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# HAF/2

Semi-automatic  
milling machine for  
non-ferrous samples



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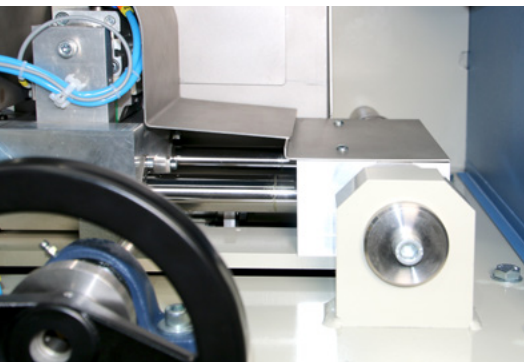
HAF/2

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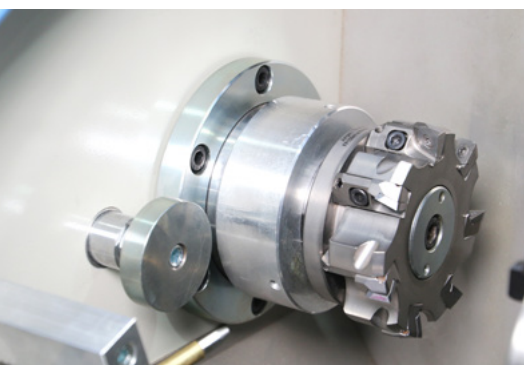
# The new HAF/2 – setting standards for quality, user-friendliness and occupational safety



Easily accessible machine room



Optimally designed machine interior



Equipped for perfect milling results

The HAF/2 is a semi-automatic milling machine especially suited for the preparation of non-ferrous samples. The HAF/2 is the workhorse in many QC laboratories worldwide and enables the machining of perfect and reproducible sample surfaces for OES and XRF analyses. The design allows for a particularly easy and ergonomic operation of the machine. At the same time, great importance was given to a high level of occupational safety.

## Engineered for preparation of perfect samples

The hydro-pneumatic system enables an absolutely smooth milling advance of the sample leading to an especially even sample surface. After completion of the milling process, the clamping device is quickly returned to the starting position and the sample can be removed by the operator. This means that the machine is instantly available for the next sample and high throughput rates can be achieved. The integrated frequency converter allows that the rotation speed of the sturdy milling spindle can be easily set via a selector switch. The feed rate of the support can be controlled continuously by a rotary switch. If required for milling, a coolant can be applied precisely on the sample surface with the help of the spray nozzle. All this enables an optimal adaptation of the milling parameters to the specific requirements of each sample material.



Easy cleaning of the machine

## Ergonomic design

The HAF/2 has an input flap that can be moved easily with the help of a gas pressure spring and is held securely in the open position.

The milling chamber of the HAF/2 has a large opening.

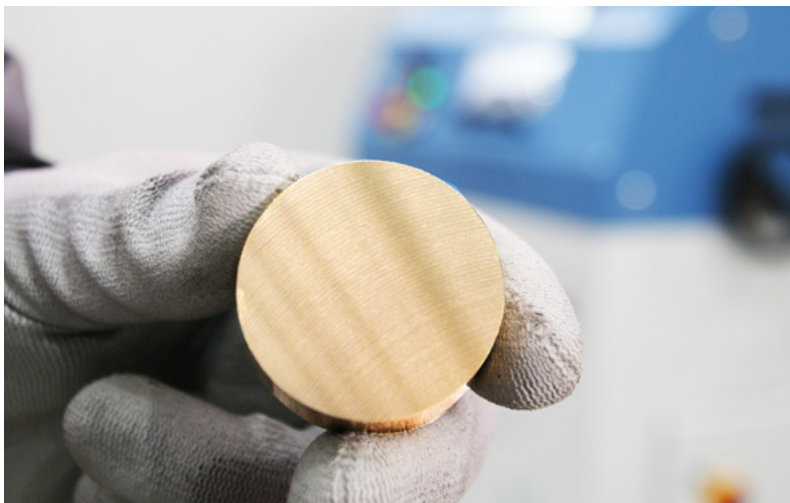
This makes it easy for the operator to clamp the sample in the chuck and to adjust the depth of infeed. The three-jaw chuck makes it possible to process different sample shapes up to a maximum diameter of 70 mm. After closing the input flap the milling process is initiated simply by pressing the start button.

The inner cover of the milling chamber has been designed in such a way that chips are efficiently drained and collected in the compartment drawer underneath. The discharge of the chips from the milling chamber is supported by an exhauster (optional) installed inside of the machine. The side cover can be removed in just a few steps and the machine room is freely accessible for cleaning and maintenance tasks.

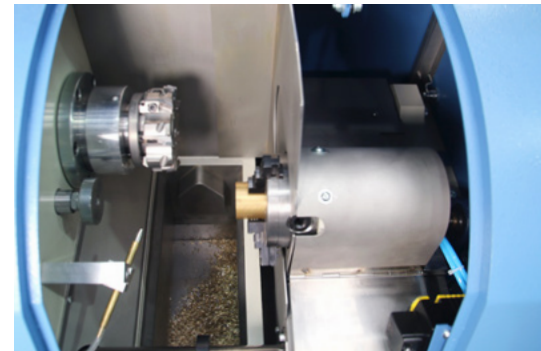
## High safety – low noise

The HAF/2 sets standard for occupational safety. The semi-automatic milling process and the use of a safety switch on the input flap ensure the health and safety of the operating personnel.

Noise emission has been minimized which allows the integration of the machine in a laboratory environment.



Optimal sample surface for spectroscopy



Efficient chip drainage



Chip collection in drawer



Precise adjustment of the milling depth

# Technical data

## Dimensions W x L x H

900 x 600 x 1380 mm

## Weight

Approx. 415 kg

## Power supply and consumption

Voltage 400 V, 50 Hz,  
3-phase, or as required  
Neutral conductor Not required  
Power consumption max. 4 kVA

## Compressed air supply and consumption

Pressure setting 0,6 MPa ( $\pm$  6 bar)  
Consumption 6 dm<sup>3</sup> / cycle  
(max. 250 dm<sup>3</sup> / min at peak)

## Clamping device

Type 3-jaw lathe chuck  
Min. sample diameter 10 mm  
Max. sample diameter 70 mm

## Tool rotation speed

2500, 3500 and 4500 min<sup>-1</sup>  
adjustable via selector switch

## Options (not included in the machine price)

Integrated exhauster  
Special cutter head with tungsten carbide tips  
Special cutter head with diamond tips

*The design of the machine complies with the applicable accident prevention and VDE regulations. We reserve the right to make technical modifications.*

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We reserve the right to make technical modifications.

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