



**BANTE**  
instruments

MS200/300/400 Hotplate Magnetic Stirrer

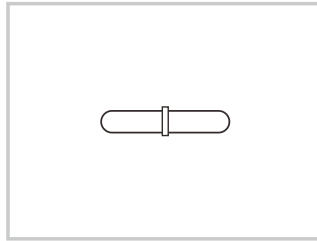
# **Instruction Manual**

## Introduction

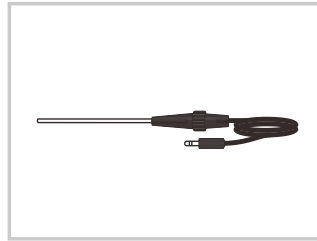
Thank you for selecting the MS series magnetic stirrer. This manual provides a step-by-step guide to help you operate the stirrer, please carefully read the following instructions before use.

## Unpacking

The following list describes the accessories of stirrer. After the unpacking, please check all accessories are complete. If any are damaged or missing, please contact nearest distributor.



Stir Bar

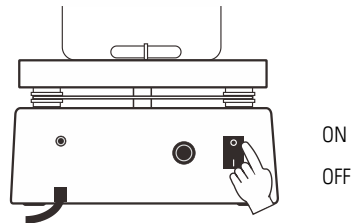


Temperature Probe (Only for MS300/400)

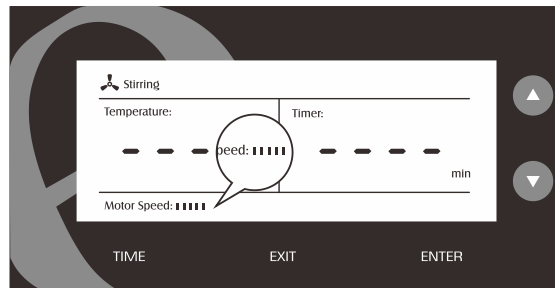
## Stirring the Liquids

Before plugging the plug into the power outlet, ensure that the local mains power voltage matches the stirrer requirements.

1. Place the stir bar into the container. Press the power switch to **ON** position, the display will light up.



2. Press the ▲ or ▼ key to set the stirring speed, the speed bar on display will show the run status.

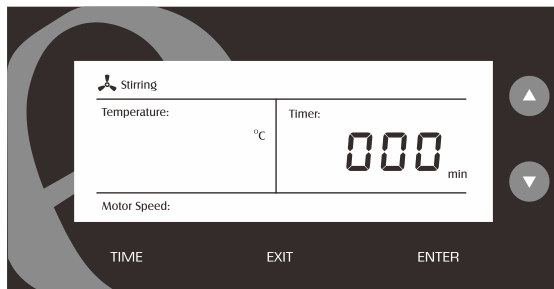


3. If the stirrer does not work well, move the container slightly, ensure that the stir bar is always in the center of container.

## Setting the Stirring Time

MS series magnetic stirrer has a built-in timer that allows user to set the stirring time from 1 to 999 minutes.

1. Press the **Time** key to enter the setting mode, the display shows "000 min".



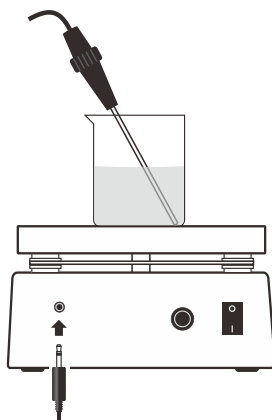
2. Press the **▲** or **▼** key to set the stirring time, press the **Enter** key to confirm. The timer automatically begins countdown until it gets to zero, the stirrer will stop the stirring simultaneously.

① If you want to exit the setting, press the **Exit** key.

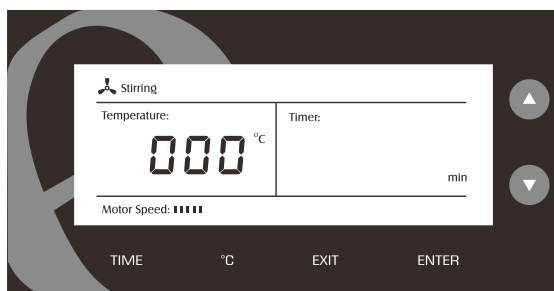
## Heating the Liquids

This section is applicable to MS300 and 400 magnetic stirrers.

1. Insert the connector of temperature probe into the corresponding connector socket on the rear panel of stirrer.



2. Place the temperature probe into the liquid.
3. Press the **°C** key and the **▲** or **▼** key to set the target temperature, press the **Enter** key to confirm. The stirrer is now begin heating.

**NOTE:**

- Ensure that the temperature probe is connected to socket, the hotplate will not heat if the probe is not attached.
- While heating a liquid the temperature probe must be immersed, otherwise the hotplate will heat continuously and will go into a fault condition.
- During the heating mode, the Heating icon will successively show as follows:



- When the liquid reached the setting temperature, the Heating icon will flashing continuously.



- Press the **Exit** key, the stirrer stops the heating immediately.

**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 stirrer.

1. Switch off the stirrer.
2. Press and hold the ▲ and ▼ keys for 3 seconds, then switch on the stirrer. The display will show the temperature value.
3. Press the ▲ or ▼ key to correct the temperature value, press the **Enter** key to confirm. Calibration is completed.

**Troubleshooting**

FAILURE	CAUSE
Stir bar does not working	<ul style="list-style-type: none"> <li>• Check the screw under the top plate are loose.</li> <li>• Container is not in the center of top plate.</li> </ul>
Can not heating	<ul style="list-style-type: none"> <li>• The temperature probe is not connect to stirrer.</li> <li>• Heater or temperature probe has damaged.</li> </ul>

**Specifications**

Model	MS200	MS300	MS400
Maximum Stirring Volume	2 Liters (H <sub>2</sub> O)		
Stirring Speed	0 to 1250 rpm		
Temperature Range	No temperature control	Room temperature to 300°C	Room temperature to 400°C
Timer Range	0 to 999 minutess		
Top Plate Size	135 (L) × 135 (W)mm		
Power Requirements	AC220V/50Hz		
Ambient Temperature	< 50°C		
Dimensions	230 (L) × 180 (W) × 120 (H)mm		
Weight	2.2kg		

### **Hazardous Substance Statement**

Bante Instruments is committed to the reduction and eventual elimination of all hazardous substances in both the manufacturing process and finished products we supply. We have an active manufacturing and procurement program to minimize and eliminate the use of harmful heavy metals such as cadmium, lead, mercury and the like. New technologies and design parameters are also promoting these efforts and we expect to have little or no such materials in our product in the coming years. We welcome our customer suggestions on how to speed up these efforts.



### **Warranty**

The warranty period for stirrer is one year from the date of shipment. Above warranty does not cover the stir bar and temperature probe. 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 nearest authorized distributor.



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