



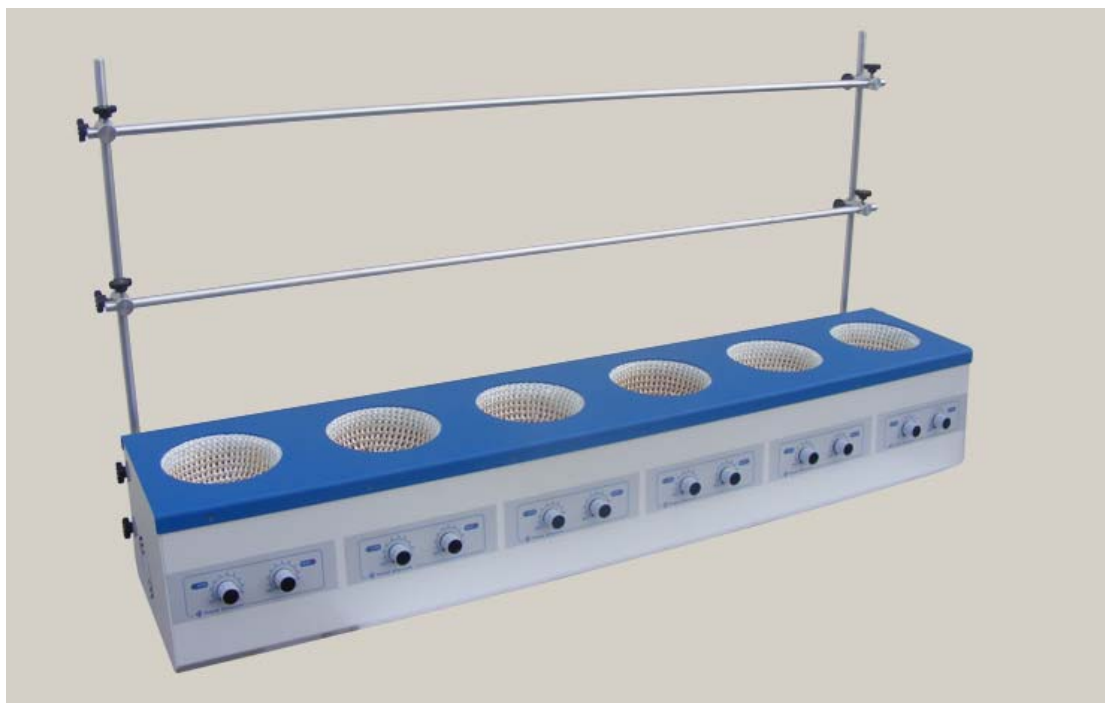
Laboratory Equipment Manufacturer
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User manual

Heating mantle with stirrer

KM-5-XX



PLEASE READ THIS MANUAL CAREFULLY BEFORE OPERATION

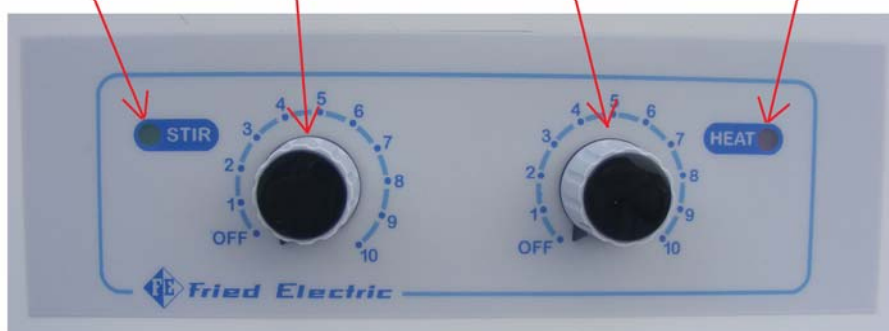
mrc@mrclab.com 3, Hagavish st. Israel 58817 Tel: 972 3 5595252, Fax: 972 3 5594529

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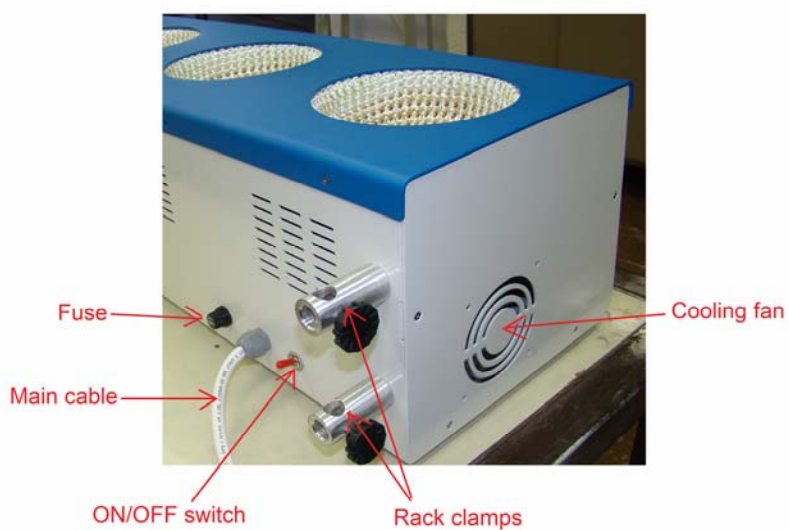
Front View



Stirrer indicator Speed regulator Heating regulator Heater indicator



Rear view



MORE OPERATION

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General Remarks:

- **Never turn on the heating mantle without Kolbe**
- **Put only glass Kolbe on the heating mantle that fit the heating mantle's volume**
- **Never put Beaker or Erlenmeyer or anything else that not Kolbe**
- Don't spill any liquids into the heating mantle
- Don't block the cooling vent
- Always replace the fuse from the same type & current
- The liquid's level inside the Kolbe must be above the heating mantle
- Always put a **glass** Kolbe in the heating mantle
- Never rotate the regulators out of their ranges to avoid damages

IMPORTANT SAFETY INSTRUCTIONS

WARNING

1. The Kolbe should match the size of the heating mantle exactly, it needs good heat conductor between the vessel & mantle.
2. The Kolbe should be clean, bad conductor can make the Kolbe burst.
3. The mantle has to be operated with Kolbe inside the mantle
4. The Kolbe has to be with liquid inside.
5. The Kolbe must be resistant the respective operating temperature
6. Keep the heating mantle dry. Even small quantities of liquids can destroy the heating elements.
7. Do not heat any substances above temperature which will cause hazards of explosion, implosion or release of toxic or flammable gases arising from the materials being heated.
8. Do not use in the presence of flammable or combustible materials or explosive gases.
9. Do not use in the presence of pressurized or sealed containers. Fire or explosion may result, causing severe injury or death.
10. To avoid electrical shock, always use a properly grounded electrical outlet of correct voltage and current handling capacity.
11. The user has the responsibility for carrying out appropriate decontamination, if hazardous material is split on or inside the equipment.
12. The user shall be aware that, if the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
13. The instrument should be placed so, that handy operation of the ON-OFF power switch is possible, and that the mantle power cable can be disconnected from the main in case of risk.

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Operation instruction:

1. **Put Kolbe with liquid** inside the heating mantle.
2. Connect the instrument to a ground mains outlet, after ensuring that the Voltage is the same as given on the sticker. The MANTLE must be connected to an earthen (grounded) supply.
3. Turn on the instrument from the ON/OFF switch.
4. Put 50mm Teflon magnet inside the Kolbe for stirring option.
5. Set the required temperature and the speed with the regulators.
6. Connect thermometer to the rack to measure the current temperature inside the Kolbe.

Explanation about the temperature regulator (simmerstat)

An electrical control device that turns a heating element on and off in a user-selectable duty cycle. The control knob on the simmerstat determines what proportion is spent on, and what off. For example, with the knob turned to a quarter it might use a duty cycle of 5 seconds on then 15 seconds off, thus giving roughly 25 percent of the heating element's full power.

At the MAX position, power is on continuously and maximum temperature is obtained.

CAUTION: When turning OFF the control, be sure the knob is in OFF position and the indicator LED is off.

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