

### **Precision Products and Solutions**



- √ Needle Rollers
- √ Tappet Roller Bearings
- ✓ Injection Pump Bearings
- ✓ Planet Shafts
- √ Hydraulic Pistons

# Smoother. Faster. Longer.

Because That's How We Roll.











RBC manufactures highly engineered precision plain, roller and ball bearings, shaft collars, rigid couplings and keyless locking devices. While RBC designs and manufactures products in these major product categories, RBC excels at solving the most demanding and difficult applications with solutions that improve customers' products and process performance and deliver the lowest total cost of ownership. This has been achieved by providing products such as maintenance free bearings and components, and bearings designed to withstand environments with extreme temperature, high speed, contamination, corrosion, and severe shock loading.

RBC Bearings has been providing engineered solutions to customers since 1919. RBC has significantly broadened our end markets, products, customer base and geographic reach through organic growth and through acquisitions. These acquisitions fit well with our philosophy of providing high quality products and solutions to our customer base. They have enhanced our customer solutions and experience, further diversifying our offering to our target markets.

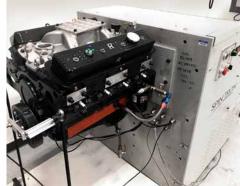
RBC currently has 43 facilities in six countries, with manufacturing in 36 locations.

- ✓ Customer Service Representatives located on site
- ✓ Dedicated Project Teams
- ✓ Inventory Stocking Programs

- √ Rapid Quote Turnaround
- √ Rapid Prototype Capabilities
- ✓ Wide Range of Testing Capabilities













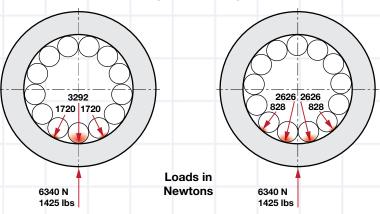
RBC provides advanced Application Review and Analytical Support which includes Component Loads, Contact Pressures, Subsurface Raceway Stress, FEA, Metallurgical & Chemical Analysis and much more.



# Optimized Bearing Life

Roller Hydraulic Valve Lifter Bearing Application

# Needle Loads & Outer Ring Bending Stress



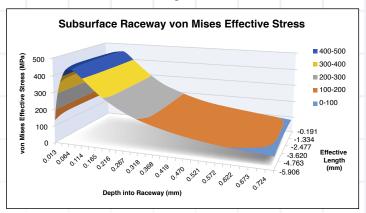
Max Needle Load (3292 N)

Max Ring Bending Stress (525 MPa)

#### Contact Pressure of Most Heavily Loaded Needle

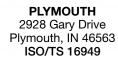
#### **Needle Contact Pressure with Optimum Profile** No Misalignment ■ 3000-5000 2500-3000 3500 2000-2500 3000 **1500-2000** 2500 ■ 1000-1500 Pressure 2000 **500-1000** 1500 0-500 1000 500 5.90° 5.144,392° 620° 2.865° 2.08° 394 57° 39° 355° 3.16° 247 3.228 400° 4.76° 5.55° Effective Length (mm)

## Subsurface Raceway Stress Under the Most Heavily Loaded Needle



Customers truly appreciate the level of detailed analysis RBC brings to their applications.

We strive to make our customer's products the best they can possibly be.





### **Innovation. Commitment. Quality.**

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



#### **Tapered Roller Thrust Bearings**

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



#### Thin Section Ball Bearings

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



#### Cam Followers

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



#### Cylindrical Roller Bearings

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



#### Needle Roller Bearings

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



#### Commercial Rod Ends

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



#### 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



#### **Tapered Roller Bearings**

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



#### TP Series Bearings

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



#### **Keyless Locking** Devices

Mechanical bushings used to connect power transmission components onto rotating shafts. Without the use of keyways, KLDs eliminate the problems associated with backlash including fretting, corroding, and wallowing.



#### Lubron<sup>™</sup> Bearings

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



#### **Shaft Collars**

Used to position or locate a component on a shaft. Made from mild steel, type 303 or 316 stainless steel, aluminum, or acetal. Available in inch and metric sizes.



#### Self-Lubricating **Bearings**

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



#### Rigid Couplings

Shaft couplings serve as components to time, join, or align shafts at lower speeds and torque, especially when zero backlash is desired. Made from mild steel with a black oxide finish type 303 stainless steel, or aluminum. Available in inch and metric sizes.



#### Specials

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



#### **Ball Bearings**

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



#### Needle Rollers, Tappets. Shafts & Pistons

Precision Products needle rollers, shafts, tappet roller bearings, injection pump bearings, and pistons.



#### PIC Design®

Complete line of precision gears, precision hardware, timing belts, pulleys, and linear motion systems. Industries served include industrial, aerospace, defense, medical, robotics and automation, material handling, and assembly. Custom design support for unique applications.















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