



# SPLIT ROLLER BEARINGS IN MARINE PROPULSION



**TIMKEN**

Stronger. **By Design.**

**Series Prefix**

For most commonly used bearings this will be either;

- LS – Light Series
- MS – Medium Series
- HS – Heavy Series

**Bearing Size (Shaft Size)**

Imperial sizes are given in inches followed by 16ths.

- e.g. 207 – 2 <sup>7</sup>/<sub>16</sub> inches
- 508 – 5 <sup>8</sup>/<sub>16</sub> – 5 <sup>1</sup>/<sub>2</sub> inches
- 1004 – 10 <sup>4</sup>/<sub>16</sub> – 10 <sup>1</sup>/<sub>4</sub> inches

Metric sizes are given in millimeters followed (mm).

**Seal**

Aluminum Triple Labyrinth

**Additional Suffixes\***

For Marine Applications add the suffix E0302 to the complete part number

**LS****M****100****BX****ATL****E0302****Unit of Measure**

- E – Imperial Sizes (English)
- M – Metric Sizes

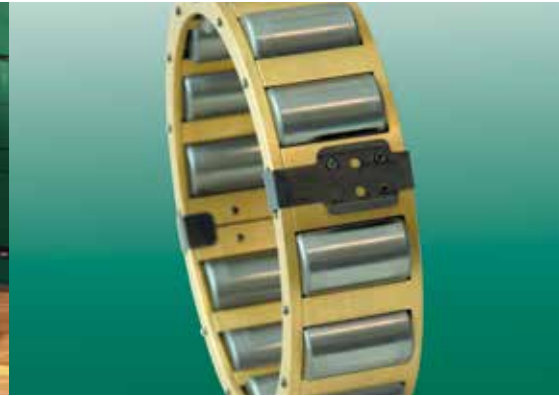
**Unit Type**

These can indicate individual bearings or housings, or combinations for assemblies.

- e.g. BX – Bearing, expansion type
- BR – Bearing, retained type
- HXTL – Housing, expansion type
- HRTL – Housing, retained type
- BRHATL – Bearing, housings, retained type
- BXHATL – Bearing, housing, expansion type
- BXHSATL – Bearing, housing and support, expansion type
- BRHSATL – Bearing, housing and support, retained type
- BXHFATL – Bearing, housing, expansion type and flange support
- BRHFATL – Bearing, housing, retained type and flange support

\*please see Revolve catalog for additional suffix codes

# Innovation in PERFORMANCE



## Split Roller Bearing: Taking the Initiative

The complete range of Timken® Revolve split roller bearings incorporates a number of innovative features that assist not only the user in terms of product performance, but also the maintenance engineer with fitting and assembly benefits.

From concept, to production and then throughout the life cycle of the unit, no other split bearing manufacturer works so hard to exceed your expectations.

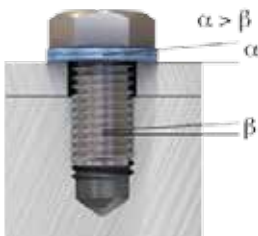
The split roller bearing range has been designed and developed to maximize service life of all the bearing components.

### Standard Marine Product Features

- 1 Machined-Brass Cage**  
Accommodates higher speeds and temperatures as well as acceleration forces, while at the same time reducing noise
- 2 Integrated Cage Clips**  
Simplifies assembly, no more lost cage clips
- 3 Anti-Vibration Cage Features**  
Cage peening ensures long-term cage reliability on high-vibration applications



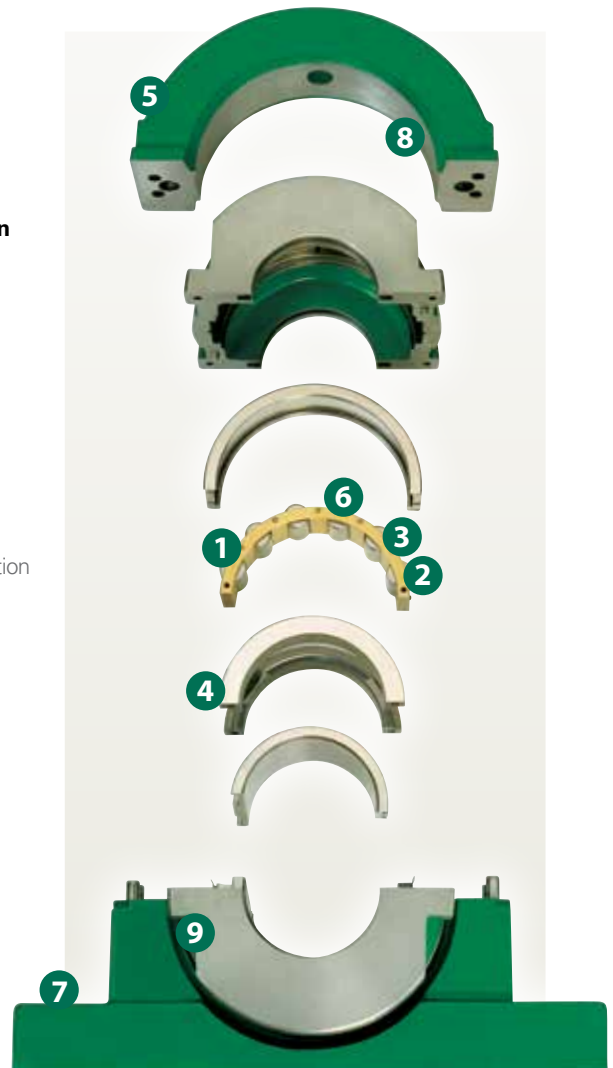
- 4 Anti-Vibration Clamp Ring Bolts**  
Incorporates Nord Lock® safety washers with wedge lock technology to ensure clamping force is always maintained even in high-vibration application



- 5 Robust Pedestal Support Design**  
Includes double webs and thick sections of premium 250 grade cast iron to enhance product life through rigidity and strength, and extra robust anti-rotation pegs
- 6 Profiled Rolling Elements**  
Minimize damaging edge stress and accommodate minor dynamic misalignment
- 7 Jacking Screws**  
Facilitates alignment during installation



- 8 Spherical Lubrication Features (SLUB)\***  
Split cylindrical roller bearing supports can be specified with a spherical re-lubrication feature (SLUB) to allow the bearing housing to move freely within the pedestal support
- 9 Temperature and Vibration Probe Features (TEVB)\***  
Allows for the installation of monitoring equipment



# Innovation in APPLICATION



Timken has developed a detailed understanding of the bearing requirements of the marine industry. Part of the program is the innovative split cylindrical roller bearing range; essential components in a marine propulsion drive.

A product development program based on the principle of continuous improvement has resulted in the new marine specification split roller bearing range.

- **Maintenance Friendly**  
When replacement is necessary, downtime is minimized because of the split to the shaft design. This saves valuable time and money compared to the replacement of solid roller or sleeve bearings.
- **Easy Installation**  
The split cylindrical roller bearing jacking screws solve difficult alignment problems during installation. The housing can accept up to +/- 3 degrees of shaft misalignment.
- **Simple In-Service Inspection**  
Raceway and rolling element condition can be easily checked with the bearing and shaft in place – simply remove the pedestal cap and upper half of the housing and all critical components are readily accessible for inspection. Once inspected there is no need for realignment.
- **Constant Alignment Feature**  
Premature bearing failure can be caused by hull flexing. Split cylindrical roller bearing pedestal supports can be specified with a spherical re-lubrication optional (SLUB) to allow the bearing housing to move within the pedestal support, to maintain shaft and bearing alignment during hull flexing.
- **High-Performance Sealing Solutions**  
All split cylindrical roller bearing seals are constantly concentric with the shaft offering high performance even with shaft misalignment, and are designed to retain the lubricant, while excluding contamination and corrosive salt water.



Standard Support with complete Housing & Bearing

Flange Support

- **Workboats to Military Vessels**  
Split roller propulsion bearings are used on a diverse range of marine vessels from ferries, offshore support vessels, tugs, workboats and ice-breakers, with either conventional propulsion shafts or waterjet drive stems.

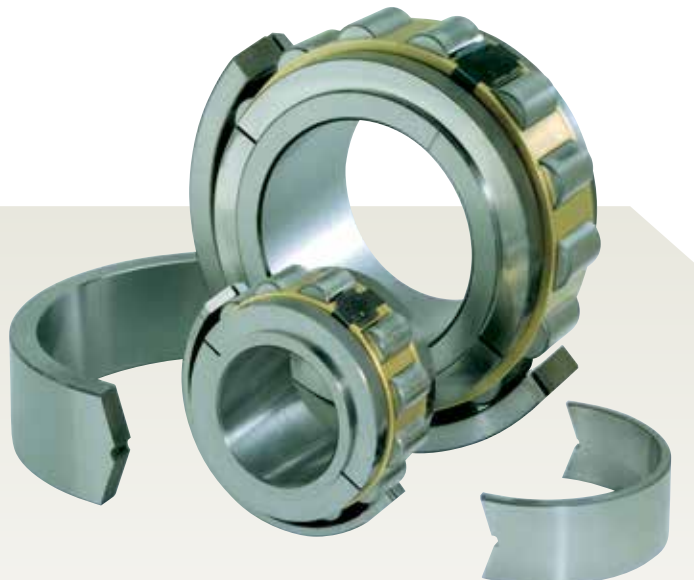


# Innovation in SERVICE



Producing products that push the boundaries of performance is only the beginning. The Revolve split cylindrical roller bearing has more than 40 years experience in the industry of specialized bearings for demanding applications, and Timken recognizes that users and specifiers of marine propulsion bearings demand technical, logistical and after-sales support.

- **Cellular Manufacturing**  
Ensures production flexibility for standard and customized products
- **Customized Design Service**  
Supported by experienced design and bearing application engineers
- **Local Inventory**  
Improves product availability and reduces delivery times
- **Local Service & Support**  
Through authorized distributor networks
- **Easy Referencing System**



# Specialist & Customized Products

**Timken® Revolve products have been designed and developed to maximize service life and minimize maintenance effort.**

Timken Revolve bearings have machined brass cages with unique single piece clips as standard, and the rolling elements are profiled to minimize damaging edge stresses and provide optimum rolling contact.

All supports and housings incorporate pry slots and doweled machined joints for easy separation. Supports are manufactured from high-strength cast iron and feature double webs and thick sections; product life is thus enhanced due to high rigidity and inherent strength.

For Marine applications we add features to accommodate for high vibration and initial alignment on an uneven mounting surface as standard.

## CALL ON TIMKEN

For your nearest Timken sales representative, visit [www.timken.com](http://www.timken.com).

# TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance mechanical components, including bearings, gears, belts, chain and related mechanical power transmission products and services.

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Stronger. **Commitment.** Stronger. **Value.** Stronger. **Worldwide.** Stronger. **Together.** | Stronger. **By Design.**