Metso

# Mill Reline Machine



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Metso Mill Reline Machines (MRMs) are specialized equipment for mechanically assisting the highly dangerous, challenging, and time-consuming task of replacing the steel lining systems inside grinding mills.

They are equipped with a wide range of industry-leading features that make the relining process as safe and efficient as possible.



### A safe, efficient, and flexible mill relining solution

Metso MRMs are designed and manufactured in accordance with international crane standards that cover everything from structural safety factors and hydraulic performance to control system functionality. As a result, they can be CE, EAC, or CSA certified, as well as customized according to country-specific requirements. All Metso MRMs are manufactured at Metso's state-ofthe-art, ISO-certified facility, guaranteeing the highest quality standards.

### Unique mechanical functions for efficient relining

A four-wheel-drive, four-wheel-steering system allows sideways driving and turning on the spot, enabling highly accurate movement and positioning. Liners are transported on a cart with continuous hydraulic rotation to minimize the need for potentially dangerous manual work. A powerful crane and manipulator with seven axes of motion ensures that every liner can be precisely positioned. All machine functions are controlled via reliable wireless controls to maximize operator visibility and safety. Lifting capacities range from 1500 to 6000 kg for grinding mills with diameters from 17 to 42'.

### Leverage the power of data to maximize reliability and performance

An advanced suite of safety sensors provides a wide range of machine diagnostics and advanced fault detection capabilities. Operators have full visibility over the machine's status and performance via the multilanguage operator interface with simple and intuitive navigation. Fault-finding screens and plug-and-play spare part replacement help to minimize downtime, while local data-logging capabilities and an optional telematics unit provide customers with comprehensive relining performance data.

### **Benefits**

- Efficient mill relining enabled by unique mechanical design features
- Maximized reliability thanks to easy data access and spares replacement
- Minimized risk thanks to industry-leading safety features
- Comprehensive service support via Metso's global service network



The future-proof machine architecture allows the machine to be upgraded with new operator assistance features and improvements as required.

### Industry-leading safety systems

A safety PLC, safety sensors, and a redundant control system architecture built on the CANOpen Safety protocol mitigate serious safety risks that have previously been an unavoidable part of the mill relining process. The rated capacity limiter prevents the machine from lifting loads that exceed its rated lifting capacity. A self-collision avoidance feature prevents machine collisions during operation, while hydraulic valve monitoring mitigates the risk of unexpected hydraulic movement. Safety sensors in the rear tie-downs also ensure that the machine is correctly anchored before crane movement and lifting operations can begin.

#### Comprehensive service support

As your service partner, we ensure that every solution has the maximum impact on performance and productivity throughout your mill's entire life cycle.

Our services portfolio includes:

- Full mill reline equipment packages including mill reline machines, feed chute transporters, bolt hammers, and support tooling
- Equipment inspection, maintenance, and training services
- Remote troubleshooting support
- OEM spare parts and spare parts advisory services, and easy online parts identification and ordering

Metso is a frontrunner in providing sustainable technologies, end-to-end solutions and services for the aggregates, minerals processing and metals refining industries globally. By helping our customers increase their productivity, improve their energy and water efficiency and environmental performance with our process and product expertise, we are the **partner for positive change**.

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