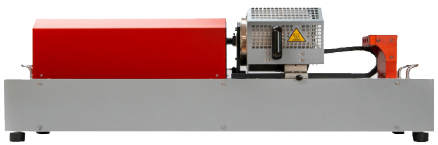
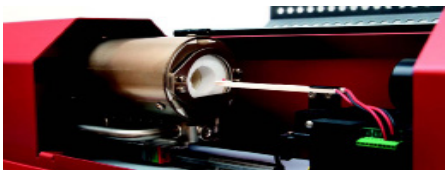


CODE GT3001
MODEL ..... GT–HMS
EXTERNAL DIMENSIONS. . . .800x260x310 mm
POWER. ..... 1500 Watt
VOLTAGE ..... 220 V – 50 Hz single phase
WEIGHT ..... .30 Kg



HEATING MICROSCOPE GT–HMS

DESCRIPTION

The heating microscope is the ideal instrument for studying the phenomena of softening, melting, swelling or combustion that occur at high temperatures in materials such as glasses, ceramic glazes, metals, foundry sands and fuel ashes. For softening and melting tests with the heating microscope, a cylindrical specimen of 2 millimetres in diameter and 3 millimetres in height is used, which is prepared with a small manual press provided. It is also possible to frame and follow the behaviour of irregularly shaped specimens. The specimen is placed on a disposable sintered alumina platform. A digital camera with microscopic optics and a long focal length frames the sample placed on the plate and transfers the image to the software, which analyses it and obtains the data.

APPLICATIONS

- Fusibility of ceramic raw materials, glazes, frits, engobes, ashes, glasses.
- Characteristic shapes such as sintering, softening, sphere, half–sphere, and melting.
- Geometrical parameters changes i.e. height, volume, perimeter, width, area, up and down contact angle, ratio between base and height.
- Fusibility according to international standards (cylindrical samples): DIN 51730, ISO 540, CEN/ TS 15370 & CEN/TR 15404, Chinese QB/T 1546– 2016.
- Bloating effects.
- Theoretical viscosity.
- Surface tension at high temperature

TECHNICAL SPECIFICATIONS

- Sample Shape: Cylinder
- Sample Height: 3 mm
- Sample Diameter: 2–3 mm
- Shape Type: Regular or irregular shape
- Measurement Range: Dimensional changes up to 100% can be measured
- Simultaneous Tests: 1 samples
- Dimensional Change Resolution: 3.5 µm
- Sensor Resolution: Total 60 Megapixel
- Light Source: 480 nm; 3 W; blue led
- Filter: Interference
- Frame Acquisition Rate: From 1 to 15 frames per second, user–selectable.
- Temperature Range on Sample: RT–1300/1400/1600 °C depending on the heating element type.
- Temperature Range on the Furnace: RT–1350/1450/1650 °C depending on the heating element type
- Heating Rate: 1 to 30/80 °C/min depending on the heating element type
- Temperature Resolution: 0.1 °C
- Atmosphere Control: Air, protective atmosphere on demand

THERMAL CYCLE

- Unlimited number of heating/cooling/isothermal segments
- Simulation of industrial thermal cycles
- Maximum heating rate: 30/80°C / min

EMBEDDED COMPUTER

- Intel Core i5 Processor
- Ram 16 GB
- Linux Operating System
- Automatic data backup

EQUIPMENT

Platform, Control and Measurement Software Suite, Horizontal Filament Furnace, Platinum Heating Element 1400 °C, Heating Microscope Module, Dedicated Microscope Software.

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