374 | 1.3114 | 1.3120 | 1.3125 | 1.3131 | .844 | .703 | 2,850 |
| | 5,000 | 8,670 | .4994 | .4989 | .5003 | .4999 | 1.4989 | 1.4995 | 1.5000 | 1.5006 | 1.000 | .844 | 3,840 |
| | 5,000 | 11,800 | .5619 | .5614 | .5628 | .5624 | 1.6864 | 1.6870 | 1.6875 | 1.6881 | 1.062 | .891 | 4,870 |
| | 4,700 | 15,500 | .6244 | .6239 | .6253 | .6249 | 1.7489 | 1.7495 | 1.7500 | 1.7506 | 1.094 | .953 | 6,150 |
| | 4,000 | 20,000 | .7492 | .7487 | .7504 | .7498 | 1.8739 | 1.8745 | 1.8750 | 1.8756 | 1.156 | 1.078 | 8,950 |
| | 3,400 | 25,800 | .8742 | .8737 | .8754 | .8748 | 2.1237 | 2.1244 | 2.1250 | 2.1257 | 1.375 | 1.250 | 12,200 |
| | 3,000 | 28,700 | .9992 | .9987 | 1.0004 | .9998 | 2.2487 | 2.2494 | 2.2500 | 2.2507 | 1.500 | 1.375 | 16,300 |
| | 2,400 | 31,400 | 1.2490 | 1.2484 | 1.2504 | 1.2498 | 2.4987 | 2.4994 | 2.5000 | 2.5007 | 1.781 | 1.625 | 25,800 |
| | 2,000 | 36,600 | 1.4990 | 1.4984 | 1.5004 | 1.4998 | 2.7487 | 2.7494 | 2.7500 | 2.7507 | 2.062 | 1.875 | 25,800 |
| | 1,500 | 47,100 | 1.9988 | 1.9981 | 2.0005 | 1.9997 | 3.2485 | 3.2494 | 3.2500 | 3.2509 | 2.594 | 2.375 | 25,800 |
| | 1,200 | 57,500 | 2.4988 | 2.4981 | 2.5005 | 2.4997 | 3.7485 | 3.7494 | 3.7500 | 3.7509 | 3.062 | 2.875 | 25,800 |
| | 1,000 | 67,900 | 2.9988 | 2.9981 | 3.0005 | 2.9997 | 4.2485 | 4.2494 | 4.2500 | 4.2509 | 3.562 | 3.375 | 25,800 |
| | 850 | 80,100 | 3.4986 | 3.4977 | 3.5005 | 3.4996 | 4.8732 | 4.8742 | 4.8750 | 4.8760 | 4.141 | 3.969 | 25,800 |

Airframe Track Rollers

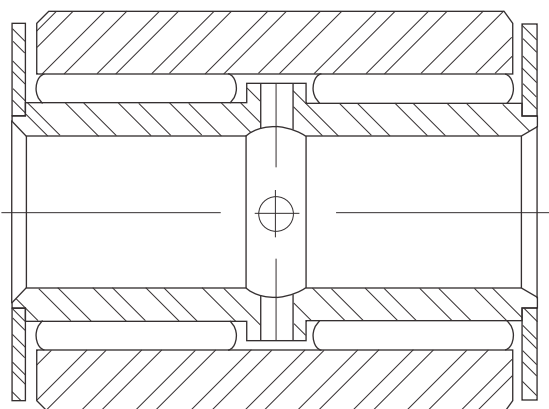


Series NBF

| PART NUMBER | d Inside Diameter | | | D Outside Diameter | | Width | | r ₂ Shaft Fillet Max. | D ₁ End Plate Dia. | P Inner Ring Groove Width |
|----------------|----------------------|--------|--------|-----------------------|--------|--------------|------------------------------|-------------------------------------|----------------------------------|------------------------------|
| | Nom. | Max. | Min. | Max. | Min. | B Overall | B ₁ Outer Ring | | | |
| 4 NBF 614 YJ | 1/4 | .2500 | .2493 | .8750 | .8740 | .375 | .281 | .022 | .750 | .125 |
| 6 NBF 817 YJ | 3/8 | .3750 | .3743 | 1.0625 | 1.0615 | .500 | .375 | .022 | .938 | .188 |
| 8 NBF 1021 YJ | 1/2 | .5000 | .4993 | 1.3125 | 1.3115 | .625 | .500 | .032 | 1.188 | .188 |
| 10 NBF 1224 YJ | 5/8 | .6250 | .6243 | 1.5000 | 1.4990 | .750 | .625 | .032 | 1.375 | .250 |
| 12 NBF 1628 YJ | 3/4 | .7500 | .7493 | 1.7500 | 1.7490 | 1.000 | .875 | .032 | 1.625 | .250 |
| 14 NBF 1832 YJ | 7/8 | .8750 | .8743 | 2.0000 | 1.9999 | 1.125 | 1.000 | .032 | 1.875 | .250 |
| 20 NBF 2040 YJ | 1 1/4 | 1.2500 | 1.2493 | 2.5000 | 2.4990 | 1.250 | 1.049 | .032 | 2.375 | .375 |
| 24 NBF 2448 YJ | 1 1/2 | 1.5000 | 1.4993 | 3.0000 | 2.9990 | 1.500 | 1.299 | .032 | 2.875 | .375 |
| 28 NBF 2455 YJ | 1 3/4 | 1.7500 | 1.7493 | 3.4375 | 3.4365 | 1.500 | 1.299 | .032 | 3.312 | .375 |
| 32 NBF 2462 YJ | 2 | 2.0000 | 1.9993 | 3.8750 | 3.8740 | 1.500 | 1.299 | .032 | 3.750 | .375 |
| 36 NBF 2469 YJ | 2 1/4 | 2.2500 | 2.2493 | 4.3125 | 4.3115 | 1.500 | 1.299 | .032 | 4.188 | .375 |
| 40 NBF 2476 YJ | 2 1/2 | 2.5000 | 2.4993 | 4.7500 | 4.7490 | 1.500 | 1.299 | .032 | 4.625 | .375 |
| 44 NBF 2480 YJ | 2 3/4 | 2.7500 | 2.7493 | 5.0000 | 4.9990 | 1.500 | 1.299 | .032 | 4.875 | .375 |

| | | | | | | | | | | |
|----------------|-------|--------|--------|--------|--------|-------|-------|------|-------|------|
| 6 NBL 1618 YJ | 3/8 | .3750 | .3743 | 1.1250 | 1.1240 | 1.000 | .875 | .022 | 1.000 | .188 |
| 8 NBL 2022 YJ | 1/2 | .5000 | .4993 | 1.3750 | 1.3740 | 1.250 | 1.125 | .032 | 1.250 | .250 |
| 10 NBL 2426 YJ | 5/8 | .6250 | .6243 | 1.6250 | 1.6240 | 1.500 | 1.375 | .032 | 1.500 | .375 |
| 12 NBL 2830 YJ | 3/4 | .7500 | .7493 | 1.8750 | 1.8740 | 1.750 | 1.625 | .032 | 1.750 | .375 |
| 14 NBL 3234 YJ | 7/8 | .8750 | .8743 | 2.1250 | 2.1240 | 2.000 | 1.875 | .032 | 2.000 | .375 |
| 16 NBL 3638 YJ | 1 | 1.0000 | .9993 | 2.3750 | 2.3740 | 2.250 | 2.049 | .032 | 2.125 | .375 |
| 20 NBL 4044 YJ | 1 1/4 | 1.2500 | 1.2493 | 2.7500 | 2.7490 | 2.500 | 2.299 | .032 | 2.500 | .375 |
| 24 NBL 4448 YJ | 1 1/2 | 1.5000 | 1.4993 | 3.0000 | 2.9990 | 2.750 | 2.549 | .032 | 2.750 | .375 |
| 28 NBL 4855 YJ | 1 3/4 | 1.7500 | 1.7493 | 3.4375 | 3.4365 | 3.000 | 2.799 | .032 | 3.188 | .375 |
| 32 NBL 4862 YJ | 2 | 2.0000 | 1.9993 | 3.8750 | 3.8740 | 3.000 | 2.799 | .032 | 3.625 | .375 |

Airframe Track Rollers



Series NBL

| | T Effective Track Width | Approx. Weight [lbs] | Speed Limit [rpm] | Load Limit [lbf] | Capacity as a Track Roller [lbf] | Track Capacity @ 40 Rc [lbf] | Recommended Shaft Diameter | | | | Boss Dia. Min. | Clamping Force Max. [lbf] |
|--|----------------------------------|----------------------------|-------------------------|------------------------|---|---------------------------------------|--------------------------------|--------|--------------------------------|--------|----------------------|------------------------------------|
| | | | | | | | Loose Transition Fit ISO g6 | | Tight Transition Fit ISO j6 | | | |
| | | | | | | | Max. | Min. | Max. | Min. | | |
| | .218 | .049 | 5,000 | 1,910 | 1,430 | 590 | .2498 | .2494 | .2503 | .2499 | .516 | 800 |
| | .312 | .098 | 5,000 | 3,600 | 2,700 | 1,000 | .3748 | .3744 | .3753 | .3749 | .672 | 2,000 |
| | .438 | .178 | 5,000 | 5,780 | 4,300 | 1,800 | .4998 | .4993 | .5003 | .4999 | .844 | 3,500 |
| | .562 | .266 | 4,600 | 8,530 | 6,400 | 2,600 | .6248 | .6243 | .6253 | .6249 | .953 | 6,000 |
| | .750 | .495 | 3,800 | 14,200 | 10,700 | 4,100 | .7497 | .7492 | .7504 | .7498 | 1.109 | 9,000 |
| | .875 | .713 | 3,300 | 19,300 | 14,400 | 5,400 | .8747 | .8742 | .8754 | .8748 | 1.219 | 12,000 |
| | .938 | 1.100 | 2,300 | 25,300 | 18,900 | 7,300 | 1.2496 | 1.2490 | 1.2504 | 1.2498 | 1.625 | 25,000 |
| | 1.172 | 2.250 | 1,900 | 37,900 | 28,400 | 10,900 | 1.4996 | 1.4990 | 1.5004 | 1.4998 | 1.984 | 25,000 |
| | 1.172 | 3.160 | 1,650 | 44,100 | 33,000 | 12,500 | 1.7496 | 1.7490 | 1.7504 | 1.7498 | 2.281 | 25,000 |
| | 1.172 | 3.820 | 1,450 | 48,900 | 36,700 | 14,000 | 1.9996 | 1.9989 | 2.0005 | 1.9997 | 2.562 | 25,000 |
| | 1.172 | 4.810 | 1,300 | 55,000 | 41,200 | 15,600 | 2.2496 | 2.2489 | 2.2505 | 2.2497 | 2.859 | 25,000 |
| | 1.172 | 5.940 | 1,200 | 59,900 | 44,900 | 17,200 | 2.4996 | 2.4989 | 2.5005 | 2.4997 | 3.109 | 25,000 |
| | 1.172 | 7.200 | 1,100 | 64,800 | 48,600 | 18,100 | 2.7496 | 2.7489 | 2.7505 | 2.7497 | 3.344 | 25,000 |
| | .750 | .228 | 5,000 | 7,130 | 5,370 | 2,600 | .3748 | .3744 | .3753 | .3749 | .672 | 2,000 |
| | 1.000 | .416 | 5,000 | 12,500 | 9,370 | 4,300 | .4998 | .4993 | .5003 | .4999 | .891 | 3,500 |
| | 1.125 | .693 | 4,600 | 19,900 | 15,000 | 5,600 | .6248 | .6243 | .6253 | .6249 | 1.109 | 6,000 |
| | 1.375 | 1.080 | 3,800 | 28,500 | 21,400 | 8,000 | .7497 | .7492 | .7504 | .7498 | 1.281 | 9,000 |
| | 1.625 | 1.550 | 3,300 | 38,500 | 28,900 | 10,700 | .8747 | .8742 | .8754 | .8748 | 1.469 | 12,000 |
| | 1.797 | 2.200 | 2,900 | 44,900 | 33,600 | 13,200 | .9997 | .9992 | 1.0004 | .9998 | 1.578 | 15,000 |
| | 2.047 | 3.100 | 2,300 | 59,500 | 44,600 | 17,400 | 1.2496 | 1.2490 | 1.2504 | 1.2498 | 1.844 | 25,000 |
| | 2.297 | 4.120 | 1,900 | 71,300 | 53,600 | 21,300 | 1.4996 | 1.4990 | 1.5004 | 1.4998 | 1.984 | 25,000 |
| | 2.547 | 5.800 | 1,650 | 92,000 | 69,000 | 27,000 | 1.7496 | 1.7490 | 1.7504 | 1.7498 | 2.281 | 25,000 |
| | 2.547 | 7.000 | 1,450 | 102,000 | 76,600 | 30,500 | 1.9996 | 1.9989 | 2.0005 | 1.9997 | 2.562 | 25,000 |

TECHNICAL DATA

Cam Followers, Yoke, and Track Rollers

Introduction to Cam Follower Technology

Safety Precaution

In rare cases a bearing failure may cause great mechanical damage or even lead to personal injury. To help prevent such losses, you may contact RBC's engineering staff to review your application details. The engineering staff's review will assist you in identifying potential problem areas and suggest modifications to improve bearing performance in your application. The engineering staff at RBC has many years of experience with a large variety of applications and operating conditions. If you have a safety related application and would like an evaluation by RBC's engineering department, please submit your application details in confidence.

1. Difference from Standard Bearings

The outer rings of regular ball and roller bearings are typically mounted in rigid housings providing support around the entire circumference. Individual roller forces are transmitted through the outer ring directly into the housing with no major deformations.

By contrast, cam followers and yoke rollers are supported at a single point on their circumference. Individual roller forces produce bending moments on

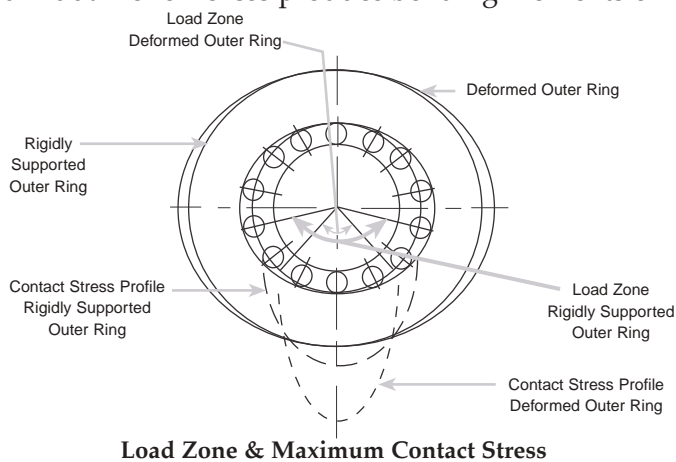


Fig. 1

the outer ring around the point of contact. The effects are outer ring deformation with reversed bending stresses in dynamic applications, a reduced load zone, and a higher maximum roller load (see Fig. 1.).

To keep deformation to a minimum, the outer ring of a cam follower must have a considerably heavier cross section than a standard bearing. This requirement conflicts with the desire for maximum dynamic bearing capacity which needs as large a roller diameter as possible. RBC cam followers and yoke rollers provide an optimum compromise between outer ring strength and theoretical bearing capacity.

2. Capacity and Load Limits

Evaluation of the expected service life and limit loads of cam followers is more complex than with housed bearings. In addition to the static and dynamic capacity of the rolling elements, outer ring deformation, track capacity, and cam follower stud bending stress must be considered. In yoke rollers, the pin shear stress must be considered.

RBC lists the static bearing capacity for reference purposes only. Typically, the maximum allowable load is a function of the maximum permissible bending stress of the stud or the outer ring. For best results, the operating loads should not exceed the lower of track capacity or 50% of the dynamic capacity.

2.1 Capacity of Rolling Element Bearing

Equations for static and dynamic capacities of roller bearings are given in ANSI / ABMA Standard 11. The more recent revisions leave it up to the manufacturer to introduce factors which account for internal design features and operating conditions. For cam followers and yoke rollers RBC has chosen to apply a conservative rating system, so a direct comparison with capacity figures of competitive products may not be possible.

2.2 Track Capacity

Track capacity is that load which a track subject to a uniform contact stress can withstand without excessive plastic deformation. It is directly related to track hardness. The published track capacity is based on a hardness of HRc 40. For other track hardness values the track capacity must be modified with factors from Table 1.

| Track Hardness [HRC] | Material Strength [psi] | Modification Factor |
|----------------------|-------------------------|---------------------|
| 26 | 128,000 | .45 |
| 32 | 146,000 | .61 |
| 36 | 165,000 | .79 |
| 40 | 182,000 | 1.00 |
| 44 | 204,000 | 1.24 |
| 47 | 229,000 | 1.50 |
| 50 | 247,000 | 1.78 |
| 53 | 266,000 | 2.09 |
| 56 | 281,000 | 2.42 |
| 58 | 298,000 | 2.78 |

Table 1. Track Capacity Adjustment Factors.

Alternatively, contact stress can be easily calculated and compared directly to the strength of material. The equation for the Hertz contact stress between a cylindrical cam follower outer ring and a flat steel track is given by “Roark, Formulas for Stress and Strain” as:

$$\sigma_{C \max} = 3,237 * \sqrt{\frac{F}{l_{\text{eff}} * D}} \quad \text{[psi]} \quad (1)$$

where

F = radial load [lbf]
 l_{eff} = length of outer ring contact [in]
 D = outer ring diameter [in]

It can be shown that for infinite life the ultimate tensile strength of track and roller must be at least equal to the maximum contact stress $\sigma_{C \max}$

Example 1:

Determine the required minimum track hardness for an RBC cam follower S 56 L operating under a 3000 lbf radial load.

Solution:

$$\sigma_{C \max} = 3,237 * \sqrt{\frac{3,000 \text{ lbf}}{0.8 \text{ in} * 1.75 \text{ in}}} = 149,800 \text{ psi}$$

Referring to Table 1, 149,800 psi is between 146,000 psi (HRC32) and 165,000 (HRC 36). Interpolation yields a minimum track hardness of HRC 33.

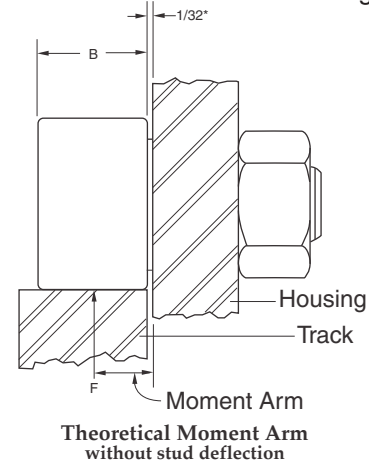
2.3. Bending and Shear Stresses

2.3.1 Cam Follower Stud Bending Stress

If the load over the width of the outer ring is evenly distributed, it may be replaced by a single concentrated force F [lbf] acting at the center of the cam follower (see Fig.2). Assuming that the cam follower stud has been tightly mounted in a housing bore flush with the end plate, this concentrated force generates a bending moment M_b .

$$M_b = F * \left(\frac{B}{2} + \frac{1}{32} \right) \quad \text{[in * lbf]} \quad (2)$$

where B = outer ring width [in]
 1/32 = cam follower overhang [in]



*sizes 160 and above = 1/16

Fig. 2

The bending moment generates a bending stress in the cam follower stud of approximate magnitude

$$\sigma_b = 10 * \frac{M_b}{SD^3} \quad \text{[psi]} \quad (3)$$

where SD=Stud Diameter [in]

Standard cam follower studs are heat treated to a hardness of HRC 58 min in the raceway area only.

The hardness in other areas of the stud is typically in a range of HRC 20 -22 with an ultimate strength of material of 110,000 -120,000 psi. RBC bases the maximum allowable load of stud type cam followers on a theoretical stud bending stress of 100,000 psi. Standard stud cam followers and heavy stud cam followers differ in stud diameter, which permits higher operating loads and more resistance to impact loading for the heavy stud version. High stud strength cam followers are available by special order.

In most applications the stud will deflect away from the load, which causes the point of attack to shift toward the support, shortening the moment arm and reducing the effective bending moment (see Fig. 3). Tests show that this deflection yields a safety factor of at least 2 over RBC's maximum allowable load. However, this effect may not be sufficient to avoid damage in severely misaligned applications where the load is applied at the very extreme out-board edge of the cam follower outer ring.

Where misalignment is a problem, RBC recommends crowned cam followers.

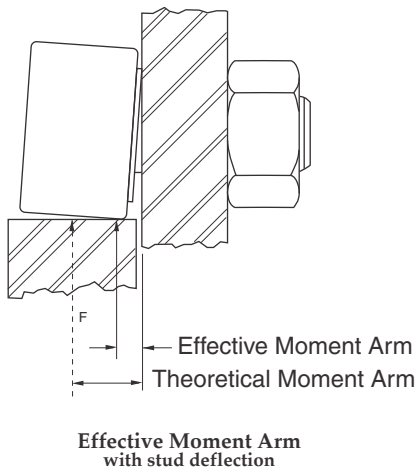


Fig. 3

Example 2

Cam follower S 64 L supports a load of 6,000 lbf. The stud diameter is .875", the outer ring width 1.25". Determine the theoretical bending stress at the stud housing interface.

Solution:

$$M_b = 6,000 \text{ lbf} * \left(\frac{1.25 \text{ in}}{2} + \frac{1}{32} \text{ in} \right) = 3,938 \text{ in} * \text{lbf}$$

$$\sigma_b = 10 * \frac{3,938 \text{ in} * \text{lbf}}{(.875 \text{ in})^3} = 58,776 \text{ psi}$$

2.3.2 Yoke Roller Pin Shear Stress

Yoke rollers are mounted with a pin in a yoke. Under load the pin is subject to shear and bending stresses. RBC recommends that the yoke arms are located as close to the yoke roller as possible, so that bending stress can be ignored. In case of widely spaced pin supports, the resulting pin deflection may cause yoke roller damage.

The pin shear stress can be calculated with

$$\sigma_s = 2 * \frac{F}{\pi * d^2} \quad [\text{psi}] \quad (4)$$

where d =pin diameter

The permissible stress depends on the pin material selection.

Example 3

Determine the shear stress of the .375 in. diameter pin for yoke roller Y 40 L, loaded radially with 3,200 lbf.

Solution:

$$\sigma_s = 2 * \frac{3,200 \text{ lbf}}{\pi * (.375 \text{ in})^2} = 14,487 \text{ psi}$$

2.4 Outer Ring Stress and Deformation

The exact calculation of these values is beyond the scope of this introduction. The following method may be used for a (high) first estimate of the outer ring tensile stress at the inside diameter opposite the contact point of a single row cam or roller follower. The assumption is that the entire load is supported by only 2 rollers straddling the point of contact:

$$\sigma_{b \text{ max}} = \frac{6 * F * D_i * \pi}{z * b * (D - D_i)^2} \quad [\text{psi}] \quad (5)$$

where F = cam follower load [lbf]
 D_i = outer ring raceway diameter [in]
 D = outer ring outside diameter [in]
 z = number of rollers per row
 b = idealized outer ring width [in]

Example 4

Estimate the outer ring tensile stress of yoke roller Y 56 L subject to a load of 6,000 lbf. The yoke roller has 25 rollers, the outer ring outside diameter = 1.750 in., the outer ring raceway diameter = 1.125 in., the idealized outer ring width = .690 in.

Solution:

$$\sigma_{b \max} = \frac{6 * 6,000 \text{ lbf} * 1.125 * \pi}{25 * .690 \text{ in} * (1.75 \text{ in} - 1.125 \text{ in})^2} = 18,880 \text{ psi}$$

3. Fatigue Life

Fatigue life, L_{10} [rev, hrs], is a statistical measure of the life which 90% of a large group of apparently identical rolling element bearings will complete or exceed. For a single bearing, L_{10} also refers to the life associated with 90% reliability.

The relationship between fatigue or rating life, capacity and load is:

$$L_{10 \text{ rev}} = \left(\frac{C}{P_e} \right)^{\frac{10}{3}} \quad (6)$$

where $L_{10 \text{ rev}}$ = Rating life [10^6 rev]
 C = Dynamic capacity [lbf]
 P_e = Equivalent radial load

To obtain the rating life in hours, use

$$L_{10 \text{ hrs}} = \frac{16,667}{n_e} * \left(\frac{C}{P_e} \right)^{\frac{10}{3}} \quad (7)$$

where $L_{10 \text{ hrs}}$ = Rating life [hours]
 n_e = equivalent speed [rpm]

In case of constant speed, the equivalent speed equals the constant bearing speed. In all other cases the equivalent speed is the weighted average of all individual speed components.

$$n_e = \sum \left(\frac{n_i * t_i}{100} \right) = \frac{n_1 * t_1}{100} + \frac{n_2 * t_2}{100} + \dots \quad (8)$$

where n_i = individual speed component [rpm]
 t_i = time interval in percent of total time

In case of constant load, the equivalent radial load equals the constant load. To compute the equivalent load for all other cases, use:

$$P_e = \sqrt[q]{\sum \left(\frac{F_i^q * n_i * t_i}{n_e * 100} \right)} = \sqrt[q]{\frac{F_1^q * n_1 * t_1}{n_e * 100} + \frac{F_2^q * n_2 * t_2}{n_e * 100} + \dots} \quad (9)$$

where $q = 10/3$ for roller bearings
 F_t = individual radial load [lbf]

4. Speed Limit and Maximum Acceleration

4.1 Speed Limit

The limiting speed of rolling element bearings is primarily a function of size and internal design. The speed limits given in this catalog should not be exceeded on a continuous basis to prevent premature failure due to excessive temperature. Contact RBC for solutions to high speed applications.

4.2 Maximum Acceleration (Deceleration)

A sufficiently large tangential friction force F_t , acting between outside diameter and track is needed to change the rotational speed of cam follower and yoke roller outer rings.

$$F_t = F * \mu \quad [\text{lbf}]$$

(10)

where μ = coefficient of friction
 (outer ring to track)

The force F_t produces a moment M_t , which must accelerate the masses of outer ring and rollers around the bearing axis, plus the rollers in the load zone around their own axes.

The moment M_t can be calculated using:

$$M_t = \frac{D * F_t}{2} \quad [\text{in} * \text{lbf}] \quad (11)$$

Accelerating the mass of the outer ring normally requires the largest part of moment M_t . Assuming a coefficient of friction of $\mu = 0.10$ and a typical cam follower design, the following equation may be used for an estimate of the permissible angular acceleration α :

$$\alpha_{\text{perm}} = \frac{6000 * M_t}{B * D^4} \quad [\text{rad}/\text{sec}^2] \quad (12)$$

Excessive acceleration causes sliding of the outer ring on the track. The effects range from minor uniform wear on cam follower and track to flat spots on the cam follower with subsequent failure.

5. Mounting

5.1 Cam Followers

For greatest rigidity and strength, the end plate should be drawn up snugly against a boss or other flat surface of the housing. The tables on pages 8 throughout 23 list the maximum recommended clamping torque for lubricated threads, which is the normal condition. Use up to twice the listed torque for completely dry threads.

The housing bore should be drilled and reamed to the recommended tolerance. If a greater tolerance is needed, it should be added to the plus side to prevent cam follower damage during assembly. If the cam follower stud fits tightly into the housing bore, use an arbor press and apply pressure against the central portion of the flange. Never press against the rim of the flange or the outer ring.

Although wide blade screwdrivers may be used to hold slotted head cam followers during assembly, rounded tools conforming to the slot are preferable to avoid plastic deformation in the slot area.

RBC offers a convenient socket (W suffix) for hex wrenches to provide a more substantial grip, especially for 'blind hole' applications.

5.2 Eccentric Cam Followers

Eccentric cam followers are used when there is a need to make height adjustments between the cam follower and the track. By simply turning the entire cam follower inside the housing it is possible to adjust the distance between the cam follower and the track by twice the eccentricity. However, due to the mechanical advantage that the eccentricity provides, it is inadvisable that the cam follower be adjusted over this entire range.

A very large force can be exerted on the track for a small applied adjusting torque as the eccentricity of the cam follower approaches ± 90 degrees from a starting position parallel to the track, in the housing. Adjustments should be limited to ± 45 degrees and the resulting preload should not exceed 10% of the cam follower's capacity.

The following equation can be used to find an appropriate adjusting torque.

$$T = 0.1 * C * e * \cos 45^\circ \quad [\text{in} * \text{lbf}] \quad (13)$$

where T = appropriate adjusting torque [lbf]
 C = cam followers dynamic capacity [lbf]
 e = eccentricity of cam follower [in]

Example 5

CamCentric cam follower S48LWX has a dynamic capacity of 4,600 lb, and an eccentricity of 0.03 in. Determine the appropriate adjusting torque.

Solution: (14)

$$T = 4,600 \text{ lbf} * 0.03 \text{ in} * 0.070711 = 9.76 \text{ in} * \text{lbf}$$

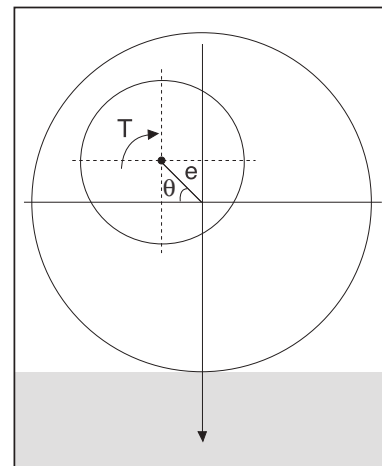


Fig. 4

5.3 Yoke Rollers

RBC yoke rollers correspond in many respects to the same size cam follower, except they are mounted on a pin for use in yoke type applications for greater shock resistance.

Yoke rollers should be clamped axially or mounted within closely fitting side rails to prevent displacement of the end plates. For applications with heavy loads, it is recommended to heat treat the pin and use a press fit for the inner ring. A soft pin and light press or push fit are sufficient for lightly loaded applications. When press fitting a yoke roller, pressure should be applied centrally and uniformly against the end plate, never against the outer ring.

The pin should have a suitable lead-in chamfer or radius to prevent scoring and to hold the mounting force to a minimum.

5.4 Caged Roller Followers

Caged roller followers can operate directly on a hardened and ground shaft (HRc 58 min, 16 rms min surface finish) or can be used with matching inner rings. Operating without an inner ring yields the largest possible shaft diameter with greatest strength and rigidity. Axial guidance must be provided by the application. It is recommended to use hardened steel or bronze thrust washers with radial lubricating grooves as needed.

6.1 Track Lubrication

In most applications it is difficult to eliminate *all* cam follower misalignment. Misalignment causes the outer ring to thrust, which in needle bearing cam followers, produces wear of the seal followed by wear of the outer ring face and the stud flange or the end plate. In RBC Rollers® the wear is generally limited to the center thrust ring. Misalignment where the axis of the cam follower is not perpendicular to the direction of rolling, typically produces the most severe thrust and also causes wear on the cam follower outside diameter, and the track. To reduce these symptoms as much as possible, the track must be lubricated. Lubrication also reduces wear stemming from excessive acceleration. Oil and grease are acceptable lubricants.

If the track cannot be lubricated, contact RBC Engineering for a review of the operating parameters to ensure that they do not exceed the limits of the bearing selected.

6.2 Bearing Lubrication

Cam followers and yoke rollers are pre-lubricated with an NLGI grade 2, lithium soap, mineral oil based grease with EP additives. RBC Roller® type cam followers and yoke rollers are normally lubricated for life and have no provisions for relubrication. Needle roller type

cam followers require relubrication depending on operating speed, duty cycle, operating environment, desired service life, etc.

For relubrication in service, mineral oil, or any good roller bearing grease on mineral oil basis may be used. Inquire about compatibility of greases with different base oil and thickener.

Except for the very small sizes (see tables), cam followers with screwdriver slots can be relubricated from both ends of the stud and through the housing. *Table 2* lists suitable drive fit Alemite fittings. Plugs are furnished by RBC to close off unused passages.

| Size | Bearing P/N | Fitting P/N |
|----------------|-------------|------------------------|
| 1/2" - 1 1/16" | -16 to -22 | 3019 |
| 3/4" - 2 3/4" | -24 to -88 | 1728-B, 1646-B, 1992-B |
| 3" - 4" | -96 to -128 | 1743, 1743-B |
| 5" - up | -160 | any 1/4" NPT fitting |

Table 2. Alemite fittings.

Cam followers of the HexLube® series are supplied

with a grease fitting at the bottom of the hex hole. Yoke rollers and sealed roller followers must be relubricated through the shaft.

7. Misalignment

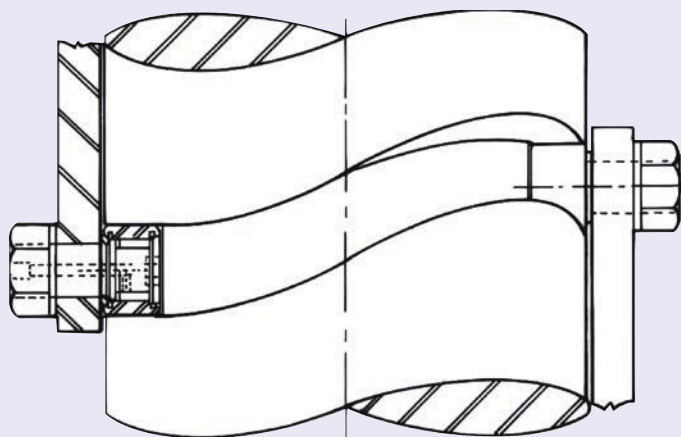
Initial misalignment should not exceed .001 in./in. Any misalignment generates thrust forces between outer ring and flange or end plate. Excessive thrusting can lead to increased operating temperature and destruction of the seal in standard cam followers and yoke rollers. Where misalignment and outer ring thrusting cannot be avoided, RBC recommends crowned outer rings or the RBC Roller® design which is more capable of withstanding thrust loads. Contact RBC engineers about thrust and load limits.

8. Operating Temperature

The temperature limits of all standard cam followers and yoke rollers in this catalog, except airframe bearings, are determined by the temperature limits of the seals and the lubricant. With lower temperatures, grease gradually becomes stiffer, increasing the rolling resistance of the cam follower. Any application with the cam follower operating continuously below 0° F (-18° C), consult with RBC Engineering for a specific low temperature grease. The maximum continuous operating temperature is +250° F (120° C), and for short periods, the maximum temperature may rise to +300° F (150° C). For continuous operation above +250° F (120° C), consult with RBC Engineering to determine the need for special high temperature grease and seal material.

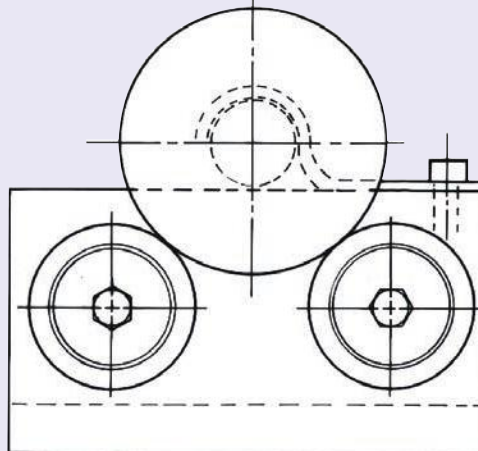
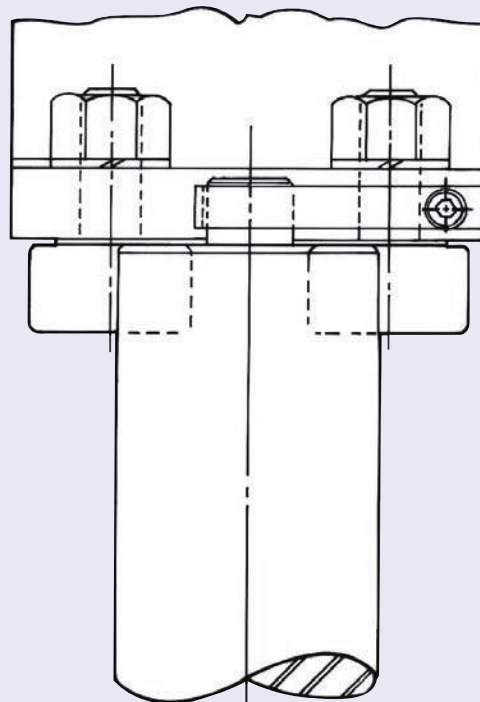
RBC can provide special solutions for applications outside the normal operating temperature range.

TYPICAL APPLICATIONS



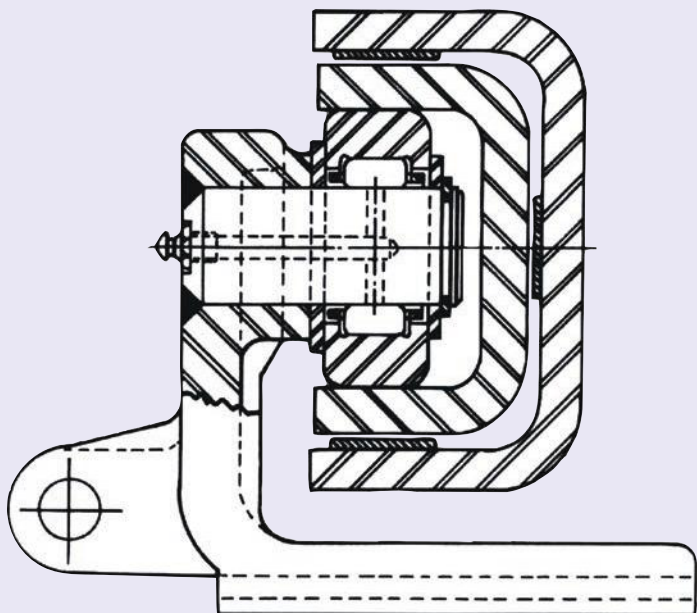
Drum Cam

A pair of heavy stud cam followers are shown mounted in linkages activated by a drum cam or grooved rotating shaft. A lubrication hole through the stud accepts a drive fitting for periodic relubrication.



Rewind Stands

Rewind stands for packaging material or printed coils make use of cam followers. A simple two or three point support consists simply of several cam followers acting on the journal or body of the roll. The upper bracket is optional and a very quick changeover results in either case.



Material Handling Equipment

Carriage rollers and side rollers of lift trucks are typical applications where roller followers have performed exceedingly well. The heavy walled outer ring eliminates the need for a separate tire and bearing assembly.

TYPICAL APPLICATIONS

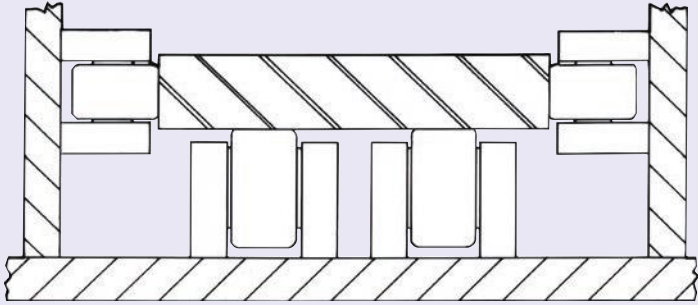
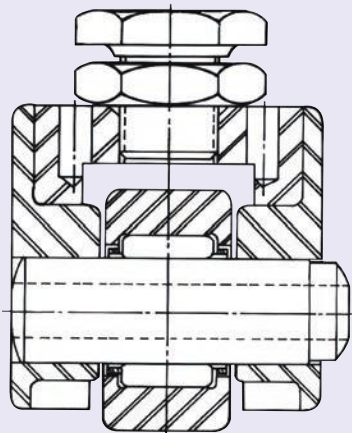


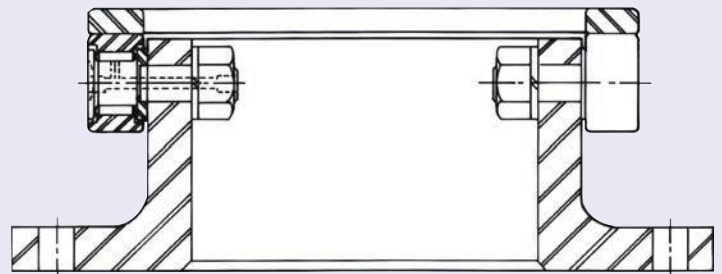
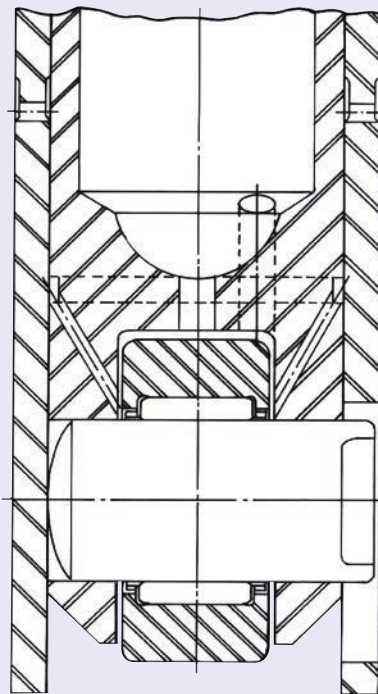
Table Supports

Yoke rollers may be effectively mounted to support tables, tracks or other machine members requiring linear motion. The illustration depicts horizontal location between yoke rollers, but this may be achieved by cam followers or CamCentric® followers as well.



Internal Combustion Engines

RBC's yoke roller followers have found wide acceptance as valve tappet and fuel injection rollers. The outer ring flanges support the cage against high inertia loads assuring positive, individual roller control by the cage.



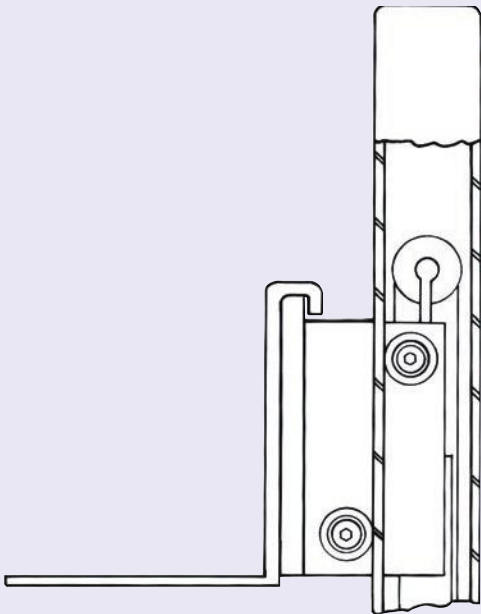
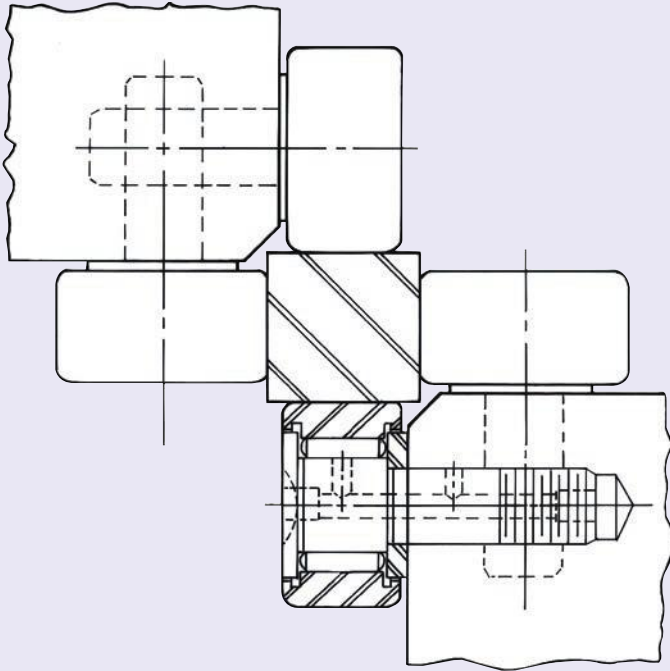
Turntable Mounting

Cam followers can be mounted in a circular housing to support a ring or thrust plate. Precise leveling adjustment for the turntable can be obtained using the adjustable CamCentric® cam follower.

TYPICAL APPLICATIONS

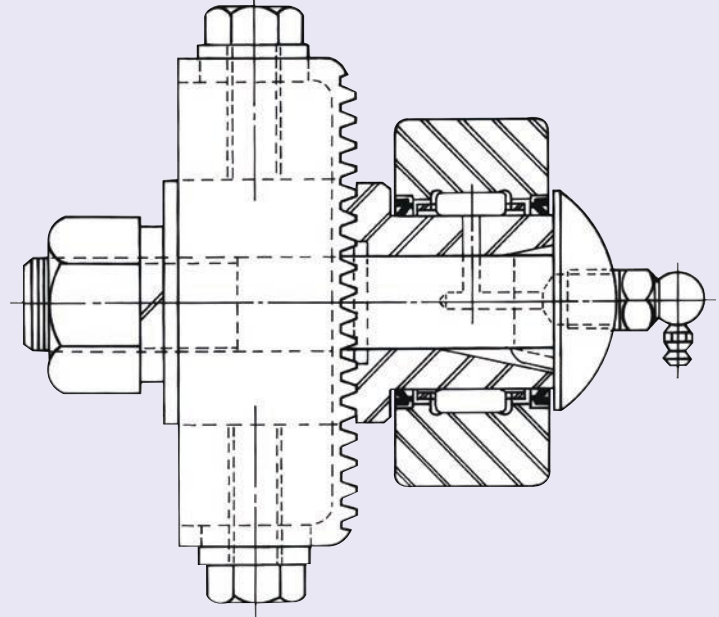
Cluster Mounting

Cluster mounting of four cam followers around a square column demonstrates the unique versatility of these bearings. Threads are concentric with the shank within very close limits. This feature is important on "blind hole" mountings where run-out would result in binding.



Manual Lift Truck

Schematic arrangement of cam followers is shown on the upright of a warehouse hand truck. CamCentric® bearings are frequently used to provide adjustment so that all bearings contact the track without critical hole positioning.



Textile Machinery

The sealed yoke rollers work extremely well as picking rolls of looms due to the fact that the minimum friction assures constant turning to eliminate wear.

UNIVERSAL SERIES™ INTERCHANGE TABLES



STANDARD STUD With Hex Socket Head – Sealed

| RBC UNIVERSAL HexLube® Series | REPLACES Direct Interchange | | REPLACES | | | | | |
|----------------------------------|--------------------------------|------------|----------|-------|-----------|-------------|------------|----------|
| | McGill | Torrington | RBC | | McGill | | Torrington | |
| S16LW* | CF-1/2-SB | CRSB-8-1 | S16 | S16L | CF-1/2 | CF-1/2-S | CR-8-1 | CRS-8-1 |
| S18LW* | CF-9/16-SB | — | S18 | S18L | CF-9/16 | CF-9/16-S | N/A | N/A |
| S20LW* | CF-5/8-SB | CRSB-10-1 | S20 | S20L | CF-5/8 | CF-5/8-S | CR-10-1 | CRS-10-1 |
| S22LW* | CF-11/16-SB | — | S22 | S22L | CF-1 1/16 | CF-1 1/16-S | N/A | N/A |
| S24LW | CF-3/4-SB | CRSB-12 | S24 | S24L | CF-3/4 | CF-3/4-S | CR-12 | CRS-12 |
| S28LW | CF-7/8-SB | CRSB-14 | S28 | S28L | CF-7/8 | CF-7/8-S | CR-14 | CRS-14 |
| S32LW | CF-1-SB | CRSB-16 | S32 | S32L | CF-1 | CF-1-S | CR-16 | CRS-16 |
| S36LW | CF-1 1/8-SB | CRSB-18 | S36 | S36L | CF-1 1/8 | CF-1 1/8-S | CR-18 | CRS-18 |
| S40LW | CF-1 1/4-SB | CRSB-20 | S40 | S40L | CF-1 1/4 | CF-1 1/4-S | CR-20 | CRS-20 |
| S44LW | CF-1 3/8-SB | CRSB-22 | S44 | S44L | CF-1 3/8 | CF-1 3/8-S | CR-22 | CRS-22 |
| S48LW | CF-1 1/2-SB | CRSB-24 | S48 | S48L | CF-1 1/2 | CF-1 1/2-S | CR-24 | CRS-24 |
| S52LW | CF-1 5/8-SB | CRSB-26 | S52 | S52L | CF-1 5/8 | CF-1 5/8-S | CR-26 | CRS-26 |
| S56LW | CF-1 3/4-SB | CRSB-28 | S56 | S56L | CF-1 3/4 | CF-1 3/4-S | CR-28 | CRS-28 |
| S60LW | CF-1 7/8-SB | CRSB-30 | S60 | S60L | CF-1 7/8 | CF-1 7/8-S | CR-30 | CRS-30 |
| S64LW | CF-2 -SB | CRSB-32 | S64 | S64L | CF-2 | CF-2-S | CR-32 | CRS-32 |
| S72LW | CF-2 1/4-SB | CRSB-36 | S72 | S72L | CF-2 1/4 | CF-2 1/4-S | CR-36 | CRS-36 |
| S80LW | CF-2 1/2-SB | CRSB-40 | S80 | S80L | CF-2 1/2 | CF-2 1/2-S | CR-40 | CRS-40 |
| S88LW | CF-2 3/4-SB | CRSB-44 | S88 | S88L | CF-2 3/4 | CF-2 3/4-S | CR-44 | CRS-44 |
| S96LW | CF-3 -SB | CRSB-48 | S96 | S96L | CF-3 | CF-3-S | CR-48 | CRS-48 |
| S104LW | CF-3 1/4-SB | CRSB-52 | S104 | S104L | CF-3 1/4 | CF-3 1/4-S | CR-52 | CRS-52 |
| S112LW | CF-3 1/2-SB | CRSB-56 | S112 | S112L | CF-3 1/2 | CF-3 1/2-S | CR-56 | CRS-56 |
| S128LW | CF-4 -SB | CRSB-64 | S128 | S128L | CF-4 | CF-4-S | CR-64 | CRS-64 |
| S160LW | CF-5 -SB | CRSB-80 | S160 | S160L | CF-5 | CF-5-S | CR-80 | CRS-80 |
| S192LW | CF-6 -SB | CRSB-96 | S192 | S192L | CF-6 | CF-6-S | CR-96 | CRS-96 |

*Cannot be lubricated through hexhead

UNIVERSAL SERIES™ INTERCHANGE TABLES



STANDARD STUD

With Crowned Outer — Sealed — Hex Head

| RBC UNIVERSAL HexLube® Series | REPLACES Direct Interchange | | REPLACES | | |
|----------------------------------|--------------------------------|------------|----------|-------------|------------|
| | McGill | Torrington | RBC | McGill | Torrington |
| CS16LW* | CCF-1/2-SB | CRSBC-8-1 | CS16L | CCF-1/2-S | CRSC-8-1 |
| CS18LW* | CCF-9/16-SB | — | CS18L | CCF-9/16-S | N/A |
| CS20LW* | CCF-5/8-SB | CRSBC-10-1 | CS20L | CCF-5/8-S | CRSC-10-1 |
| CS22LW* | CCF-11/16-SB | — | CS22L | CCF-11/16-S | N/A |
| CS24LW | CCF-3/4-SB | CRSBC-12 | CS24L | CCF-3/4-S | CRSC-12 |
| CS28LW | CCF-7/8-SB | CRSBC-14 | CS28L | CCF-7/8-S | CRSC-14 |
| CS32LW | CCF-1-SB | CRSBC-16 | CS32L | CCF-1-S | CRSC-16 |
| CS36LW | CCF-1 1/8-SB | CRSBC-18 | CS36L | CCF-1 1/8-S | CRSC-18 |
| CS40LW | CCF-1 1/4-SB | CRSBC-20 | CS40L | CCF-1 1/4-S | CRSC-20 |
| CS44LW | CCF-1 3/8-SB | CRSBC-22 | CS44L | CCF-1 3/8-S | CRSC-22 |
| CS48LW | CCF-1 1/2-SB | CRSBC-24 | CS48L | CCF-1 1/2-S | CRSC-24 |
| CS52LW | CCF-1 5/8-SB | CRSBC-26 | CS52L | CCF-1 5/8-S | CRSC-26 |
| CS56LW | CCF-1 3/4-SB | CRSBC-28 | CS56L | CCF-1 3/4-S | CRSC-28 |
| CS60LW | CCF-1 7/8-SB | CRSBC-30 | CS60L | CCF-1 7/8-S | CRSC-30 |
| CS64LW | CCF-2-SB | CRSBC-32 | CS64L | CCF-2-S | CRSC-32 |
| CS72LW | CCF-2 1/4-SB | CRSBC-36 | CS72L | CCF-2 1/4-S | CRSC-36 |
| CS80LW | CCF-2 1/2-SB | CRSBC-40 | CS80L | CCF-2 1/2-S | CRSC-40 |
| CS88LW | CCF-2 3/4-SB | CRSBC-44 | CS88L | CCF-2 3/4-S | CRSC-44 |
| CS96LW | CCF-3-SB | CRSBC-48 | CS96L | CCF-3-S | CRSC-48 |
| CS104LW | CCF-3 1/4-SB | CRSBC-52 | CS104L | CCF3 1/4-S | CRSC-52 |
| CS112LW | CCF-3 1/2-SB | CRSBC-56 | CS112L | CCF-3 1/2-S | CRSC-56 |
| CS128LW | CCF-4-SB | CRSBC-64 | CS128L | CCF-4-S | CRSC-64 |
| CS160LW | CCF-5-SB | — | CS160L | CCF-5-S | — |
| CS192LW | CCF-6-SB | — | CS192L | CCF-6-S | — |

*Cannot be lubricated through hexhead

UNIVERSAL SERIES™ INTERCHANGE TABLES



STANDARD STUD With Hex Socket Head Eccentric Bushing — Sealed

| RBC UNIVERSAL HexLube® Series | REPLACES Direct Interchange | |
|----------------------------------|--------------------------------|------------|
| RBC Part No. | McGill | Torrington |
| S16LWX | CFE-1/2-SB | CRSBE-8-1 |
| S18LWX | CFE-9/16-SB | — |
| S20LWX | CFE-5/8-SB | CRSBE-10-1 |
| S22LWX | CFE-11/16-SB | — |
| S24LWX | CFE-3/4-SB | CRSBE-12 |
| S28LWX | CFE-7/8-SB | CRSBE-14 |
| S32LWX | CFE-1-SB | CRSBE-16 |
| S36LWX | CFE-1 1/8-SB | CRSBE-18 |
| S40LWX | CFE-1 1/4-SB | CRSBE-20 |
| S44LWX | CFE-1 3/8-SB | CRSBE-22 |
| S48LWX | CFE-1 1/2-SB | CRSBE-24 |
| S52LWX | CFE-1 5/8-SB | CRSBE-26 |
| S56LWX | CFE-1 3/4-SB | CRSBE-28 |
| S60LWX | CFE-1 7/8-SB | CRSBE-30 |
| S64LWX | CFE-2 -SB | CRSBE-32 |
| S72LWX | CFE-2 1/4-SB | CRSBE-36 |
| S80LWX | CFE-2 1/2-SB | CRSBE-40 |
| S88LWX | CFE-2 3/4-SB | CRSBE-44 |
| S96LWX | CFE-3 -SB | CRSBE-48 |
| S104LWX | CFE-3 1/4-SB | CRSBE-52 |
| S112LWX | CFE-3 1/2-SB | CRSBE-56 |
| S128LWX | CFE-4 -SB | CRSBE-64 |

STANDARD STUD With Hex Socket Head Crowned Outer Eccentric Bushing — Sealed

| RBC UNIVERSAL HexLube® Series | REPLACES Direct Interchange | |
|----------------------------------|--------------------------------|-------------|
| RBC Part No. | McGill | Torrington |
| CS16LWX | CCFE-1/2-SB | CRSBCE-8-1 |
| CS18LWX | CCFE-9/16-SB | — |
| CS20LWX | CCFE-5/8-SB | CRSBCE-10-1 |
| CS22LWX | CCFE-11/16-SB | — |
| CS24LWX | CCFE-3/4-SB | CRSBCE-12 |
| CS28LWX | CCFE-7/8-SB | CRSBCE-14 |
| CS32LWX | CCFE-1-SB | CRSBCE-16 |
| CS36LWX | CCFE-1 1/8-SB | CRSBCE-18 |
| CS40LWX | CCFE-1 1/4-SB | CRSBCE-20 |
| CS44LWX | CCFE-1 3/8-SB | CRSBCE-22 |
| CS48LWX | CCFE-1 1/2-SB | CRSBCE-24 |
| CS52LWX | CCFE-1 5/8-SB | CRSBCE-26 |
| CS56LWX | CCFE-1 3/4-SB | CRSBCE-28 |
| CS60LWX | CCFE-1 7/8-SB | CRSBCE-30 |
| CS64LWX | CCFE-2-SB | CRSBCE-32 |
| CS72LWX | CCFE-2 1/4-SB | CRSBCE-36 |
| CS80LWX | CCFE-2 1/2-SB | CRSBCE-40 |
| CS88LWX | CCFE-2 3/4-SB | CRSBCE-44 |
| CS96LWX | CCFE-3-SB | CRSBCE-48 |
| CS104LWX | CCFE-3 1/4-SB | CRSBCE-52 |
| CS112LWX | CCFE-3 1/2-SB | CRSBCE-56 |
| CS128LWX | CCFE-4-SB | CRSBCE-64 |

UNIVERSAL SERIES™ INTERCHANGE TABLES

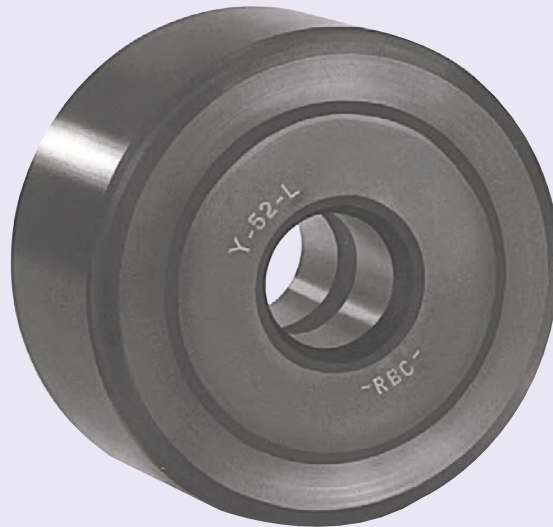
HEAVY STUD With Hex Socket Head — Sealed

| RBC UNIVERSAL HexLube® Series | REPLACES Direct Interchange | | REPLACES | | | | | |
|----------------------------------|--------------------------------|------------|------------|------|-------|-----------|-------------|----------|
| | RBC Part No. | McGill | Torrington | RBC | | McGill | Torrington | |
| H16LW* | CFH-1/2-SB | N/A | CRHSB-8-1 | H16 | H16L | CFH-1/2 | CFH-1/2-S | CRH-8-1 |
| H18LW* | CFH-9/16-SB | CRHSB-10-1 | | H18 | H18L | CFH-9/16 | CFH-9/16-S | N/A |
| H20LW* | CFH-5/8-SB | N/A | | H20 | H20L | CFH-5/8 | CFH-5/8-S | CRH-10-1 |
| H22LW* | CFH-11/16-SB | CRHSB-12 | | H22 | H22L | CFH-11/16 | CFH-11/16-S | N/A |
| H24LW | CFH-3/4-SB | CRHSB-14 | | H24 | H24L | CFH-3/4 | CFH-3/4-S | CRH-12 |
| H28LW | CFH-7/8-SB | CRHSB-16 | | H28 | HS28L | CFH-7/8 | CFH-7/8S-S | CRH-14 |
| H32LW | CFH-1-SB | CRHSB-18 | | H32 | HS32L | CFH-1 | CFH-1S-S | CRH-16 |
| H36LW | CFH-1 1/8-SB | CRHSB-20 | | H36 | HS36L | CFH-1 1/8 | CFH-1 1/8-S | CRH-18 |
| H40LW | CFH-1 1/4-SB | CRHSB-22 | | H40 | HS40L | CFH-1 1/4 | CFH-1 1/4-S | CRH-20 |
| H44LW | CFH-1 3/8-SB | CRHSB-24 | | H44 | HS44L | CFH-1 3/8 | CFH-1 3/8-S | CRH-22 |
| H48LW | CFH-1 1/2-SB | CRHSB-26 | | H48 | HS48L | CFH-1 1/2 | CFH-1 1/2-S | CRH-24 |
| H52LW | CFH-1 5/8-SB | CRHSB-28 | | H52 | HS52L | CFH-1 5/8 | CFH-1 5/8-S | CRH-26 |
| H56LW | CFH-1 3/4-SB | CRHSB-30 | | H56 | HS56L | CFH-1 3/4 | CFH-1 3/4-S | CRH-28 |
| H60LW | CFH-1 7/8-SB | CRHSB-32 | | H60 | HS60L | CFH-1 7/8 | CFH-1 7/8-S | CRH-30 |
| H64LW | CFH-2 -SB | CRHSB-36 | | H64 | HS64L | CFH-2 | CFH-2-S | CRH-32 |
| H72LW | CFH-2 1/4-SB | CRHSB-40 | | H72 | HS72L | CFH-2 1/4 | CFH-2 1/4-S | CRH-36 |
| H80LW | CFH-2 1/2-SB | CRHSB-44 | | H80 | H80L | CFH-2 1/2 | CFH-2 1/2-S | CRH-40 |
| H88LW | CFH-2 3/4-SB | CRHSB-48 | | H88 | H88L | CFH-2 3/4 | CFH-2 3/4-S | CRH-44 |
| H96LW | CFH-3 -SB | CRHSB-52 | | H96 | H96L | CFH-3 | CFH-3-S | CRH-48 |
| H104LW | CFH-3 1/4-SB | CRHSB-56 | | H104 | H104L | CFH-3 1/4 | CFH-3 1/4-S | CRH-52 |
| H112LW | CFH-3 1/2-SB | CRHSB-64 | | H112 | H112L | CFH-3 1/2 | CFH-3 1/2-S | CRH-56 |
| H128LW | CFH-4 -SB | N/A | | H128 | H128 | CFH-4 | CFH-4S | CRH-64 |
| H160LW | CFH-5 -SB | N/A | | N/A | N/A | N/A | N/A | N/A |
| H192LW | CFH-6 -SB | N/A | | N/A | N/A | N/A | N/A | N/A |
| H224LW | CFH-7 -SB | N/A | | N/A | N/A | N/A | N/A | N/A |

HEAVY STUD With Crowned Outer — Sealed — Hex Head

| RBC UNIVERSAL HexLube® Series | REPLACES Direct Interchange | | REPLACES | | |
|----------------------------------|--------------------------------|--------|------------|--------------|------------|
| | RBC Part No. | McGill | Torrington | RBC | McGill |
| CH16LW | CCFH-1/2-SB | N/A | CH16L | CCFH-1/2-S | N/A |
| CH18LW | CCFH-9/16-SB | N/A | CH18L | CCFH-9/16-S | N/A |
| CH20LW | CCFH-5/8-SB | N/A | CH20L | CCFH-5/8-S | CRHSC-10-1 |
| CH22LW | CCFH-11/16-SB | N/A | CH22L | CCFH-11/16-S | N/A |
| CH24LW | CCFH-3/4-SB | N/A | CH24L | CCFH-3/4-S | CRHSC-12 |
| CH28LW | CCFH-7/8-SB | N/A | CH28L | CCFH-7/8-S | N/A |
| CH32LW | CCFH-1-SB | N/A | CH32L | CCFH-1-S | CRHSC-16 |
| CH36LW | CCFH-1 1/8-SB | N/A | CH36L | CCFH-1 1/8-S | CRHSC-18 |
| CH40LW | CCFH-1 1/4-SB | N/A | CH40L | CCFH-1 1/4-S | CRHSC-20 |
| CH44LW | CCFH-1 3/8-SB | N/A | CH44L | CCFH-1 3/8-S | N/A |
| CH48LW | CCFH-1 1/2-SB | N/A | CH48L | CCFH-1 1/2-S | N/A |
| CH52LW | CCFH-1 5/8-SB | N/A | CH52L | CCFH-1 5/8-S | N/A |
| CH56LW | CCFH-1 3/4-SB | N/A | CH56L | CCFH-1 3/4-S | CRHSC-28 |
| CH60LW | CCFH-1 7/8-SB | N/A | CH60L | CCFH-1 7/8-S | N/A |
| CH64LW | CCFH-2-SB | N/A | CH64L | CCFH-2-S | CRHSC-32 |
| CH72LW | CCFH-2 1/4-SB | N/A | CH72L | CCFH-2 1/4-S | N/A |
| CH80LW | CCFH-2 1/2-SB | N/A | CH80L | CCFH-2 1/2-S | CRHSC-40 |
| CH88LW | CCFH-2 3/4-SB | N/A | CH88L | CCFH-2 3/4-S | N/A |
| CH96LW | CCFH-3-SB | N/A | CH96L | CCFH-3S | CRHSC-48 |
| CH104LW | CCFH-3 1/4-SB | N/A | CH104L | CCFH3 1/4-S | N/A |
| CH112LW | CCFH-3 1/2-SB | N/A | CH112L | CCFH-3 1/2-S | N/A |
| CH128LW | CCFH-4-SB | N/A | CH128L | CCFH-4-S | N/A |
| CH160LW | CCFH-5-SB | N/A | CH160L | CCFH-5-S | N/A |
| CH192LW | CCFH-6-SB | N/A | CH192L | CCFH-6-S | N/A |

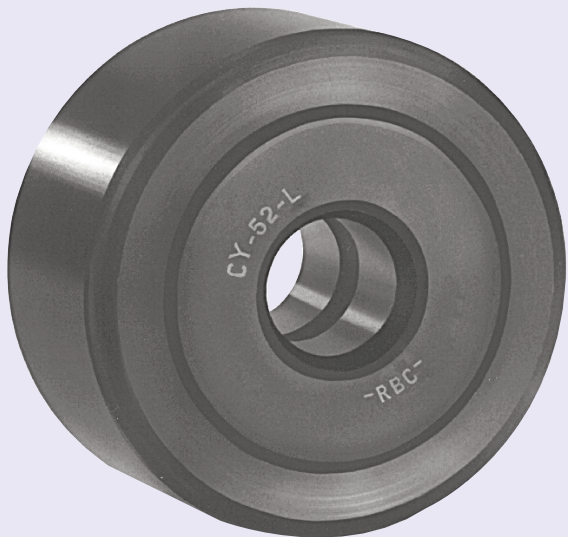
UNIVERSAL SERIES™ INTERCHANGE TABLES



YOKE ROLLER Sealed

| RBC UNIVERSAL Series | REPLACES Direct Interchange | | REPLACES | | |
|-------------------------|--------------------------------|------------|----------|----------|------------|
| | McGill | Torrington | RBC | McGill | Torrington |
| Y24L | CYR-3/4-S | YCRS-12 | Y24 | CYR3/4 | YCR12 |
| Y28L | CYR-7/8-S | YCRS-14 | Y28 | CYR7/8 | YCR14 |
| Y32L | CYR-1-S | YCRS-16 | Y32 | CYR1 | YCR16 |
| Y36L | CYR-1 1/8-S | YCRS-18 | Y36 | CYR1 1/8 | YCR18 |
| Y40L | CYR-1 1/4-S | YCRS-20 | Y40 | CYR1 1/4 | YCR20 |
| Y44L | CYR-1 3/8-S | YCRS-22 | Y44 | CYR1 3/8 | YCR22 |
| Y48L | CYR-1 1/2-S | YCRS-24 | Y48 | CYR1 1/2 | YCR24 |
| Y52L | CYR-1 5/8-S | YCRS-26 | Y52 | CYR1 5/8 | YCR26 |
| Y56L | CYR-1 3/4-S | YCRS-28 | Y56 | CYR1 3/4 | YCR28 |
| Y60L | CYR-1 7/8-S | YCRS-30 | Y60 | CYR1 7/8 | YCR30 |
| Y64L | CYR-2-S | YCRS-32 | Y64 | CYR2 | YCR32 |
| Y72L | CYR-2 1/4-S | YCRS-36 | Y72 | CYR2 1/4 | YCR36 |
| Y80L | CYR-2 1/2-S | YCRS-40 | Y80 | CYR2 1/2 | YCR40 |
| Y88L | CYR-2 3/4-S | YCRS-44 | Y88 | CYR2 3/4 | YCR44 |
| Y96L | CYR-3-S | YCRS-48 | Y96 | CYR3 | YCR48 |
| Y104L | CYR-3 1/4-S | YCRS-52 | Y104 | CYR3 1/4 | YCR52 |
| Y112L | CYR-3 1/2-S | YCRS-56 | Y112 | CYR3 1/2 | YCR56 |
| Y128L | CYR-4-S | YCRS-64 | Y128 | CYR4 | YCR64 |
| Y160L | CYR-5-S | YCRS-80 | N/A | N/A | N/A |
| Y192L | CYR-6-S | YCRS-96 | N/A | N/A | N/A |
| Y224L | CYR-7-S | YCRS-112 | N/A | N/A | N/A |

UNIVERSAL SERIES™ INTERCHANGE TABLES



YOKE ROLLER Crowned Outer – Sealed

| RBC UNIVERSAL Series | REPLACES Direct Interchange | |
|----------------------|-----------------------------|------------|
| | McGill | Torrington |
| RBC Part No. | | |
| CY24L | CCYR-3/4-S | YCRSC-12 |
| CY28L | CCYR-7/8-S | YCRSC-14 |
| CY32L | CCYR-1-S | YCRSC-16 |
| CY36L | CCYR-1 1/8-S | YCRSC-18 |
| CY40L | CCYR-1 1/4-S | YCRSC-20 |
| CY44L | CCYR-1 3/8-S | YCRSC-22 |
| CY48L | CCYR-1 1/2-S | YCRSC-24 |
| CY52L | CCYR-1 5/8-S | YCRSC-26 |
| CY56L | CCYR-1 3/4-S | YCRSC-28 |
| CY60L | CCYR-1 7/8-S | YCRSC-30 |
| CY64L | CCYR-2 -S | YCRSC-32 |
| CY72L | CCYR-2 1/4-S | YCRSC-36 |
| CY80L | CCYR-2 1/2-S | YCRSC-40 |
| CY88L | CCYR-2 3/4-S | YCRSC-44 |
| CY96L | CCYR-3-S | YCRSC-48 |
| CY104L | CCYR-3 1/4-S | YCRSC-52 |
| CY112L | CCYR-3 1/2-S | YCRSC-56 |
| CY128L | CCYR-4-S | YCRSC-64 |
| CY160L | CCYR-5-S | YCRSC-80 |
| CY192L | CCYR-6-S | YCRSC-96 |
| CY224L | CCYR-7-S | YCRSC-112 |

CUSTOM DESIGNED CAM FOLLOWERS

In addition to our complete line of standard cam followers, RBC also will manufacture many other cam followers of a highly specialized nature for specific applications. As each special cam follower is engineered for a particular set of operating conditions, it is essential that we have complete data regarding the application, including potential production volumes.

Shown below are just a few of our custom designed cam followers.



Stainless Steel Cam Follower



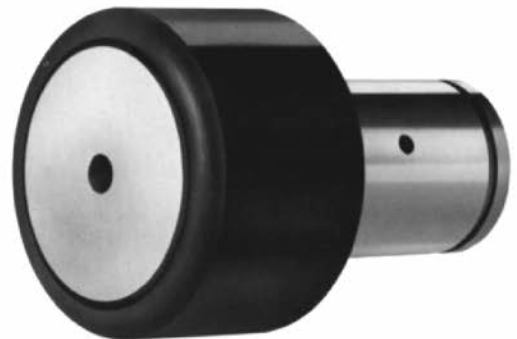
Double Outer Ring Cam Follower



Scotch Yoke Bearing
For Stamping Press



Double Row Caged Roller Follower



Plain Shank with Snap-Ring Groove

Innovation. Commitment. Quality.

RBC Bearings 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:



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.



Thin Section Ball Bearings

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



Tapered Roller Bearings

Tyson® case-hardened and through-hardened tapered roller bearings. Available in many sizes. Used in Class 8 heavy truck and trailer wheel bearings, gear boxes, and final drive transmissions.



Tapered Roller Thrust Bearings

Case-hardened. Sealed and unsealed for truck, tractor, and construction equipment steer axles, and Class 8 trailer landing gear.



Integrated Assemblies

For robots and other process tool applications. Engineering design assistance. Production volume capacity.



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.



Needle Roller Bearings

Pitchline® caged heavy duty needle roller bearings, inner rings, TJ TandemRoller® bearings for long life.



Self-Lubricating Bearings

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



Airframe Control Bearings

Ball bearing types, self-lubricating types, needle roller track rollers.



Dowel Pins, Loose Needle Rollers, Shafts

Precision Products dowel pins, loose needle rollers, and shafts.



Commercial Rod Ends

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



Ball Bearings

Precision ground, semi-ground, unground. High loads, long life, smooth operation. Nice® ball bearings 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.