



ISO 9001:2008 Certified Co.

**GLASSCO**

# Heating Mantle Combined Unit

## USER MANUAL

2000.EU/2000.US



Congratulations on your purchase of a Glassco Heating Mantle Combined Unit.

### General Description:-

Heating Mantle Combined Unit is made of fiber Glass Yarn with heating elements covered in fiber Glass Sleeves, to provide uniform heating of Borosilicate flask up to 400°C. The mantle sizes are as per round Bottom DIN 12347 standard. Ideal heater for the extractions of soxhlet and other type. This apparatus is suitable of heat soxhlet flask of 100 ml to 500 ml. It consists of mild steel sheet housing nicely painted with rods and clamps to perform six tests simultaneously.

**Safety Information:-** This product has been designed for safe operation when used as detailed in accordance with the Manufacturer's instructions.

6. Green indication glows which shows that the heating has started.

7. When the heating is complete, switch the heat off by knob to there off positions. Disconnect the mains electricity supply.

### Features:-

1. ON/OFF knob for heat power control.
2. Mantle knitted with glass fiber yarn.
3. Provide uniform heating to flasks.
4. Heats up to 400°C.
5. For round bottomed Flasks as per DIN-12347.
6. Easy maintenance.
7. Long life.

### Technical Specification:-

Model No. (230 VAC/50Hz)	Model No. (115 VAC/60Hz)	Mantle capacity (ml)	Wattage (W)	No. of position / Electronic power regulator
2000.EU.01	2000.US.01	100	450	3/3
2000.EU.02	2000.US.02	250	450	3/3
2000.EU.03	2000.US.03	500	600	3/3
2000.EU.04	2000.US.04	100	900	6/6
2000.EU.05	2000.US.05	250	900	6/6
2000.EU.06	2000.US.06	500	1200	6/6

- Heating Mantle Combined Unit material : Made of M.S.
- Mantle Capacity : To hold standard round bottom flasks up to 500ml
- Temperature range : Approx. 400°C
- Heating control : Electronic power regulator
- Permissible ambient temperature : 5 to 40°C
- Permissible relative moisture : 80%
- IP Class : 10

### Maintenance & Repair:-

According the safety regulations the operator has to verify regularly the safety and functioning of the Heating Mantle Combined Unit (just as other electronic devices, Repair must be done at the factory or by authorized companies.)

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### General Remarks:-

- The operator has to make sure that the HEATING MANTLE COMBINED UNIT is stable.
- Put only Glass flask on the Unit that fit the volume.
- Always replace the fuse from the same type & current.
- Always put a Glass flask in the heating mantle. Never put beaker & anything else without flask.
- Never rotate the Heater knob out of their ranges to avoid damages.
- These HEATING MANTLE COMBINED UNIT should not be operated unattended.
- Do not lift unit by the top.
- Don't spill any liquids into the heating mantle.

### ➤ Important Safety Instruction:-

- Never turn on the Heater knob without flask.
- The Glass flask should match the size of the heating mantle exactly, it needs good heat conductor between the vessel & mantle.
- HEATING MANTLE COMBINED UNIT are to be operated in accordance with individual national regulations or the specifications of the professional associations in each case.
- Keep the Unit dry. Even small quantities of liquid can destroy the heating elements.
- For safety reasons HEATING MANTLE COMBINED UNIT should be operated with appropriate temperature limiters.
- Continuous duty might lead to excess temperature if there is no temperature control. Under these conditions the HEATING MANTLE COMBINED UNIT will be damaged or destroyed. The temperatures stated in the general description is the maximum operating temperature of the heating element. The operator has make sure that the maximum operating temperature is not exceeded at any part of the HEATING MANTLE COMBINED UNIT. The glassware and the media must be resistant to the respective maximum operating temperature. Any prescriptions or specifications issued by the producer of glassware and media must be observed.
- The temperature which can be attained does depend, however, on the individual operating conditions. Thermal conductivity and if applicable, the throughput of the media to be heated determine the final temperature, if no temperature regulation is being used.
- Do not touch the heating surface when they are switched on.
- Do not touch the surface of the heating element while energized or hot.
- The upper area of the heating mantle can also take high temperature and must therefore not be touched during operation. Do not use metal instruments near the heating element surface of the mantle.
- Do not install the HEATING MANTLE COMBINED UNIT in hazardous area. They are not explosion protected and accordingly may not be used for heating processes in which there may be a risk due to explosive media or explosive gas air mixtures.
- To avoid electrical shock, completely cut off power to the unit by disconnecting the power cord from the unit or unplug from the wall outlet. Disconnect unit from the power supply prior to maintenance and servicing.
- To avoid electric shock always use a properly grounded electrical outlet of correct voltage and current handling capacity.
- You can use a soft moistened cotton cloth to clean the outer surface of the HEATING MANTLE COMBINED UNIT.
- Don't use in the presence of pressurized or sealed containers. Fire or explosion may result, causing severe injury or death.

### Symbols on the Instruments:-



Caution:- For continued safety replace only with fuse of same rating.



Caution:- Hot surface

### Unpacking & Contents:-

Please unpack the equipments carefully and check for any damages. It is important that any damages which may have arisen during transport are ascertained when unpacking. If applicable a fact report must be sent immediately.

Please check the contents of your carton against the relevant product .

Item No.	Description	Qty
1.	Heating mantle combined unit	1
2.	User manual	1
3.	SS rod (small & big)	3
4.	Boss head	
5.	Rod clamp ( rod holder)	2



### Installation:-

#### Electrical Safety And Installation

This equipment is designed to be used safely under the following conditions:-

- Indoor use.
- Mains supply voltage fluctuations up to  $\pm 10\%$  of the nominal voltage. This equipment must be earthed / grounded to a fixed earth / grounded mains socket outlet. The mains supply is to earthed / grounded in accordance with current legislation. See Technical Specification for recommended fuse ratings.
- Ensure only the correct rated mains input fuses are fitted. (Where applicable ensure the correct Mains cord and moulded IEC plug and lead set fuse if fitted).
- Check the voltage on the product data label on this product unit and those of any accompanying electrical accessory. Ensure the rating conforms to your local supply.
- Do not install this product or accessories on a surface which may become flooded.

**Observation:** - The surface of the heating element of a mantle cartridge will upon receipt look slightly discoloured. This discolouration is normal and occurs at the factory during test when the mantle is first heated up.

#### Operating Instructions :-

1. Place the heating unit on the level table or bench near to the mains supply and water supply.
2. Put the flask with liquid inside the heating mantle. Make sure that the flask makes good contact with the yarn.
3. Connect the instruments to a ground mains outlet, after ensuring that the voltage is the same as given on sticker. The unit must be connected to a single face A.C power supply with protective earth.
4. Ensure that the heater knob is at OFF position.
5. Set the required temperature with the knob by rotating.