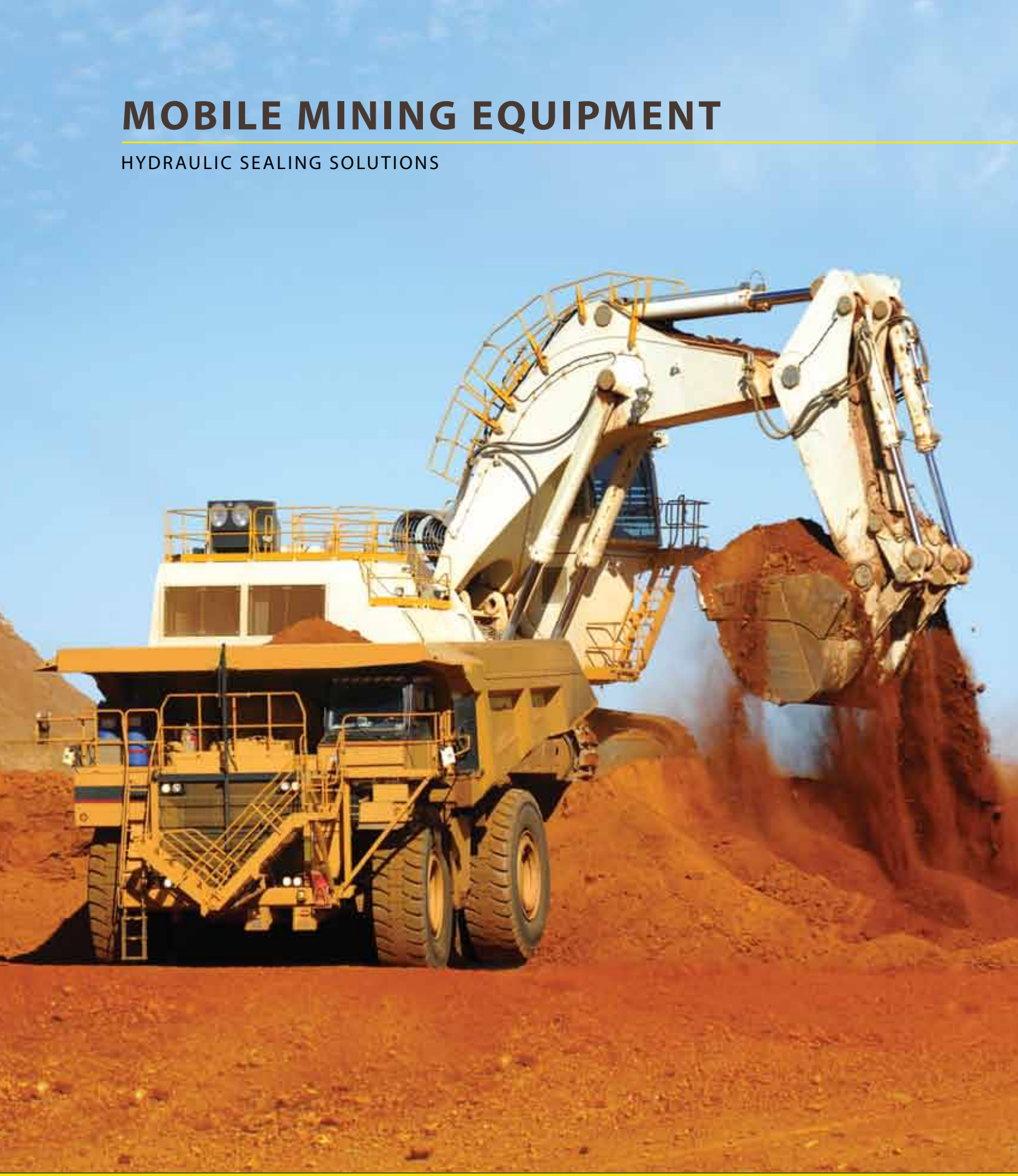
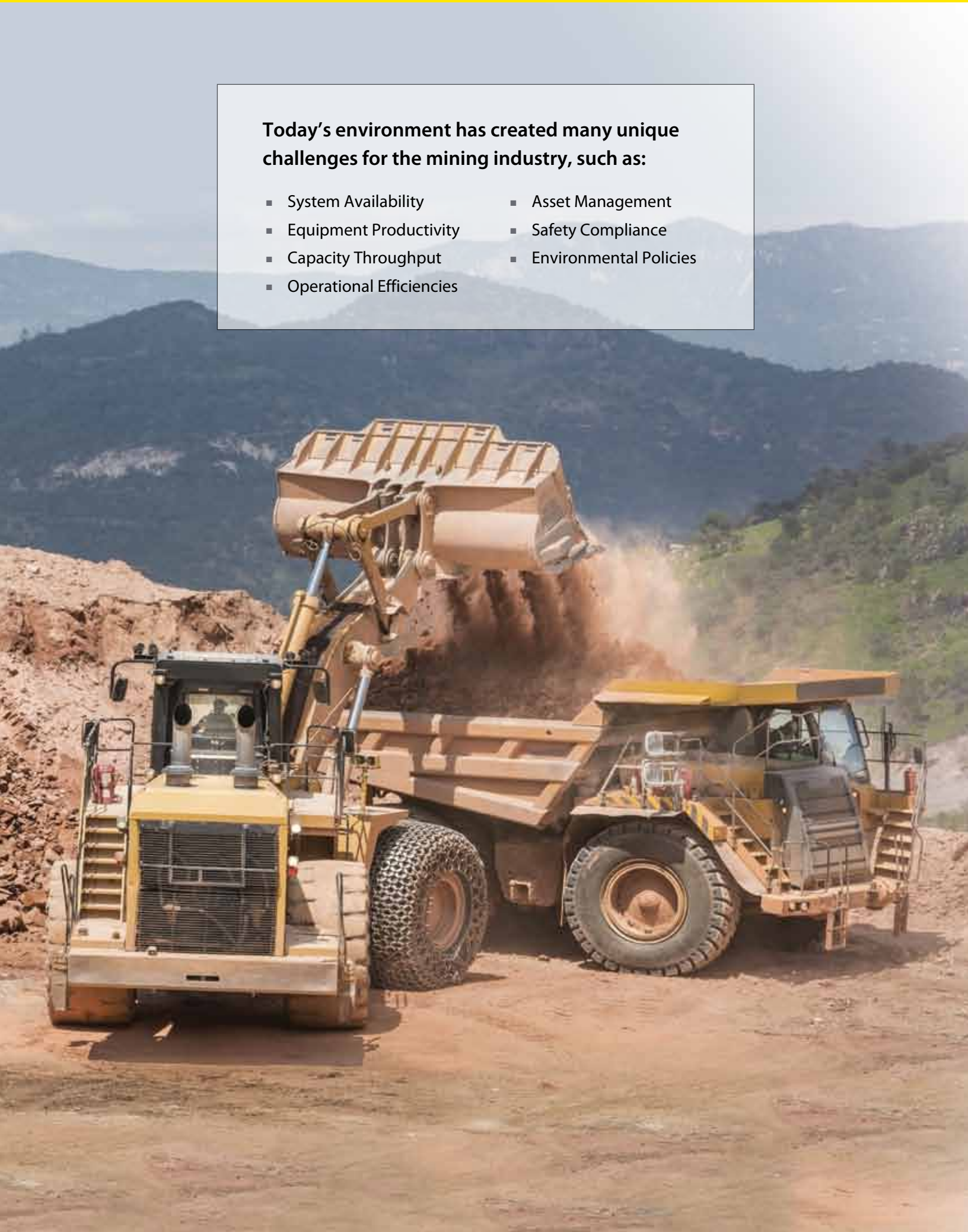
MOBILE MINING EQUIPMENT

HYDRAULIC SEALING SOLUTIONS



CHESTERTON®
Global Solutions, Local Service.



Today's environment has created many unique challenges for the mining industry, such as:

- System Availability
- Equipment Productivity
- Capacity Throughput
- Operational Efficiencies
- Asset Management
- Safety Compliance
- Environmental Policies

Solutions

Increased reliability and reduced costs

We know that mining is a challenging business and to help reduce the cost of downtime, you must meet critical challenges and anticipate the unexpected every day. Whether you're in the metal, mineral, or coal mining markets, we can help you manage costs and maintain margins by optimizing the value of your equipment investments.

Chesterton® sealing solutions help increase cylinder reliability by extending the hours of operation between maintenance intervals. Our turnkey cylinder repair kits combine proprietary polymer technologies with unique seal geometries to help improve the performance of your off-road mining equipment.

Chesterton is uniquely positioned, with decades of know-how and experience, to help you drive significant improvements in equipment reliability.

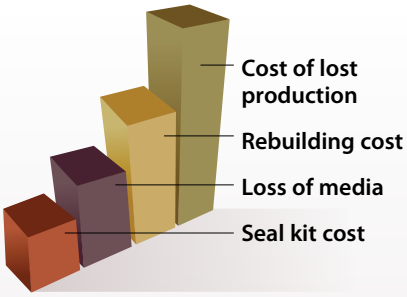
Our comprehensive services include:

- Turnkey custom cylinder repair kits
- Skilled in-field technical support
- On-site inspection and troubleshooting
- Experienced application engineers and designers
- Proven approach towards cylinder upgrades

Value-driven Approach

Our Product, Service, and Technical Expertise

Real world proof comes from the performance of Chesterton products in various applications used in mine after mine worldwide. The cost of a replacement seal kit is the least expensive aspect of a cylinder rebuild yet can have the greatest impact on production. Protect your assets while increasing your productivity and efficiency by upgrading to Chesterton products.



Cost of downtime

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Turnkey Custom Cylinder Kits

The rigors of surface mining are well-known. Whether it's corrosion, contamination, side loading, or shock loading conditions, these challenging environments and destructive loads take their toll on your equipment. To help protect your assets and lower overall cost of ownership, Chesterton provides high performance, turnkey cylinder repair kits proven to perform under these conditions.

- **Excavators (shovel and backhoe)**
  Boom, arm bucket, dump, and level cylinder kits
- **Trucks**
  Hoist, front and rear suspension, steering cylinder kits
- **Wheel loaders**
  Lift, steering, and tilt cylinder kits
- **Dozers**
  Tilt, lift, ripper tilt, and ripper lifter cylinder kits

Lift cylinder rebuild kit

Experienced Field Specialists

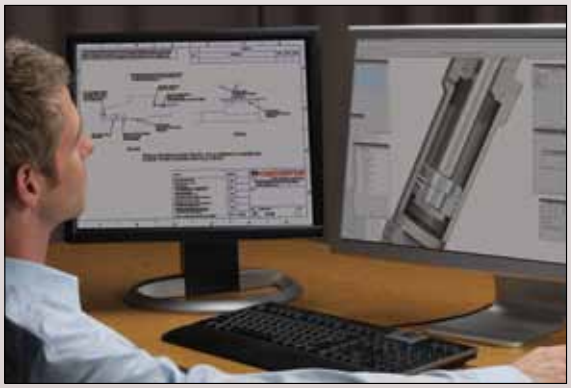
Chesterton's skilled field specialists work in collaboration with customers to understand their needs and provide the best solution for their application. Our local service is supported by a global distribution and logistics network that enables us to reach and react to the shifting needs of mining customers around the world.

- Knowledgeable field specialists on-site
- Hands-on equipment analysis
- Kits stocked and serviced locally
- Exceptional customer service
- Global distribution network

Engineering Support

Chesterton has decades of combined engineering experience in the mining industry. Our engineers focus on developing unique solutions that solve mining's most difficult sealing challenges. These polymer sealing experts develop proven solutions from comparable situations that help improve equipment reliability.

- Engineer-to-engineer collaboration
- Expert applications engineering support
- Application-specific solutions
- Experienced seal design experts



Sealing Technology

Cylinder Upgrades

Solutions Approach

THE CHESTERTON CYLINDER UPGRADE PROGRAM applies a systematic solutions approach for improving seal performance during the repair and overhaul of equipment. Working in partnership with you, we offer a unique approach to total cylinder re-fitting that saves money and delivers a better, more reliable cylinder back to the mine.

- Address environmental issues
- Improve equipment reliability
- Extend leak-free service life
- Reduce hydraulic oil consumption
- Minimize downtime and maintenance costs

Materials

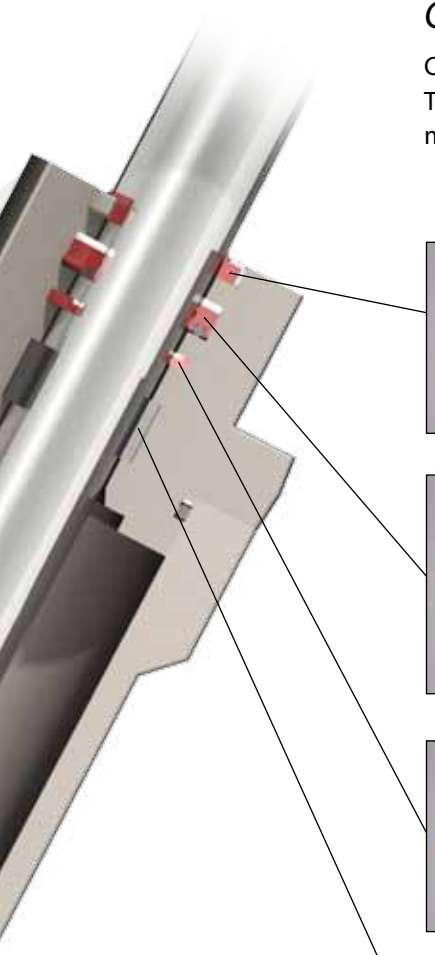
Unique Thermoset Urethanes

Chesterton's proprietary polymer technologies offer high abrasion and cut resistance designed to withstand the elements and extend the hours of equipment operation between maintenance intervals. Whether extreme heat or cold, our exclusive thermoset materials allow your equipment to run longer, thereby helping to improve equipment performance and reliability.

Designs

Custom Seals and Components

Chesterton offers a wide range of seal profiles specifically designed for the mining industry. These sealing solutions were designed to accommodate a broad range of cylinders used on mobile mining equipment.



Wiper

Minimizes contaminants from entering the system

Our stainless steel canned wiper design effectively dislodges foreign material from the retracting rod which keeps external contaminants from entering the system, thus helping to minimize expensive gland replacements.

Rod Seal

Combats low pressure leakage

Unique heavy-duty, custom rod seal provides increased pre-loads to minimize issues associated with low pressure leakage while also providing added stability at higher pressures and temperatures.

Buffer Seal

Reduces impact of pressure spikes

Our buffer seal is designed to reduce the impact of pressure spikes on the primary seal while the custom vented slots minimize the possibility of pressure trapping between itself and the rod seal.

Precision Bearing Band

Minimizes metal-to-metal contact

These precision split bearing bands offer the same carrying load as bronze and, when used in combination with our sealing devices, have proven to be the ideal choice to optimize cylinder life.

Piston Seal

Bi-directional sealing system

This four-piece, bi-directional sealing system creates a very effective seal through the entire operating range even when exposed to tremendous pressure spikes.

Trash Ring

Absorbs contaminants within the fluid

This ancillary device functions as the first line of defense for piston seals and bearing bands by absorbing contaminants in the system, thus helping to protect the sealing components and extend maintenance intervals.

Speed of Service

Industry Leading Materials and Advanced Designs

Chesterton is a technology leader in the polymer seal industry. Our SpeedSeal capability brings same-day service of this advanced technology to customers worldwide. Strategically located and integrated service centers use innovative manufacturing methods to provide you with a broad selection of proven designs and a wide range of high performance materials.

This capability is supported by a network of highly trained and experienced Field Specialists and Application Engineers who offer the best service and applications assistance in the industry.

- Same day delivery
- Experienced field service
- Engineering expertise
- Sizes to 1370 mm (54")
- On-hand inventory
- Custom designs
- Exclusive Chesterton materials
- Kits stocked and serviced locally

Our service center locations:

Global Solutions, Local Service

Since its founding in 1884, the A.W. Chesterton Company has successfully met the critical needs of its diverse customer base. Today, as always, customers count on Chesterton solutions to increase equipment reliability, optimize energy consumption, and provide local technical support and service wherever they are in the world.

Chesterton's global capabilities include:

- Servicing plants in over 100 countries
- Global manufacturing operations
- More than 500 Service Centers and Sales Offices worldwide
- Over 1200 trained local Service Specialists and Technicians

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