



**GLASS VIALS**  
— AUSTRALIA —



## USER MANUAL

**GVA-001-010 Magnetic Hotplate Stirrer 5L**

Please ensure you read this user manual carefully prior to operation, and retain it for reference purposes.

[www.glassvials.com.au](http://www.glassvials.com.au)

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User Manual Version 1.0

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## Introduction

Thank you for choosing Glass Vials Australia’s Magnetic Stirrer. Users should read this manual carefully, follow the instructions and procedures, and be aware of all the cautions when using this product. Please retain this manual for reference and safety purposes.

## Warranty




This instrument is warranted to be free from defects in materials and workmanship under normal use and service, for a period of 12 months from the date of purchase. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident or abnormal conditions of operation.

For claims under the warranty please contact [orders@glassvials.com.au](mailto:orders@glassvials.com.au)

## Delivery

The unit is supplied with 1 x main unit, power cable, support clamp, temperature rod, stirrer and user manual. Please see the Packing List for product codes and Global Trade Item Numbers (GTIN).

## Safety Instructions

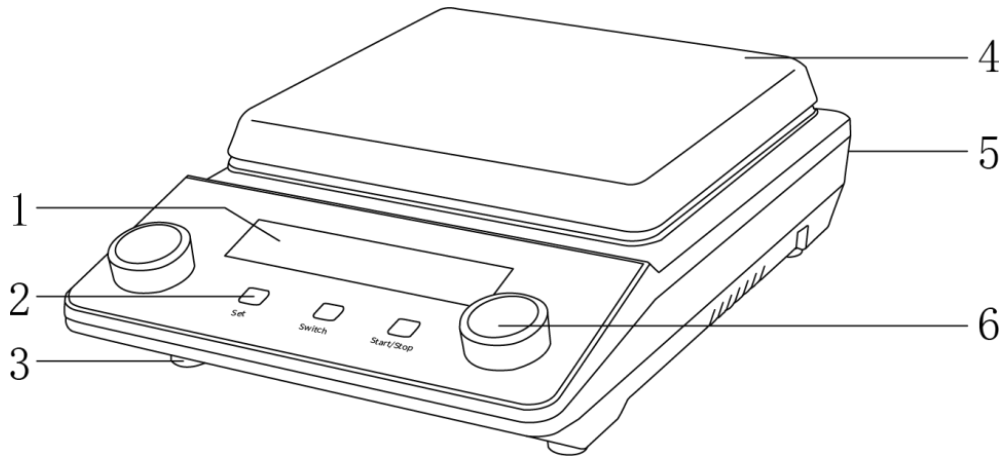
	<p><b>Warning:</b></p> <ul style="list-style-type: none"> <li>• Read the operating instructions carefully before use.</li> <li>• Ensure that only trained staff work with the instrument.</li> </ul>
	<p><b>Risk of burns:</b></p> <ul style="list-style-type: none"> <li>• Use caution when touching the housing parts and the hotplate as they can reach temperatures of 340°C.</li> <li>• After switching the unit off, there will be residual heat and risk of burns.</li> </ul>
	<p><b>Protective ground contact:</b></p> <ul style="list-style-type: none"> <li>• Ensure that the electrical socket is grounded (protective ground contact) before using the unit.</li> </ul>

- Ensure you are wearing appropriate Personal Protective Equipment (PPE) when working with the unit to avoid the risk from splashing and evaporation of liquids, releases of toxic or combustible gases, or glass breakages.
- Set up the unit in a spacious, well ventilated area, on a stable, clean, non-slip, dry and fireproof surface. Do not operate the unit in hazardous environments, near flammable substances or near water.
- Please ensure that only trained persons operate this unit.
- Ensure compliance with relevant Work, Health and Safety regulations to avoid risks and accidents.
- Gradually increase unit speed, being aware to reduce speed if:
  - The stirring bar breaks away; or
  - The unit is not running smoothly; or
  - The container moves on the base plate.
- If displacement or excessive vibration of the unit occurs during operation, please stop the unit immediately, or reduce the run speed.
- Do not use the unit in direct sunlight, or in a high temperature or high humidity environment.
- Temperatures must always be set to at least 50°C lower than the fire point of the media being used.
- It is recommended that flammable media are not used on this unit. Only stir media that do not produce dangerous reactions during the stirring process.
- Be aware of hazards due to:
  - Flammable materials or media with a low boiling temperature;
  - Overfilling media containers;
  - Unsafe and non-compliant containers.
- Process pathogenic materials in closed containers only.
- Ensure that you are not heating the unit for excessive periods of time. It is recommended that the unit not be heated when there is no stirring bar fitted.
- The unit should be kept clean and dry at all times. Ensure that no liquids come into contact with the unit to avoid damage
- When not in use, the machine should be removed from power and stored safely.
- Ensure the power cable is disconnected and the residual heat has dissipated before cleaning the unit.
- Always ensure the power cable does not come into contact with the hotplate.
- Do not disassemble and adjust the parts of the unit. If any parts are damaged, please replace them with the original parts sourced only from Glass Vials Australia.
- Do not use the unit in areas with strong magnetic fields.
- Do not cover the unit during use.

## Overview

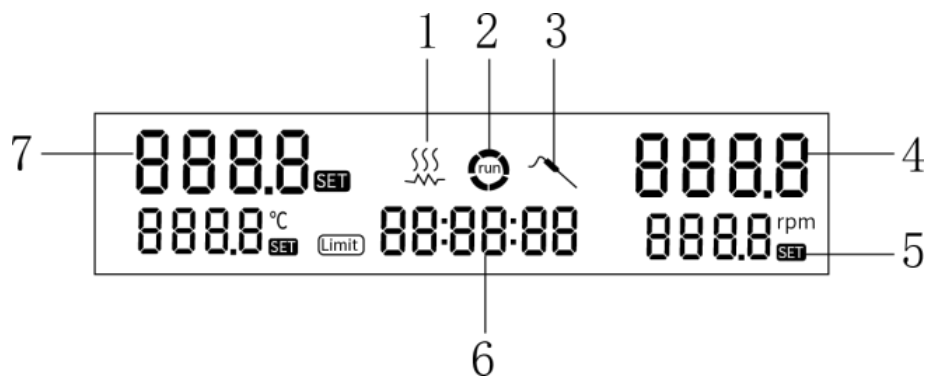
Glass Vials Australia GVA-001-010 magnetic stirrer is a laboratory instrument used for liquid mixing, stirring or simultaneously heating and stirring low-viscosity liquid or solid-liquid media.

## Structure




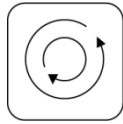

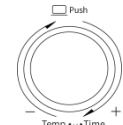
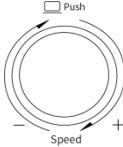
- |                  |                            |                         |
|------------------|----------------------------|-------------------------|
| 1. LCD           | 2. Touch Key               | 3. Shock-absorbing feet |
| 4. Heating plate | 5. Temperature sensor plug | 6. Adjustment knob      |

## Display



- |                          |                        |                     |
|--------------------------|------------------------|---------------------|
| 1. Heating indicator     | 2. Direction indicator | 3. PT1000 indicator |
| 4. Speed indicator       | 5. Set indicator       | 6. Time display     |
| 7. Temperature indicator |                        |                     |

## Button Functions

	<p><b>Program</b></p>	<p>Enter program control mode.</p>
	<p><b>Stirring Direction</b></p>	<p>Changes the direction of the stirring rod.</p>
	<p><b>Start/Stop</b></p>	<p>Start or stop the unit.</p>
	<p><b>Time and Temperature</b></p>	<p>Time and temperature adjustment knob. A quick press of the knob allows you to switch between time and temperature settings. Turn clockwise to increase or counterclockwise to decrease.</p>
	<p><b>Speed Adjustment</b></p>	<p>Turn clockwise to increase or counterclockwise to decrease the speed.</p>

## Features

1. The LCD (Liquid Crystal Display) displays the current mode, speed, state and settings for the unit.
2. The heating plate is constructed of die-cast aluminium to promote consistent, uniform temperatures and is coated with a ceramic spray surface to ensure corrosion resistance, non-slip conditions.
3. The unit can also be connected to a GVA-001-011 PT1000 Temperature Sensor 260mm to achieve precise temperature control.
4. The unit is equipped with direction control capabilities which can stir in forward or reverse.
5. There are 6 operating modes available to suit the parameters of the experiment.
6. The unit comes with a DC brushless motor which provides for maintenance free, low noise and stable operating conditions.
7. The unit is fitted with a microprocessor to ensure consistent, accurate control and is able to be programmed with specific speeds, temperatures and directionality

## Technical Specifications

Model	GVA-001-010
Voltage/V	AC200-240V
Frequency/Hz	50/60
Power/W	550W
Display Mode	LCD
Speed Range/rpm	100-1600
Speed Control Accuracy/rpm	±10
Timing Range	1-99h59min
Temperature Control Range/°C	RT-300
Temperature Control Accuracy/°C	Working plate: ±3 Liquor: ±0.5
Max Stirring Volume (H <sub>2</sub> O)L	5
Working Plate Material	Cast aluminium with ceramic coating
Working Size	150×150
Motor Type	Brushless Motor
Net Weight/Kg	2.1
Dimensions/mm	180×270×85

## Setting up

### Choosing the correct working environment

Ensure the work surface is:

- Uncluttered, clean and dry;
- Level, stable, non-slip and flame-retardant;
- Free from magnets and clear of magnetic field generating equipment;
- Free from flammable hazards;
- In an area free from high humidity and dust particles.

### Equipment installation

1. Remove the unit from the outer packaging, and remove the cushioning sponge.
2. Place the unit on a stable and vibration-free workbench, as level as possible.
3. Insert the power cord into the power socket on the back of the unit.
4. Screw the bracket into the screw hole until it is fully seated.

## Operating Instructions

### Speed Regulation

1. Place the magnetic stir bar into the container of the solution to be stirred.
2. Place the container on the surface of the magnetic stirrer.
3. Confirm that the magnetic stir bar is centred in the container.
4. Turn on the power.
5. Adjust the speed control knob to the required speed.
6. After the mixing is complete, return the knob to zero and turn off the power.

### Heating Regulation

1. Place the magnetic stir bar into the container of the solution to be stirred.
2. Place the container on the surface of the magnetic stirrer.
3. Confirm that the magnetic stir bar is centred in the container.
4. Turn on the power.
5. Adjust the left temperature control knob to the required temperature, and the right speed control knob to the required speed.
6. After the mixing is complete, return the knob to zero and turn off the power.

**NOTE:** The unit will be hot after operation. Use caution to reduce the risk of burns.

## Digital Display Speed Regulation

1. Place the magnetic stir bar into the container of the solution to be stirred.
2. Place the container on the surface of the magnetic stirrer.
3. Confirm that the magnetic stir bar is centred in the container.
4. Turn on the power.
5. Short press the left knob to set the length of time.
6. Short press the right knob to set the speed.
7. Press and hold the Program button for 5 seconds to activate or deactivate the program control mode.
8. Short press the Program button again to save as the default P1 program. Up to 6 programs can be stored on the unit.
9. Adjust the left and right knobs to set the time, rotation speed and directionality of the stirring bar.
10. When the time is set to 00:00, the unit will not enter the next program.
11. Short press the Switch key to switch the direction of the stir bar.
12. Short press the Start/Stop key to begin or cease running the program to the set parameters.

## Maintenance

1. Do not use any harsh chemicals when cleaning the unit.
2. Remove attachments when cleaning the machine to prevent damage to the accessories and hotplate.
3. Unplug the power cord when not in use.
4. Store the unit in a cool and dry place, ensuring that no dust settles on the unit.
5. If the unit has not been used for some time, please ensure that you perform a test of the functions to ensure safe operation.

## Troubleshooting

Fault symptom	Reasons	Solution
Unit does not switch on	The power cord is not connected correctly.	Check whether the power cord is connected correctly, check that the power outlet is on.
The unit does not heat, unit beeps	The heating wire terminal is disconnected	Check the heating wire terminal
The instrument does not stir	Motor failure	Check the motor cable or replace the motor.
Vibration or bumps while stirring	Incorrect beaker positioning or container is not flat	Correct container placement, or replace container.

## Packing list

<b>Product Code</b>	<b>Description</b>	<b>GTIN</b>
GVA-001-010	Magnetic Hotplate Stirrer 5L	9359234004683
GVA-001-011	PT1000 Temperature Sensor 260mm	9359234004690
GVA-001-012	Clamp Support for PT1000 Temperature Sensor	9359234004706
GVA-001-013	Powder Adapter	9359234004713
GVA-001-014	Stirrer Bar	9359234004720

