HP-M 500

Semi-automatic disc grinding mill

HERZOG

Semi-automatic disk grinding mill for large material volumes

The HP-M 500 is the disc grinding mill especially designed for pulverizing of large material volumes. The machine can be equipped with an exchangeable 500 or 1000 ccm grinding vessel made from chrome steel. The HP-M 500 enables automation of strenuous and time-consuming preparation steps including filling of ground material into the sample cup and cleaning of the grinding vessel. This significantly improves labor safety, lowers physical stress of the laboratory staff and increases reproducibility of sample preparation and analysis.

Easy program selection through the HMI control panel

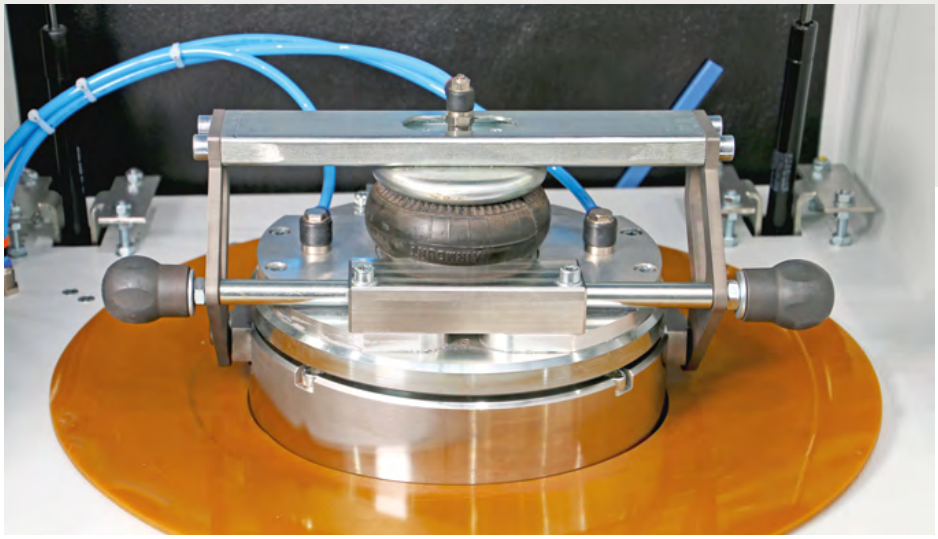
Separate output position for the sample cup

Wide range of applications

The HP-M 500 is suitable for a wide range of material like, e.g., minerals, slags and ferroalloys. The rotation speed of the grinding vessel is continuously adjustable between 600 and 1500 rpm and allows optimal adaptation to the specific characteristics of each sample material. The choice between 500 and 1000 ccm vessels gives the operator ample flexibility to implement almost any application. The grinding vessels can be easily exchanged and mounted on the swinging aggregate.

User-friendly operation

Great deal was set in user-friendly operation of the machine. The machine cover has an external and internal handle for easy opening and closing. Lifting and lowering of the cover is virtually effortless due to the support by gas pressured springs.
With equal ease, the operator can lift the lid of the grinding vessel due to an integrated robust spring mechanism. This makes filling of the sample into the grinding vessel very simple for the laboratory personnel. After starting the program on the HMI panel the grinding vessel is locked by a pneumatic cylinder. After completion of the pulverizing process, the grinding vessel is automatically evacuated via the bottom valve. The ground material is filled into a sample cup which can be removed from a separate output position. In the meanwhile, the grinding vessel is automatically cleaned by compressed air to be ready for the next grinding action.



Pneumatic clamping of the grinding vessel

Increased efficiency and reproducibility

The HP-M 500 eliminates lengthy and arduous manual operations resulting in significantly increased laboratory efficiency and sample throughput. Concurrently, the automation involves higher reproducibility of the sample preparation process and increased analytical accuracy.

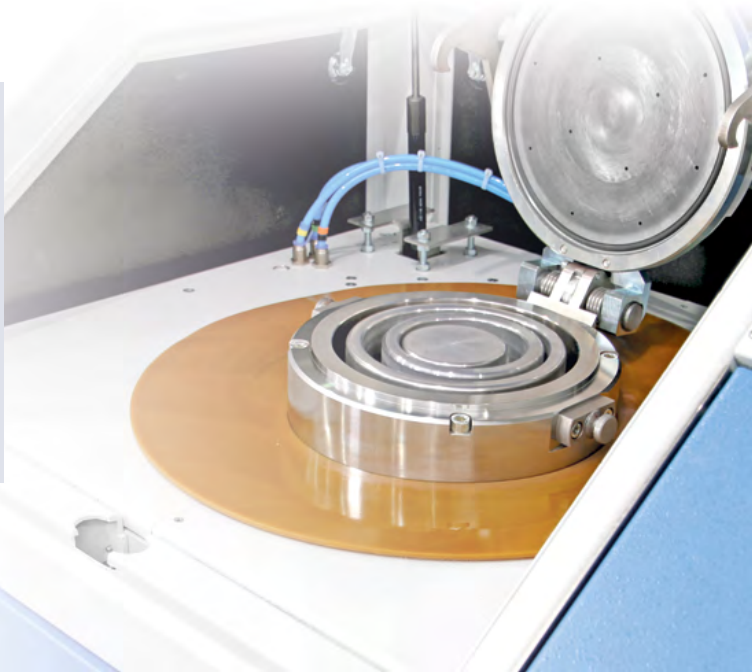
Improved labor safety and maintenance

Due to the automated discharge of the sample material it is no longer necessary to remove the heavy grinding vessel from the machine. This is an important condition to reduce potential safety risks and decrease the physical workload of the operator. Furthermore, it leads to a lower dust exposure in the workplace.

The HP-M 500 is fully encapsulated, insulated against noise and has a protective switch on the machine door. The emergency stop leads to immediate disconnection of power to the machine. The serviceable machine components including the swinging aggregate are easily accessible leading to simple and fast maintenance and service works.

At a glance

- Pulverizing large sample volumes using 500 ccm or 1000 ccm grinding vessels
- Applicable for a wide range of material including minerals, slag and ferroalloys
- Improvement in labor safety, analytical reproducibility and sample throughput due to automated sample preparation



Technical Description

Model HP-M 500

• Colour	RAL 5007/7035
• Operating manual	1-set, English

Dimensions L x W x H	
Machine	1100 x 1340 x 870 mm
Machine incl. Packing	1400 x 1700 x 1200 mm

Weight	
Machine	Approx. 720 kg
Machine incl. Packing	Approx. 880 kg

Power supply and consumption	
Standard voltage	3 x 400 V, 50 Hz
Voltage range	3 x 380–400 V, 50 Hz 3 x 440–480 V, 60 Hz
Neutral wire	Not required
Connected load	3,5 kVA

Connection points	
Compressed air	At the rear site of the machine
Connection stud for de-dusting unit	At the rear site of the machine
Diameter of connection stud	80 mm

Electric control cabinet (integrated)	
PLC-control	Siemens PLC SIMATIC S7
Control voltage	24 V
Protection	IP 55
Insulation class	B

Sample input/output	Cup input/output in front of the machine

Adjustable program parameter	
Number of programs	16
Grinding time	10–999 s
Rotation speed	600–1500 rpm

Available grinding vessel

- Chromium steel 1000 ccm
- Chromium steel 500 ccm

Processable samples	
Material	Silicate, cement, ceramic material, ores, iron sinter, slag ferroalloys and various other minerals
Grain size	Max. input grain size: 6 mm
Hardness	Max. 9 Mohs

CE Die Ausführung der Maschine entspricht den geltenden UVV- und VDE-Vorschriften. Technische Änderungen vorbehalten.

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