Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

GOYOJO GLS-HM-1000

GOYOJO 1000ml Heating Mantle with Magnetic Stirrer User Manual

Model: GLS-HM-1000

1. Introduction

This manual provides instructions for the safe and efficient operation of the GOYOJO 1000ml Heating Mantle with Magnetic Stirrer. This laboratory instrument is designed for controlled heating and magnetic stirring of liquids in 1000ml round-bottom flasks, supporting various laboratory procedures such as distillation, crystallization, and purification.
Key features include 330W heating power, stirring speeds up to 2450 RPM, and precise temperature control up to 380°C with industrial-grade self-tuning PID technology. Its detachable design allows for flexible use of heating and stirring functions.



Figure 1: GOYOJO 1000ml Heating Mantle with Magnetic Stirrer.

2. Safety Instructions

WARNING: Read all safety information before operating the device to prevent injury or damage.

- Always operate the heating mantle on a stable, level, and heat-resistant surface.
- Ensure proper ventilation in the work area.
- Do not splash liquid onto the hot surface. Avoid touching the heating mantle when operating, as surfaces can reach high temperatures (up to 380°C).
- Wear appropriate personal protective equipment (PPE), including heat-resistant gloves and eye protection.
- Do not operate the device with damaged power cords or if it shows signs of malfunction.
- Ensure the flask is securely placed within the heating mantle.
- Disconnect power before cleaning or maintenance.

- Do not immerse the unit in water or other liquids.
- Keep flammable materials away from the heating mantle during operation.

3. Package Contents

Verify that all components are present and undamaged upon unpacking:

- GOYOJO Heating Mantle (1000ml capacity)
- Magnetic Stirrer Base Unit
- Power Cord
- K-Type Temperature Sensor
- Support Stand and Thermometer Clamp
- Magnetic Stir Bar (Rotor)



Figure 2: Labeled components of the GOYOJO Heating Mantle and Stirrer.

4. Setup Guide

1. **Placement:** Place the magnetic stirrer base unit on a stable, level, and heat-resistant workbench. Ensure adequate space around the unit for ventilation and safe operation.
2. **Connect Heating Mantle:** Connect the heating mantle to the designated port on the magnetic stirrer base unit. The heating mantle can be used directly on the base unit or placed separately if desired, utilizing its detachable design.
3. **Install Support Stand:** Assemble the support stand and attach the thermometer clamp. Position it to securely hold the temperature sensor and any glassware.
4. **Insert Temperature Sensor:** Insert the K-Type temperature sensor into the solution within the round-bottom flask. Ensure the sensor tip is submerged and not touching the bottom or sides of the flask. Connect the sensor to the appropriate input on the control panel.
5. **Place Flask:** Carefully place the 1000ml round-bottom flask into the heating mantle. If stirring, ensure a magnetic stir bar is inside the flask.
6. **Power Connection:** Connect the power cord to the magnetic stirrer base unit and then to a grounded electrical outlet.

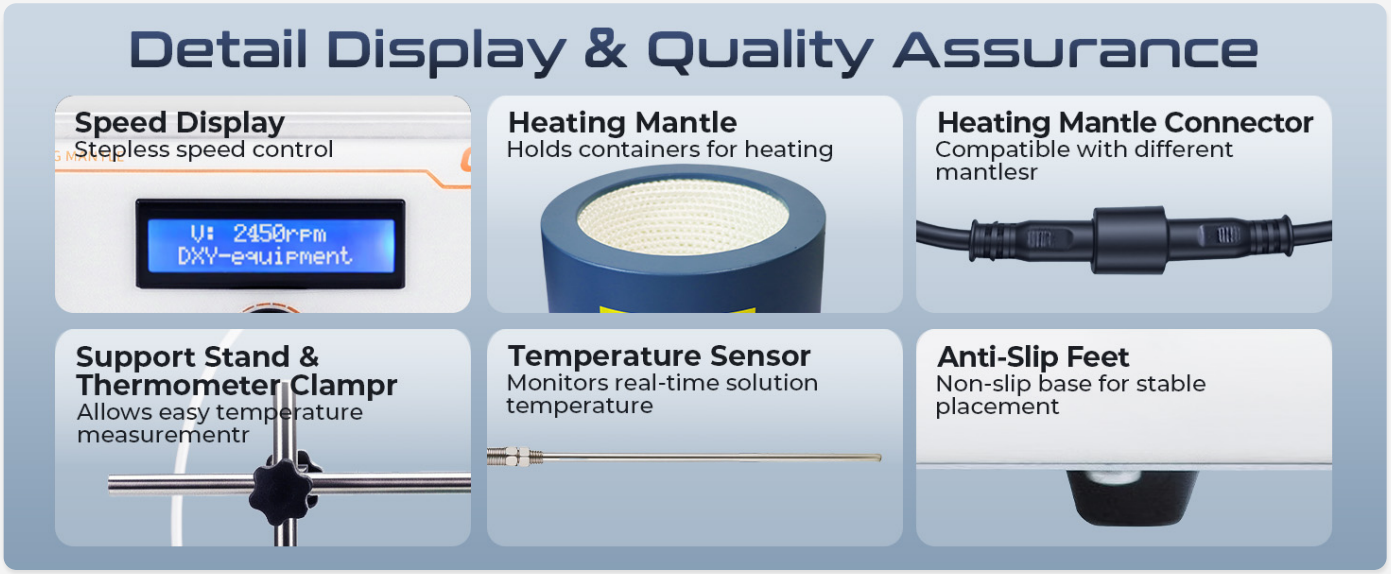


Figure 3: Detailed view of components including speed display, heating mantle, connector, support stand, temperature sensor, and anti-slip feet.

5. Operating Instructions

The GOYOJO heating mantle features separate controls for heating and stirring, allowing for precise management of your experiments.

5.1 Control Panel Overview



Figure 4: Control panel, stirring speed knob, and power/heat dual switches.

- **Temperature Control Panel:** Displays Process Value (PV - actual temperature) and Set Value (SV - target temperature). Use the SET button and arrow keys to adjust the target temperature.
- **Stirring Speed Knob:** Adjusts the magnetic stirring speed. The current speed is displayed on the LED screen.
- **Power/Heat Dual Switches:** Separate switches for main power and heating function.

5.2 Starting Operation

1. **Power On:** Flip the main power switch (usually labeled "Power") to the ON position. The display screens will illuminate.
2. **Set Temperature:**
    - Press the **SET** button on the temperature control panel. The SV (Set Value) will flash.
    - Use the **Up** and **Down** arrow keys to adjust the target temperature.
    - Press **SET** again to confirm the setting. The PV (Process Value) will show the current temperature.

3. **Activate Heating:** Flip the heating switch (usually labeled "Heat") to the ON position. The heating mantle will begin to heat the flask. The PID control system will work to maintain the set temperature.
4. **Set Stirring Speed:** Turn the **Stirring Speed Knob** clockwise to increase the stirring speed. The current RPM will be displayed. Adjust as needed for your application.



Figure 5: PID temperature control ensures stable and accurate heating.

5.3 Detachable Design

The heating mantle and magnetic stirrer base unit can be used together or separately. This provides flexibility for experiments requiring only heating or only stirring, or for using different sized heating mantles (e.g., 2000ml, if compatible and purchased separately) with the same stirring base.



Figure 6: Detachable design for flexible use, showing separate heating and stirring functions.

5.4 Ending Operation

1. Turn the stirring speed knob to its minimum setting or OFF.
2. Flip the heating switch to the OFF position.
3. Allow the heating mantle and flask to cool down completely before handling.
4. Flip the main power switch to the OFF position and disconnect the power cord.

6. Maintenance and Care

- **Cleaning:** After each use, ensure the unit is completely cooled and disconnected from power. Wipe down exterior surfaces with a damp cloth. Do not use abrasive cleaners or immerse the unit in water.
- **Inspection:** Regularly inspect the power cord, heating mantle, and control panel for any signs of damage or wear. Do not operate if damage is found.

- **Storage:** Store the heating mantle and stirrer in a clean, dry, and dust-free environment when not in use.
- **Heating Liner:** The heating sleeve is made of alkali-free glass fiber. Handle with care to avoid damage.



Figure 7: The hand-woven heating liner provides uniform heating.

7. Troubleshooting

Problem	Possible Cause	Solution
Unit does not power on.	No power supply; Power cord loose; Main power switch OFF.	Check power outlet; Ensure power cord is securely connected; Flip main power switch ON.
Heating function not working.	Heating switch OFF; Temperature not set; Heating element failure.	Flip heating switch ON; Set target temperature; Contact support if issue persists.

Problem	Possible Cause	Solution
Stirring function not working.	Stirring speed knob at minimum; No stir bar in flask; Stir bar stuck.	Increase stirring speed; Ensure stir bar is present and free to move.
Temperature unstable or inaccurate.	Temperature sensor not properly immersed; PID settings issue; External drafts.	Ensure sensor is correctly placed; Allow PID to self-tune; Minimize drafts.

8. Technical Specifications

Brand	GOYOJO
Model Number	GLS-HM-1000
Heating Power	330W
Maximum Temperature	380°C (716°F)
Temperature Accuracy	±0.1°C / ±0.1°F
Stirring Speed	Up to 2450 RPM
Compatible Mantle Size	1000ml (Included), 2000ml (Optional)
Included Mantle Capacity	1000ml
Mantle Inner Diameter	5.51 inches
Mantle Height	4.72 inches
Item Weight	10.8 pounds
Included Components	Heating Mantle, Magnetic Stirrer Base, K-Type Temperature Sensor, Support Stand, Thermometer Clamp, Magnetic Stir Bar



Figure 8: Product dimensions and key specifications.

9. Warranty and Support

For warranty information, technical support, or service inquiries, please contact GOYOJO customer service. Refer to your purchase documentation for specific warranty terms and contact details.
You can also visit the official GOYOJO store for more information:GOYOJO Store on Amazon

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question