User Manual

Heating Mantle

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I. Preface

Please read this product instruction manual carefully, operate and maintain according to its requirements, and keep this instruction manual properly.

From the date you buy this product, our company after-sales service will closely accompany you, use problems, please contact us in time, we will serve you wholeheartedly.

This manual mainly introduces the application scope, main technical parameters, use method, matters needing attention and other aspects of the product, so as to ensure the safety of correct operation and avoid unnecessary losses caused by improper operation.

II. Product overview

Heating mantle are mainly used for liquid heating in laboratories of major technical colleges, petroleum, chemical, pharmaceutical, environmental protection and other industries.

The heating inner core is insulated with high-temperature resistant alkali free glass fiber, and the heating wire made of nickel chromium is sealed in the insulation layer, and then crochet into a hemispherical shape.It has the advantages of large heating area, fast heating speed, uniform temperature, good heat preservation effect, no fire, and should not damage glassware.The shell is made of high quality cold-rolled steel plate, and the surface is treated by electrostatic spraying process, which is

corrosion resistant, aging resistant, durable, safe and reliable.

Magnetic stirring heating mantle is developed on the basis of ordinary electric heating sleeve. A powerful motor with large torque is added inside to drive the agitator in the container to rotate with magnetism, which can realize the function of stirring while heating.

Ⅲ. Major technical parameter :

Capacity（ml）	Power（W）	Speed range（rpm/min）	Max temperature（℃）	Voltage（V）
100	100	Start～1200 (only for magnetic stirrer type)	380（Surface temperature of heating element）	220 ±10%
250	180			
500	250			
1000	300			
2000	500			
3000	600	/		
5000	1000			
10000	1500			
20000	2500			
50000	6000			

VI. Instructions for use

4.1.Heating mantle

4.1.1 Electronic thermostat type（ZDHW）:

Advanced contactless electronic voltage controller, temperature control than a mechanic thermostat has a long service life, wide temperature range and so on. When used, place flask filled with liquid in the heating jacket, and then turn the temperature adjustment knob clockwise, voltage gauge needle increases as the knob is larger (larger voltage value, closer to rated power), required temperature rising, after when you have reached the desired temperature, turn the knob to swing some, to reach the purpose of the thermostat

4.1.2 Intelligent temperature control type（SXKW）:

The product is my company based on common upgrading products electronic thermostat heating jacket. Digital display measuring temperature and the set temperature, anti-overshooting PID algorithm is used to control heating, temperature can effectively prevent rushed too much. And is equipped with two

temperature sensors, external temperature sensor, when in use, insert it to measure the temperature of the liquid in the flask; built-in sensors for measuring core temperature.

4.2 Magnetic stirring heating mantle

4.2.1.Electronic thermostat type (HJ-6) :

The product adopts advanced contactless electronic voltage regulating circuit, which has the advantages of long service life and wider temperature regulating range than mechanical temperature regulating.

Place the instrument on the table and put the liquid container into the heating jacket of the instrument.Turn the temperature knob clockwise and the heating indicator light will be on. Gradually increase the temperature according to your needs. When the temperature reaches the desired level, turn the adjusting knob counterclockwise to keep the temperature constant.

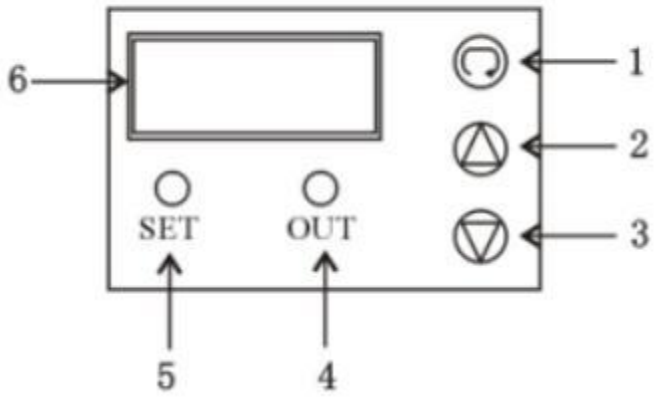
Adjust the stirring speed: adjust the stirring knob clockwise, the stirring indicator light will be on, and the stirring revolution will increase accordingly;And vice versa.

4.2.2.Intelligent temperature control type (HJ-6A) :

Place the heating mantle on the table, install the sensor bracket, and insert the sensor plug into the sensor seat on the back of the instrument.Put the liquid container into the heating jacket of the instrument and put the sensor in the heated liquid.When the power is switched on, the instrument's screen shows the temperature of the heated liquid.Setting temperature: after pressing the "function" button, the green SET indicator will light up and the screen will display the setting temperature. Then press the up and down keys to select the temperature to be used.After setting the temperature, press the "function" button and the screen displays the actual temperature.When heated, the OUT indicator is on, and when the lamp is off, it is not heated.When the temperature rises to the set temperature for the first time, there may be several degrees of temperature shock, and when the temperature falls, it will be stable.(see the operation method of intelligent instrument for details)

Adjust the stirring speed: adjust the stirring knob clockwise, the stirring indicator light will be on, and the stirring revolution will increase accordingly;And vice versa.

V.Controller operation method



(1)function keys
(2)Reduce
(3)Increase
(4)output indicator
(5)Setting indicator Light
(6)Measurement value/setting display window

(1) Setting temperature:

Press the function key, the SET light will light up, and the window will display the setting value. Modify the setting temperature by adding or subtracting keys. Press the function key again, and the temperature setting is completed.

(2) Enter the second menu:

Hold down the function key for about 5 seconds and SET light will light up to enter the second menu.Modify the corresponding parameters according to the requirements. After the modification is completed, hold down the function key for about 5 seconds, SET lights out, and save and exit.

(3) Second menu:

Item	Prompt	Description	Factory value
1	C	Sensor modified, range -19 to 19℃.	0
2	A	0: bit control 1: PID control 2: self-tuning	1
3	L	Heating output limit (%), only below 50℃	80

VI.Matters needing attention

1.As the surface of glass fiber is coated with grease, it shall slowly heat up during the first use. After white smoke is produced, turn off the power, and then power up and heat up after smoke is dispersed. Repeat several times until smoke-free.
2.Flammable, explosive and corrosive liquids are not allowed in the heater.
3.Must be reliably grounded.
4.The relative humidity of the operating environment shall not exceed 85%.Store in a dry place, do not get damp.If damp, leave to dry before normal use.
5.Two sensors of intelligent temperature control electric heat sleeve cannot be used at the same time, only one temperature measurement mode can be used.When switching between internal and external sensors, it must be switched off.
6.Speed adjustment, should be adjusted slowly, with stable rotation and then gradually increase the speed.It is not allowed to start directly at high speed, so as to avoid pulsating caused by unsynchronized agitators.
7.The liquid in the container should not be too full to avoid liquid expansion and overflow into the heating jacket during heating, causing leakage of electricity.