



ENGINEERED SOLUTIONS FOR UNDERGROUND MINING

IMPROVE EQUIPMENT PERFORMANCE AND UPTIME

When you're working far below the earth's surface, every moment counts.

Space for maintenance and repairs is limited. And just one hour of downtime can cost operators \$10,000 or more. That's why you need products engineered to deliver reliable performance – even in the harsh conditions of underground mines.

Through our relationships with original equipment manufacturers (OEMs), we play a key role in designing and manufacturing bearings and industrial motion components to deliver results that matter: improving productivity and uptime while reducing maintenance and replacement costs.

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

Timken Advantages

- **Extensive product portfolio.** We offer a full portfolio of bearings and industrial motion components to help you extend equipment uptime and avoid unplanned outages.
- **Reliable performance.** Timken products are engineered to overcome the challenges of underground mining applications – including debris and contamination, heavy loads and shock loads.
- **Technical Support.** Our engineering team understands the unique demands placed on underground mining equipment. This knowledge helps us select and design the right product for each mining application.

Gain Solutions That Give You:

Reliable performance.

Our full range of premium products keeps your mining operations up and running. Each product offers performance you can count on, due to our use of premium materials, debris-resistant designs and special coatings engineered for superior performance in highly contaminated surface mining environments.




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 around the world, supported by regional warehouses with local inventory.

More value.

Timken has a track record for consistent quality and performance, with rigorous global manufacturing standards. Global customer support. Fast response to customer requests. On-site troubleshooting and technical assistance. A total-system approach for specifying the right product for each application. It's all part of the value that Timken delivers to the mining industry.

AN IDEAL SOLUTION FOR UNDERGROUND MINING APPLICATIONS

Application Challenge	Timken Solution	Advantages	Product Image	Equipment
Heavy loads	Timken® tapered roller bearings with enhanced internal geometries and profiling	<ul style="list-style-type: none"> High load carrying capacity in a compact envelope. Enhanced profiles increase load ratings, offering more performance in a smaller, lighter bearing. 		<ul style="list-style-type: none"> Continuous Miners Road Headers Longwall Shearers Armored Face Conveyors
Debris and contamination	Case-carburized rings and rollers	<ul style="list-style-type: none"> Case-carburized rings and rollers deliver great debris resistance, which can extend bearing life. 		<ul style="list-style-type: none"> Continuous Miners Road Headers Longwall Shearers
Impact and shock loading	Case carburized rings and rollers	<ul style="list-style-type: none"> Premium materials and heat treatment prevent premature bearing damage. 		<ul style="list-style-type: none"> Continuous Miners Road Headers Longwall Shearers Crushing Equipment
Impact and shock loading	Timken® solid-block mounted bearings with cast steel housings	<ul style="list-style-type: none"> Cast steel housings are standard on Timken solid-block mounted bearings. 		<ul style="list-style-type: none"> Crushing Equipment Material Handling
Low speeds and inadequate lubrication	Enhanced surface finishes, Timken® ES coatings	<ul style="list-style-type: none"> Help prevent metal-to-metal contact. 		<ul style="list-style-type: none"> Continuous Miners Road Headers Longwall Shearers Armored Face Conveyors Haulage Equipment
Debris and contamination	Timken® debris-resistant bearings	<ul style="list-style-type: none"> Up to 3.5 times longer bearing life than standard Timken options. 		<ul style="list-style-type: none"> Road Headers Longwall Shearers Crushing Equipment
Debris and contamination	Sealing solutions for Timken® Type E and solid-block mounted bearings	<ul style="list-style-type: none"> Timken® solid-block mounted spherical roller bearings and Type E mounted bearings feature a steel-housing and multiple locking options with complete multi-point sealing solutions. 		<ul style="list-style-type: none"> Crushing Equipment Material Handling
Elevated G-forces	Enhanced cage designs	<ul style="list-style-type: none"> With enhanced cage designs, Timken tapered, spherical and cylindrical roller bearings can handle elevated G-forces - leading to increased performance. 		<ul style="list-style-type: none"> Haulage Equipment
High speeds	Optimized internal geometry, surface finish and lubrication	<ul style="list-style-type: none"> Enhanced profiles increase load ratings, offering more performance in a smaller, lighter bearing. Lower operating temperatures help extend bearing life. 		<ul style="list-style-type: none"> Haulage Equipment

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 industrial motion rebuild and repair services.

Stronger. By Design.

www.timken.com