

# RBC Bearings

## NEXT LEVEL Assy Bearings

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by Schaublin



### Background

For many years RBC-Bearings provided the aerospace market with global bearing solutions on the next level assembly to offer reduced weight, high performance solutions

- Structural parts made of titanium, aluminum, and other conventional or exotic materials
- Integrated bearing solution using conventional cartridge or integral design

### Broad bearing solution offering

Utilizes a structural part integrating the bearing function

- Design of the structural bracket, materials and surface coatings
- Bearing design: swaged cartridge, split ball or race, loader slot
- Bearing technology: self-lubricating or greased bearing

These bearing solutions are designed according to the environmental application requirements

- Operational temperature
- Limit and ultimate working loads
- Static, dynamic operation
- Weight targets
- Fatigue life requirements
- Surrounding parts

### Typical applications

- Accessory mounts
- Engine parts, Lever arms, actuators, crankshaft supports, turnbuckles, linkages
- Pylon bearings, spigot bearings

### Technology

- Use of light weight materials and specially developed coatings
- Integral configuration
  - Our design and manufacturing expertise allows us to offer PTFE self-lubricating as well as metal-to-metal technology in an integral design – split ball, which eliminates the outer race resulting in smaller dimensions and lower weight
  - Optimized designs using FEA resulting in even more weight savings



- Full titanium solution
  - Advanced coating solutions for lined and Titanium-to-titanium based materials
- RBC-Bearings liner technology
  - High load capacity
  - Low friction
  - High temperature capability

### Advantages

- Weight savings, higher stiffness, robust
- Numerous qualified solutions on existing aircraft programs
- When needed, the complex design of the structural component can be optimized by using FEA

# RBC Bearings

## Innovation, Commitment, Quality

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



### Spherical Plain Bearings

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



### Needle Roller Bearings

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



### 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.



### Self-Lubricating Bearings

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



### 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, gearboxes, and final drive transmissions.



### Airframe Control Bearings

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



### Tapered Roller Thrust Bearings

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



### Dowel Pins, Loose Needle Rollers, Shafts

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



### Integrated Assemblies

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



### 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.



### Cam Followers

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



### Ball Bearings

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



### Ball Pin Spherical Plain Bearings

Self-lubricating types, greased plain bearings, sealed. High loads, high vibration resistant, long life. **S-FIT**™ and **CTRL**™ configurations available.



### Specials

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