

TECHNICAL DATA SHEET

ALab™ MS10-H500-Pro Magnetic Hotplate Stirrer

Digital magnetic hotplate stirrer · 254 × 254 mm glass ceramic plate · 500 °C plate limit · 100–1500 rpm · 30 L (water)



ACS Material ALab™ MS10-H500-Pro LCD Digital Magnetic Hotplate Stirrer with 10 inch ceramic plate

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SECTION I

Product Overview

The **ALab™ MS10-H500-Pro** is a digital magnetic hotplate stirrer built around a **254 × 254 mm (10 inch) glass ceramic work plate**. It heats from room temperature to a **500 °C plate limit** in 1 °C increments, with overheating protection at 540 °C, and stirring runs from **100 to 1500 rpm** at ±1 rpm resolution on a brushless DC motor rated at 10 W. Maximum stirring quantity is **30 L for water**, with magnetic bars up to 80 mm long. Speed and temperature share one LCD. An external PT1000 sensor, rated at ±0.2 °C, moves the control point from the work plate into your medium. The timer runs from 1 minute to 99 h 59 min, an SD card records the instrument's running data in real time, and a "HOT" warning flashes whenever the work plate is above 50 °C, including after the hotplate has been switched off.

SECTION II

Core Advantages

- **Large-format work plate** — 254 × 254 mm of glass ceramic handling batches up to 30 L of water, the large-format unit in the ALab magnetic stirring range
- **500 °C plate limit** — room temperature to 500 °C in 1 °C increments at the work plate, overheat protection at 540 °C
- **External PT1000 input** — an external PT1000 input regulates on your liquid rather than the work plate; sensor accuracy ±0.2 °C
- **Timer and SD-card recording** — a settable run from 1 minute to 99 h 59 min, with running data recorded in real time

SECTION III

Specifications

Technical data

Specifications	
Work Plate Dimension [W × D]	254 × 254 mm (10 inch)
Work Plate Material	Glass ceramic
Motor	Brushless DC motor · rating output 10 W
Stirring Positions	1
Max. Stirring Quantity [H ₂ O]	30 L (water)
Max. Magnetic Bar [length]	80 mm
Speed Range	100–1500 rpm, resolution ±1 rpm · LCD
Heating Temperature Range	Room temp. – 500 °C at the work plate, increment 1 °C · LCD
Temperature Control Accuracy (plate)	±1 °C (<100 °C) · ±1% (>100 °C)
Temperature Display Accuracy	±0.1 °C
External Temperature Sensor	PT1000 · sensor accuracy ±0.2 °C
Overheating Protection	540 °C
"Hot" Warning	50 °C
Timer Function	1 min – 99 h 59 min
Data Connector	SD card

Specifications

Protection Class	IP20
Power Requirements	100–120 / 200–240 V, 50/60 Hz · 1700 W total · 1500 W heating output
Dimensions [W×D×H]	328 × 424 × 138 mm
Weight	7.2 kg
Permissible Ambient Conditions	5–40 °C, 80% RH

500 °C is the work plate limit, not a guaranteed sample temperature. 30 L is a maximum stirring quantity for water; ACS Material does not state a capacity for other media. Speed resolution, plate control accuracy, display accuracy and external sensor accuracy are four separate figures and are not interchangeable. Where a value is not listed above it is not specified on this data sheet — contact ACS Material and we will confirm it for your configuration.

Where it fits in the ALab range

The MS10-H500-Pro is the large-format hotplate stirrer in the ALab range. Specify it where vessel size, batch volume, timed running or recorded run data matter: a 10 inch work plate, a 30 L water stirring capacity, a settable timer and SD-card recording, from a 328 × 424 mm footprint at 7.2 kg. Where the bench is tighter or batches are smaller, ACS Material can match a smaller plate and capacity to the work.

Configuration

The MS10-H500-Pro accepts an external PT1000 temperature sensor for control on the medium. Your approved ACS Material quotation specifies the sensor model, support accessories, quantities, stir-bar inclusion and the cord and electrical configuration supplied with your order. Contact us on how the instrument will be used and ACS Material will quote the right configuration.

SECTION IV

Applications

The MS10-H500-Pro supports the following. Suitability for any particular method, medium or vessel must be validated by the user:

- **Heated stirring** — within the rated plate temperature range and water stirring quantity
- **Timed operation** — settable run time from 1 minute to 99 h 59 min
- **Recorded runs** — SD-card recording of the instrument's running data in real time
- **Medium-referenced control** — via an external PT1000 sensor rather than plate temperature

Product value: a 254 × 254 mm glass ceramic plate, a 500 °C plate limit in 1 °C increments, 100–1500 rpm at ±1 rpm resolution and a 30 L water stirring quantity, with an external PT1000 input, a timer and SD-card recording.

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