

MHC™ Series Hydrocyclone



Exceptional
efficiency for
optimized
performance

Metso Beneficiation Solutions

Metso Beneficiation Solutions for minerals processing aim for maximizing ore recovery while optimizing operations costs.



Proven solutions to address any mineral processing challenge

Integrated packages for maximizing recovery, minimizing water

Depleting high-grade ore deposits set new challenges related specifically to mineral processing. The industry is seeking solutions to optimize costs, improve efficiencies and find ways of doing sustainable & economically viable mining for long-term survival. From plant modules to complete solutions, Metso offers world class technology for the beneficiation of wide variety of ores such as copper, gold, iron, lead, zinc and industrial minerals.

Classification

Metso's advanced screening and classification solutions help in achieving optimum size control, improved product quality, enhanced comminution efficiency and increased throughput.

Separation

Metso's reliable beneficiation technology considerably improves the contained value of the ore by removing gangue minerals using flotation, gravity separation, magnetic separation, washing and leaching.

Dewatering

Metso's energy efficient dewatering solutions enable concentrate separation achieving maximum recovery of valuable materials using filtration, thermal drying and slurry handling.

Optimized process performance and uptime with MHC™ hydrocyclones

Designed to improve complete classification package, the Metso's MHC™ Series hydrocyclone responds to diverse needs, balancing grinding circuit cost and plant performance.



High unit capacity



Increased uptime



Exceptional separation efficiency



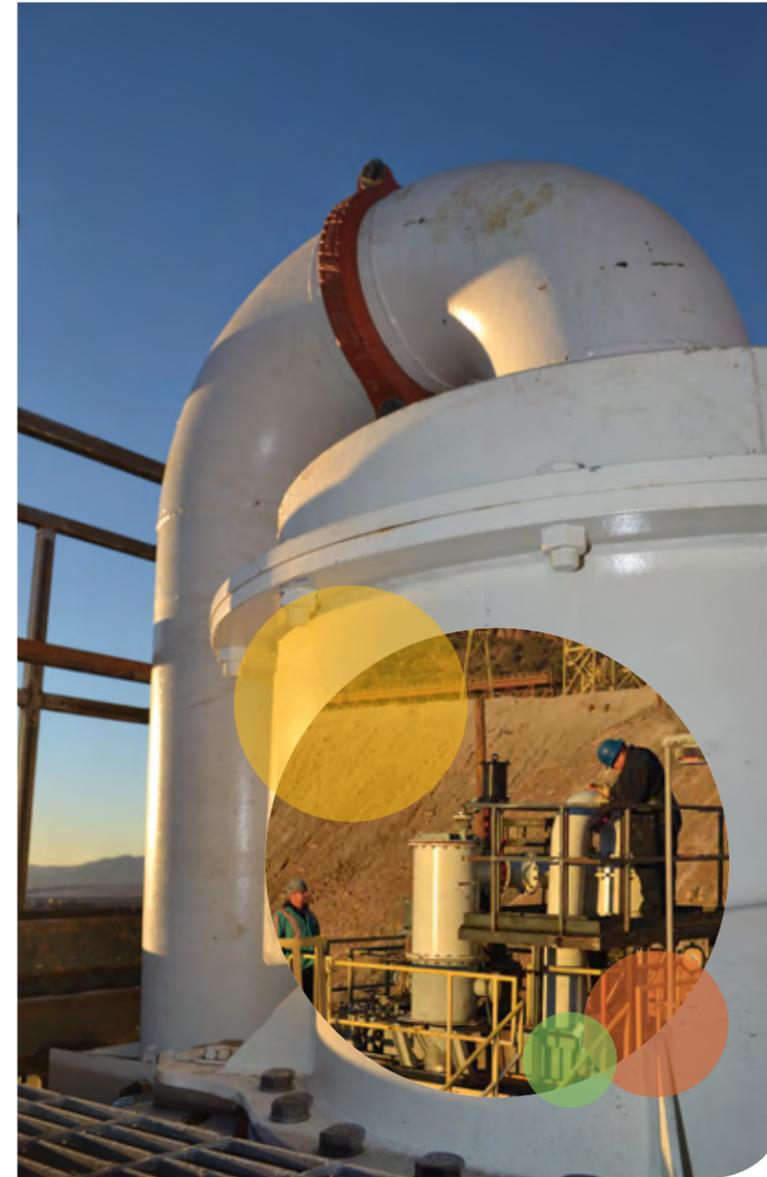
Superior wear life



Low OPEX



Improved ease of maintenance



MHC™ hydrocyclones

Cutting edge solution enriching Metso's classification capabilities

The story of innovation and efficiency continues through entire Metso's beneficiation solutions. Our world-class wet fine classification technologies help to increase efficiency, capacity and profitability in customer operations.

The new MHC™ Series provides a cutting-edge solution for a wide range of classification duties ranging from primary grinding to fine regrinding applications. The superior manifold design delivers increased unit capacity while minimizing liner wear, bringing improved efficiency and profitability.

Broad product line offering

The new MHC™ Series has seven different hydrocyclone sizes available, ranging from 100 to 800 mm in diameter. Each size has a range of vortex finder and apex inserts to fine tune classification performance.



Diverse applications:

- » Grinding circuit classification
- » Ranges from primary to fine grinding
- » Full range of mineral types

Why choose Metso MHC™ hydrocyclone?

Equipped with world-class technology and several innovative features, the new range offers significant product advantages.

Inlet head design for increased capacity

- » Developed in coordination with Metso's simulation and modeling scientists using the latest CFD-DEM software
- » Inlet head to promote smooth flow of material into the hydrocyclone, minimizing turbulence
- » Increased unit capacity and reduced liner wear
- » Rigorously tested in laboratory & field

Manifold design for accurate distribution

- » Radical manifolds to accurately distribute the feed and collect the underflow & overflow from multiple hydrocyclones operating in parallel
- » Wear-resistant linings are incorporated into the feed distributor, as well as the overflow & underflow launders
- » Special attention paid toward safe access for monitoring, sampling and maintaining the hydrocyclones & manifold components

Single component conical section

- » Single component conical section providing ease of maintenance and lower costs
- » Unique conical geometry providing a smooth acceleration of particles to promote a sharp particle separation at a low cost
- » Quick, safe and easy liner change out due to the simple design and limited number of parts



The MHC™ Series patent-pending design represents the next generation of hydrocyclones

Results from over **12,000** hours of field testing

Metso MHC™ hydrocyclone testing was performed at the pilot scale and at a copper concentrator in southwestern US.

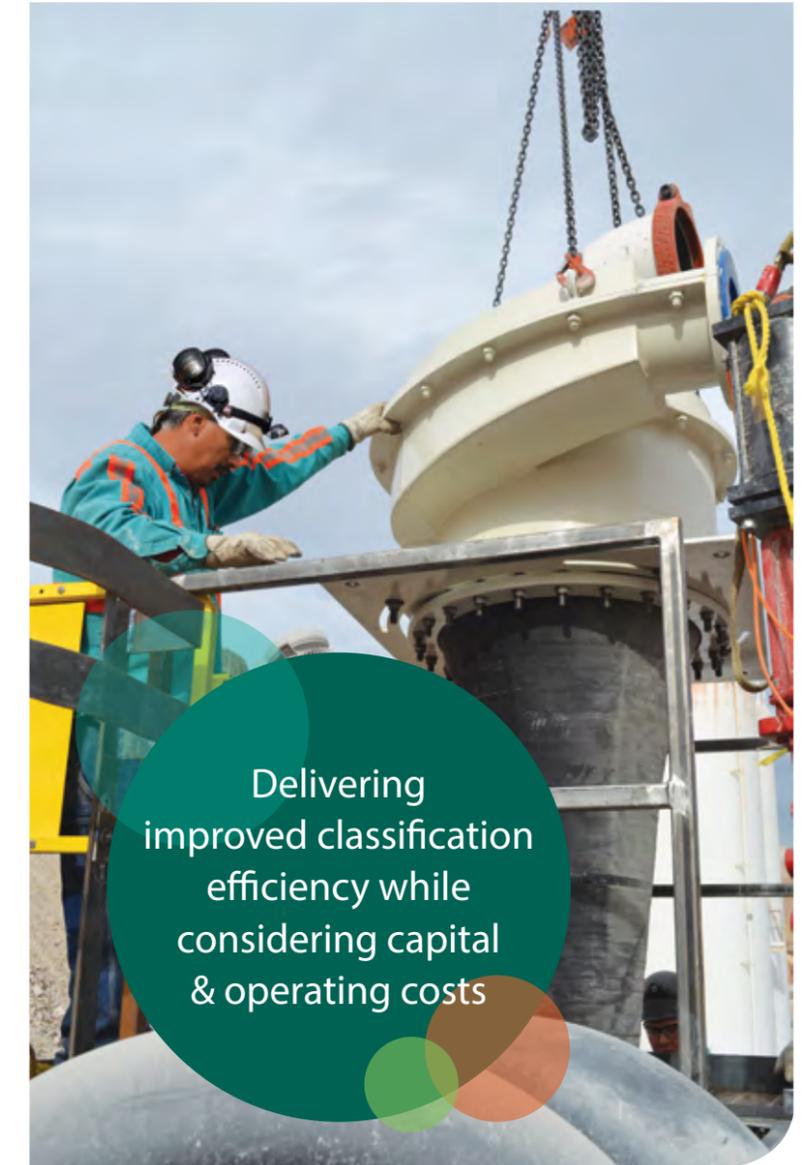
Solution

A Metso MHC-650 (650 mm diameter) was installed in the grinding circuit for wear component prototyping and continued process data collection.

Result

Based on extensive test program the MHC™ Series offer significant advantages over previously available technologies.

- Industry leading with an increased flow rate for a given pressure drop.
- Wear components within the individual units are optimized to promote even wear life throughout the entire assembly
- Increased overall wear life and consistent performance throughout the hydrocyclone lifecycle



Delivering improved classification efficiency while considering capital & operating costs

Through our knowledge and experience, we work with our customers to create solutions that enable them to attain their objectives. We call this **The Metso Way**, which focuses on creating value to our customers.

The Metso Way

Knowledge -



We have deep knowledge about our customers' business environment, processes and challenges

People -



Our committed and highly competent people make the difference to our customers

Solutions -



We create the technology and services required to meet our customer needs



Metso Inc.,
www.metso.com/mhc