



Optimized Preparation of Oxidic Sample Materials for Spectroscopic Analysis

HAG-S

The HAG-S fusion machine is a cost-effective solution for the fusion of oxidic powder samples for which grinding and pressing methods are unable to yield the requisite analytical accuracy.

All components of the machine, including the switch cabinet, are enclosed within a single housing. With its space-saving modular design, the HAG-S therefore meets all the requirements for laboratory use.

When the borate-sample mixture which is proportioned in advance into the Pt / Au crucible, has been placed in the insertion magazine, the machine is started by means of a start command. The fusion process employs a gas-oxygen burner with a maximum fusion temperature of 1400 °C.

A program-controlled translatory swivel movement ensures that the molten mixture is homogenized perfectly and remains free of bubbles during the fusion process.

The integral temperature control facility permits program control of the fusion process. The pyrometer located above the burner, for example, monitors the fusion temperature during the fusion process.

Following the fusion process, the fused material is poured into casting dishes and then cooled in stages.



The pyrometer located above the burner monitors the fusion temperature during the fusion process, ensuring that the temperature characteristic is adjusted to the sample quality.

The HAG-S has a sample insertion magazine with capacity for 10 samples to enable it to be integrated perfectly into a modern laboratory. Sample insertion and discharge by an external robot is a further option, as is the transport of the beads to the spectrometer by conveyor belt. The HAG-S can also be fitted with a second fusion unit as an option, in order to increase the sample throughput. Two samples can then be processed simultaneously.

TECHNICAL DATA :

Dimensions:

880 x 850 x 1780 mm

Weight:

approx. 450 kg

Electrical power supply and consumption:

400 V , 50 Hz, 3 – phase, or other as required

Neutral conductor not required

Power consumption of approx. 4 kVA

Electrical switchgear cabinet:

PC controller: integrated

Degree of protection : IP 44

Insulation class : B

Compressed air supply and consumption:

Pressure setting: 6 bar

Consumption: approx. 400 dm³ / N per sample

Gas supply:

Natural gas (Pressure of approx. 80 mbar)

or

Liquid gas (Pressure of approx. 50 mbar)

Oxygen (Pressure of approx. 1.5 bar)

Options:

- Discharge conveyor system with magazine function
- 2nd fusion unit
- Preparation for connection to a robot