


Metso:Outotec

Service and repair centers

Genuine repairs
to maximize
availability



A close-up photograph of a male technician wearing safety glasses and an orange high-visibility work shirt. He is focused on working on a large, circular metal component, possibly a part of a machine or engine. The technician's hands are visible, and he appears to be adjusting or inspecting a bolt or nut on the inner surface of the component. The background is slightly blurred, showing a workshop or repair center environment.

Metso Outotec repair centers are committed to maintaining and prolonging the original quality and performance of your equipment. All our repair and service activities are designed to maximize the productivity, safety and reliability of our customers' equipment.

Repairs that you can depend on to help you meet your goals

Meeting your aims

To stay competitive in today's market, you aim for increased machine availability and reliability, while still keeping an eye on costs. Metso Outotec's knowledgeable repair technicians are there to help you achieve your aims with expert recommendations and solutions that work for you and your budget.

Overcoming your challenges

Many mines and quarries face continuous challenges. Finding and retaining the right internal resources to

properly service equipment from multiple suppliers can be challenging. Ensuring that repair centers use the correct OEM repair process and parts can also be problematic. Using non-OEM spares that do not conform to required specifications can lead to issues such as premature machine wear or failure, while also complicating warranty coverage. Minimizing downtime is also a critical concern, as every hour a machine is out of production can add up to significant costs in terms of lost production.

Metso Outotec can help you understand which parts of your equipment are worn down, close to failing, or need immediate replacement. We can also make recommendations on upgrade and refurbishment options to maximize your equipment availability.



Metso Outotec at your service

We can assist you with:

Tried and tested procedures

As an OEM, we have in-depth knowledge of OEM repair procedures, and can ensure the use of genuine parts that fit your machine. We combine our decades of equipment experience with today's modern repair techniques and technology to offer the best repair even for older equipment.

No weak link in the equipment chain

Every component in a piece of equipment is like a link in a chain, if there is even one weak link, performance can suffer. Our repairs ensure equipment performs to its designed standards.

Risk reduction

Working with a Metso Outotec repair center ensures risk reduction. Firstly, you get firm quotes from the OEM repair center, minimizing surprises once the repair has been agreed upon. Secondly, the use of OEM drawings and parts ensures that parts fit and perform to specifications, reducing further unplanned downtime.

Competitive rates

A Metso Outotec repair means you get a competitive rate and can rest assured that service problems will be fixed quickly the first time, resulting in long-term savings.

Benefits for your operation:

- Minimized downtime
- Higher machine availability
- Lower maintenance and parts costs
- Increased safety

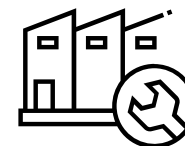


Contents



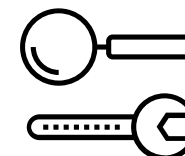
Repair center
locations

p. 6



Repair center
services

p. 8



Equipment
expertise

p. 10



Additional
services

p. 12



Repair centers

Metso Outotec offers a full range of services to precisely inspect, repair, and return equipment to service. We serve customers in mining, aggregates and industrial markets around the world. Metso Outotec repair center services can be used in combination with on-site field services to speed up large repair projects or plant shutdowns. All repair work is backed by our regional warranty policies.

Locations around the world

Ensuring rapid global response time through our service centers and partners

20+

Factory hubs

3

Performance centers

5,000+

Service experts

~140

Service locations





Metso Outotec repair center services

Metso Outotec offers a full range of repair services from reconstructing surfaces to full rebuilds of large components. Skilled technicians with specialized tools are available from our repair centers and global service network. All repairs are handled end-to-end, guaranteeing safe execution and the correct parts.

Strip and assess

Our strip and assess process is designed around a complete inspection of components or assemblies. We inspect to the original dimensions, detailing damages as found. After initial assessment, we carry out a review that highlights unusual wear patterns or issues. With this information, the service shop creates a report and provides a recommended scope of repair.

Working with your team, we decide on a course of action: Maintenance machining, a repair operation or a complete rebuild, depending on your requirements. We then provide a budgetary cost for the given repair, as well as a breakdown of the work and spare parts required to complete the job.

Repair welding

Metso Outotec repairs focus on high quality welding to OEM specifications. You can be sure that welding is done correctly, in a controlled environment, using qualified

welders with the right tools. Metso Outotec shares best practices throughout our global network of repair centers to ensure welding work delivers the longevity you expect and is backed by our warranties.

Structural parts remachining

Metso Outotec 's detailed repair processes take a step-by-step approach to all remachining work. Equipment expertise coupled with access to OEM parts, is key to understanding the relationship between components, assemblies and parts.

Genuine wear and spare parts

Metso Outotec repair centers carry out all repairs using genuine parts, exact materials, OEM specifications and original drawings. This ensures proper fit and original production values.

Further options

Test running of equipment

Repair centers are also able to test components to complete machines. Fully equipped testing stands result in safe and efficient examination of key parts. Clients are also welcome to come and witness the testing of their equipment, when applicable.

Paint and preparation

If the client does not wish for repaired equipment to be put back in use immediately, our centers are also equipped to paint and prepare equipment for long-term storage.

Exchange programs

When time is of the essence, many repair centers are also able to keep a supply of recently repaired parts or assemblies for our clients. A program can be put into place to make sure that while your repair is ongoing, you will be able to continue production by using one of our available exchange parts.



Equipment expertise

Our network of repair centers constantly share best practices, and have access to knowledge from our global design centers. This helps us guarantee repairs to the same exacting standards worldwide. Always working with the best available processes, tooling and methods gives the value, consistency, reliability and safety that our customers expect.



Steadfast and timely repairs

Metso Outotec repairs are carried out with the same consistent care, across all markets and locations. All the parts used are original OEM parts and in many cases, there is a next generation design or material available for your benefit. The majority of our repair work is standardized, which means you can get a quick estimate and turnaround on many repairs.

Access to global know-how

When you work with Metso Outotec, you gain a window into all the knowledge that Metso Outotec has accumulated over years of building, testing and servicing equipment. When

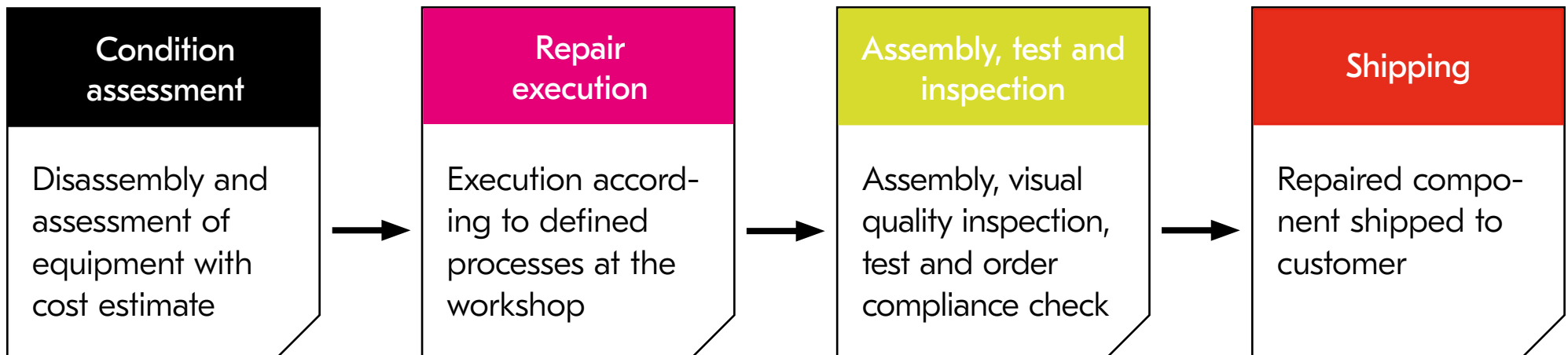
we run into unusual wear or mechanical issues, we can easily access specialists for wears, spare parts or process experts who all work closely together to come up with a solution for you. Their expertise allows them to pinpoint the root cause of an issue and to ensure that it does not recur.

Safety

Metso Outotec service activities and repairs are always carried out according to local and global regulations to ensure safety for people, the environment and equipment. Our repairs personnel are trained to control the hazards inherent in the equipment and use the proper techniques needed for handling, disassembly, testing and reassembly.

Each member of the Metso Outotec team has an obligation and a responsibility to work safely, at all times and under all circumstances. OEM documentation By having access to the equipment's original design documentation and criteria, we are able to complete repairs with an unmatched level of confidence and understanding. This documentation is further backed by individual product groups and engineering services to ensure that the job is done right, the first time around. As required, we can provide documentation for all our repairs to meet the customer's needs for their internal quality policies and operations.

Standardized workflow on majority repairs



A photograph of three people in an office environment. On the left, a man in a blue and orange high-visibility vest leans over a table. In the center, a man with glasses and a beard, wearing a blue striped shirt, sits at the table. On the right, a woman in a light blue button-down shirt and a lanyard with an ID badge leans over the table. They are all looking down at a large sheet of paper, likely a blueprint or technical drawing, which is spread out on the table. The background is a bright, modern office space with light-colored walls and a window.

Additional Metso Outotec services

We offer a variety of options to ensure availability and improve performance for your aggregates, mining or industrial operations. Our services range from supplementing your team with additional expertise, to full responsibility for large projects. Each service can be customized to fit your needs.

Life Cycle Services (LCS)

Metso Outotec's Life Cycle Services (LCS) take the entire range of Metso services and conveniently bundles them into tailored, and easy-to-manage packages. These can range from basic services to more complete solutions, depending on the scale of your needs. Packages are equipped to cover single-event shutdowns or span multiple years, measured against strict KPIs.

Field services

Metso Outotec offers a comprehensive set of field services to help meet your maintenance, repair, installation and refurbishment needs. Each service is fully customizable to

your exact requirements. Our highly specialized services cover all Metso Outotec and 3rd party bulk material handling, crushing, screening, conveying, grinding, mineral separation and pyro processing equipment.

Engineered upgrades and refurbishments

Older equipment often runs into parts becoming difficult to source, causing excessive downtime. Metso Outotec can offer cost-effective components and parts to modernize and upgrade your machine, bringing it back to its original capabilities. Enjoy a fast payback, simplified maintenance and spare part requirements, as well as boosted availability and performance.

Metso Outotec Training Academy (MOTA)

Metso Outotec offers training programs based on expert knowledge of equipment and maintenance procedures. Training programs include online e-training, hands-on modules, specialized courses on bulk handling, crushing, grinding and screening equipment, along with safety and maintenance training in accordance with global best practices.

Complement your operations

Life Cycle Services

Tailored solutions and complete packages

Field services

Specialized services and experts on site

Upgrades and refurbishments

Bringing equipment back to original capabilities

Training

Get the most out of your equipment

A large industrial machine, possibly a lathe or mill, is shown in a factory setting. The central focus is a large, glowing orange-red disc that is rotating, creating a motion blur effect. The disc is mounted on a complex metal structure with various bolts and nuts. The background is dark and industrial, with some lights and structural elements visible.

Customer success cases

Equipment expertise and dedication to our customers shines through in all of our work.

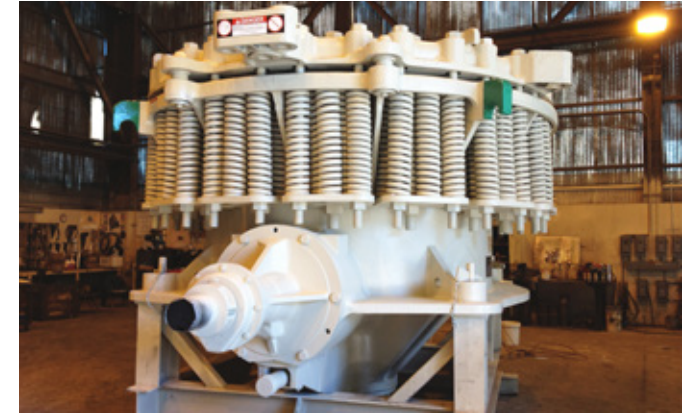
Repair of gyratory mainshaft



Repair exchange of complete triple deck mining screens



Repair exchange of crusher mainframe



Significant savings

Work scope

- Handling, transport and needed repairs
- Repair cracks near upper threaded portion
- Delivery and installation

Our solution

- Modifications to lathe to accept weight of mainshaft (90+ tons)
- Modifications to lathe's gearing, for welding prior to remachining
- Upper and lower bearing surfaces polished and machined as needed
- In-situ stress relieving before machining
- Installation of new wear components

Results

- Repair instead of replacement of mainshaft
- A year of lead time saved from not needing to replace
- Over 1 million USD in cost savings

Minimized downtime

Work scope

- Handling, transport and needed repairs to 12' x 26' mining screens
- Disassembly, parts replacement, assembly and test run

Our solution

- Complete disassembly and inspection with side plate replacement
- Gear mechanism rebuilds and reassembly
- New components where needed
- Custom-designed screen base for installation and removal
- Complete screens on a track system

Results

- Close collaboration for effective repairs
- Complete screen changeout in only a few hours
- Improved uptime

Effective changeouts

Work scope

- Complete rebuild of 7' EXHD Symons crusher mainframe and adjustment rings assembled
- Handling, transport and repair
- Assembly, inspections and test run

Our solution

- Rebuild and upgrades developed with customer
- Disassembly and inspection of mainframe, adjustment ring and large components for rebuild
- Extensive new parts replacement
- Fully stress relieved and welded mainframe and adjustment ring

Results

- Mainframe and adjustment ring restored to like-new condition
- Plug and play arrangement allows for two-hour crusher changeout
- Cost savings from new parts planning and volume discounts

