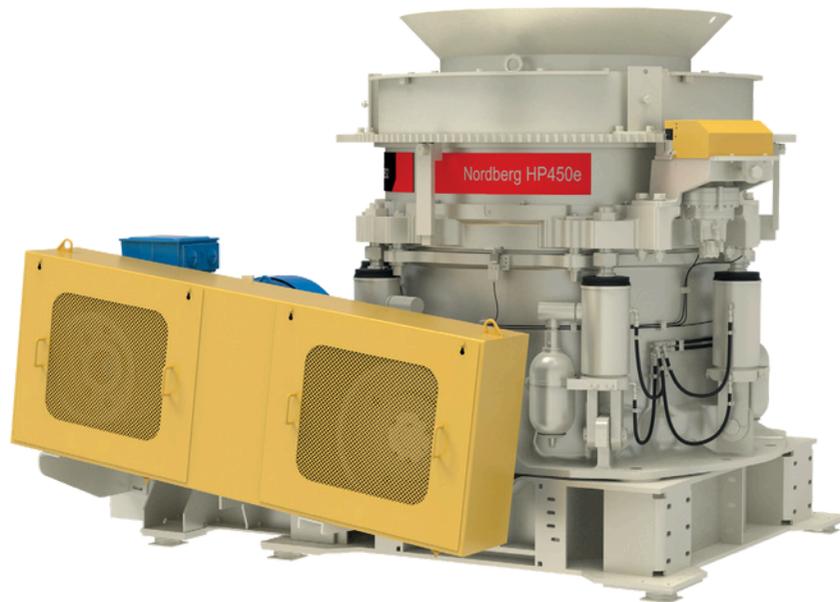


Metso

Evolution in motion

Nordberg® HP450e™ cone crusher



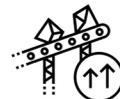
Higher level in performance, uptime, application coverage and serviceability.

The HPe range provides performance and uptime in a more sustainable way. The kinematics and chamber optimization results in significantly higher performance. The new liners are fitted without backing material.

This makes maintenance breaks shorter and liner replacement easier and safer for the operators while also having a positive impact on the environment at the same time.

Benefits

- Enhanced performance
 - +10% more head motion
 - +13% more power (in kW and HP)
 - +20% more force
- Environmentally friendly solution as backing material is not needed
- New more efficient chambers
- Head spin brake for higher uptime
- Serviceability improvements
- Feed cone lifting tool



Enhanced performance



Higher uptime



Wider application coverage



Faster and safer serviceability

Evolution in motion

Nordberg® HP450e™ cone crusher

Evolution in performance

- Perfect balance with kinematics, chambers, release force and power rating.
- HP450e crusher's performance increased up to +10% compared to traditional HP400 crusher in secondary and tertiary application with the new enhanced kinematics and cavities.

Evolution in uptime

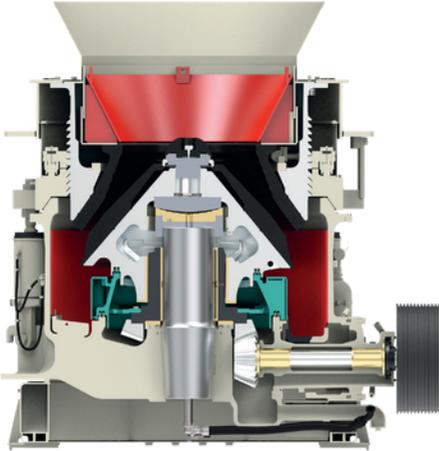
- Quicker, easier and safer liner change with no-backing liners.
- Extended liner life thanks to head spin brake.
- Maximum performance and crusher protection when combined with IC70C crusher automation (optional).

Evolution in application coverage

- Three alternative kinematics to choose from.
- Enhanced chamber designs and application specific chambers. Chamber Selection and Chamber Expert service support the selection of the optimal chamber.
- Alternative speeds

Evolution in serviceability

- No-backing liners for quick, easier and safer liner change.
- Head spin brake extends liner wear life.
- Enhanced tramp release cylinder mounting.
- New feed cone lifting tool, for safe lifting and handling.



Technical specifications

	Metric	Imperial
Basic crusher weight *	23,600 kg	51,900 lbs
Complete crusher weight **	26,000 kg	57,000 lbs
Maximum power	355 kW	450 hp
Head diameter	1320 mm	52"
Kinematics options	New enhanced kinematics Classic HP400 kinematics Reduced stroke kinematics	New enhanced kinematics Classic HP400 kinematics Reduced stroke kinematics
Number of chambers ***	10	10
Capacity up to ****	695 mtpH	765 stph

* Bare crusher weight
 ** Crusher weight with options
 *** Additional offering: optional liners range for use with backing material. Different alloy alternatives.
 **** Capacity subject to application, cavity, speed and other process parameters.

Metso

Evolution in motion

Nordberg® HP600e™ cone crusher

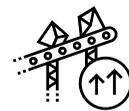


The HPe range provides performance and uptime in a more sustainable way. The kinematics and chamber optimization results in significantly higher performance. The new liners are fitted without backing material.

This makes maintenance breaks shorter and liner replacement easier and safer for the operators while also having a positive impact on the environment at the same time. Designed with the same footprint and external dimensions as the classic Nordberg® HP500™, it seamlessly fits existing foundations.

Benefits

- Enhanced performance
 - Enhanced and unique head motion for improved efficiency
 - More power: +27% (in kW) and +20% (in hp)
- Environmentally friendly solution as backing material is not needed
- All chambers are new and more efficient
- Head anti-spin brake for higher uptime
- Serviceability improvements
- Optional feed cone lifting tool
- Optional ring bounce monitoring



Enhanced performance



Higher uptime



Wider application coverage



Faster and safer serviceability

Higher level in performance, uptime, application coverage and serviceability.

Evolution in motion

Nordberg® HP600e™ cone crusher

Evolution in performance

- Perfect balance with kinematics, chambers, release force and power rating.
- New HP600e crusher's performance is up to +20% (compared to HP500 crusher) when used in secondary application and up to +15%, when used in tertiary application.

Evolution in uptime

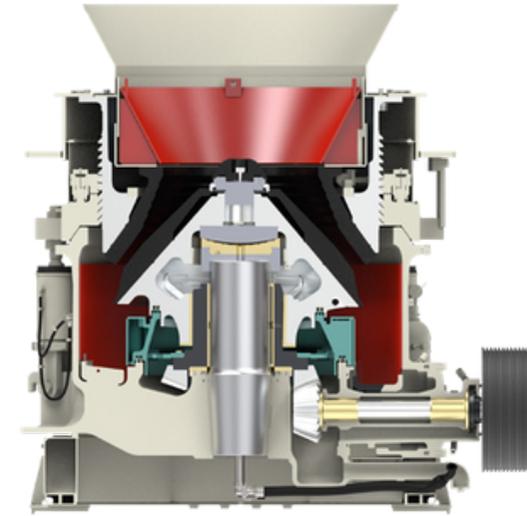
- Quicker, easier and safer liner change with no-backing liners.
- Extended liner life thanks to head anti-spin brake.
- Maximum performance and crusher protection when combined with IC70C crusher automation (optional).

Evolution in application coverage

- Three alternative kinematics to choose from.
- Enhanced chamber designs and application specific chambers. Chamber Selection and Chamber Expert service support the selection of the optimal chamber.
- Alternative speeds.

Evolution in serviceability

- No-backing liners for quick, easier and safer liner change.
- Head anti-spin brake extends liner wear life.
- Enhanced tramp release cylinder mounting.
- New feed cone lifting tool, for safe lifting and handling.



Technical specifications

	Metric	Imperial
Basic crusher weight *	35,000 kg	77,000 lbs
Complete crusher weight **	37,400 kg	82,500 lbs
Maximum power	450 kW	600 hp
Head diameter	1520 mm	60"
Kinematics options	enhanced / classic / reduced store	enhanced / classic / reduced store
Number of chambers ***	9	9
Capacity up to ****	950 mtph	1050 stph

* Bare crusher weight

** Crusher weight with options

*** Additional offering: optional liners range for use with backing material. Different alloy alternatives.

**** Capacity subject to application, cavity, speed and other process parameters.