

8) The Yellow HOT TOP warning indicator located to the left top in the front panel will blink if the plate temperature is above approx. 55°C (131°F) as a safety reminder. It will continue to blink till it is hot. Please keep the unit connected to AC supply for the indication to be available as long as the plate is hot & connected to power & turned on.

9) The LED Indication are illustrated in below table.

LED/Indications:-

	Attribute	Meaning	Remarks
1.	Heat led off	Heat control off	Ok
2.	Heat led blinking green	Plate temperature reaching to set value.	Ok
3.	Heat led stable(green)	Plate temperature has reached	Ok
4.	Heat led blinking red	Failure in heater sensor	ERROR
5.	Stir led off	Stirring off	Ok
6.	Stir led stable(green)	Stirring on	Ok
7.	Stir led blinking blue	Failure of motor due to heavy load or something is stuck up to stop motor.	ERROR
8.	Yellow Hotplate Led Blinking	Top plate in Hot observe caution	Ok

10) For **ERROR** condition contact your dealer.

TECHNICAL SPECIFICATIONS:

Operating Voltage: 230V AC or 115V AC 50/60 Hz depending upon model.

Power: 450x3 Watts ± 10%

Weight: 7.0 Kgs (Approx)

Dimensions of hot plate: Diameter 150mm

Hotplate material : Polished S.S.

Over all dimensions: 505 mmX246mmX195mm

Fuse Internal : 5 Amps./ 8 Amps depending on 230V AC / 115V AC

Fuse External : 10 Amps./ 20 Amps depending on 230V AC / 115V AC



ISO 9001:2008 & OHSAS 18001:2007
Certified Co.

GLASSCO

Hot Plate Magnetic Stirrer

OPERATING MANUAL

713.AG.01/713.AG.02



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Congratulations on your purchase of a Glassco Hot Plate/Stirrer.

Introduction

The unit is designed to heat and stir the contents in a beaker. Please read the instructions carefully to ensure that you receive the maximum benefit from it. Also, be sure to fill out and return the enclosed warranty registration card. We would like to receive the information requested, and it will help us assure you of proper warranty coverage.

Important Information

This manual contains important operating and safety information. You must carefully read and understand the contents of this manual prior to using this equipment.

Safety Information

Glassco Hot Plate/Stirrer has been designed with function, reliability, and safety in mind. It is the user's responsibility to install it in conformance with local electrical codes. For safe operation, please pay attention to the alert boxes throughout the manual.

Warnings:

REFER SERVICING TO QUALIFIED PERSONNEL. NO USER SERVICEABLE PARTS INSIDE THE EQUIPMENT USE AT PROPER VOLTAGE INDICATED ON THE EQUIPMENT.

USE PROPER EARTHING.

Cautions



Hot Surface



Electrical

Note:-Please do not run hotplate without load.

Heater Plate Surface

Glassco Hot Plate/Stirrer Series 713.AG.01/713.AG.02 is capable of temperatures in excess of 370°C, \pm tolerance, at the plate surface. Touching the heated surface will cause severe burns.

USE EXTREME CAUTION AT ALL TIMES. Never leave your Hot Plate/Stirrer accessible to others while it is hot. Although the unit is equipped with a "Hot Warning" indicator on the front panel, do not rely on this alone. Never touch the heating surface unless you are absolutely sure that it is cool.

Electrical

Hot Plate/Stirrer Series 713.AG.01/713.AG.02 is available in models that operate at 115 volts and 230 volts AC. Be certain that your voltage matches the unit that you receive. Check the plate on the Rear sticker for the voltage setting on your unit. Take the normal care and precaution one would use with any electrical appliance. Be very careful to keep the AC line cord away from the hot plate.

General Description

Hot Plate/Stirrer Series 713.AG.01/713.AG.02 is a set able, general purpose, laboratory hot plate with stirrer. Having there individually operated hotplate units in one. Both the plate temperature and the stirrer speed are controllable from the knobs on the front panel.

Heater

Plate temperature can be controlled from (ambient + 20°C) to 350 °C. Heat control works on PID based algorithm. It always tries to maintain the energy of heater according to the set temperature by measuring the actual temperature of plate. A built in electronic control prevents the hot plate for running its temperature higher than 370°C in case of any failure or overshoot in temperature.

Stirrer

The stirrer is a motor-driven magnet which revolves directly under the center of the heater plate. It is common practice, when heating solutions, to spin a "stir bar" (Teflon-coated bar magnet) which is placed in the solution. This assures a more uniform temperature throughout the solution. The stirrer speed is set from the front panel in continuous manner. The rpm should be started from a lower value and left to

operate at the point of chosen value.

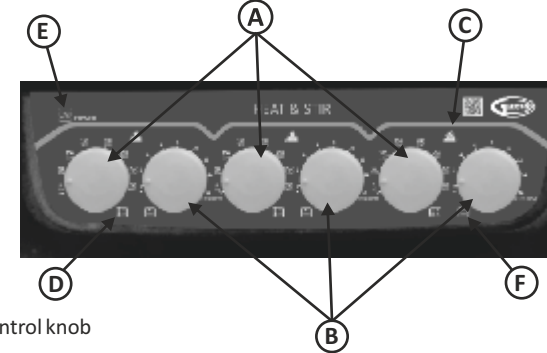
Front & Rear Panels

The front panel of the Glassco Series 713.AG.01/713.AG.02 has two rotary knobs for controlling hot plate and stirrer functions.

Ensure that the Heat knob (A) & Stir knob (B) are at zero position before power on.

The ON/Off electrical switch (H) is located on the Rear side of the equipment. When the unit is turned ON the Power light (E) will be lighted.

You can place the sample to heat and stir and select the heat temperature and increase the stir speed slowly to reach a desired level.



A - Heat control knob

B - Stir control knob

C - Hot top warning

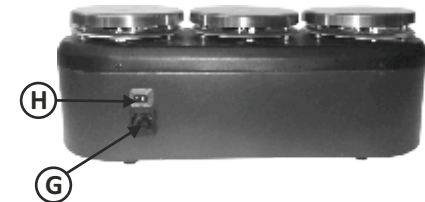
D - Temperature status

E - Power status

F - Stirring status

G - AC power connector IEC Input

H - Power ON/OFF



The AC power connector jack (G) is located on the rear side. The AC power jack is a IEC Input. The AC power supply is fused inside as there are no user serviceable parts inside/outside and a blown fuse will require attention of a qualified personnel from the company. The unit is not supposed to be reused with a fuse from outside for safety reason. The AC type i.e. 115V or 230V 60/50Hz is indicated on a sticker on the side panel close to IEC power input.

Operating Instructions

The Glassco Analogue Hot Plate/Stirrer 713.AG.01/713.AG.02 is simple to use.

Please read below :

Set-Up

- 1) Place the unit on a level, dry bench or surface.
- 2) Plug the unit into a properly grounded, three wire outlet of proper voltage.
- 3) Place the sample on the heater plate and put the stir bar into the sample. Be sure the vessel is centered and that the stir bar is centered in the vessel. Try to match the stir bar to the sample and container size to optimize mixing. Generally, more powerful stir bars are needed to mix more viscous samples. However, one-inch long bars match the magnet in the stirrer best.
- 4) Turn the unit ON by the rocker switch on the rear side.
- 6) Set the Heat temperature to the desired level (A), increase the stir speed (B) to suitable speed.
- 7) When the temperature knob (A) is set to a temperature the indicator near knob starts blinking in green. It blinks till the temperature reaches set value then it stops blinking & glows continuously.