

ULPMAT

ADVANCED MATERIALS & LABORATORY SOLUTIONS

Laboratory Stirrer

Magnetic, heating and electric stirrers for mixing, temperature-controlled stirring and reaction applications in chemical, pharmaceutical, materials and food laboratories.

MS-5

MS-20H

MS-HT SERIES

ME-30

[Configure the right stirrer for your process »](#)



UltraPurMat Group Co., Ltd.

High-purity materials & laboratory equipment

ABOUT ULPMAT

About ULPMAT

UltraPurMat Group Co., Ltd (ULPMAT) is an integrated R&D, manufacturing and sales company specialising in high-purity thin-film deposition materials and advanced inorganic powders. Extending its expertise in laboratory and process environments, ULPMAT now offers a complete range of magnetic, heating and electric stirrers engineered for reliable mixing in chemical, pharmaceutical, materials and food laboratories.

Complete Stirring Range

Basic magnetic, heating magnetic and electric mechanical stirrers, covering routine liquid mixing through to slurries, suspensions and polymer systems.

Stable & Durable

Designed for long-term continuous operation, including at elevated temperatures, with simple controls and convenient maintenance.

Precise Temperature Control

External PT1000 sensing and bath heating options deliver accurate, uniform temperature for synthesis, extraction and reflux work.

Application Support

Selection advice, stirring blade matching and configuration support for specific vessels and experimental conditions.

Product Series Overview

Series	Type	Main Function	Typical Application
Magnetic Stirrer Series	Magnetic stirring	Liquid mixing and homogenisation	Low- to medium-viscosity liquids
Heating Magnetic Stirrer Series	Magnetic + heating	Mixing with temperature-controlled heating	Synthesis, extraction, reflux
Heating Bath Magnetic Stirrer	Magnetic + bath heating	Constant-temperature bath stirring	Reflux and high-temperature reactions
Electric Stirrer Series	Mechanical stirring	Mixing of medium- to high-viscosity materials	Slurries, suspensions, polymers

Note: capacities quoted as maximum water stirring capacity under standard conditions; actual performance depends on the specific model, vessel size, impeller and liquid viscosity. ULPMAT can advise on the most suitable configuration for your application.

MAGNETIC STIRRER

MS-5 Basic Magnetic Stirrer

Compact magnetic stirrer for routine laboratory mixing

5000 ml Max water capacity	50–2000 r/min Stirring speed	40 mN·m Motor torque
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The MS-5 basic magnetic stirrer is a general-purpose laboratory mixing device designed for liquid stirring without heating. Its self-developed motor and simple, durable construction support long-term continuous operation, making it suitable for routine liquid-phase mixing.

Key Features

- Wide speed range from 50 to 2000 r/min, from small samples up to 5 L water capacity.
- Stable motor performance for long-term continuous operation.
- Simple speed control for convenient operation and maintenance.
- Magnetic drive eliminates the mechanical stirring shaft and leakage risk.
- Compact design saves valuable laboratory bench space.

Typical Applications

Routine solution preparation and reagent mixing in university and college laboratories, research institutes, environmental testing and fine chemical applications.

Specifications

Parameter	Specification
Model	MS-5
Max. Stirring Capacity (Water)	20–5000 ml
Stirring Speed	50–2000 r/min
Motor Torque	40 mN·m
Drive	Magnetic, shaft-free
Heating	No

Notes — The MS-5 is a stirring-only unit without heating. Stirring bars are available as accessories and should be selected according to vessel volume and liquid viscosity.

HEATING MAGNETIC STIRRER

MS-20H Heating Magnetic Stirrer

Magnetic stirring with precise temperature control

20 L Max water capacity	±0.5°C Temp. accuracy	250°C Max liquid temp.	340°C Plate temp.
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The MS-20H integrates magnetic stirring with precise heating and temperature control. An external PT1000 sensor measures the actual liquid temperature rather than relying only on the heating plate. With up to 20 L water stirring capacity, it suits synthesis, extraction and reflux experiments that need simultaneous heating and stirring.

Key Features

- Ceramic-coated silicon-aluminium heating plate: corrosion resistant, uniform heat transfer.
- External PT1000 sensor measures liquid temperature for more accurate control.
- ±0.5°C control accuracy with 400°C over-temperature protection.
- Stable stirring-speed output for continuous operation at elevated temperatures.
- Up to 20 L water stirring capacity for small- and medium-scale work.

Specifications

Parameter	Specification
Model	MS-20H
Max. Stirring Capacity (Water)	20–20,000 ml
Stirring Speed	50–2000 r/min
Motor Torque	40 mN·m
Working Plate Material	Si-Al alloy, ceramic coated
Temperature Sensor	External PT1000
Temp. Control Accuracy	±0.5°C
Heating Plate Temperature	Room temp.–340°C
Liquid Temperature	Room temp.–250°C
Over-temp. Protection	400°C

Typical Applications

Organic synthesis, pharmaceutical research and new-material experiments, particularly processes requiring simultaneous heating and stirring, reflux or extraction.

Notes — Immerse the external PT1000 probe in the liquid for accurate temperature control. The ceramic-coated silicon-aluminium plate resists common laboratory reagents and cleans easily.

HEATING BATH MAGNETIC STIRRER

MS-HT Series Heating Bath Magnetic Stirrer

*Constant-temperature stirring for reflux and high-temperature reactions***Water / Oil**

Bath media

Digital

Speed & temp. display

MS-HT-100 / 200

Representative models

The MS-HT series uses a heating bath to provide controlled heating and supports both water-bath and oil-bath operation. By combining magnetic stirring with constant-temperature heating, the series suits teaching and research laboratories as well as experiments requiring reflux and long-duration high-temperature reactions.

Key Features

- Heating-bath design for efficient heat transfer and rapid temperature rise.
- Digital display of stirring speed and temperature for convenient monitoring.
- Water-bath and oil-bath operation for different temperature requirements.
- Suitable for reflux set-ups and long-duration reactions.
- Stable construction and simple operation for teaching and research.
- Multiple safety protection functions for laboratory operation.

Typical Applications

University and college teaching laboratories, and chemical, pharmaceutical and food-related applications including reflux reactions, extraction, distillation and synthesis.

Specifications

Parameter	Specification
Working Mode	Stirring + constant-temp. bath
Heating Method	Water bath / oil bath
Representative Sub-models	MS-HT-100, MS-HT-200
Display	Digital speed & temperature
Bath Media	Water, heat-transfer oil
Construction	Rugged, low-maintenance

Notes — Use water as the bath medium below 95°C and heat-transfer oil for higher temperatures. The series can be supplied to cover common configurations such as DF-101, SZCL, RTC-2, RG-18 and HJ-85 type heating magnetic stirrers.

ELECTRIC STIRRER

ME-30 Laboratory Electric Stirrer

Digital-speed mechanical stirrer for low- to high-viscosity materials

110 W Motor power	50–2000 rpm Speed range	30 L Max water capacity	0.5–10 mm Rod clamping range
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The ME-30 uses a DC brushless motor to drive the stirring shaft and is designed for materials ranging from low to high viscosity. It is particularly suitable for slurries, suspensions and polymer systems, providing mechanical stirring where magnetic stirrers may not deliver sufficient mixing performance. It is intended for laboratory research and small-scale development work.

Key Features

- Maintenance-free DC brushless motor with integrated overload protection.
- Digital display of actual rotational speed with stepless speed adjustment.
- Built-in cooling fan supports long-term continuous operation.
- Hollow-shaft design enables quick installation and removal of the stirring rod.
- Compatible with different stirring impellers, including propeller-type blades.

Specifications

Parameter	Specification
Model	ME-30
Motor Power	110 W
Power Supply	220 V / 50 Hz
Speed Range	50–2000 rpm
Speed Display	Digital
Speed Control	Stepless
Rod Clamping Range	0.5–10 mm
Max. Capacity (Water)	200–30,000 ml
Working Temp.	0–40°C
Optional Accessories	Various stirring blades

Typical Applications

Polymer synthesis, coating slurries, suspensions, pharmaceutical and food formulations, especially higher-viscosity materials or where magnetic stirring is insufficient.

Notes — Match the impeller to the vessel and material: a propeller blade suits low-viscosity liquids, while anchor or paddle impellers are preferred for higher-viscosity materials. The ME-30 is intended for laboratory research and small-scale development work.

GET IN TOUCH

Contact Us

For quotations, technical consultation or customisation, our team is ready to help. Tell us your required capacity, material viscosity, stirring speed, heating and temperature range, vessel size and application, and we will recommend the right configuration.

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What to tell us

- Required stirring capacity or vessel volume (ml / L).
- Material viscosity, and whether magnetic stirring is sufficient.
- Stirring speed range needed (r/min or rpm).
- Heating requirement — none, plate heating or bath heating — and target temperature.
- Vessel type and dimensions, and any reflux or closed-system set-up.
- Quantity, delivery destination and required lead time.

ULPMAT — advancing laboratory mixing with reliable, precise stirring solutions.

