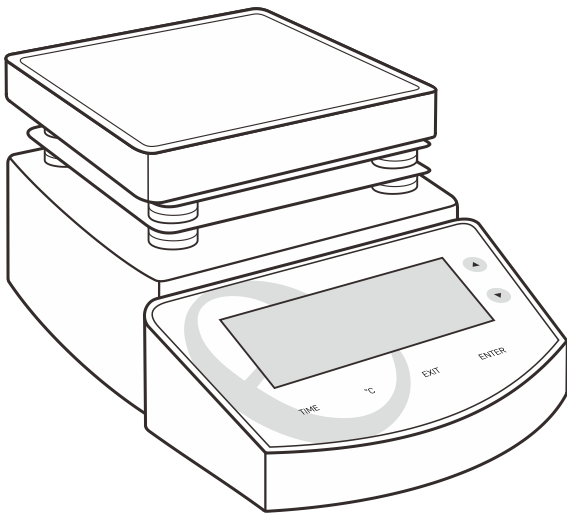


MS400C Hotplate Magnetic Stirrer

# USER MANUAL



## Introduction

Thank you for selecting the MS400C hotplate magnetic stirrer. This manual provides a step-by-step guide to help you operate this stirrer. Please carefully read the following instructions before use.

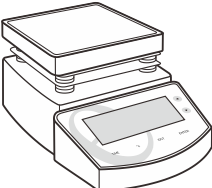


### Environmental Conditions

Before unpacking, ensure that current environmental conditions meet the following requirements.

- Relative humidity is less than 80%
- Ambient temperature between 0°C (32°F) and 40°C (104°F)
- No corrosive gas exists and well-ventilated area

### Packing List

The following list describes all components of the stirrer. If any items are missing or damaged, contact the supplier immediately.

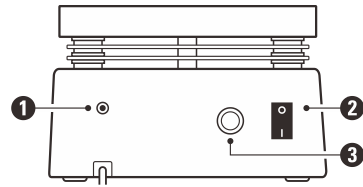
- |  |   |
|--|---|
| <p><b>1</b></p>   | <p><b>2</b></p>  |
| <ul style="list-style-type: none"> <li>• Magnetic stirrer</li> </ul>                               | <ul style="list-style-type: none"> <li>• Stir bar</li> </ul>                                      |
| <p><b>3</b></p>  |   |
| <ul style="list-style-type: none"> <li>• Temperature probe</li> </ul>                              |   |

## Stirrer Overview

### Keypad

Key	Function
Time	Set the stirring time
°C	Set the heating temperature
Enter	Confirm the settings
Exit	Exit the setting, heating or timed stirring mode
▲	Increase value or stirring speed
▼	Decrease value or stirring speed

### Connectors



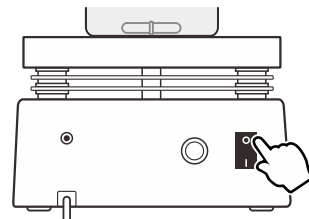
- |   |                              |
|---|------------------------------|
| 1 | Socket for temperature probe |
| 2 | Power switch                 |
| 3 | Fuse                         |

## Safety Notes

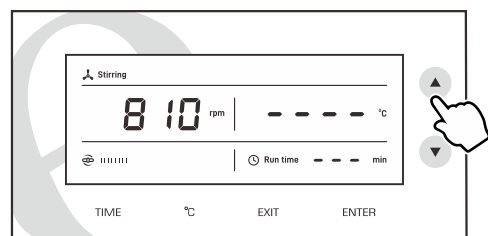
- Before connecting the power supply, ensure that the local mains power voltage meets the requirements of the stirrer and that the power outlet is properly grounded.
- Ensure that the cable of the temperature probe and power cord are kept clear of the hot plate.
- Do not use a metal container.
- Do not heat or stir volatile or flammable liquids.

## Stirring

1. Place stir bar into the container and fill the liquids to be stirred.
2. Place container in the center of the top plate.
3. Press the power switch to **ON** position.



4. Press the ▲ or ▼ key, the stir bar will begin to rotate after 5 seconds, the display will show the stirring speed.



- When desired stirring is completed, press the power switch to **OFF** position. Remove container from the top plate.



- If you need to stir a high viscosity liquid, we recommend to set a slower stirring speed.
- If the stir bar is not running smoothly, try moving the container slightly, the stir bar should be in the center of the container.

## Stirring Time

The MS400C magnetic stirrer has a built-in clock chip, which allows for time management during stirring and heating.

- Press the **Time** key, the display shows 000 min.
- Press the **▲** or **▼** key to set a desired stirring time.
- Press the **Enter** key, the timer begins countdown until it reaches zero, the stirrer will stop running.



To exit the setup without saving changes, press the **Exit** key.

- Press the **°C** key, the display shows 000 °C.



- Press the **▲** or **▼** key to set a desired temperature.
- Press the **Enter** key to begin the heating.



- The hot plate will not heat if the temperature probe is not attached.
- While heating a liquid, the temperature probe must be immersed. Otherwise, the hot plate will heat continuously and will go into a fault condition.
- During the heating process, the Heating icon will show in sequence as follows:



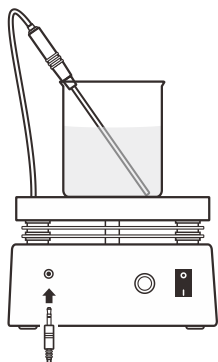
- When the liquid reached the target temperature, the Heating icon will continuously flash.



- Press the **°C** key, then press the **Exit** key, the hot plate will stop working.

## Heating

- Insert the plug of the temperature probe into the jack socket on the rear panel of stirrer.
- Place the temperature probe into the liquid.



## Temperature Calibration

During the heating, if the temperature reading displayed differs from that of an accurate thermometer, please follow the steps below to calibrate the temperature probe.

- Turn off the stirrer.
- Press and hold the **▲** and **▼** keys for 5 seconds, then turn on the stirrer.
- Press the **▲** or **▼** key to modify the temperature value.
- Press the **Enter** key to save.

## Appendix

### Optional Accessories

Order Code	Description
TP-100P	Temperature probe, stainless steel body
STB-S	Stir bar, PTFE material, 30 (L)×7 (Ø)mm

### Specifications

Model	MS400C
Stirring Volume	0 to 2000 ml
Stirring Speed	0 to 2000 rpm
Heater	300 W
Hot plate Temperature	Maximum 300°C
Timer Range	0 to 999 minutes
Top Plate Size	135 (L)×135 (W) mm (5.3×5.3 in.)
Top Plate Material	Ceramic coating
Display	Segmented LCD, 95×35 mm (3.74×1.37 in.)
Power Requirements	AC 220V/50Hz
Dimensions	230 (L)×180 (W)×120 (H) mm (9×7×4.7 in.)
Weight	2.2 kg (4.8 lb)

### Troubleshooting

Fault	Cause and Corrective Action
Stir bar is not running	The screw under the top plate is loose.
Hot plate is not heating	Temperature probe is not connected to the stirrer or the heater has damaged.

### Disposal

This product is required to comply with the European Union's Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC and may not be disposed of in domestic waste. Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment.



### Warranty

The warranty period for stirrer is one year from the date of shipment. Above warranty does not cover the stir bar. Out of warranty products will be repaired on a charged basis.

The warranty on your stirrer shall not apply to defects resulting from:

- Improper or inadequate maintenance by customer.
- Unauthorized modification or misuse.
- Operation outside of the environment specifications of the products.

For more information, please contact the supplier.



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