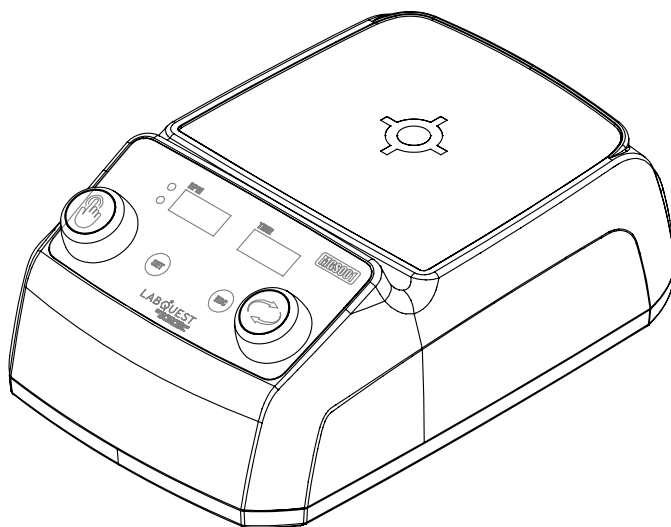


LABQUEST
BY **BOROSIL®**

MAGNETIC STIRRER

OPERATING MANUAL MGS001P



DEALER :

THANK YOU NOTE

We Borosil, one of India's most customer oriented brands truly appreciate your business and express our gratitude for the trust you have placed on us.

We hope your choice serves you well in your scientific endeavors and aspire to have the pleasure of doing business with you for years to come.

INTRODUCTION

The manual provides important information regarding the safety information of the Magnetic stirrer.

Magnetic stirrer has a speed range upto 2200 RPM, timer of 999 mins and infinite time.

The body of the unit is made up of PBT 30% glass filled which will have minimum chemical reaction if the chemical spillage takes place and also has low body thermal conductivity which prevents any accidental heat burns.

Read this manual thoroughly before attempting to operate the unit. All persons operating this piece of equipment should review the safety precautions section of this manual.

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PACKING LIST

Sr. No	Description	Quantity
1	MGS001P Unit	01 No.
2	Power Cable	01 No.
3	Stir Bar	01 No.

PRODUCT SPECIFICATION

PARAMETERS	MGS001P
Stirring position	1
Max Capacity	2L
Speed Range	300 - 2200 RPM
Speed Accuracy	±50 RPM
Speed Control	PID
Speed Feedback	Yes
Display	2 X LED 7 Segment
Controlling	Rotary Knobs & Push Keys
Timer	0 - 999 min & Infinite
Top Plate Material	SS304
Top Plate Dimension (LxB)	155mm X 145mm
Product Dimensions (LxBxH)	285mm x 190mm x 120mm
Magnetic Stir Bar	25mm
Fuse Rating	0.5 Amps
Power Consumption	0.5A, 230V, 25W

**CAUTION**

- Always use proper protective equipment. (Clothing, gloves, etc.)
- Always follow good hygiene practices.
- Each individual is responsible for his / her own safety.
- Always wear shatter proof eye protection.

SAFETY AND WARNING

- Ensure mains are switched off or unplugged when the product is not in use.



Important operating and maintenance instructions. Read the accompanying text carefully.

**POTENTIAL ELECTRICAL HAZARDS**

- Only qualified persons should perform procedures associated with this Symbol.
- Equipment being maintained or serviced must be turned off to prevent possible injury.
- Inadequate earthing at the installation facility can lead to hazardous electrical shocks.
- The manufacturer is not liable for any injury or death resulting from electrical hazards due to faulty earthing in the lab.

**POTENTIAL HEAT HAZARDS**

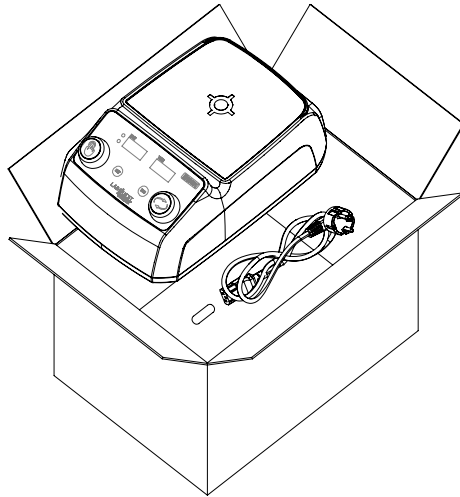
Only qualified persons should perform procedures associated with this Symbol.

SAFETY PRECAUTIONS

The following precautions should be taken when operating or working near the Magnetic stirrer:

- Do not use the product if there is any electrical or mechanical damage.
- Stir hazardous samples in appropriate containment vessels.
- Repair should be performed only by qualified individuals.
- Do not use accessories which are not recommended by the manufacturer as it may affect the performance.
- Do not use the unit in hazardous atmosphere or with hazardous material for which the unit is not designed.
- Always use the unit on a level & stable surface for best performance and maximum safety.
- The instrument is designed to be used in the laboratory environment.
- Clean the unit with a damp cloth using a mild detergent only. Do not use chemical cleaning agents.
- If liquid is spilled on the unit, first disconnect the unit from the external (main) power supply and then clean the unit with damp cloth.

UNBOXING



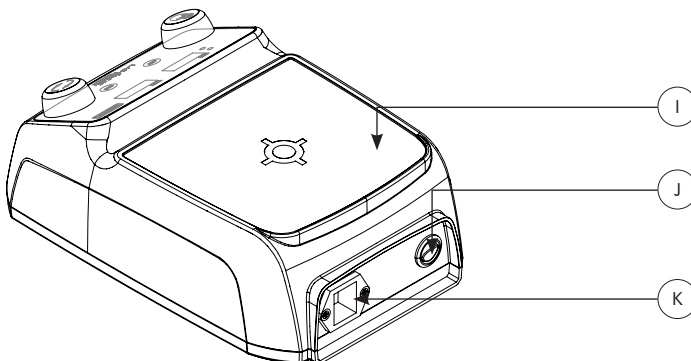
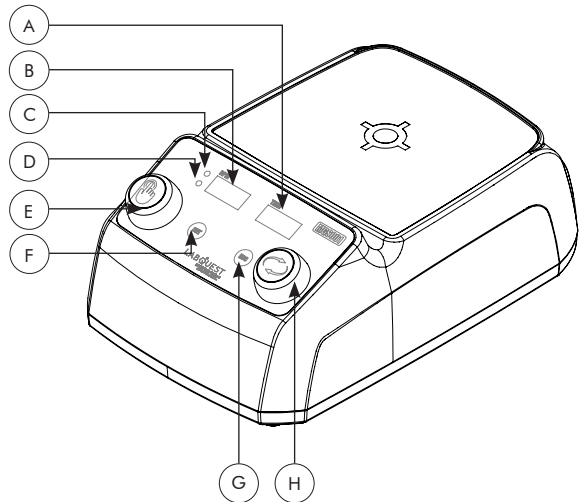
1. Place the carton box in the proper direction.
2. Check the exterior of the carton box for any damages.
3. Unbox the carton box from the top. If there is any physical damage found on the product report to the dealer / delivery agent.
4. Remove the accessories and the unit from the box safely.
5. Compare the items present in the carton box with the packaging list and the unboxing image. If any of these items are missing, contact Labquest's Customer Service Department immediately.

Refer page no. 6 to know what is present in the carton box with respect to the product.

(Read Manual before installation on the lab bench.)

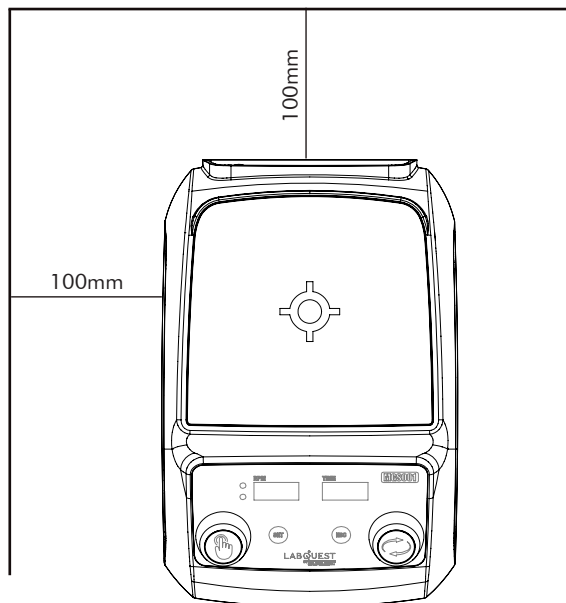
PRODUCT IDENTIFICATION

- A. TIME DISPLAY
- B. RPM DISPLAY
- C. SET INDICATOR (GREEN LED)
- D. PROCESS INDICATOR (RED LED)
- E. RPM KNOB
- F. SET KEY
- G. ESC/BACK KEY
- H. TIME KNOB
- I. SS TOP PLATE
- J. POWER SWITCH
- K. POWER SOCKET



PRODUCT INSTALLATION

- Locate the unit on a level, stable surface near a grounded electrical outlet.
- The surface should be clean and free of dust and also ensure that there are no flammable substances present near the unit .
- Allow sufficient clearance on all sides of the unit for proper ventilation.
- With the power switch in the OFF position, plug the power cord into a grounded receptacle.
- Make sure that a minimum 100 mm gap is maintained between the unit, wall and also with other instruments present in the lab as shown in the figure below.
- Please ensure there is a fuse in the fuse holder.
- Connect the male end of the power cable to the wall socket.
- The unit is ready to operate for first usage.



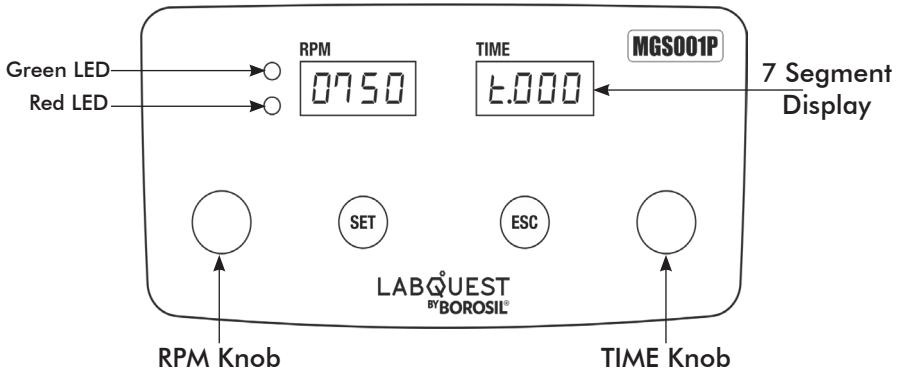
GENERAL OPERATING INSTRUCTIONS

- All operating controls are located on the front panel and back panel of the unit.
- The power switch, power socket are located on the back panel.
- Press the power switch, display will Turn ON showing the current RPM of the unit by glowing the speed indicator.
- Single press the RPM knob to enter the parameter-set mode.
- Rotate the RPM knob clockwise or counterclockwise to vary the set RPM.
- During this time, the RPM display will blink and show the set RPM.
- Rotate the TIME knob clockwise or counterclockwise to set or vary the TIME value.
- During this time, the time display will show set TIME.
- Single press the RPM knob to confirm and fix the set RPM and TIME, and also to start the process.
- The Green LED will remain ON while adjusting the RPM and TIME.
- Single press the 'ESC' key or long press the RPM knob to return to the home screen.
- RPM regulation will be 300-2200 RPM and time regulation will be from 1-999mins.
- If one rotates the RPM knob during the process is ON then the speed increases or decreases based on the rotation of the RPM knob.
- Single press of the SET key during the process will display the set parameters.
- Once the parameter in the unit is set and the process has started then the unit will show the RPM and time along with the respective display screens.
- If one wants to terminate the process in between then long press the RPM knob or press the 'ESC' key until a beep sound occurs stating that the process is terminated.
- Once the time is completed the unit will give a buzzer sound indicating the process is completed.

NOTE:

Do not use a stir bar which has lost its magnetic property which causes slipping of it at high speed.

DESCRIPTION OF KNOB, LED'S AND KEYS



1. RPM Knob

- **Clockwise Rotation**
 - » To increment the set RPM value.
- **Anti Clockwise Rotation**
 - » To decrement the set RPM value.
- **Single Press** : To select the particular parameters value.
- **Long Press**: To reset the set parameters, to exit the process and to jump into the settings.

2. TIME Knob

- **Clockwise Rotation**
 - » To increment the set TIME value.
- **Anti Clockwise Rotation**
 - » To decrement the set TIME value.

3. Red LED

- This indicates the current RPM value and current TIME value.

4. Green LED

- This indicates the set RPM value and set TIME value.

5. SET Key

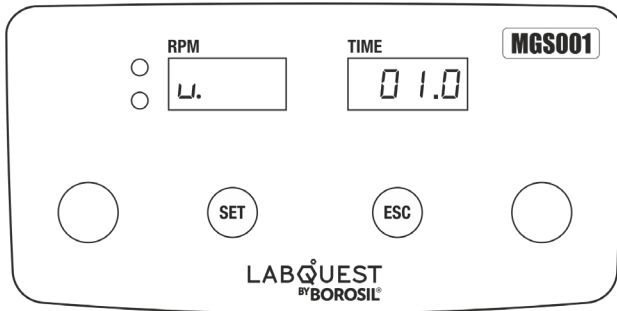
- Single press during the process will display the set parameters.
 - » Set RPM value on the RPM display.
 - » Set time on the TIME display.

6. ESC Key

- If the key is pressed once, the RPM display will show 'stop' and the TIME display will show 'pros' for 5 seconds.
- If the key is pressed again within this duration, the process will stop. If not, the process will resume.

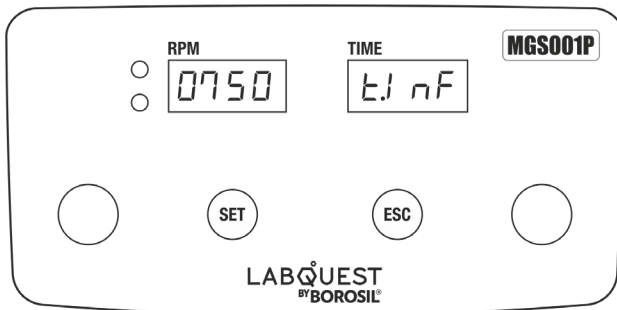
OPERATIONS

1. When the power supply is turned ON, the unit will display the current software version and the buzzer will beep for 2 seconds.
2. During this time, both LEDs will remain OFF.



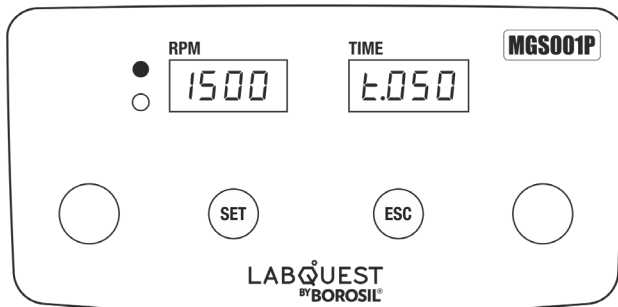
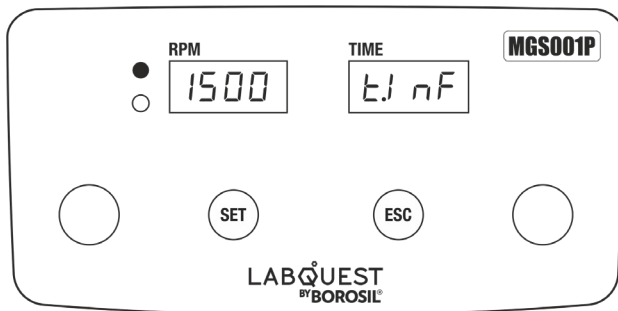
3. At Home Screen:

- The unit will show the current RPM on the RPM display and the time on the TIME display.
- Both LEDs will remain OFF.



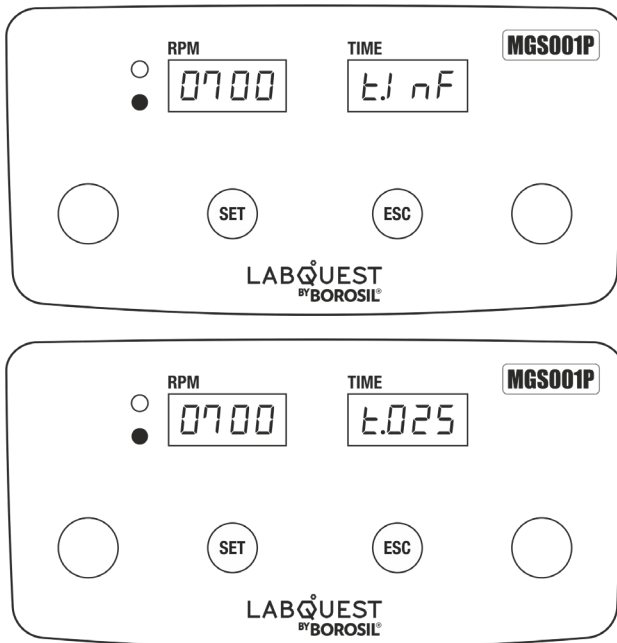
4. To set the parameters:

- Single press the RPM knob to enter the parameter-set mode.
- Set RPM and TIME:
 - » Rotate the RPM knob clockwise or counterclockwise to vary the set RPM.
 - » During this time, the RPM display will blink and show the set RPM.
 - » Rotate the TIME knob clockwise or counterclockwise to set or vary the TIME value.
 - » During this time, the TIME display will show set TIME.
 - » Single press the RPM knob to confirm and fix the set RPM and TIME, and also to start the process.
- The Green LED will remain ON while adjusting the RPM and TIME.
- Single press the 'ESC' key or long press the RPM knob to return to the home screen.

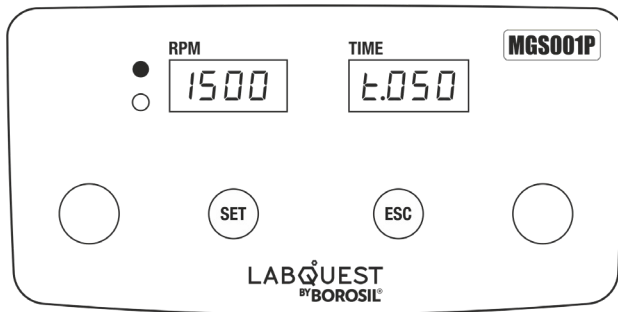
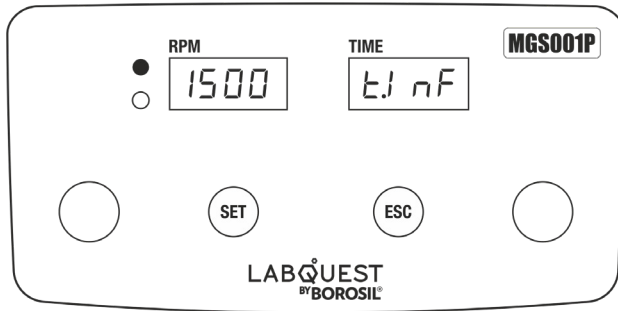


5. In Process:

- The Red LED will remain ON during the process.
- When the process starts or stops, the buzzer will beep for 2 to 3 seconds as an alert.
- If time is 'Infinite':
 - » The unit displays the actual RPM on the RPM display.
 - » The elapsed TIME will be shown on the TIME display.
- If time is 'definite':
 - » The unit displays the actual RPM on the RPM display.
 - » The remaining TIME will be shown on the TIME display.

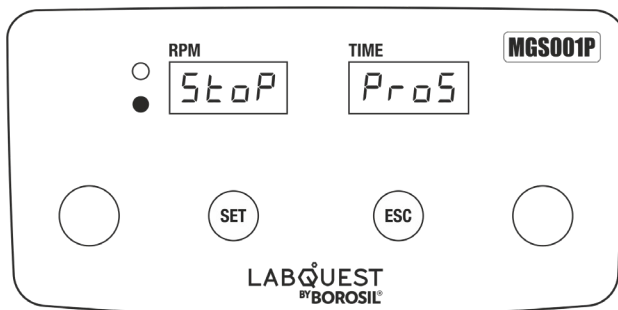


- Single press of the SET key during the process will display the set parameters:
 - » Set RPM value on the 1st display.
 - » "t.inF" (for 't.inF') or Set time (for 'definite') on the 2nd display.



6. To Stop the Process:

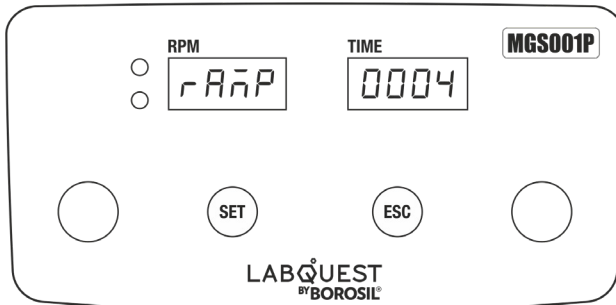
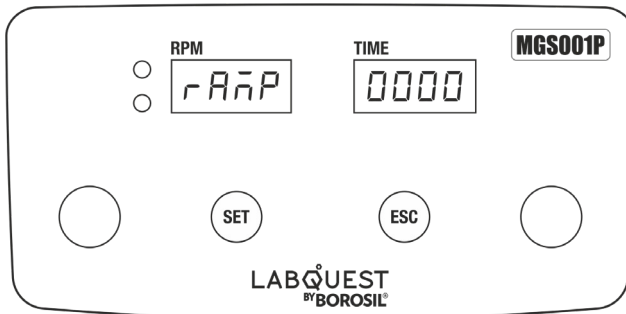
- If the ESC key is pressed once, the 1st display will show 'stop' and the 2nd display will show 'pros' for 5 seconds.
- If the ESC key is pressed again within this duration, the process will stop. If not, the process will resume.
- If the first knob is long pressed, the process will stop.



SETTINGS MENU

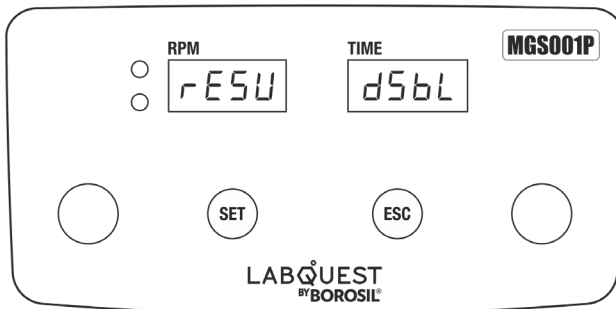
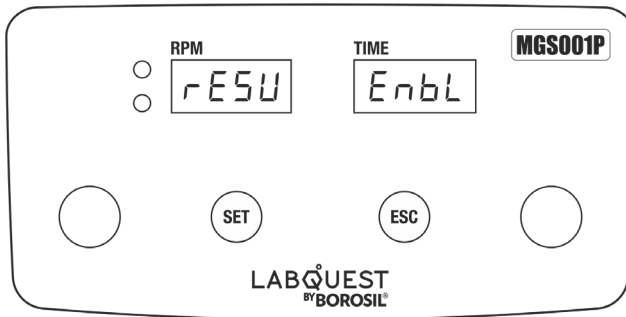
Set RAMP

- Long press the RPM knob for 7 seconds on the Home Page to enter the Settings Menu.
- The unit will display:
 - » 'rAñP' on the RPM display.
 - » The current RAMP VALUE will be displayed on the TIME display.
- Press the RPM knob once to enter the RAMP Mode.
- Rotate the RPM knob to set the RAMP VALUE(00 to 04).
- Press the RPM knob again to save the settings and exit.
- Both the leds will remain off.
- Long press the RPM knob to return to the Home Page.



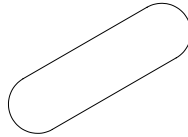
Auto Restart

- Rotate the RPM knob to select the Auto restart mode.
- The unit will show 'rESU' on the RPM display and 'Enbl/dSbl' on the TIME display.
- Press the RPM knob once to enter rESu mode.
- Rotate the RPM knob to choose between 'Enbl' or 'dSbl'.
- Press the RPM knob again to save the selection and exit.
- Long press the RPM knob to return to the Home Page.



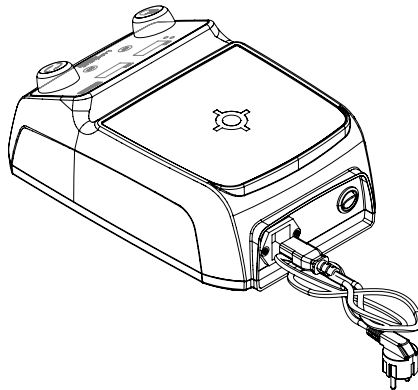
ACCESSORIES

STIR BAR



(8 DIA X 25 LENGTH)

INSTALLATION



TROUBLESHOOTING

S.NO.	PROBLEM	SOLUTION
1.	The unit is not turning ON	<ul style="list-style-type: none"> • Check the supply in AC mains. • Make sure power cable is inserted to the socket properly. • Check whether the main switch is ON or OFF. • Check if the illuminated switch present in the unit is OFF or ON. • Check if the unit is running and the switch is not illuminating, then the switch needs to be replaced.
2.	If the fuse is blown	<ul style="list-style-type: none"> • Switch OFF the unit and remove power cable from AC mains. • Pull out the fuse holder located at the bottom of the power socket. • Remove the glass tube fuse. • Check if the fuse is blown. • If the fuse is blown, replace it with a glass tube fuse that is given in the product specification table.



WARRANTY REGISTRATION

Please handover this Registration form to the distributor from where you have purchased this product.

The warranty is valid only when this warranty registration card is received by us within 30 days from the date of purchase.

Product: MGS001P

Product Sr. No.: _____

Date of Invoice : _____

Invoice No.: _____

Customer name & address

Name : _____

Address: _____

Telephone: _____

E-mail: _____

Customer sign & seal

Dealer name & address

Name : _____

Address: _____

Telephone: _____

E-mail: _____

Dealer sign & seal

BOROSIL[®] **Scientific**

STATEMENT OF WARRANTY

Borosil confirms that this product has been manufactured in accordance with our technical specifications and quality requirements.

- Borosil warrants the product from manufacturing and workmanship defects for a period of 12 months from the date of invoice.
- Warranty void if apparatus is not operated as prescribed in this operating manual.
- To be covered under warranty.
 - Units have to be connected to standard 230V, 50Hz, 5A wall sockets with proper earthing for MGS001P.
 - The units should never be run with wet or dripping glassware.
 - Warranty does not cover replacement of heating element more than once.
 - Warranty does not cover rust and physical damage to metal parts due to corrosive environment in the lab.

Terms:

- In the event of malfunction due to defect, the buyer will have to follow the Borosil's service process.
- Certain units can not be serviced/rectified at the buyer's place and the units may have to be brought to Borosil's service center as advised by Borosil's representatives.
- In no event shall Borosil be liable for consequential or incidental damages.

INVOICE DATE	BUYER	AFFIX SERIAL NUMBER
INVOICE#		
Dealer name & address		Dealer sign & seal

BOROSIL SCIENTIFIC LIMITED

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: MANUFACTURED BY :

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Write to us on above address.

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Maharashtra, India

: CUSTOMER CARE CONTACT :

Phone : 1800 22 4551 | Email : lab.support@borosil.com

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