

Heating Mantle (Digital /Magnetic)
YR05021 to YR05048

Instruction Manual

Thank you very much for purchasing our Kalstein's YR Heating Mantle (Digital /Magnetic)

Please read the "Operating Instructions" and "Warranty" before operating this unit to assure proper operation. After reading these documents, be sure to store them securely together with the "Warranty" at a hand place for future reference.



Warning: Before operating the unit, be sure to read carefully and fully understand important warnings in the operating instructions.



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NAME AND MODEL

YR Heating Mantle (Digital /Magnetic)

USE

Kalstein's YR Heating Mantle (Digital /Magnetic)

SAFETY INSTRUCTION

- Connect the device to an earthed power supply to ensure safety of machine and experiment, connect the power as the machine required.
- This equipment is forbidden to use in inflammable and explosive, poisonous and strong corrosive experiments.
- Make sure horizontal installation.
- Non-professionals are not allowed to disassemble and repair this machine.
- Pay attention to the set temperature while dealing with the inflammable matters.
- Make sure dry the resin container, if the temperature is setting too high by accident, the container would be dissolved and then fall on the heater to cause fire.
- Overfilled of sample will lead to overheat of working room under parts, which will dissolve the inflammable material and cause fire.
- While the machine is working, don't touch the top, and exhaust port of the device to protect from high-temperature burns
- Read the instruction book before operation.

- When working, where the personal guard to avoid the risk from:
 - Splashing and evaporation of liquids
 - Release of toxic or combustible gases.
- Set up the instrument in a spacious area on an stable, clean, non-lip, dry and fireproof surface, do not operate the instrument in explosive atmospheres, with hazardous substances or under water.
- Temperature must always be set to at least 25°C lower than the fire point of the media used.
- Beware of hazards due to:
 - Flammable materials or media with a low boiling temperature
 - Overfilling of media
 - Unsafe container
- Process pathogenic materials only in closed vessels.
- Check the instrument and accessories beforehand for damage each time you use them. Do not use damaged components.
- Safe operation is only guaranteed with the accessories described in the "Listing of Items" chapter. Accessories must be securely attached to the device and cannot come off by themselves. Always disconnect the plug before fitting accessories.
- Ensure that the external temperature sensor is inserted in the media to a depth of at least 20mm.

When using metal vessels, do not place the temperature sensors on the bottom of

the vessel. Placing sensors on the vessel bottom can cause excessively high temperature to be measured especially in media which have poor conductivity. The tip of the measuring sensor must be at least 5mm from the vessel bottom, a distance of 10mm is ideal.

- The instrument can only be disconnected from the main power supply by pulling out the mains plug or the connector plug.
- The voltage stated on the label must correspond to the main power supply.
- Ensure that the mains power supply cable does not touch the heating base surface. Do not cover the device.
- Keep away from high magnetic field.

Unpack the equipment carefully and check for any damages which may have arisen during transport. If it happens, please contact manufacturer for technical support.

TRIAL RUN

- Make sure the required operating voltage and power supply voltage match.
- Ensure the socket must be earthed reliably
- Ensure the power be off
- Plug in the power cable, ensure the power be on and begin initializing.
- Add the medium into the vessel with a stirring bar if with the magnetic stirrer function.
- Put the vessel on the work plate.
- Adjust the stirring speed and start stirring if with the magnetic stirrer function



- Observe the stirring bar and LCD display if with digital function.
- Adjust the temperature and start heating.
- Observe the real temperature on LCD display it with the digital function.
- Adjust the heating and stirring functions.

Observe the real temperature on LCD display if with the digital function. Stop the heating and stirring functions.

If these operations above are normal, the device is ready to operate, If these operations are not normal, the device may be damaged during transportation, please contact manufacture for technical support.

OPERATING MODES

- **Manual Heating Mantle YR05021 to YR05029**

Place the equipment on level worktable, put the container with liquid inside into heating mantle.

- Switch on the power accords with the machine, the power indicator light will be lightened, turn on the power of regulation. knob, and turn the knob clockwise, the working indicator light will be lightened the process regulating the light intensity changes according to different regulation position, and the temperature rises as well. Turn the knob anticlockwise to adjust the temperature down.



Notes:



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- The power must accord with the machine.
- Make sure the power line has safety distance from the heating
- When the machine meets fault, please cut off the Electricity first

- **Magnetic Manual Heating Mantle YR05039 to YR05043:**

- Place the equipment on level worktable, put the container with liquid inside into heating mantle.
- Switch on the power accords with the machine, the power indicator light will be lighten, turn on the power of regulation. knob, and tun the knob clockwise, the working indicator light will be lighten i the process regulating the light intensity. Changes according to different regulation position, and the temperature rises as well.
- The same to adjust the magnetic stirring power, anticlockwise to adjust the temperature down.





Notes:



mantle.

- The power must accord with the machine.
 - Adjust the speed slowly, please adjust the speed when too high speed make the stir breakaway.
 - Make sure the power line has safety distance from the heating mantle.
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- When the machine meets fault, please cut off the Electricity first.

- **Digital Heating Mantle YR05030 to YR05038:**

Place the equipment on level worktable, put the container with liquid inside into heating mantle.

- Install the Sensor Rack with Stainless Rods on the heating mantle back holder.
- Put the temperature sensor into the liquid.
- Turn the knob anticlockwise to the left place, Setting the inquiry temperature and the equipment will working slowly.
- If the temperature on the screen can not up to the setting temperature, turn the knob clockwise slowly, the real temperature on the screen will increase slowly.
- If the temperature still can't up to the setting temperature, do this process again.
- If the temperature higher than the setting temperature, turn the knob anticlockwise to make the temperature down.

Notes:



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- The power must accord with the machine.
 - Make sure the power line has safety distance from the heating mantle.
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- When the machine meets fault, please cut off the Electricity first.



- **Magnetic and Digital Heating Mantle YR05044 to YR05048:**
 - Place the equipment on level worktable, put the container with liquid inside into heating mantle.
 - Install the Sensor Rack with Stainless Rods on the heating mantle back holder.
 - Put the temperature sensor into the liquid.
 - Press the S key board comes into the setting condition. Adjust the temperature by press the up and down keyboard.
 - Press the S keyboard again to finish the temperature setting the equipment comes into the working condition.

Turn the knob clockwise and anticlockwise to adjust the magnetic stirrer power





Notes:



- The power must accord with the machine.
- Adjust the speech slowly, please adjust the speech when too high speech make the stir breakaway.
- Make sure the power line has safety distance from the heating mantle.
- When the machine meets fault, please cut off the Electricity first.

MAIN TECHNICAL PARAMETERS

- Heating Mantle YR Series

Type	Analog						
Model	YR05021	YR05022	YR05023	YR05024	YR05025	YR05026	YR05027
Capacity(ml)	100	250	500	1000	2000	3000	5000
Voltage(V)	200-240V/50-60Hz or 100-120V/50-60Hz						
Max use temp(°C)	380						
Power(w)	100	150	250	350	450	600	800
Working time	continuous						
Exterior size(mm)	φ200×160		φ260x200	φ300x230	φ340x245	φ350x250	
Packing size(mm)	230×230×170		290x290x220	330x330x250	365x365x295	390x390x310	
N/G.W.(kg)	2.5/2.8		4/6	5/7	7.5/8	8.5/9.2	

Type	Digital						
Model	YR05030	YR05031	YR05032	YR05033	YR05034	YR05035	YR05036
Capacity(ml)	100	250	500	1000	2000	3000	5000
Voltage(V)	200-240V/50-60Hz or 100-120V/50-60Hz						
Max use temp(°C)	380						
Power(w)	100	150	250	350	450	600	800
Working time	continuous						
Exterior size(mm)	φ200x160		φ260x200	φ300x230	φ340x245	φ350x250	
Packing size(mm)	230x230x170		290x290x220	330x330x250	365x365x295	390x390x310	
N/G.W.(kg)	2.5/2.8		4/6	5/7	7.5/8	8.5/9.2	



- Heating Mantle w/stirrer YR Series

Type	Analog				
Model	YR05039	YR05040	YR05041	YR05042	YR05043
Capacity(ml)	100	250	500	1000	2000
Voltage(V)	200-240V/50-60Hz or 100-120V/50-60Hz				
Max use temp(°C)	380				
Power(w)	100	150	250	350	450
Speed (r.p.m)	0-1600rpm				
Working time	continuous				
Exterior size(mm)	φ220×165		φ260×200		φ330×230
Packing size(mm)	230*210*195		290×290×220		345x290x350
N/G.W.(kg)	2.5/3.5		4.5/5.5		6.5/7

Type	Digital				
Model	YR05044	YR05045	YR05046	YR05047	YR05048
Capacity(ml)	100	250	500	1000	2000
Voltage(V)	200-240V/50-60Hz or 100-120V/50-60Hz				
Max use temp(°C)	380				
Power(w)	100	150	250	350	450
Speed (r.p.m)	0-1600rpm				
Working time	continuous				
Exterior size(mm)	φ220×165		φ260×200		φ330×230
Packing size(mm)	230*210*195		290×290×220		345x290x350
N/G.W.(kg)	2.5/3.5		4.5/5.5		6.5/7

Working condition:

Ambient temperature: 5~40°C; Ambient humidity: ≤90%; Voltage: 220V±10%, 50/60Hz

STORAGE AND TRANSPORTATION

- Keep it in dry and clean room with good ventilation and no corrosive gas.
- Prevent it from wetting by the rain and avoid violent collision in transportation.



FAULTS

- When working, wear the personal guard to avoid the risk from:
 - Instruments can't be power ON
 - Check whether the power cable is plugged
 - Check whether the fuse is broken or loose
 - Temperature cannot reach set point or stirring can't be starts when adjust the control knob
 - Check whether the heating wire broke during transport
 - Check whether the controller broke during transport
- If these faults are not resolved, please set the instruments to factory center, or contact with the manufacturer.

MAINTENANCE AND CLEANING

- Proper maintenance can keep instruments working in a good state and lengthen its lifetime.
- Be careful not spray the cleanser into the instrument when cleaning.
- Unplug the power line when cleaning.
- Only use cleanser that we advised as below:

Dyes	Isotropic alcohol
Construction materials	Water containing tenside
Cosmetics	Isotropic alcohol Water containing tenside
Food stuffs	Water containing tenside
Fuels	Water containing tenside



- Wear the proper protective gloves during cleaning of the instrument
- Before using other method for cleaning or decontamination, the user must contact the manufacturer ascertain that this method does not destroy the instrument.
- The instrument must be cleaned and put it into the initial packaging carton before sending to service for repair, avoiding the contamination of hazardous.
- Use the instrument in a dry clean room and temperature stable environment.

