CE

Operation Manual
H4000-HS(E), H4000-H(E), H4000-S(E)
Revised : June 2010

Hotplate/Stirrer

OPERATING MANUAL

This manual covers three similar models. One model, the "Hotplate Stirrer", has two knobs on the control panel for separate control of heating and stirring functions. The remaining two models have a single knob, to control their single function (heating or stirring).

1.1. Getting Started

Thank you very much for purchasing our Hotplate, Magnetic Stirrer, or Hotplate Stirrer.

Your Hotplate/Magnetic Stirrer has been CE certified and designed with durability, reliability, and safety in mind. It is your responsibility to install this instrument in conformance with local electrical codes. For safe operation, please pay attention to the alert symbols through the manual.

This manual contains important operating and safety information. You must carefully read and understand the contents of this manual prior to operating this instrument.

Warning
Warning alert - possibility of personal injury

Caution
Caution alert - possibility of damage to the equipment.

Note
Notes alert - pertinent facts and conditions.

Hot Surface
Hot surface alert - possibility of burning injury by hot instrument surface

Explosive
Explosive alert - possibility of explosion by high pressure.

1.2. Product Overview

These products are made with an excellent heat-resistant, anti-corrosive aluminum casting body with a high quality powder coating.

The ceramic coated and stainless steel top plate provides excellent chemical resistance, especially against strong acids or bases.

Unlike traditional hotplate/magnetic stirrers, these units have a high precision speed control system. (from 60 to 1500rpm) with a continuously smooth revolution pattern.

The technically advanced PCB board eliminates an electrical overload and regulates energy distribution. The bearing type motor maintains gentle revolution over the lifetime of the equipment.

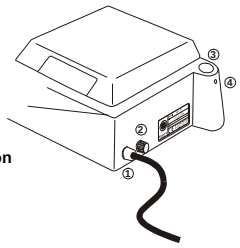
1.3. Product Specifications

Model		Benchmark H4000-S(E)	Benchmark H4000-H(E)	Benchmark H4000-HS(E)
Type		Magnetic Stirrer	Hotplate	Hotplate & Stirrer
Speed Range		60 to 1500 rpm	N/A	60 to 1500 rpm
Temperature Range		N/A	Ambient + 5 degrees C to 380 degrees C	
Controller		Electronic Solid State Controller		
Material		Ceramic Coated Stainless Steel Top Plate		
Dimensions	Plate	180 x 180 mm / 7.1 x 7.1 in		
	Overall	205(W) x 250(D) x 110(H) mm / 8.5(W) x 10(D) x 4.5(H) in		
Power Consumption		Max. 500 watt, 3.0 amp		
Electric Supply		120V, 60 Hz (USA) or 220V, 50/60 Hz		

1.3.1. Control Panel

1 Temperature Controller
ON/OFF and Temperature Control
2 Heater Lamp
Red light Illuminates when heater is on
3 Speed Controller
ON/OFF and revolution speed control
4 Stir Lamp
Green light Illuminates when motor is on

1.3.2. Main Body



1 Power Cord
2 Fuse Holder
3 Standing Rod Position
4 Screw Position

1.4. Operation

1.4.1. Before Operation

1) Place Hotplate/Stirrer on flat and level surface.

2) Plug unit into power outlet. The voltage must correspond to the voltage listed on the product name-plate

CAUTION : "Hot Surface. Avoid Contact." The hotplate will remain hot without visual indication for some time once the power has been turned off.

1.4.2.. **Operation**

1) Temperature Control

- Turn temperature control knob clockwise, heat light illuminates.
- Turn temperature control knob to adjust to the desired heat position.

2) Stirring Speed Control

- Turn Speed control knob clockwise, stir light illuminates.
- Turn speed control knob to adjust to the stirring speed to the desired position. (Increase speed slowly.)

1.5. Warning

1. Use a properly grounded electrical outlet with the proper voltage and current handling capacity as specified on the name-plate.
2. Disconnect from power supply before servicing or cleaning.
3. Always place the Hotplate Stirrer on a flat and level surface.
4. Do not touch the top plate of the instrument during operation. The hotplate will remain hot without visual indication for some time after you have turned the power off.
5. Do not use in the presence of flammable or combustible materials; fire or explosion may result. This device contains components which may ignite such materials.
6. Replace the top plate immediately if damaged by scratching or chipping. A damaged top plate can shatter during use.
7. Do not use metal foil, metal containers, sand baths or other insulating material on the hot plate – This can cause damage to the top plate and shock hazard can exist.
8. Do not remove or modify the grounded power plug. Use only properly grounded outlets to avoid shock hazard. The instrument is not rated for use in hazardous atmospheres.
9. Use caution when heating volatile samples; top surface and element can reach the "Flash Point Temperature" of many chemicals. These hot plates are not explosion proof. Fire or explosion may result. Unit contains components which may ignite such materials.
10. Use appropriate hand and eye protection when handling hazardous chemicals.
11. Refer servicing of this instrument to qualified personnel.

1.6. Trouble Shooting

	Check	Trouble Shooting
Not heating Or Not stirring	Check power Supply Cord	Plug firmly into socket
	Check Fuse	Replace Fuse

Benchmark Scientific
P.O. Box 709 Edison, NJ 08817 USA
Ph: 908-769-5555 EM: info@BenchmarkScientific.com