

# Nordberg MP<sup>®</sup> Series Cone Crushers MP1250



Technology at work for you

# the new Nordberg **MP<sup>®</sup>1250** cone crusher

**Designed for increased capacity, reduced maintenance and increased reliability.**

The MP1250 comes to market at a time when customers not only expect more, but demand more...in production, reliability, efficiency, and features.

Metso combines high fidelity simulation technology and decades of experience to design the MP1250, building on the proven features of the MP Series while incorporating new and improved features aimed at providing more value to the customer.

## Productivity

- Advanced crushing dynamics mean more work per cycle
- Increased power draw of 1250hp means up to a 30% increase in capacity
- Higher power-to-production ratio means more efficient use of energy

## Maintenance

- Easily replaceable counterweight liner
- New head-nut installation only requires common hand tools
- Fewer accumulators to maintain
- Fewer adjustment motors to service
- Faster bowl removal and adjustment

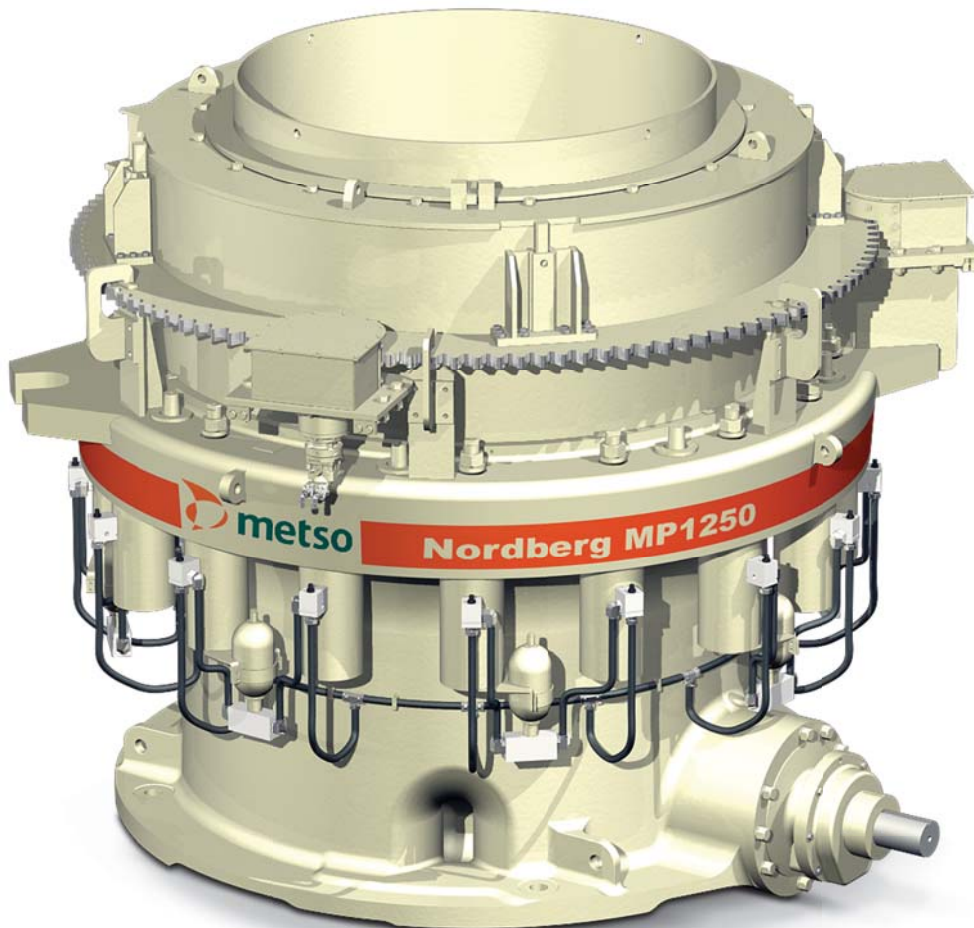
## Reliability

- Robust design of sleeved eccentric is fully machined to reduce wear and protect critical components in overload conditions
- New socket and bushing design (patent pending) reduces no-load head spin without extra components
- Patent pending counterweight dramatically reduces dynamic imbalance
- New tramp system better protects from mechanical overload
- New drive ring pads provide longer life and are impervious to contaminants
- New mainframe with reinforced stress areas

## Consistency

Optional Gradation Auto-Setting System:

- Eliminates the need for frequent calibration
- Continually monitors product size for more consistent crushing and output
- Automatically adjusts the crusher setting

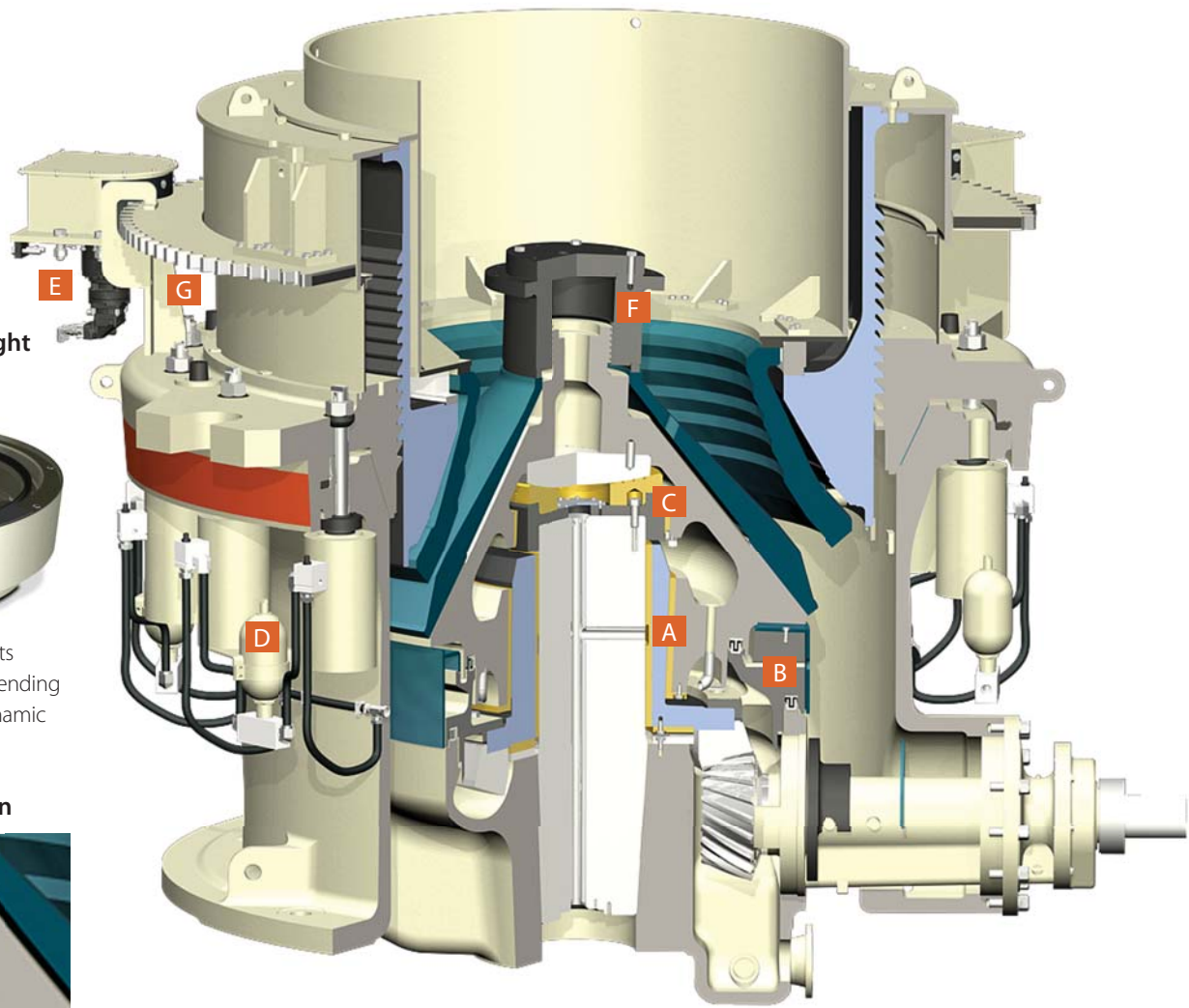


**More financial flexibility for your operations**

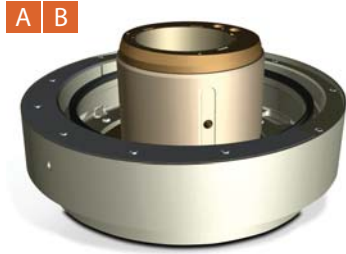
### Metso Innovation...

#### ...Lower Investment

Metso's innovative design leads to increased capacity and minimized cost, reduced maintenance and increased reliability. The MP1250 is not only a higher capacity crusher, but a more advanced crusher.

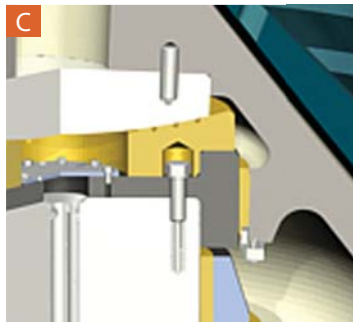


### Eccentric & Counterweight



New sleeved eccentric protects critical components; patent pending counterweight minimizes dynamic imbalance.

### Socket & Bushing Design



Patent pending socket and bushing design act to reduce head spin in no load conditions, thus preventing bushings from unnecessary wear.

### Tramp Release System



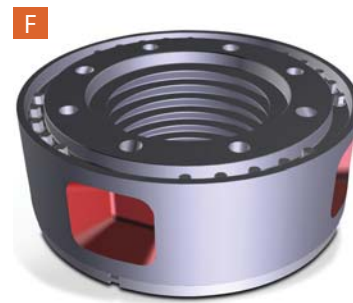
New tramp release system provides improved response time to better protect your investment from force overloads and requires less maintenance.

### Hydraulic Adjust System



New hydraulic adjust system reduces bowl adjustment and removal time.

### Mantle Locknut

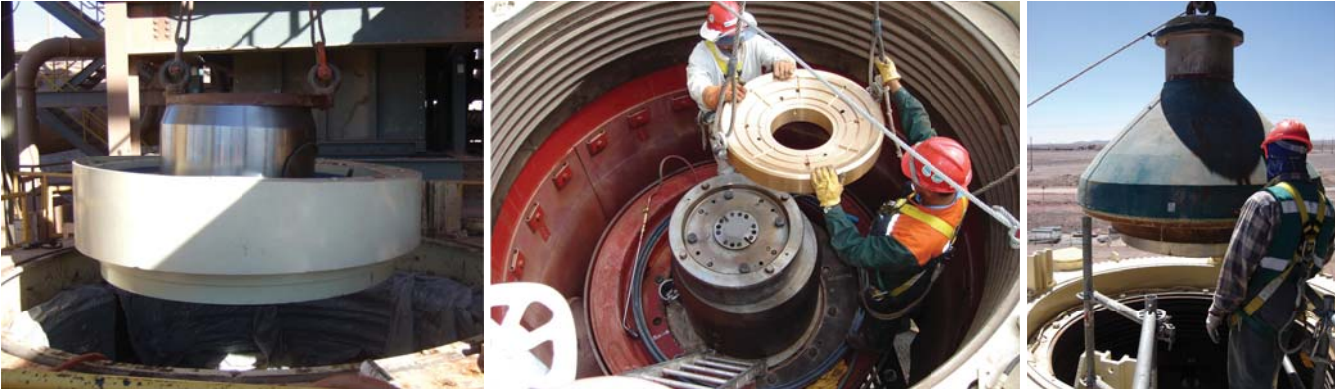


New mantle locknut eliminates the need for special installation and removal tools. The new design can be tensioned and loosened using common hand wrenches. Maintenance is now easier and faster!

### Drive Ring Support Pads



New drive ring support pads take the place of roller bearing assemblies. Eliminates the need for bearing greasing and maintenance. Pads are impervious to environmental contaminants and provide long, maintenance-free life.



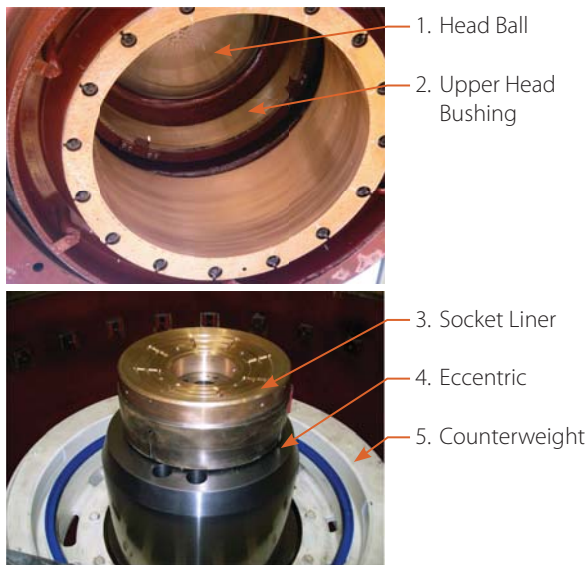
# MP<sup>®</sup>1250 retrofit kit

**Get all of the performance, at a fraction of the price!**

The performance advantage of the new Metso MP<sup>®</sup>1250 cone crusher is available in a retrofit kit. Replace as few as five components in your existing MP<sup>®</sup>1000 and realize up to a 30% increase in capacity by virtue of advanced crushing dynamics.

## The retrofit kit consists of the following components:

1. Head Ball
2. Upper Head Bushing
3. Socket Liner<sup>1</sup>
4. Eccentric
5. Counterweight



## Key Features and Benefits

- Utilize the same foundation and support structure<sup>2</sup>
- Increase capacity with minimum capital investment
- New counterweight (patent pending) allows for simple maintenance and restricts debris entry under the head
- New sleeved eccentric protects critical components
- Reduced energy consumption per ton of product
- Readily adaptable to any MP1000<sup>3</sup>

### FIELD TESTED

Rigorous field testing was conducted on the MP1250 to validate the projected performance increase. The test period encompassed ore bodies with varying properties and the MP1250 was directly evaluated against an existing MP1000. Under these specific conditions, the MP1250 averaged a 29% overall increase in fine ore production over the MP1000. Further, the MP1250 consistently recorded a reduction in the specific energy used (kWh/t) by 10% and greater.

#### Application specifics

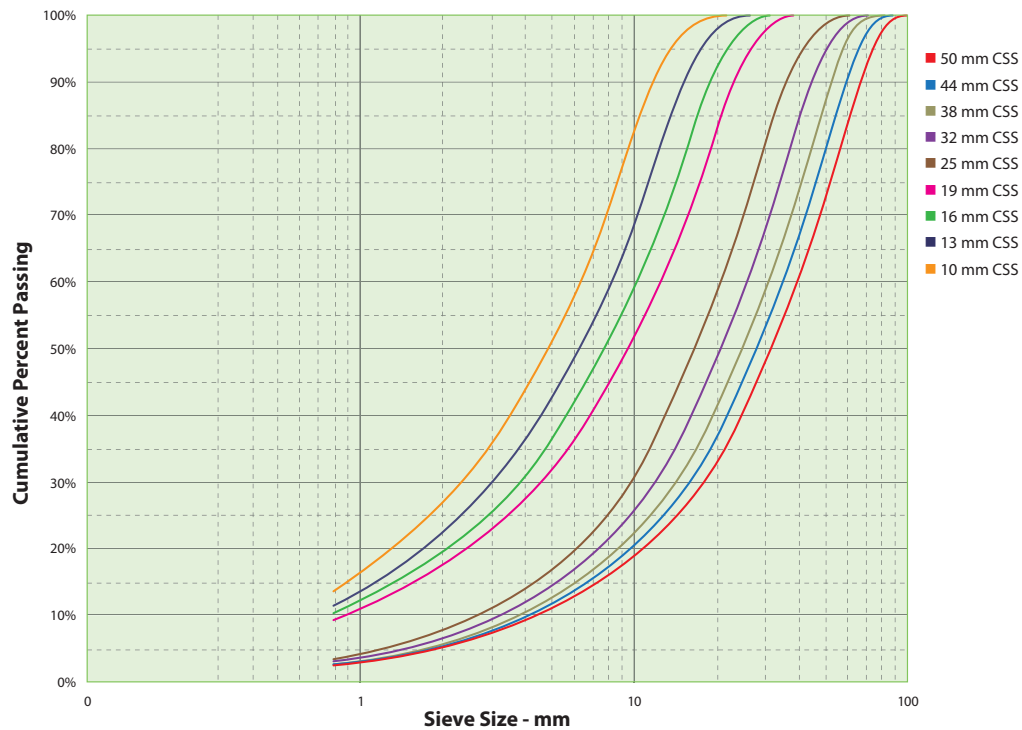
<sup>1</sup> Existing anti-spin machines will also require a new socket to accept MP1250 components.

<sup>2</sup> While unbalanced forces and moments are similar to the MP1000, each structure should be evaluated to confirm appropriate safety factor.

<sup>3</sup> Certain applications may require different drive components to attain MP1250 recommended speeds. High power draw applications may require a 1250 hp motor.

**Making the Best...even Better!**

## Technical Specifications – Crusher Capacities and Gradation Curves



Closed side setting	50 mm	44 mm	38 mm	32 mm	25 mm	19 mm	16 mm	13 mm	10 mm
Capacity (mtp/h)	2290 - 3025	2000 - 2610	1720 - 2190	1455 - 1875	1145 - 1510	900 - 1125	835 - 1020	770 - 915	590 - 700
Capacity (stph)	2520 - 3335	2210 - 2870	1895 - 2415	1600 - 2065	1260 - 1665	990 - 1240	920 - 1125	850 - 1010	650 - 775

The crusher is one component of the circuit. As such, its performance is in part dependent on the proper selection and operation of feeders, conveyors, screens, supporting structure, electric motors, drive components and surge bins.

### Attention to the following factors will enhance crusher capacity and performance:

1. Proper selection of crushing chamber for material to be crushed.
2. A feed grading containing proper distribution of the particle sizes.
3. Controlled feed rate.
4. Proper feed distribution 360° around crushing chamber.
5. Discharge conveyor sized to carry maximum crusher capacity.
6. Properly sized scalping and closed circuit screens.
7. Automation controls.
8. Adequate crusher discharge area.

### The following factors will detract from crusher capacity and performance:

1. Sticky material in crusher feed.
2. Fines in crusher feed (smaller than crusher setting) exceeding 10% of crusher capacity.
3. Excessive feed moisture.
4. Feed segregation in crusher cavity.
5. Improper feed distribution around circumference of crusher cavity.
6. Lack of feed control.
7. Inefficient use of recommended connected horsepower.
8. Insufficient conveyor capacity.
9. Insufficient scalper and closed circuit screen capacities.
10. Insufficient crusher discharge area.
11. Extremely hard or tough material.
12. Operation of crusher at less than recommended full load counter-shaft speed.

## Achieving a Higher Standard



### A track record of success

From the first day they were introduced, the MP Series cone crushers have transformed the possibilities for secondary and tertiary crushing in large mining operations. Metso's decades of experience in the design and manufacture of cone crushers has created a quantum increase in productivity coupled with cost-effective operation and ease of maintenance.

Whether intended for a new operation or as a replacement, Metso's MP Series cone crushers improve the entire comminution circuit.



## Metso Crushing Equipment and Services

### Unit Crushers

- C Series jaw crushers
- Primary gyratory crushers
- GP Series cone crushers
- HP Series cone crushers
- MP Series cone crushers
- NP Series horizontal impact crushers
- B- and V-Series vertical shaft impact crushers
- Laboratory crushers

### Mobile Equipment

- LT Series mobile crushing plants
- NW Series portable plants

### Complete Plants

- Complete plants for aggregate production
- Complete plants for recycling

### Services

- Annual service agreements
- Breakdown assistance
- Equipment inspections
- Machine upgrades/retrofits
- Operations and maintenance training
- Replacement parts
- Service life extension projects
- Start-Up assistance/commissioning
- Troubleshooting services
- Equipment performance optimization
- Wear optimization

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