

## PRODUCT SPECIFICATIONS

# Thermo Scientific HAAKE MiniJet Pro Piston Injection Moulding System

## Sample specimen preparation

The Thermo Scientific™ HAAKE™ MiniJet Pro Piston Injection Moulding System optimizes your development process, enabling you to test mechanical properties of specimens from 2 ml up to 12.5 ml. The need to produce various sample geometries coupled with the common reality of limited material quantities can often create great difficulties in a product's development.

### Applications

- Sample preparation for mechanical testing, optical testing and rheometry
- Preparation of special specimen for pharmaceutical testing

### Main features

- Small sample volume
- Quick & easy to use
- Interchangeable molds
- Liquid cooling (optional)



### Efficient sample specimen preparation

The HAAKE MiniJet Pro system allows you to optimize your development process and realize cost reduction opportunities:

- The production of test specimens from 2 ml up to 12.5 ml of material.
- Test specimens can be produced from powders, pellets or direct melt transfer.
- Specimen geometries offered from established standards to customized molds.
- A control and design concept that provides simplistic handling with consistent, reproducible results.

The HAAKE MiniJet Pro offers a complementary workflow solution to product development investigations when used together with the Thermo Scientific™ HAAKE™ MiniLab 3 Micro Compounder or Process 11 Compounder and the Thermo Scientific™ HAAKE™ MARS™ Rheometers System.



**State-of-the-art technology driven by customer needs**

The HAAKE MiniJet Pro system is designed as a piston injection molding system. Material consumption can be reduced dramatically in comparison with conventional injection molding units due to:

- Reduced cylinder volume, resulting in a smaller quantity of required material.
- Almost complete transportation of material into the mold, promoting minimal loss and waste.

In addition, an injection pressure of up to 1100 bar can be realized, thus enabling the processing of highly viscous materials.

**Vertical machine design features**

- Simple loading of powders and pellets within the system cylinder
- Quick and easy removal of the heated cylinder for direct melt transfer connecting to the HAAKE MiniLab 3, Process 11 or other extrusion systems
- Simple design for the exchange of molds. One tool is needed (and provided).

Several mold designs are available, allowing for the preparation of many different types of sample specimens. Standardized molds for common mechanical testing are offered (see table), as well as customized solutions that can be produced upon request.

To ensure a consistent and reproducible sample specimen, the HAAKE MiniJet Pro system is equipped with precise microprocessor controls. All processing parameters such as temperature (separate for cylinder and mold), injection pressure and duration, and post-pressure can be controlled and closely monitored. Strict management of the post-pressure during sample creation enables optimum compensation for material shrinkage due to the cooling of the sample. Potential user influences on sample quality also have been eliminated through menu structure and control as well as parameter storage.

Technical specifications HAAKE MiniJet Pro	
Injection pressure	max. 1100 bar
Mold material	1.2767
Dimensions	340 mm x 460 mm x 740 mm
Power	230 V ± 10 %, 3.15 A, 50..60 Hz 115 V ± 10 %, 3.15 A, 60 Hz
Air pressure	max. 10 bar
Mold temperature	max. 250 °C
Liquid cooling option	max. 80 °C
Cylinder temperature	max. 450 °C

Description	Type
Tensile test	ISO 527-2
Tensile test	ASTM D638 IV & V
Charpy test	ISO 179
Izod impac test	ASTM 4508
Rheometer probe disc	D = 20, h = 1.5 mm
Rheometer probe disc	D = 25, h = 1.5 mm
Rheometer probe disc	D = 35, h = 1.5 mm
DMA test bar	L = 60, w = 10, h = 1 mm
Custom	on request

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