Cylindrical Roller Bearings
AXPB and RBtech recently developed a joint venture/partnership between AXPB Suzhou and R.B. International Group. AXPB RBtech operates a new, state of the art manufacturing facility that has passed strict audits by some of the most demanding industrial companies worldwide. We have been able to accomplish this by adopting the latest in European manufacturing technology that previously was offered only by major, global bearing companies and investing in equipment such as Thielenhaus equipment from Germany. Japanese production and quality management systems have also been adopted as part of AXPB RBtech’s overall commitment to quality. Allowing AXPB RBtech to manufacture affordable, world class quality products with peak performance.

Our factory is ISO 9001 certified and observes our Quality Management System according to TS16949:2016. To be a “World Class Manufacturing” operation our factory utilizes 5S Site Management & Safety Production Management practices.

- Improved production capabilities by 30% since 2016
- Top-tier component suppliers
- Temperature controlled environment
- Premium packaging
- Central emulsion supply system
- Complete traceability
- Premium raw materials
- US inventory

Our new, main warehouse and distribution center is centrally located in Chicago, Illinois. Once shipments reach our warehouses, the skids are checked in and assigned storage space in our warehouse through a bar coding system. The bar codes assigned to the product and warehouse location are linked together and uploaded into our Warehouse Management System.

- FIFO (1st in 1st out) inventory program
- Centrally located warehousing
- Lot number tracking system
- Special packaging requirements
- Package / skid quantity programs
- Custom stocking programs
- Air and sea freight forwarding
- Bar coding
**MAIN BEARING APPLICATIONS**

- Electric motors & generators
- Vibration motors
- Pumps & compressors
- Large ventilation fans
- Industrial gear boxes
- Rolling mills
- Material handling equipment
- Textile machinery
- Machine tool spindles

**AXPB RBTECH CYLINDRICAL ROLLER BEARINGS.**

AXPB RBtech’s cylindrical roller bearings are available in a variety of sizes in the common, single row configurations (shown below) and 4 cage materials Brass, PA66, L-PPS & Pressed Steel. In addition to these single row configurations, we offer cylindrical roller bearings in double row and multi-row designs. These bearings can be supplied in either full complement or caged configurations.

**HOW THESE CYLINDRICAL ROLLER BEARING DESIGNS ARE USED:**

**Bi-Directional Positioning for Floating Applications - NU & N**

The NU and N type designs allow axial displacement of the shaft with respect to the housing in both directions. These designs are normally selected as non-locating bearings.

**Uni-Directional Positioning for Floating or Fixed Applications - NJ & NF**

The NJ and NF designs allow axial displacement of the shaft with respect to the housing in only one direction. These designs can only locate the shaft axially in one direction.

**Locked Positioning for Fixed Applications - NUP & NH**

The NUP and NH type designs do not allow axial displacement of the shaft with respect to the housing in either direction. These designs can locate the shaft axially in both directions.

AXPB RBtech offers several different cage designs and materials, each developed to meet the specific needs of your application.

<table>
<thead>
<tr>
<th>Cage Material</th>
<th>Suffix</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brass</td>
<td>M</td>
<td>Machined brass, roller guided design</td>
</tr>
<tr>
<td></td>
<td>MA</td>
<td>Machined brass, outer ring guided design</td>
</tr>
<tr>
<td>Nylon</td>
<td>TN</td>
<td>Nylon (PA66), roller guided design</td>
</tr>
<tr>
<td>Plastic</td>
<td>TN7</td>
<td>L-PPS (Linear polyphenylene sulfide), roller guided design</td>
</tr>
<tr>
<td>Steel</td>
<td>J</td>
<td>Pressed steel, roller guided design</td>
</tr>
</tbody>
</table>

**Country** | **Bearing steel** | **Standard** |
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>USA</td>
<td>52100</td>
<td>ASTM/A295</td>
</tr>
<tr>
<td>Germany</td>
<td>100Cr6</td>
<td>DIN 17230</td>
</tr>
<tr>
<td>Japan</td>
<td>SUJ2</td>
<td>JIS G4805</td>
</tr>
<tr>
<td>China</td>
<td>GCr15</td>
<td>GB/T 18254</td>
</tr>
</tbody>
</table>

- Made with ultra clean bearing steel
- Our standard bearing steel is heat stabilized to operate at 150°C (300°F).
- Higher temperature heat stabilization levels are offered up to 300°C (575°F).
Optimum Rib Geometry from Hard Turning
- Greater axial load carrying capacity due to optimized rib contact
- A higher level of energy efficiency due to reduced frictional torque
- Suitable for extremely high radial loads & very high speeds
- Enhanced lubrication
- Increased misalignment capabilities
- Maximum usable rib length
- Increased performance under axial loading conditions. Up to 1.5x increase in axial capacity

Finish Hard Turning
Greater accuracy, better value.
Finish hard turning allows for machining parts in one set up resulting in more precise geometry.

- More flexibility: With a single standard tool and clamping set-up, you can machine a wide variety of products with different forms and sizes. Providing more flexibility and reduces changeovers.
- Higher productivity: Finish hard turning can remove more material per machining operation than grinding. Making hard turning 3 to 4 times faster when compared to cylindrical grinding.
- Cost savings: Multiple operations can be done in one set-up which eliminates the need for a multi-step grinding process.

Control
- Climate controlled manufacturing environment
- Precision levels of ABEC 5 and above
- Control over material and process
- 100% traceable material, components, manufacturing, assembly
- Data matrix or bar code marking on product. No mixing during handling
- Manufacturing SPC controlled at center of tolerance

Material, Forging and Heat Treatment
- Ultraclean, extremely wear resistant, low oxygen level bearing steel
- Forging and ring rolling in state-of-the-art facilities
- Salt bath hardening, along with sub zero treatment to assure residual austenite levels less than 2%

Machines
- German engineered production machinery controlled by SIEMENS Systems interfaces
- Vertical turning machinery for hard turning process
- German engineered production machinery, most notably Thielenhaus superfinish machinery
- 3-Stage ultrasonic washing equipment

FOR MORE INFORMATION, QUOTES OR SAMPLES CALL YOUR RBI SALESMAN AT 1-800-708-2128.
AXPB RBTECH CYLINDRICAL ROLLER BEARING BENEFITS

- Clean 52100 bearing steel
- 4 cage material options
- Improved brass cage design
- C3 clearance
- High temperature and chemical resistant cages
- Increased axial load capacity
- Accommodates heavy radial loads
- Reduced roller edge loading to accommodate misalignment
- Enhanced crowning of inner and outer ring raceways
- Extra load capacity design
- Smoother, quieter operation
- High speed operation
- Increased wear resistance

Locations

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Keeping the world in motion >>