



## Magnetic Stirrer

**MS12 / MS15  
MS200 / MS33**

# MANUAL

Thank you very much for selecting Mi-sung products.

For your safety, please read the following before using.

### Main products

- Temp controller
- ▣ Heating Tape
- Hot plate
- Digital
- ▣ Mantle, Analog
- Mantle, Rota Mantle
- ▣ Digital Stirrer
- Analog stirrer

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## General Information

Unpack your item carefully and inspect for damage and report such damage or missing parts to your supplier right away.

Read your instruction manual carefully. Take time to save time while working with your item.

Make sure that every user has read and understood the instruction manual.

Please store the instruction manual in a place easily accessible to every user.

## Safety Information

Please comply with all safety and accident-prevention regulations as in force for laboratory work!

Use extra care when working with flammable substance; refer to safety data sheets.

When connecting your item with your local power supply, please make sure your item is designed for your local supply voltage; go by data plate on the item.

Turn your power switch OFF whenever the item is not used, or before disconnecting the plug.

Use extra care when working in the vicinity of flammable and explosive substances. Motor are non-sparking type, however, the item itself is not explosion proof.

Please do not connect your instrument without a protective ground outlet.

Your item requires a solid stand.

## Warning

### To avoid electrical shock, always:

1. Use a properly grounded electrical outlet of correct voltage and current handling capacity.
2. Disconnect from power supply before servicing.

### To avoid personal injury:

1. Do not use in the presence of flammable or combustible materials; fire or explosion may result.  
This item contains components which may ignite such materials.
2. Keep the item clean. Use non-abrasive cleaner. Alkali spills, hydrofluoric acid spills or phosphoric acid spills may damage the item and lead to thermal failure. Unplug unit and remove spills promptly. Do not immerse unit for cleaning.
3. Do not remove or modify grounded power plug. Use only properly grounded outlets to avoid shock hazard.  
Not rated for use in hazardous atmospheres.
4. Use appropriate hand and eye protection when handling hazardous chemicals.
5. Do not use in highly corrosive atmospheres; corrosive fumes and spill may damage your item and internal components,

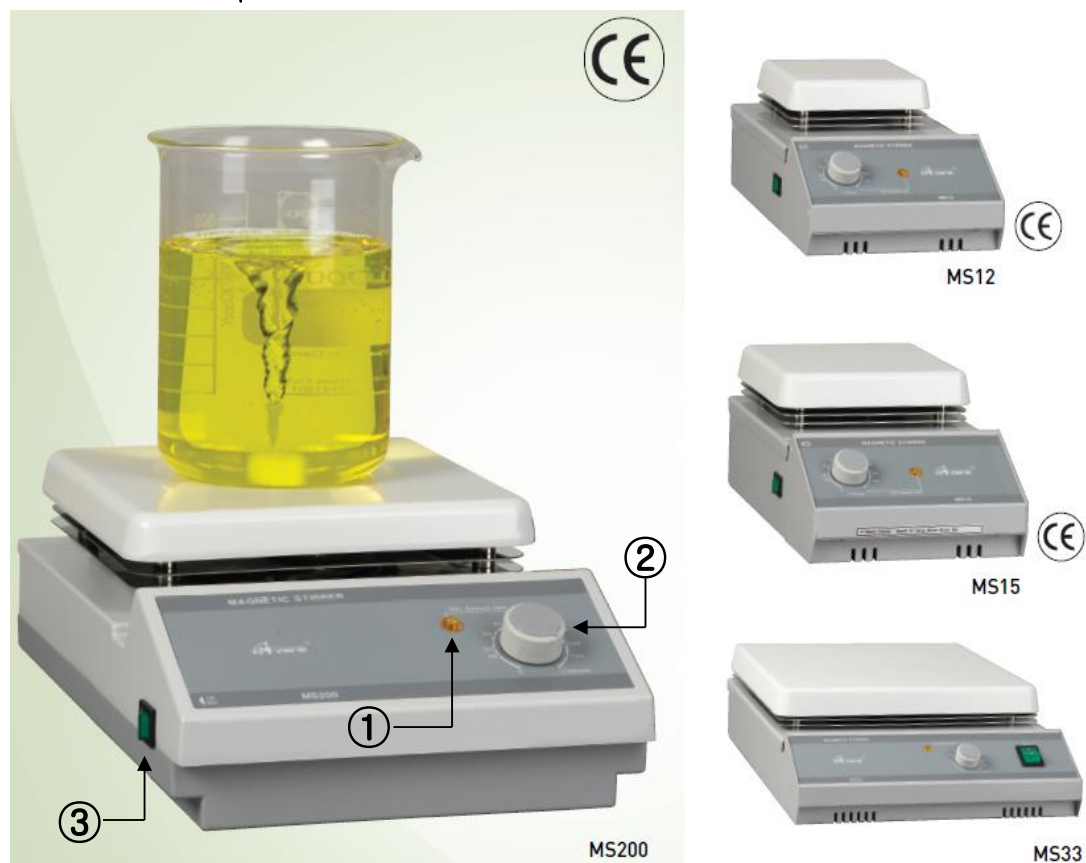
## Caution

Space instrument 12 inches away from combustible materials under any conditions.

## 1. Specifications

MODEL		Magnetic Stirrer			
		MS12	MS15	MS200	MS33
Stirring	Speed	100 ~ 1500rpm			100 ~ 1300rpm
	Speed display	Scale(rpm)			
	Capacity(H <sub>2</sub> O)	up to 1L	up to 2L	up to 5L	up to 15L
Speed controller		Feedback control			
Top plate		Ceramic coated top plate			
Dimensions	Plate area	120 x 120	150 x 150	180 x 180	300 x 300
	Overall(WxDxH)	160 x 280 x 107	160 x 280 x 107	200 x 310 x 107	310 x 430 x 120
Electrical supply		AC220V 50/60Hz or AC110V 50/60Hz (option)			

## 2. Functional Description



1. Motor lamp : It display output of the Motor.
2. Motor control : It is used for the controlling of the Motor RPM.
3. Main power S/W : It is for On/Off of the main power.

## 3. Operation and control

\* Connect the supplied power cord into connecting holder on rear side

1. Turn s/w No.2 to the right, then stirring runs with lighting on lamp No.1
2. Adjust the motor volume using s/w No.2
3. To stop the stirring, turn s/w No.2 to the left, then motor stops with lamp No.1 off