

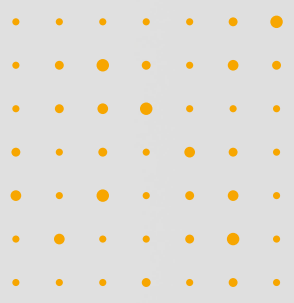
HERZOG

HSM

Pulverizing mill

HTP

Pellet press



Your quality. Our focus.

[www.herzog-maschinenfabrik.de](http://www.herzog-maschinenfabrik.de)

# The standard for sample preparation

The combination of the HSM and HTP delivers efficiency, reliability, and precision for your laboratory's highest demands.

## Pulverizing mill HSM

### Short grinding times – long life span

The HERZOG HSM vibration disk mill is suitable for pulverizing of minerals, slags, ferro-alloys and other basic material. The high-speed of the drive motor enables the grinding of even hard materials with short process times. Due to the robust design with twin eccentric disk bearings the HSM mill achieves a long service life with a minimum of maintenance.



### Complete flexibility

The pulverizing parameters of the Herzog HSM mill are controlled by a PLC program. This allows an easy operation of the machine and complete flexibility in selection of processing parameters. A wide variety of different sizes and materials can be selected for the grinding vessels – according to the requirements of the customer.



Optimal sample preparation of powder material

## At a Glance

- The HERZOG pulverizing mill HSM and pellet press HTP offer the full benefits of program-controlled sample preparation for x-ray fluorescence analysis.
- Pulverizing and pelletizing with the HERZOG HSM and HTP significantly increase reproducibility and accuracy of sample preparation.
- The HSM and HTP are fully encapsulated, insulated against noise, and have safety cutouts for operator protection. Dust and noise burden are reduced, and safety enhanced.
- The HERZOG pulverizing mill and pellet presses are high-quality, precision engineering products with compact dimensions. They are ideally suited for laboratory requirements.

## Pelletizing press HTP

### Optimum quality of pressed pellets

The HERZOG hydraulic HTP press produces high-quality pressed pellets with a mirrorlike surface necessary for optimal XRF results. The HSM achieves the desired homogeneity and stability of each individual pellet with a maximum of reproducibility.

The HTP 40 reaches press forces of 400 kN, the HTP 60 of up to 600 kN even with larger sample diameters.

### Easy handling

A swing-out cross-head makes filling and cleaning of the die quick, simple and safe. A number of pressing variables can be selected, depending on the press tool employed. Precision press tools with a range of diameters and materials permit free pressing, pressing in aluminium shells, and pressing in steel rings.



### Precise control of the pelletizing process

The pelletizing process of the HSM is controlled by the PLC program. This leads to substantial improvement in reproducibility of sample preparation and consequently more precise analysis results.

Pelletizing parameters such as total pressing force, incremental increase and decrease of pressure as well as pressure holding time can be preset on the HMI panel.

The pressure increase and decrease during pelletizing are controlled such that inner stresses within the sample are reduced. This allows the production of perfect pellets even with complicated sample material.



## Technical Data

### Model

**HSM 100 H / HSM 100 P / HSM 250 H / HSM 250 P**

Color: Blue / White

Labeling Text: English

Instruction Manual: 1 Copy (English)

**HTP 40 / HTP 60**

Color: Blue / White

Labeling Text: English

Instruction Manual: 1 Copy (English)

### Dimensions (LxWxH)

Machine: 550 x 750 x 1,000 mm

Machine incl. Packaging: 1,000 x 1,050 x 1,350 mm

Machine: 550 x 620 x 1,250 mm

Machine incl. Packaging: 900 x 1,050 x 1,550 mm

### Weight

Machine: 250 kg

Machine incl. Packaging: 360 kg

Machine: 340 kg

Machine incl. Packaging: 470 kg

### Electrical Power Supply & Consumption

Voltage: 400 V, 50 Hz, 3-Phase, or Other as Required

Neutral Conductor: Not Required

Power Consumption: 2 kVA

Voltage: 400 V, 50 Hz, 3-Phase, or Other as Required

Neutral Conductor: Not Required

Power Consumption: 4 kVA

### Pneumatic Supply & Consumption

Version: 250 P / 100 P (Pneumatic Clamping Facility)

Pressure: Min. 5 bar, Max. 10 bar

Consumption per Sample: 10 dm<sup>3</sup> (Approximate)

Only required with pneumatic ring cleaning device

Pressure: Min. 5 bar, Max. 10 bar

Consumption per Sample: 15 dm<sup>3</sup> (Approximate)

### Electrical Switchgear Cabinet (Integral)

Programmable Controller: SIMATIC S 7-1200

Control Voltage: 24 V DC

Degree of Protection: IP 54

Insulation Class: B

Programmable Controller: SIMATIC S 7-1200

Control Voltage: 24 V DC

Degree of Protection: IP 54

Insulation Class: B

### Control Parameters

Grinding Duration: 1-900 s

Pressure build-up / pressure decrease

Pressure holding time

Press force

### Sample Types

Material:

A range of materials, e.g. raw cement meal, cement, clinker, slag of different types, ores, ferroalloys, and other basic material

Grain size: 10 mm

Hardness: Max. 9 Mohs

Temperature: Max. 100 °C

### Pressing Process

Pressing in steel rings:

Standard 40 x 35 x 14 mm

Or 51.5 x 35 x 8.6 mm

Pressing in aluminum shells:

Standard diameter 40 mm

Free pressing diameter 15-50 mm

### Options

- Pneumatic clamping device (HSM 100 P, HSM 250 P)
- Grinding vessel chromium steel (10, 50, 100, 250 ccm), tungsten carbide (10, 50, 100, 250 ccm), colmonoy (100, 250 ccm), agate (100 ccm)
- Continuously variable rotation speed (750 – 1,500 rpm)

- Press tool 40 mm diameter for free pressing
- Press tool 40 mm in aluminium cups
- Press tool 40 mm for pressing in steel rings
- Press tool 51.5 mm for pressing in steel rings
- Cleaning device, manual
- Cleaning device, pneumatic

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