



ISO 9001:2008 Certified Co.

**GLASSCO**

# Heating Mantle With Stirrer

**USER MANUAL**

1500.EU/1500.US



Congratulations on your purchase of a Glassco Heating Mantle With Stirrer.

**General Description:-**

**Heating Mantle With Stirrer** -The heater is made of fiber glass yarn with heating elements covered in fiber Glass sleeve, to provide uniform heating of Borosilicate flask up to 400°C.The mantle sizes are as per round bottom DIN 12347 Standard.

The stirrer is a motor driven magnet which revolves directly under the center of the mantle. It is common practice, when heating solutions, to spin "stir bar" (Teflon coated bar magnet) which is placed in the solution. The stirrer speed is set from the front panel. The rpm should be started from a lower value and left to operate at the point of chosen value.

7. Green indication glows which shows that the heating has started. And the Red indication glows which shows that the stirring has started.
8. Put Teflon magnet bar inside the flask for stirring option.
9. When the heat & stir process is complete, switch the heat and stir speed by knobs to their off positions. Disconnect the mains electricity supply.
10. After use keep the unit in a safe place.

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**Features:-**

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

**Technical Specification:-**

Model No. (230 VAC/50Hz)	Model No. (115 VAC/60Hz)	Mantle capacity (ml)	Wattage (W)
1500.EU.01	1500.US.01	100	170
1500.EU.02	1500.US.02	250	170
1500.EU.03	1500.US.03	500	220
1500.EU.04	1500.US.04	1000	320
1500.EU.05	1500.US.05	2000	470
1500.EU.06	1500.US.06	3000	470
1500.EU.07	1500.US.07	4000	470
1500.EU.08	1500.US.08	5000	620

- Heating mantle material : Made of aluminium
- Mantle Capacity : To hold standard round bottom flasks up to 5 Liters (with stirring model only)
- Variable speed range : Approx. up to 750 RPM (with stirring model)
- Temperature range : Approx. 400°C
- Heat & Stir control : Electronic power regulator
- Permissible ambient temperature : 5 to 40°C
- Permissible relative moisture : 80%
- IP Class : 10

**Maintenance & Repair:-**

According to the safety regulations the operator has to verify regularly the safety and functioning of the heating mantle ( just as other electronic devices, repair must be done at the factory or by authorized companies.)

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

### General Remarks:-

- The operator has to make sure that the Heating mantle is stable.
- Put only Glass flask on the heating mantle that fit the heating mantle's 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 Heat knob out of their ranges to avoid damages.
- These Heating mantle should not be operated unattended.
- Do not lift unit by the top.
- Don't spill any liquids in to the heating mantle.

### Important Safety Instruction:-

- Never turn on the Heat 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 are to be operated in accordance with individual national regulations or the specifications of the professional associations in each case.
- Keep the heating mantle dry. Even small quantities of liquid can destroy the heating elements.
- These heating mantles are not moisture protected, and must therefore be protected against humidity and damp, in the particular against aggressive media a few drops of which could be sufficient to destroy the heat conductor. A heating mantles which has become wet may only be used again once it has been thoroughly dried out for half an hour (for preference in a drying cabinet).
- For safety reasons heating mantle should be operated with appropriate temperature limiters.
- 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 in hazardous area. They are not explosion protected and accordingly may not be used for heating & stir 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.
- 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 with stirrer	1
2.	User manual	1
3.	Stir bar	1

### 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 :-

#### Over view of heating mantle with stir control

##### FRONT VIEW



Heat Knob

Stir Knob

##### REAR VIEW



Fuse Holder

Power Cable

Liquid Spill

1. Place the 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 instrument 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 heat knob is at OFF position.
5. Connect the heating mantle with stir to power source.
6. Set the required temperature and the stir speed with the heat and stir knob by rotating.