

TECHNICAL DATA SHEET

ALab™ MS7-H280-G 7-Inch Infrared Magnetic Hotplate Stirrer

Digital magnetic hotplate stirrer · 100–1500 rpm · room temp.–280 °C · 180 × 180 mm microcrystalline glass work plate



ACS Material ALab™ MS7-H280-G Infrared Magnetic Hotplate Stirrer

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SECTION I

Product Overview

The ALab™ MS7-H280-G is a 7-inch infrared magnetic hotplate stirrer built around a full-coverage infrared heating element and a 180 × 180 mm microcrystalline glass work plate. It stirs up to 20 L of water on a single position at 100–1500 rpm with ±10 rpm accuracy, taking magnetic bars up to 80 mm long, and heats from room temperature to 280 °C in 1 °C increments on 900 W of heating output. Plate temperature control accuracy is ±1 °C below 100 °C and ±1% above it, with the LCD reading to 0.1 °C. An external PT1000 temperature sensor, accurate to ±0.2 °C, lets you measure in the medium rather than at the plate. A brushless DC motor, overheating protection at 340 °C, a “hot” surface warning at 50 °C, a liquid drainage groove above the control panel, IP21 protection and an RS232 data connector are all standard. The instrument weighs 3.7 kg and is available for 100–120 V and 200–240 V supply at 50/60 Hz — confirm your supply voltage, plug type and accessory configuration with us when you order.

SECTION II

Core Advantages

- **Infrared heating across the whole plate** — even heat distribution, fast response, quick heating and minimal overshoot at 900 W
- **Stirs up to 20 L of water** — one position, 100–1500 rpm ± 10 rpm, magnetic bars to 80 mm, driven by a brushless DC motor
- **Overheating protection at 340 °C** — with a “hot” warning that flashes above 50 °C even after the heater is switched off
- **Microcrystalline glass work plate** — 180 × 180 mm, high flatness, scratch and corrosion resistant, quick to clean
- **External PT1000 sensor and RS232** — measure in the medium to ±0.2 °C; connect to a computer for remote control and data logging
- **Liquid drainage groove** — above the control panel, helping protect the instrument from splashes

SECTION III

Specifications

Technical data

Specifications	
Work plate dimension [W × D]	180 × 180 mm
Work plate material	Microcrystalline glass
Motor type	Brushless DC motor
Stirring positions	1
Max. stirring quantity [H ₂ O]	20 L
Max. magnetic bar [length]	80 mm
Speed range & accuracy	100–1500 rpm, ±10 rpm
Speed display	LCD
Heating temperature range	Room temp.–280 °C, increment 1 °C

Specifications	
Temperature display	LCD
Temperature control accuracy	±1 °C (<100 °C), ±1% (>100 °C)
Temperature display accuracy	0.1 °C
External temperature sensor	PT1000 (accuracy ±0.2 °C)
Overheating protection	340 °C
“Hot” warning	50 °C
Data connector	RS232
Protection class	IP21
Motor rating output	10 W
Heating output	900 W
Power	920 W
Voltage, frequency	100–120 / 200–240 V, 50/60 Hz
Dimension [W × D × H]	215 × 360 × 112 mm
Weight	3.7 kg
Permissible ambient temperature and humidity	5–40 °C, 80% RH

Specifications are typical and may vary; confirm product details at the time of quotation. Note that three temperature figures are given and they describe different things: temperature CONTROL accuracy is ±1 °C below 100 °C and ±1% above 100 °C; SENSOR accuracy for the supplied external PT1000 is ±0.2 °C; and DISPLAY accuracy is 0.1 °C. The maximum stirring quantity of 20 L is rated for water. If you need to hold a specific tolerance in your medium, or to stir a different medium, contact us with the application before ordering.

Scope of delivery

— **Instrument:** ALab™ MS7-H280-G infrared magnetic hotplate stirrer

— **Electrical supply:** 100–120 / 200–240 V, 50/60 Hz, 920 W total. Confirm your supply voltage and plug type when you order

— **Supplied with:** External PT1000 temperature sensor and a support stand with clamp. Your final configuration — accessories, quantities and part numbers — is confirmed on your quotation

— **Connection:** RS232 data connector for remote control and data saving

SECTION IV

Applications

Use the ALab™ MS7-H280-G for:

- **Magnetic stirring** — up to 20 L of water on one position, 100–1500 rpm, with a magnetic bar up to 80 mm
- **Heating** — room temperature to 280 °C in 1 °C increments at 900 W heating output
- **Temperature measurement in the medium** — using the supplied external PT1000 sensor, accurate to ±0.2 °C
- **Recording and remote control** — via the RS232 data connector, where your protocol requires a parameter record

The capabilities above are individual ratings rather than a validated combined duty. Assess vessel, medium, volume, temperature, viscosity and safety conditions for your own application, and confirm chemical compatibility between your samples and a microcrystalline glass work plate. Contact us with your application and we will confirm whether the MS7-H280-G is the right model for it.

Product value: full-coverage infrared heating to 280 °C at 900 W beneath a 180 × 180 mm microcrystalline glass work plate, stirring from 100 to 1500 rpm and rated to 20 L of water, with an external PT1000 temperature sensor and RS232 data connection, from a 3.7 kg benchtop instrument. Part of the ALab™ magnetic stirring range from ACS Material.

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