

TECHNICAL DATA SHEET

ALab™ MS-H380-F Series LCD Digital Magnetic Stirrer Heating Mantle

Magnetic stirrer heating mantle · 100–2000 mL round-bottom flasks · 25–380 °C · 100–1500 rpm · PT1000 input · five models



ACS Material ALab™ MS-H380-F Series Magnetic Stirrer Heating Mantle

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SECTION I

Product Overview

The ALab™ MS-H380-F Series comprises five LCD digital magnetic stirrer heating mantles supplied by ACS Material for 100, 250, 500, 1000 and 2000 mL round-bottom flasks. Every model gives a 25–380 °C temperature control range, 100–1500 rpm stirring from a brushless DC motor, a timer from 1 minute to 99 hours 59 minutes, an RS232 data connector and a PT1000 external temperature sensor input rated ± 0.2 °C. Six values change across the range — nominal flask volume, mantle inner diameter, heating power, total power, dimensions and weight — and everything else is shared. The well is formed from a glass-fibre inner sleeve with aluminium silicate wool insulation inside a powder-coated metal housing, and a dual-side temperature-sensor bracket is part of the design. Two independent safety circuits, overheat protection at 500 °C, overcurrent and ground-fault protection, a residual-heat warning above 50 °C and a keypad lock are fitted as standard. Choose the model by nominal flask volume and mantle inner diameter. Tell us the electrical version and control requirements you need, and we will confirm the configuration on your quotation.

SECTION II

Core Advantages

- **A mantle sized to the flask** — bores of 70, 90, 115, 142 and 181 mm for 100 to 2000 mL flasks
- **Stirring and heating in one instrument** — brushless DC motor, 100–1500 rpm, held to ± 10 rpm
- **External temperature sensor input** — PT1000 rated ± 0.2 °C; ask us to confirm the control mode
- **Layered protection** — dual safety circuits, 500 °C overheat cut-out, HOT warning, keypad lock

SECTION III

Specifications

Technical data

Specifications	
Motor / Speed	Brushless DC motor, 5 W output · 100–1500 rpm, accuracy ± 10 rpm
Temperature Control Range	25–380 °C
Temperature Accuracy	Control ± 1 °C (<100 °C), 1% (>100 °C) · display ± 0.1 °C
External Temperature Sensor	PT1000 · published sensor accuracy ± 0.2 °C
Display / Timer	LCD — speed, temperature and time · 1 min – 99 h 59 min
Overheating Protection	500 °C · “Hot” warning above 50 °C
Data Connector / Protection	RS232 · IP21
Power Requirements	100–120 V, 60 Hz · 200–240 V, 50 Hz
Permissible Ambient	5–40 °C · 80% humidity
Compatible Containers	100, 250, 500, 1000 and 2000 mL round-bottom flasks

Model range	
MS-H380-F100	100 mL flask · 70 mm bore · 110 W heating / 130 W power · 267 × 227 × 169 mm · 3.8 kg
MS-H380-F250	250 mL flask · 90 mm bore · 150 W heating / 170 W power · 267 × 227 × 169 mm · 3.8 kg
MS-H380-F500	500 mL flask · 115 mm bore · 330 W heating / 350 W power · 267 × 227 × 169 mm · 3.8 kg
MS-H380-F1000	1000 mL flask · 142 mm bore · 430 W heating / 450 W power · 302 × 260 × 189 mm · 4.7 kg
MS-H380-F2000	2000 mL flask · 181 mm bore · 630 W heating / 650 W power · 337 × 300 × 214 mm · 6.1 kg

Dimensions are given as W × D × H. Match your flask volume to the corresponding model and check its mantle inner diameter; if your flask differs in size or geometry, send us the dimensions and we will confirm before quoting. Heating power and total power are rated electrical values, not measured heat delivered into a liquid. We do not publish a heat-up time for these mantles.

Configuration and scope of supply

- Supplied: ALab™ MS-H380-F heating mantle, 1 unit
- Electrical version: 100–120 V/60 Hz or 200–240 V/50 Hz
- We confirm on quotation: PT1000 probe, support rod, clamp
- Model: F100 / F250 / F500 / F1000 / F2000 — tell us which
- Interfaces: PT1000 sensor input · RS232 connector
- We confirm on quotation: external-sensor control mode

SECTION IV

Applications

We supply the ALab™ MS-H380-F Series for the following applications:

- Organic synthesis and polymerization
- Distillation and purification
- Sample dissolution and extraction — including pretreatment before analysis
- Catalytic reaction kinetics research

Product value: five nominal flask sizes from 100 mL to 2000 mL sharing one specification for temperature range, speed range, timer, sensor input, connector and protections. For applications outside those listed, ask us and we will advise; we do not publish chemical compatibility data for this series.

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DISCLAIMER

ALab™ is a trademark of ACS Material, LLC, the supplier of this series. Specifications in this Technical Data Sheet are our published data for the ALab™ MS-H380-F Series; we confirm the ordered model, electrical version, control mode and supplied accessories on your quotation. Specifications are typical and may vary. ACS Material makes no representations or warranties, express or implied, regarding suitability for any application or the accuracy of this document. This equipment reaches surface temperatures that will cause burns, and the well and the flask remain hot after heating stops. As general laboratory practice, match the mantle to the flask volume ordered, keep flammable solvents clear of hot surfaces, supervise heated apparatus, and follow the operating manual supplied with the instrument together with your own safety procedures. ACS Material will not be responsible for damages resulting from use of or reliance upon this information.