Global Resource for Products and Expertise

CHESTERTON is headquartered in Woburn, Massachusetts, with manufacturing facilities around the world. Products are stocked, sold and serviced by highly trained CHESTERTON Specialists in over 97 countries worldwide. This extensive network provides you with the best applications assistance and service available throughout the industry.

CHESTERTON's Engineered Polymer Solutions Group is the resource to call on, whether you have a low-tomedium volume, fast-turnaround MRO or aftermarket requirement, or a high volume OEM requirement.

Next Day Shipment for Inventory Control

Let us help meet inventory reduction goals through our rapid response service. Most sizes and profiles can be made to order and shipped the next day. Wipers and other ancillary components are also available.

A Company-Wide Commitment to Quality

CHESTERTON is proud to have been an early adopter of world class quality standards. Our manufacturing facilities are all ISO 9001 Certified. Our manufacturing center for hydraulic and pneumatic seals is an MRPII Class A Manufacturing Facility. This facility features multi-cavity, high volume tooling.

Puts Muscle in Warranted Work

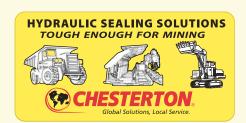
A cylinder rebuilt and upgraded to CHESTERTON seals and recommended tolerances can be confidently warranted for long service life. Simply by increasing reliability, we can help eliminate warranty returns. The value of an extended warranty is often enough to offset any additional cost of using higher reliability CHESTERTON seals.

Partnership with Experienced Repair Facilities

Our specialists work with you and your repair shop to determine the economic benefit of a complete upgrade. Very often a replacement piston built to accommodate our seals and wear bands will save an entire cylinder from the scrapheap and return it to service at better-than-new performance. We provide machine drawings and all of the wearing parts.

A Leader in the Mining Industry

We are proud to meet and exceed the reliability needs of the worldwide mining industry. Mines in North America, Europe, Africa, Asia and Australia are now benefiting from the move to newer technology, CHESTERTON seals.





ISO certifications available at www.chesterton.com/corporate/iso

Technical Data reflects results of laboratory tests and is intended to indicate general characteristics only.

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MINING

HYDRAULIC SEALING

INDUSTRY SOLUTIONS





TOUGH ENOUGH FOR MINING

Aftermarket and OEM Suppliers

TOUGH ENOUGH FOR SURFACE MINING

The harshness of surface mining is well known. Excavating, loading, transporting and spreading, all take their toll on your hydraulic cylinders.

CHESTERTON has over seventy years of combined experience in developing and manufacturing sealing devices to meet the needs of the mining industry. Our seal designs and materials have been proven to enhance the profitability and productivity of our customers worldwide.

Our product specialists, application engineers and distributors have the knowledge and product offerings needed to provide cost efficient and dependable sealing solutions. That's why Chesterton has become a trusted name in the mining industry.

Unique Designs

Chesterton offers a wide range of custom seal profiles specifically for the mining industry. These profiles were custom designed to meet the broad range of cylinder designs found on mining equipment. Our wipers, rod seals, piston seals and other sealing components combine the best material in the industry with the most effective design for the application.

Chesterton's Polymer Materials

Recognized to be the finest in the industry Chesterton's thermoset polymers are internally lubricated with a specially formulated material proven to reduce friction and heat thus extending wiper and seal life. In addition, they offer high abrasion and cut resistance, low compression set and are totally unaffected by ultraviolet rays of the sun.

Wipers

A wiper is considered to be the cylinders first line of defense against the elements and is critical to prolonging equipment longevity. Chesterton's positive lip profiles effectively clean and dislodge foreign material from the retracting rod to prevent internal scoring and system contamination. Static sealing bump on wiper flange provides outstanding sealing to keep out water and dust.

Rod Seals

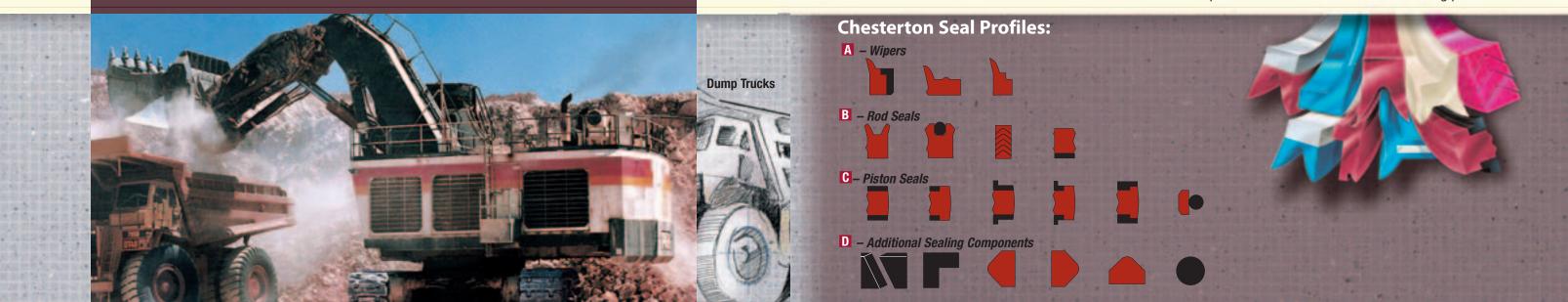
Chesterton offers many custom rod seal profiles, all of which have been proven to combat the rigorous working environments and offset the severe operating parameters of equipment in the mining industry.

Piston Seals

Chesterton's most common piston seal profiles use high quality anti-extrusion rings to offset excessive clearances and pressure spikes during operation. The toughness and long term elastic memory of the special polymer will extend the leak-free life of any hydraulic cylinder. All of these designs are intended to increase production and profitability at your mine.

Additional Sealing Components

Some of the other Chesterton sealing components include cap seals, anti-extrusion rings and precision bearing bands. Cylinder manufacturers seldom design their cylinders with adequate bearing support. As bearing bands wear, seal and equipment wear accelerates, causing leakage and more frequent repairs. Increasing the bearing area or upgrading the bearing materials will extend the leak-free life of the cylinder. Chesterton recommends its split, precision bearing bands which are designed to prevent metal to metal contact of moving parts.



"TOUGH ENOUGH FOR MINING"

CHESTERTON® CAN BE YOUR SOLE SOURCE FOR HIGH RELIABILITY SEALING DEVICES

Chesterton offers a unique approach to total cylinder re-fitting that saves money and delivers a better, more reliable cylinder back to the mine. Not only that, after a cylinder is upgraded, subsequent replacement of wearing parts becomes standardized, faster and easier.

- Consolidate suppliers
- Improve equipment reliability
- Reduce maintenance costs
- Extend leak-free service life
- Minimize equipment downtime
- Reduce hydraulic oil consumption
- Eliminate environmental issues

Exclusive Materials

Chesterton offers a wide spectrum of specialized and exclusive material formulations which are designed and manufactured to international quality standards. Our innovative red and cherry polymer seals combined with our precision bearing bands and anti-extrusion rings offer excellent sealing and extrusion resistance for mining applications.

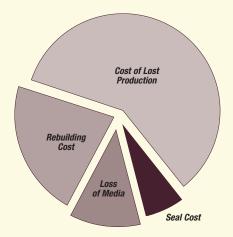
These custom designed materials have been proven to withstand even the demands of the mining industry.

SOL

Expert Custom Applications Engineering Support

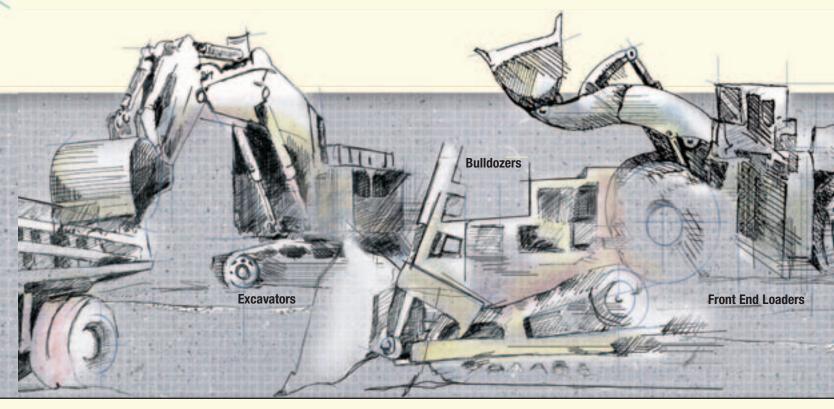
We focus on providing a total system solution to hydraulic sealing problems. Our objective is to optimize your equipment productivity throughout its life by lowering the operating cost per ton/hour. We offer comprehensive services including:

- Prompt, expert product support
- Analysis of customer processes and sealing problems
- On-site measurement and inspection of the equipment
- Product recommendations best suited for your application
- Design and engineering solutions for extended reliability
- Written analysis of customer return on investment
- Project management and local rebuild services



Cylinder Upgrades — OEM or Rebuild

Real world proof comes from the applications experience with Chesterton seals, in mine after mine, worldwide. We see reports of service life jumping two times, three times and five times when cylinders are upgraded with our seals and components. Our cylinder upgrades protect your investment while at the same time increasing your productivity and profits.



TOUGH ENOUGH FOR MINING

TOUGH ENOUGH FOR UNDERGROUND MINING

The rigors of underground mining are legendary. Tunneling, supporting, shearing and conveying, all take their toll on your hydraulic cylinders.

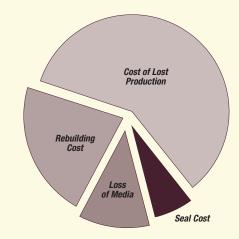
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