



## ENGINEERED SOLUTIONS FOR MINING PROCESSING EQUIPMENT

### INCREASE PRODUCTION WITH IMPROVED PERFORMANCE AND RELIABILITY

The profitability of any mine site depends on how quickly minerals can be processed into a marketable product. During this process, extreme demands are placed on mining processing equipment – including the bearings, belts and chains that keep them moving.

Timken offers a full range of bearing and industrial motion components for the mining industry – each designed to improve equipment performance and reliability in harsh mine site environments. For mining processing equipment, we deliver results that matter: helping improve productivity and uptime while reducing maintenance and replacement costs.

Across the industry, customers trust our unmatched engineering expertise and customized solutions to help make mining more productive.

### Timken Advantages

- **Extensive product portfolio.** Our wide portfolio of high-performance bearings and industrial motion components help you extend equipment uptime and avoid unplanned outages.
- **Reliable performance.** From spherical and tapered roller bearings to thrust and mounted bearings, Timken products are engineered to help extend lubricant life, operate at lower temperatures and perform for the long haul – improving your overall efficiency and productivity.
- **Technical Support.** Our engineering team understands the unique demands placed on mining processing equipment, including extreme loads, heavy contamination and high operating temperatures. This knowledge helps us select and design the right product for each mining application.

### Gain Solutions That Give You:

#### Reduced downtime.

Our full range of premium products help keep your mining operations up and running. Our available technologies offer performance you can count on, thanks to our use of premium materials, including debris-resistant designs and special coatings engineered for superior performance in highly contaminated mining processing environments.

#### Local support.

In the extreme environments of processing sites, equipment failures happen. As a Timken customer, you gain access to one of the largest global service engineering teams in the industry – ready to provide on-site service and training.

#### Product – when you need it.

Timken bearings and industrial motion products are available where you need them. We have authorized distributors operating from thousands of branch locations, as well as a global availability system, regional warehouses and flexible shipping.

#### More value.

Timken has a track record for consistent quality and performance, with rigorous global manufacturing standards and customer support. Our on-site troubleshooting and technical assistance are part of our total-system approach for specifying the right product for your application. It's all part of the value Timken delivers to the mining industry.

# AN IDEAL SOLUTION FOR MINING PROCESSING EQUIPMENT

Application Challenge	Timken Solution	Advantages	Product Image	Equipment
Heavy application loads	Timken® mounted bearings equipped with Timken® spherical roller bearings	<ul style="list-style-type: none"> <li>Designed with high load ratings – helping to achieve longer bearing life.</li> <li>Able to handle misalignment and high loads, Timken spherical roller bearings can run cooler.</li> </ul>		<ul style="list-style-type: none"> <li>Bulk Conveyors</li> <li>Roll and Impact Crushers</li> <li>Ball Mills</li> <li>Fans and Blowers</li> </ul>
Heavy application loads, which can cause shaft deflection and misalignment	Timken spherical roller bearings	<ul style="list-style-type: none"> <li>Timken spherical roller bearing design gives you more uptime, longer life and a lower cost of ownership.</li> <li>Enhanced internal geometry to reduce operating stress.</li> </ul>		<ul style="list-style-type: none"> <li>Hydraulic Roller Presses</li> <li>Slurry Pumps</li> <li>Ball Mills</li> </ul>
High axial loads and misalignment	Timken® Type E mounted tapered roller bearings	<ul style="list-style-type: none"> <li>Can provide up to 2x longer design life than the current industry-leading competitor due to optimized bearings.</li> </ul>		<ul style="list-style-type: none"> <li>Cone Crushers</li> <li>Slurry Pumps</li> <li>Fans and Blowers</li> </ul>
Shock loading	Timken® solid-block mounted bearings with cast steel housings	<ul style="list-style-type: none"> <li>Timken provides cast steel housings standard on spherical roller bearing solid-block mounted units.</li> <li>Cast steel also available on split-block SAF/SNT units.</li> </ul>		<ul style="list-style-type: none"> <li>Bulk Conveyors</li> <li>Jaw Crushers</li> <li>Roll and Impact Crushers</li> </ul>
Unbalanced and shock loads, shaft misalignment and deflections	Timken spherical roller bearings	<ul style="list-style-type: none"> <li>Engineered with high radial load ratings and able to efficiently handle misalignment.</li> <li>W800 modification code for applications that experience vibration and shock loading.</li> </ul>		<ul style="list-style-type: none"> <li>Jaw Crushers</li> <li>Roll and Impact Crushers</li> <li>Shaker Screens</li> </ul>
Debris and contamination	Sealing solutions for mounted bearings	<ul style="list-style-type: none"> <li>Timken® mounted solid-block spherical roller bearings feature a steel-housing and multiple locking options with complete multi-point sealing solutions.</li> </ul>		<ul style="list-style-type: none"> <li>Bulk Conveyors</li> <li>Cone Crushers</li> <li>Roll and Impact Crushers</li> <li>Shaker Screens</li> <li>Fans and Blowers</li> </ul>
Debris and contamination	Timken® ES coatings	<ul style="list-style-type: none"> <li>Our ES coatings provide a diamond-like surface on rollers to enhance performance in thin-film and debris-heavy environments, helping you to improve operations and avoid expensive bearing damage.</li> </ul>		<ul style="list-style-type: none"> <li>Bulk Conveyors</li> <li>Jaw Crushers</li> <li>Cone Crushers</li> <li>Roll and Impact Crushers</li> <li>Hydraulic Roller Press</li> <li>Reclaimers/Stackers</li> <li>Ball Mills</li> <li>Fans and Blowers</li> </ul>
Debris and contamination	Case-carburized rings and rollers	<ul style="list-style-type: none"> <li>Case-carburized rings and rollers deliver greater debris resistance, which can extend bearing life.</li> <li>Premium materials and proper heat treatment helps prevent premature bearing damage, including component fracture.</li> </ul>		<ul style="list-style-type: none"> <li>Bulk Conveyors</li> <li>Cone Crushers</li> <li>Roll and Impact Crushers</li> <li>Hydraulic Roller Press</li> <li>Reclaimers/Stackers</li> <li>Ball Mills</li> </ul>
High temperatures	Timken® spherical roller bearings	<ul style="list-style-type: none"> <li>Cooler running temperature helps lubrication last longer, which helps the bearing last longer.</li> </ul>		<ul style="list-style-type: none"> <li>Bulk Conveyors</li> <li>Cone Crushers</li> <li>Roll and Impact Crushers</li> <li>Hydraulic Roller Press</li> <li>Shaker Screens</li> <li>Ball Mills</li> </ul>
Trapped bearing locations	Timken® mounted split cylindrical roller bearings	<ul style="list-style-type: none"> <li>Split design can greatly reduce replacement time and effort, helping minimize downtime.</li> </ul>		<ul style="list-style-type: none"> <li>Bulk Conveyors</li> <li>Reclaimers/Stackers</li> <li>Fans and Blowers</li> </ul>

# 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 bearings, gear drives, automated lubrication systems, belts, brakes, clutches, chain, couplings, linear motion products and related power transmission rebuild and repair services.

**Stronger. By Design.**

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