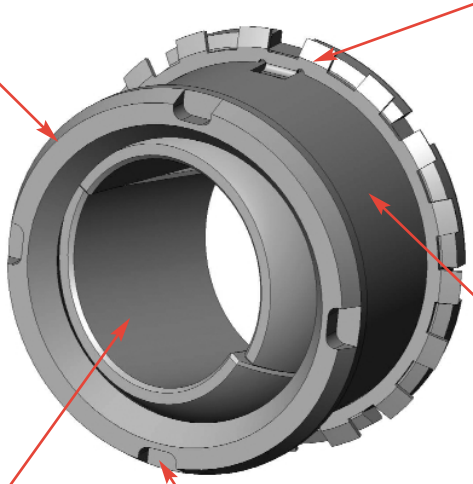
RBC Split Ball Bearings

GENERAL FEATURES AND TECHNICAL SPECIFICATIONS

Outer Ring, Race

The outer ring is precisely machined to provide maximum ball to race conformity like a loader slot, but without the loss of load carrying area caused by machining the loader slot. The race can be furnished with face grooves, chamfers, flanges, or threads for retention in the housing. The race can be manufactured from a variety of alloys such as steel, aluminum, or titanium. Lubricant can be grease, dry-film, or PTFE liner.



Construction

The split ball is replaceable when it wears out. In unclamped applications, most wear is limited to the ball bore, allowing the race to be reused in certain applications.

Materials

Various materials are use. Races: 17-4PH, 15-5PH, Inconel® 718, aluminum (requires PTFE liner or hard coat), titanium (requires PTFE liner or hard coat).

Balls: Copper alloys, titanium, aluminum, 440C, PH13-8Mo, 15-5PH, 17-4PH, cobalt alloys.

Inner Ring, Ball

The ball is split and designed around a “zero gap.” The ball is typically a softer material, such as copper alloy or bronze, for grease lubricated applications. For PTFE lined, the ball may be hardened or have a hard coating applied to the sphere. Split ball bearings are best used in unclamped applications, where the pin/bolt is free to rotate in the ball bore. Clamped bore applications require special considerations/designs.

Design

Usually grease lubricated, steel race, copper alloy ball. Titanium hard coated race, grease lube, or copper ball also possible. All titanium component construction is possible. Self-lubricating PTFE liners are also an option.