



# THORDON BEARINGS IN MINING APPLICATIONS

## THORDON

ZERO POLLUTION | HIGH PERFORMANCE | BEARING & SEAL SYSTEMS

# HIGH PERFORMANCE GREASE-FREE BEARINGS FOR MINING APPLICATIONS

Thordon Bearings offers a comprehensive lineup of bearings for all the diverse needs in mining. Different bearings have been specially designed for various scenarios, including handling high pressures of up to 70 MPa (10,000 psi); withstanding heat of up to 80°C (176°F); and performing well in severely abrasive environments.

Whatever your needs may be, Thordon bearings outperform and eliminate the operating/labour costs associated with traditional greased bearings and extend the useful operating life of your equipment. All Thordon bearings are grease/oil-free and built to last, making them the perfect replacement for greased bronze applications in mining.

Thordon Bearings, a pioneer in the development of grease-free bearing designs, offers a variety of choices for your mining operations depending on the application. The line of high performing bearing grades include Thordon SXL, PT80, Thordon Composite (GM2401), HPSXL, HPSXL TRAXL, and ThorPlas-Blue.

Thousands of customers around the world depend on Thordon bearings to deliver best-in-class value and outstanding performance. These bearings are the proven choice to meet and exceed your needs in some of the most demanding and challenging working conditions.

## **Thordon bearings offer these benefits:**

- Do not require oil or grease/greasing systems to ensure flawless operation
- Long wear life, low maintenance, and no need for grease dramatically reduce your costs
- Able to withstand high impact and shock loads, increasing resistance to damage from pounding during operation
- Installation and conversions can be done onsite and are quick and easy
- Available globally from Thordon's extensive Distribution Network in over 100 countries

## **Thordon bearings achieve the best performance in these operating conditions:**



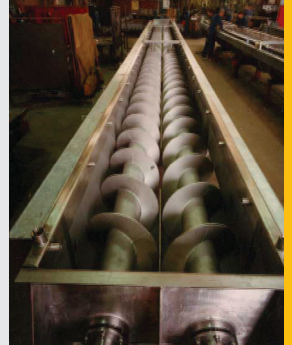
- Corrosive
- High impact load situations
- Abrasive environments
- High humidity conditions
- Infrequent maintenance

# THORDON BEARINGS - TOUGH MATERIAL. EASY CHOICE.

## Mining Conditions

Machinery in mines is expected to operate at full capacity, despite being subject to dirty, humid, and wet conditions that are commonplace in mining.

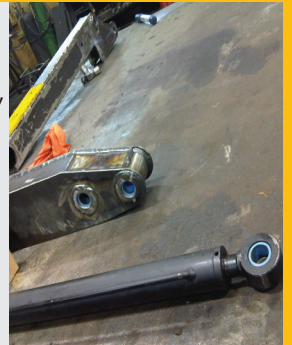
*Thordon bearings perform well in water and heat—up to 80°C (176°F)—and maintain stability through heavy shocks with little wear and no need for oil/grease. This will result in significant cost-savings and reduced downtime from the replacement and maintenance of bearings.*



## Bushings for Pivot Points

Through regular use, pivot point bushings that endure high loading and high impact can quickly wear down and fail. Without frequent lubrication (especially in dusty environments), bushing failure and out-of-round housings are the inevitable results, and replacement is unavoidable.

*Thordon bearings are highly resistant to shock loading and vibrations, allowing them to absorb impact and recover to their original shape. In addition to this, Thordon bearings are self-lubricating and have a low coefficient of friction, which means that the equipment they are installed in will operate more efficiently and last longer without any lubrication or maintenance.*



## Excavation and Earth Moving

In excavators, backhoes, and cranes that move and dig massive amounts of soil, dirt, and rocks, failure from bearings is a common occurrence. The bearings in heavy-duty equipment rotate slowly and must be re-lubricated with liberal amounts of grease every 8 to 100 operating hours to prevent the equipment from breaking down prematurely.

*All of our bearings have low coefficients of friction, are self-lubricating, and have exceptional wear resistance. The ThorPlas-Blue and HPSXL TRAXL grade bearings can withstand high pressures of 45MPa (6,527 psi) and 70MPa (10,000 psi) respectively, giving you peace of mind and assurance that your heavy-duty equipment is operating with bearings that are capable of functioning under these demanding conditions.*



## Idle Equipment

Although most mining processes constantly use crushers, miners, and loaders, there is some technical mining equipment that is idle or on standby in order to avoid work stoppages. However, parts of the machinery that remain stagnant can actually render the equipment useless when its called into action.

*Thordon bearings are never among the wearing parts that react poorly to dust, rust, corrosion, or moisture. ThorPlas-Blue, in particular, is a thermoplastic - extremely tough, ensuring that the bearings are ready to work when necessary.*



# HIGH PERFORMANCE THORDON BEARING GRADES



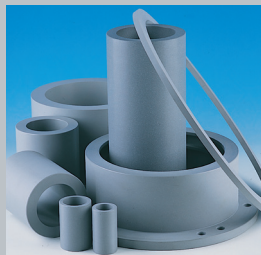
## SXL

- High resistance to shock loading and vibration
- High abrasion resistance
- Lower dry coefficient of friction with little or no lubrication
- Working pressure up to 12 MPa (1,740 psi)



## PT80

- Increased thermal stability
- High hardness and toughness
- Excellent abrasive wear resistance
- Low coefficient of friction



## HPSXL

- High resistance to shock and loading vibration
- Moderate abrasion resistance
- Lowest dry coefficient of friction
- Working pressure up to 15 MPa (2,175 psi)



## HPSXL TRAXL

- HPSXL, housed in a metallic carrier to reinforce strength for high pressure applications
- TRAXL uses about 2mm (1/16") wall of bearing material
- Minimal bearing deformation
- Working pressure up to 70 MPa (10,000 psi)



## COMPOSITE (GM2401)

- Specifically designed for exceptionally abrasive applications
- Lower coefficient of friction than rubber
- GM2401 can be bonded in metallic carriers, where specific tolerances exist



## THORPLAS-BLUE

- High resistance to shock and loading vibration
- High stiffness/low deflection
- Excellent friction/wear properties
- Able to function in high humidity
- Life-time lubricated and does not require oil or grease

## CUSTOMER FOCUSED TO QUICKLY MEET YOUR NEEDS

Thordon Bearings designs and manufactures a complete range of polymer bearing products for industrial markets. Thordon's strong and recognizable global brand is known for high quality and superior performance, eliminating oil and grease from bearing applications in industrial markets.

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