



Rexnord Shafer Aerospace Bearings and Tools

For more than 60 years, Rexnord Aerospace has served manufacturers for commercial and military aerospace sectors with the Rexnord Shafer Aerospace Bearings and Tools offering. Our products are used for extreme performance under severe operating conditions in:

- Airframe structures (hinge and control rods)
- Door systems
- Flight controls
- Landing gear
- Specialty industrial machinery and race car suspensions

Through extensive engineering analysis, innovative design, state-of-the-art manufacturing, and total product lifecycle support, customers rely on Rexnord Shafer Aerospace Bearings for their demanding applications.

Rexnord Shafer Aerospace Rod End Bearings

Rod end bearings for your high load-carrying and low-friction applications.

Rexnord® Shafer® Aerospace Rod End Bearings provide high load carrying and low friction even under substantial misalignment. Ideal for flight control systems — including actuators and linkages — and door systems, our designs can be customized to meet a wide range of operating conditions and applications. All of our designs provide outstanding performance, long life and extraordinary value.

Theory of operation

Rexnord Shafer Aerospace Rod End Bearings are comprised of an inner ring, a roller complement and a rod-end body. These components contact each other via spherical raceways that allow the bearing to operate in a misaligned condition without detriment to its expected performance. These robust components combine to transfer high radial and axial loads between a pin/shaft and linkage. A retainer guides the roller

complement in a rotational direction, causing it to rotate around even when the bearing is operating in oscillatory motion. This precessing action eliminates wear because the rollers do not stay in one position on the bearing raceways. In combination with a lubricant, seals and shields, the bearing operates with low friction (torque), low wear and long life.

Applications

Several rod end bearing styles are available for your application, including single row and double row. Double row styles are available with standard retainer, standard precessing retainer, our patented precessing center guide ring and full-complement precessing bearing. Please contact Rexnord Aerospace for a complete list of options and additional services.

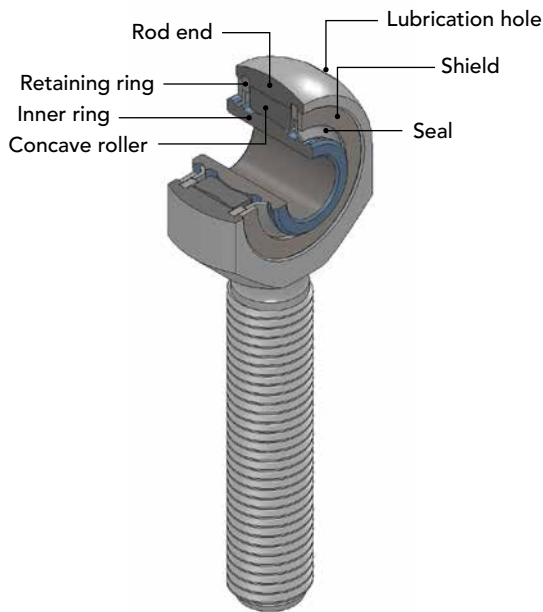
Customized designs

Our Rexnord Shafer Aerospace Bearing bore sizes range up to 10 inches (254 millimeters) for your applications. To reduce cost and simplify installation for our customers while still providing low rolling friction (torque) and accumulated wear values, we've designed our bearings to provide a broad range of physical mounting configurations, shapes and internal design variations.

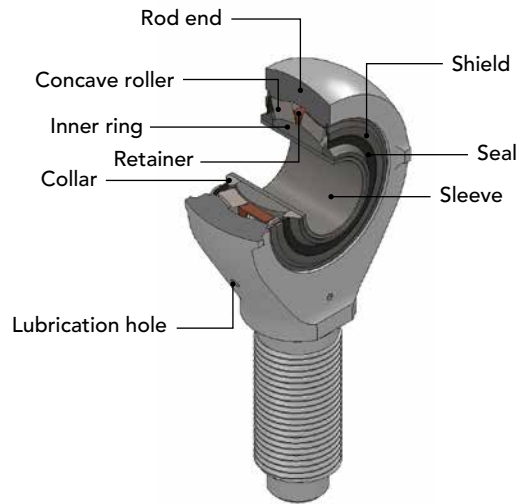


Typical construction

Single row bearing style



Double row bearing style



Features and benefits

- Rolling friction of 1–2 percent provides minimal wear rates for predicted life and lower moment loading
- Precessing prevents fretting damage and provides longer bearing life
- Internal self-alignment accommodates misalignment at installation and in use, and reduces bearing size
- Design allows for relubrication to assure longer bearing life and inhibits corrosion
- High load capacity reduces bearing size and weight
- Radial and axial load-carrying capabilities accommodate more application conditions
- Minimal initial clearance minimizes system backlash and can be preloaded
- Stainless steel bearings available to provide superior corrosion resistance
- Double row bearing with center guide ring provides an average of 20–25 percent higher load capabilities (both static and dynamic) within the same envelope; this allows growth of airframe while retaining current sizes
- Integral rod end allows an engineer to design within a space restricted envelope



Since 1946, Rexnord Aerospace has satisfied the needs and critical demands of the aerospace industry with exceptional, high-quality products and innovative engineering. Choose Rexnord Aerospace products and solutions for your designs. Speak with our engineering sales staff to address your questions and design inquiries.