

HOTPLATE/STIRRER

OPERATING MANUAL

Models 1000 Hotplate Stirrer

Models 1001 Hotplate

Model 1002 Stirrer

**NOTE:** If the units described in this manual are not used in the manner specified by the manufacturer the protection provided by the equipment may be impaired.

#### ENVIRONMENTAL PARAMETERS

The Models 1000, 1001 and 1002 are designed to operate under the following conditions:

- i) For indoor use only
- ii) Altitude up to 2000m
- iii) Temperatures 5°C to 40°C
- iv) Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% of relative humidity @ 40°C
- v) Mains voltage fluctuations are not to exceed  $\pm 10\%$  of the nominal supply voltage or if greater than supply voltage fluctuations as stated by the manufacturer
- vi) Overvoltage category II (IEC 644)
- vii) Pollution Degree 2 (IEC 644)

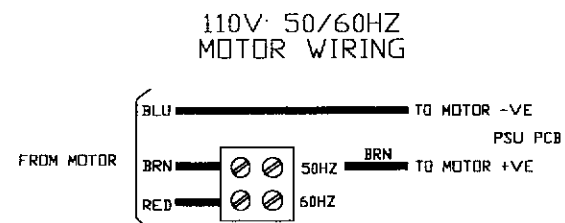
#### SPECIFICATIONS

Description	Hotplate Stirrer	Hotplate	Stirrer
Model No.	1000	1001	1002
Power (W)	500	500	50
Maximum Plate Temperature °C	> 450	> 450	-
Temperature Control °C	$\pm 5^\circ\text{C}$	$\pm 5^\circ\text{C}$	-
Stirrer Speed (rpm)	0 - 2000	-	0 - 2000
Plate Dimensions (mm)	210 x 210	210 x 210	210 x 210
Heated Area (mm)	150 x 150	150 x 150	-

All units - Overall Dimensions 225(w) x 340(d) x 85(h) mm

- \* 230 volt units Models 1000 and 1002 operate @ 50Hz  
Model 1001 operates @ 50/60Hz
- \*\* 110 volt units Models 1000 and 1002 operate @ 60Hz, with the option of 50Hz internally selectable (refer Figure 1)  
Model 1001 operates @ 50/60Hz

**Figure 1 - 50/60 Hz Internal Selection**



## POWER SUPPLY

These instruments are designed to operate on one of a number of international voltage and frequency options. Prior to installing the unit check that the voltage and frequency information given on the rear panel matches the supply that you have available.

## MAINS CONNECTIONS

### 230 volt instruments

A suitable plug should be connected to the three wires on the mains cable supplied with 230 volt units. The wires are colour coded to conform to the internationally recognised standard such that:

<b>BROWN</b>	<b>LIVE</b>
<b>BLUE</b>	<b>NEUTRAL</b>
<b>GREEN/YELLOW</b>	<b>EARTH</b>

### IMPORTANT: ALL UNITS MUST BE EARTHED.

The Green/Yellow wire in the a.c. supply cable must be connected to a properly grounded terminal.

**For the correct fuse value refer to the rear panel of the unit. Ensure the correct fuse is fitted for the supply being used.**

## FUSE REPLACEMENT

**To replace the mains fuse ensure the instrument is disconnected from the mains supply.**

Using a flat blade screwdriver rotate the fuse holder cap anti-clockwise until the fuse is released. Discard the faulty fuse.

Replace the fuse ensuring it is of the same type and rating. Refit the fuse holder cap and tighten gently. Reconnect the unit to the mains supply.

Fuse Ratings	230 volt	-	3.15A (F)
	110 volt	-	6.3A (F)

If the fuse blows immediately upon reconnection a fault condition may be suspected. In this event the product should be isolated from the mains supply and the local distributor or manufacturer should be contacted for advice/assistance.

## INSTALLATION

For units supplied with the optional retort and associated components the following assembly operations should be carried out:

- a) Screw the retort rod into one of the tapped lugs on the rear of the unit. Select the left or right lug, whichever is most convenient for use. Ensure the rod is fully tightened into the lug.
- b) Fit components to the retort rod in the normal manner, remembering that the zone immediately above the heated areas of the ceramic plate (not the Model 1002) can reach high temperatures.

## OPERATION

### FRONT PANEL CONTROLS (as applicable for product type)

1. Green Neon - will illuminate when mains power is connected to the unit.
2. Orange Neon - will illuminate when the heater is in operation.
3. Orange Neon - will illuminate when the stirrer is activated.
4. Heater Control - single turn energy regulator.
5. Stirrer Control - single turn potentiometer.

### HEATING - Models 1000 and 1001

Heat setting is achieved using the front panel control knob. When fully anti-clockwise the heat control is "off" and the amber indicator adjacent to the control will extinguish.

The pattern on the ceramic tile defines the area of full heat. The outer areas will remain cooler for safety reasons.

### WARNING

1. The hotplate must not be used to heat materials or containers which have high reflective or insulating properties. Sandbaths and silver foil must not be used. If heat is not allowed to escape from the heated surface over heating will cause failure.
2. Never use the hotplate to heat inflammable liquids.
3. Never attempt to handle the hotplate until the warning indicator stops flashing.

### STIRRING

#### Models 1000 and 1002

Stirring speed is controlled via a front panel knob. When the stirring mode is activated an amber indicator adjacent to the control is illuminated. The stirring mode can be switched off by turning the control fully anti-clockwise.

## CARE OF GLASS CERAMIC PLATE

The glass-ceramic plate has been designed for easy cleaning. Spillages, especially those of alkalis, hydrofluoric and phosphoric acid must be dealt with immediately by wiping the surface with a damp cloth to avoid damage to the glass-ceramic. This will normally remove most types of contamination, but for more stubborn deposits the use of a proprietary ceramic hob cleaner is recommended.

## IMPORTANT

Care should be taken during general operation and cleaning to ensure that the surface of the glass-ceramic plate does not become scratched, chipped, chemically etched or damaged as this may result in thermal breakage.

If damage occurs the unit must be disconnected from the mains supply and the appropriate servicing authority contacted for repair/replacement. Under no circumstances should the unit continue to be used.

## OPTIONAL ACCESSORIES - all models

Retort Rod	100 122
Model 2152 Temperature Meter	988 501
Temperature Probe for use with 2152	027 226
Probe Holder	100 123
Temperature Meter Holster	100 125

## SPARES

Fuse 315mA (F)	016 018
Fuse 1A (F)	016 025
Fuse 3.15A (F)	016 014
Fuse 6.3A (F)	016 015
Fuse 15A (F)	016 027
Models 1000 & 1002 Stirrer PCB (220/230V)	100 076
Models 1000 & 1002 Stirrer PCB (110V)	100 056
Models 1000 & 1001 Energy Regulator (220/230V)	060 312
Models 1000 & 1001 Energy Regulator (110V)	060 313
Models 1000 & 1002 Motor Assembly (220V 60Hz)	100 093
Models 1000 & 1002 Motor Assembly (230V 50Hz)	100 075
Models 1000 & 1002 Motor Assembly (110V 50/60Hz)	100 055
Models 1000 & 1001 Top Plate Assembly (220/230V)	100 074
Models 1000 & 1001 Top Plate Assembly (110V)	100 054
Model 1002 Top Plate Assembly	110 208

All units comply fully with EEC and US directives relating to ESD/EMC emission and susceptibility.



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.