

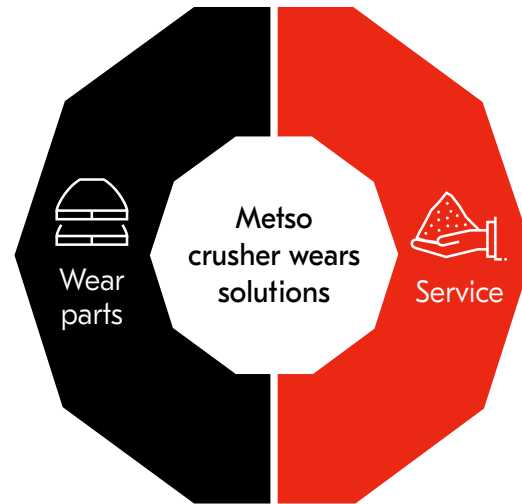
Metso

Crusher economy for every business

Wear parts for Nordberg® HP Series™ cone crushers

MINING | AGGREGATES





Crusher economy for every business

The optimal crusher economy means different things to different businesses. For some, the economy comes from good availability and value. For others, it comes from maximal service life and production. And for yet others, the long-term return on investment is the key. This is why Metso has three distinctive lines of wear parts – to bring the optimal crusher economy to your business.

What is your target?

The optimal choice of wear parts and services depends on your target. Which of the three targets below best describes you?



The OEM advantage

As the original equipment manufacturer, Metso can assure unmatched accuracy, compatibility, and safety, as well as sustainable and responsible production and optimal metal alloys. At Metso, wear parts manufacturing constantly improves by working in close collaboration with product development and listening to users' feedback.



Keep my crusher running

When you need a wear part right away, the O-Series provides you with an affordable standard part from our stock – quickly and flexibly. With reliable, suitable parts, your working days are more productive and your operating costs are lower.

Get my crusher producing

For demanding crushing professionals, the Expert Series provides the broadest range of wear parts in the market with a wide, easy-to-order selection of materials, designs and services. This enables more efficient, optimized processes, helping you get the most value out of your crusher.

Exceed my targets

When every percent makes a difference, you need expertise on many levels. With the holistic approach of the Max Series, we optimize each step of your process with custom parts to maximize your performance, economy and sustainability.

Production value & volume

Metso O-Series

Excellent value in standard crusher wear parts



Metso Expert Series

Hard-wearing crusher parts with value-adding service



















Metso Max Series

When crusher uptime and efficiency are critical



Three series, one Metso, uncompromised quality

O-Series for great availability and value, Expert Series for improved capacity, Max Series for ultimate productivity and service life – the three series are different, but they share some key Metso features. All are manufactured with the same accuracy and high standards. All feature quality materials, as well as 100% compatibility with Metso equipment and maintenance tools.

Metso O-Series	Metso Expert Series	Metso Max Series
Excellent value in standard crusher wear parts	Hard-wearing crusher parts with value-adding service	When crusher uptime and efficiency are critical
Fit and function	Widest selection in the market	Always tailored and optimized for your application and targets
For consistent end product	Industry tailored	Wide range of alloys and profiles
OEM design & quality 	OEM design & quality 	OEM design & quality 
Wear life 	Wear life 	Wear life 
Return on investment 	Return on investment 	Return on investment 
Abrasiveness Low	Abrasiveness Medium	Abrasiveness High
Matching service  Chamber Selection	Matching service  Chamber Selection Chamber Expert	Matching service  Chamber Optimization  Chamber Expert
Price category 	Price category 	Price category 

Metso experts at your service

Complementing your machinery, Metso's services are made to solve your challenges in optimizing machine productivity and lifecycle.



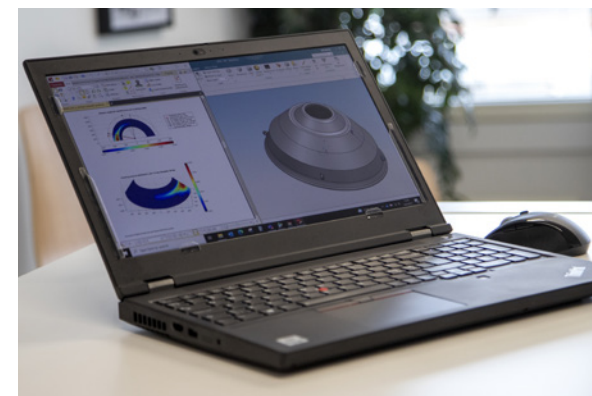
Chamber Selection service

Chamber Selection service is a fast and simple service to find the best fit for your needs. Selection is made using a product catalog and technical data sheets.



Chamber Expert service

With the Chamber Expert service and the special Metso Chamber PRO software, our crushing experts recommend the optimal chamber for your crushing process, to improve your crusher economy. Based on your application and targets, they analyze and refine the most important parameters for the wear part lifetime.



Chamber Optimization service

Metso's Chamber Optimization service is especially beneficial for high-volume crushing purposes, where tailoring enables increased production. For developing optimum crusher chambers, Metso uses state-of-the-art computer-controlled simulation software that has been developed in-house over several decades. By using this tool, taking into account your experiences and applying our expert-level crusher knowledge, we make sure the set production targets are achieved.



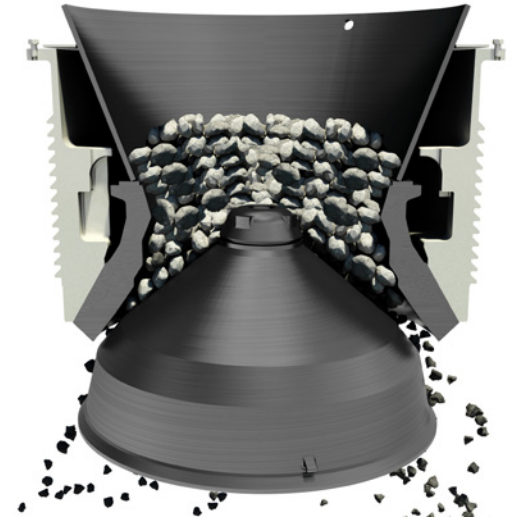
www.metso.com/products-and-services/services/process-optimization-connected-services/crusher-wear-part-optimization-service/



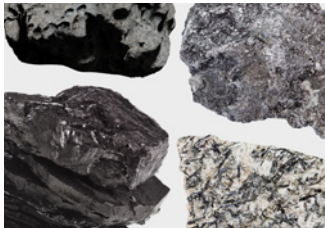
www.metso.com/products-and-services/services/process-optimization-connected-services/chamber-optimization/

The wear parts matter

The crushing chamber is the heart of your crusher. Its properties have a direct effect on your crusher output quality, capacity, energy consumption, uptime. i.e. on the efficiency and profitability of your entire operation.



Ask these questions to select the optimal wear parts for your business:



How hard is your feed material?

Limestone or granite – the source material properties have a major impact on your wear parts requirements. It defines what kind of wear parts are optimal for your operation.



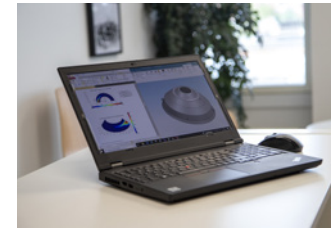
Does your crushing circuit meet your production targets?

An optimal crushing process requires the right set-up based on your targets and machinery. Small details can make a big difference when optimizing crusher performance.



What is your current crusher utilization rate and target?

To keep your crusher available when you need it, your wear parts must match your production type. They play a big part in keeping your crusher up and running and minimizing downtime.



How much energy per crushed ton do you consume?

Your crushing performance has a direct effect on how much energy your process consumes. With the right parts and optimization, you can reduce the energy consumption by as much as 30%.



Do you still use the original chamber profile?

The chamber profile has a significant effect on crushing performance. If your input-output requirements have changed, you should consider an update.

What do you want to improve?

Wears for the Nordberg® HP Series™ cone crushers

As the original manufacturer of the HP Series crushers, Metso's portfolio features a wide selection of chambers to provide the best match for different customer requirements. All our wear parts series include working and protective wears. For more options, contact your local Metso representative.

	Metso O-Series	Metso Expert Series	Metso Max Series
Working wears			
HP3-HP6 chambers •Chambers: Extra coarse – Coarse – Medium – Fine – Extra Fine •Designed to fit most applications globally	✓	✓	
HP100-HP900 Standard chambers •Chambers: Extra coarse – Coarse – Medium – Fine •For secondary and tertiary stages, designed to fit most fine- and medium-feed applications globally	✓	✓	
HP100-HP900 Shorthead chambers •Chambers: Coarse – Medium – Fine – Extra Fine •For tertiary and quaternary stages, designed to meet most fine- and medium-feed applications globally	✓	✓	
HPe Series no-backing chambers •10 different chambers		✓	
Industry Tailored chambers •Special chambers designed for specific purposes		✓	
Thick liners •Longer lifetime than normal-thickness wears •Excellent in most applications for HP cone crushers, due to naturally large max CSS		✓	
Customer tailored chambers •All chamber types •Designed for customer's application-specific needs			✓
Protective wears	Standard structural steel mainframe liners are ideal for low- or medium-abrasive applications when the wear part change interval is longer than for the mainframe liner. The casted feed cone is available in XT710 and XT720 alloys. The protective wears' offering is completed by the mainframe arm and countershaft box guards and the torch ring. In addition, abrasion-resistant steel mainframe liners are available for longer change-out intervals.		
Alloys			
Metso XC Series manganese	✓		
Metso XT Series manganese		✓	✓

Metso Expert Series



HP Thick liners are built to last

HP Thick liners generally have a lifetime improvement of +20-50%, or even more depending on the solution and HP crusher model.

Thick liners are designed to have the same feed opening dimensions as standard thickness chambers. Naturally, Thick liners reduce the maximum CSS; however, they are an excellent choice especially for HP cone crusher technology, as crushers with a rotating bowl generally have a larger maximum CSS to begin with. For applications requiring a large CSS, such as railway ballast production, the Metso Long Bowl spare parts kit makes it possible to rotate the bowl higher up.

Metso Expert Series



Metso XT720 alloy gets you more with less

Metso XT710 alloy, containing around 18% manganese, has become the industry standard. Metso XT720 alloy with increased manganese (~21%) and chrome is a tailored alloy mix with a lifetime as much as 10% longer than the standard alloy, making its cost-lifetime ratio excellent. XT720 alloy works especially well in HP cone crushers, because of their unique crushing kinematics and general chamber profile shapes.

Metso Expert Series



HPe Series no-backing chamber for quick, safe installation

HPe Series no-backing chambers

The new chambers are fitted in the HPe Series or upgraded HP Series crushers without backing material. The new chambers are faster and safer to install, and reduce hazardous waste. There are ten new chamber designs providing alternatives for optimal chamber selection.

Chambers and their outputs:

- Sand 0-5 mm
- Narrow fraction 5-11 mm
- Short head extra fine 0-11 mm
- Short head fine 0-16 mm
- Short head medium 0-16 mm
- Short head coarse 11-22 mm
- Standard fine 11-22 mm
- Standard medium 16-56 mm
- Standard coarse 16-64 mm
- Standard extra coarse 16-64 mm



Explore more of our wear parts offering online
<https://www.metso.com/products-and-services/parts/crusher-wear-parts/>



Planet Positive - our approach to sustainability

Our Planet Positive products are durable, energy-efficient equipment and services that last for a long life cycle. We are constantly looking at how to improve the handprint of our customers with high-performing crusher wears.

Chamber Optimization:

Our Chamber Optimization service helps you to optimize your crushing process and reduce environmental impact with custom-engineered wear parts.

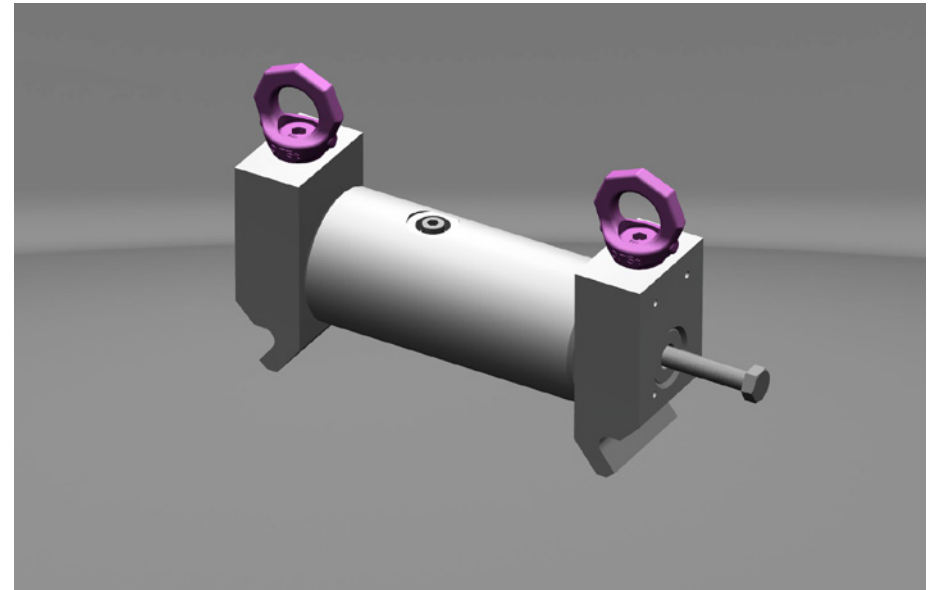
More energy-efficient crushing: Up to 30% reduction in energy consumption, depending on the application, leading to lower cost per ton and a more sustainable operation.

Longer wear-part lifetime: Double, triple or quadruple wear life reduces the amount of liners consumed and the resources needed to manufacture them. Longer wear life also means fewer change-outs and fewer stops in production.

Optimized crushing performance: Our Chamber Optimization experts help you to identify bottlenecks and optimize crushing performance, from a single crusher to the full circuit.



www.metso.com/corporate/sustainability/our-planet-positive-offering/



Safety first - lifting tools for the HP wears

Metso's specially designed, fit for purpose mantle and feed cone lifting tools make the maintenance of your crusher safer, faster and more efficient. As a result, maintenance times are decreased while crushing uptime is increased.



www.metso.com/products-and-services/parts/crusher-wear-parts/crusher-maintenance-tools/

Improving the crusher economy of our customers



MX Mantle helps eliminate several change-outs per year

"The test we ran with primary crusher #2 resulted in us using 2 sets of mantles. Using other suppliers, in the same 13-month period, we would need up to 5 sets of mantles. So, 2 vs. 5." Jorge Razo, Maintenance Manager.

Read more: [La Caridad mine increases availability of primary crushers by switching to Metso Outotec's MX Mantle technology](#)



www.metso.com/insights/case-studies/mining-and-metals/la-caridad-mine-increases-availability-of-primary-crushers/



Improving crusher economy - balancing production and costs

"We expect to achieve 10% less in terms of tons produced, but the production costs are much lower with the O-Series wear parts." Sergio Bento, Quarry Manager.

Read more: [Improving crusher economy with O-Series wears in Herdade de Benafessim - Metso](#)



www.metso.com/insights/case-studies/aggregates/improving-crusher-economy-with-o-series-wears-in-herdade-de-benafessim/



Process optimization for reducing cost and improving efficiency

"One of the main reasons we choose Metso Outotec is that the liners is easy to change." Yuanquan Ma, Manager.

Read more: [Dahuangshan quarry revisit](#)



www.metso.com/insights/case-studies/aggregates/dahuangshan-quarry-revisit/

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**.

Metso

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