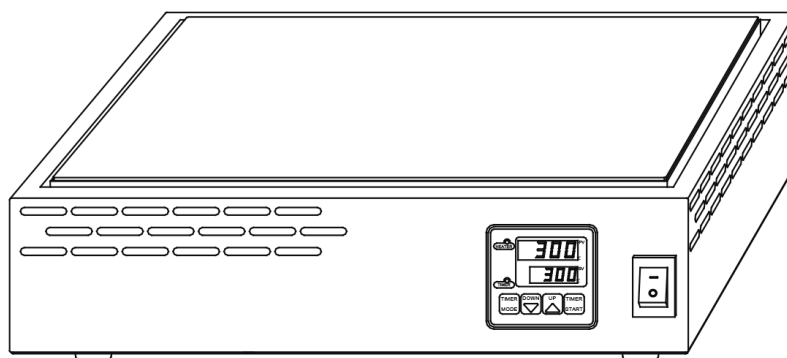


Instruction Manual**Hot Plate**

HI-1000G

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**Thank you for your purchase.**

Thank you very much for purchasing our product. In order to ensure that this product is used safely and in a favorable condition, please read this Instruction Manual, and use this product in the correct manner.

After reading this Instruction Manual, keep it in a safe place where the user can refer to it at any time. In addition, if you lend or transfer the product, please provide this Instruction Manual with the product in a location that is easy to find, so that the new user can learn how to use it safely and correctly.

**AS ONE Corporation**

Precautions for Installing and Using of Product

Please observe the following points for safe use.

 For 230 V AC($\pm 5\%$)	The power-supply voltage for this product is 230 V AC($\pm 5\%$). Using a different power-supply voltage may result in fire or failure.
 Grounding required	Always ground with a ground wire to prevent an electric shock.
 Corrosion	Be careful with corrosive samples.
 Evaporation	Do not allow the liquid in the container you are using to evaporate. It may result in failure or fire. This product does not include an evaporation-prevention system.
 High temperature	Pay attention to the set temperature for heating flammable materials. When using containers or parts made of resin, monitor the heater's operation because there is a possibility of melting or ignition when the temperature is erroneously set too high.
 High temperature	Be careful when touching the main unit or sample during use or immediately after use. Pay attention since the main unit or sample may be hot during or after use, depending on the set temperature.
 Explosion	Be careful of flammable substances, such as organic solvents. Because the temperature becomes high during operation, do not use anything that could vaporize, catch fire, or explode as a heat medium or sample. Explosive substances include nitric esters and nitro compounds, and flammable substances include peroxide salts, inorganic peroxides, nitrates, and organic solvents.
 Abnormality	If you notice an abnormality with the main unit of the product, immediately stop using it, turn off the power switch and unplug the power plug.
 Disassembly prohibited	Do not disassemble the product. Disassembling the product may cause an electric shock or injury.
 Modification prohibited	Do not modify the product or use it for purposes other than the intended use. Modifying the product or using it in a way other than for its intended purpose may cause an electric shock, injury, or failure.
 Unattended operation prohibited	Always monitor the sample condition during heating, and do not leave it unattended at any time.

Precautions for Installation and Use of the Product

Please observe the following points for safe use.



- **Do not use with an outlet other than a 230-V AC($\pm 5\%$) outlet.**
 - It may cause fire or failure.



- **Do not touch plugs and switches with wet hands.**
 - It may cause an electric shock or injury.



- **Do not use the product in water or liquid. Do not immerse it in water or splash water on it.**
 - It may cause a fire, electric shock, or failure.



- **Do not use flammable liquids or gas near the product.**
 - There is a risk of ignition, explosion, or fire.



- **Keep away from fire. Do not place in a high-temperature places such as close to a heater or under direct sunlight.**
 - It may cause deformation, failure, or fire.



- **Never modify or repair without authorization.**
 - It may cause a fire or electric shock. Contact a distributor for repair.



- **Do not use the product when the power cord or power plug is damaged. Do not use if the power plug is loose when inserting it.**
 - It may cause a short-circuit, electric shock or fire.



- **Make sure to unplug the product from the power outlet after using it.**
 - Leaving the product plugged in may cause an electric shock or fire by electric leakage due to insulation deterioration.



- **Do not apply a load exceeding the recommended capacity on the top board. Do not scratch with sharp objects.**
 - It may cause damage or performance deterioration.



- **Do not damage, alter, forcefully bend, pull, twist, or bundle the power cord.**
 - It may cause an electric shock or fire by electric leakage due to insulation deterioration.



- **Do not place in an area with high humidity or dust, or where gas is generated.**
 - It may cause an electric shock, fire or failure due to a short-circuit or heat generation.



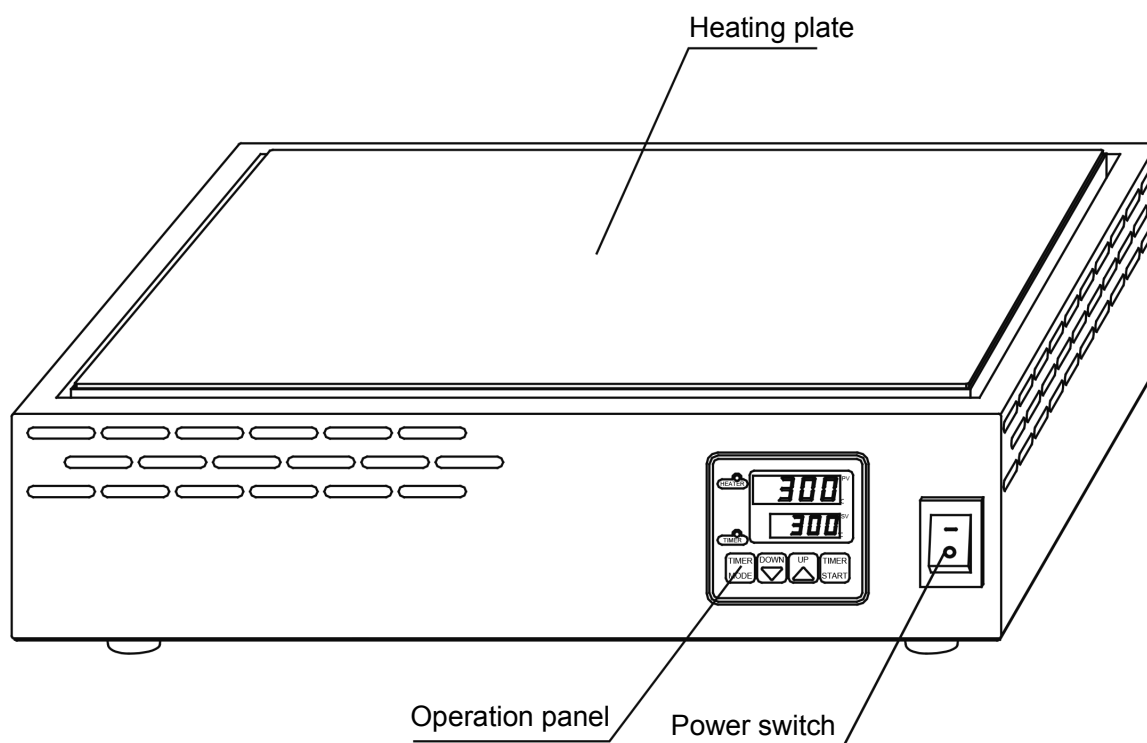
- **Do not forcefully press the operation switch.**
 - It may cause failure.



- **Do not drop the product or let it fall. Do not apply any strong impact.**
 - It may cause failure or damage.

Product Overview

<Names of product parts>



Method of Operation

■ Connect the power plug

Check that the power switch is turned OFF and insert the power plug in a power outlet with three-core grounding.

■ How to operate

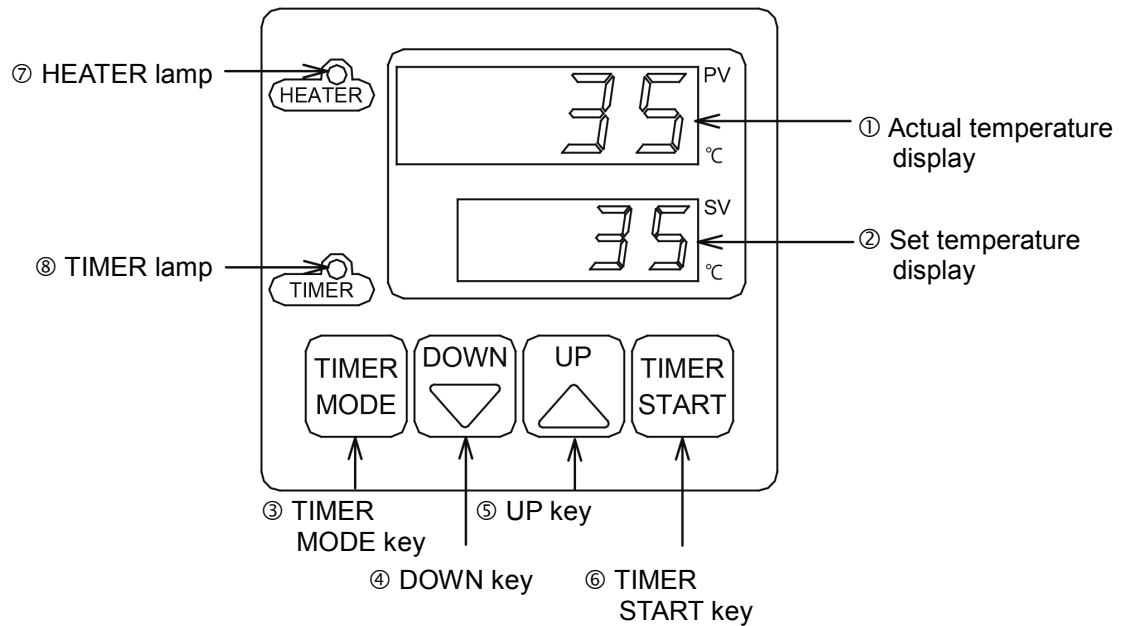
- ① Turn on the power switch located at the front of the main unit.
- ② Set the temperature (pages 5 to 7) with the operation panel located at the front of the main unit.
- ③ When the heating plate reaches the desired temperature, place the sample on it.
- ④ After finishing, turn off the power switch located at the front of the main unit.
- ⑤ Unplug the power socket from the power outlet after use.



Unattended
operation prohibited

This product does not have an evaporation prevention system.
Always monitor the sample condition during heating, and do not leave it unattended at any time for safety.

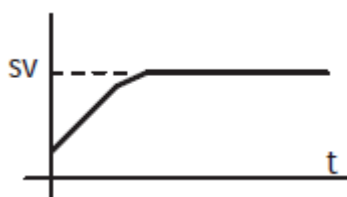
■ Names of operation panel parts



■ Function of each part

NO.	Name	Function
①	Actual temperature display (PV)	Displays the current heating plate temperature. Displays the function setting when setting the timer.
②	Set temperature display (SV)	Displays the set temperature or set timer time. Displays the set time when timer is set. When displaying the set time, 1.02 indicates 1 hour and 2 minutes.
③	TIMER MODE key	Selects the function when using the timer.
④	DOWN key	Reduces the value of the displayed setting.
⑤	UP key	Increases the value of the displayed setting.
⑥	TIMER START key	Starts/stops the timer operation.
⑦	HEATER lamp	Lights up when heater is on.
⑧	TIMER lamp	Flashes during timer counting and turns on when the timer count is up.

Explanation of Normal Operation



Heats according to the set target temperature. Stable temperature adjustment is possible via PID control.

	<ul style="list-style-type: none"> Turn the power ON. The normal operation mode starts 4 seconds after the initial screen appears. 	<p>Heating plate temperature 25°C Previous set temperature 40°C</p>
	<ul style="list-style-type: none"> Enter the set temperature (SV). Press the UP/DOWN key and set the desired temperature. * The previously set temperature (SV) appears before setting. 	
	<ul style="list-style-type: none"> * Turn the power OFF after use. 	

Timer Type

- Three types of timer operation described below are possible with this device.

Screen display	Name/Function	Temperature adjustment status (Graph)	Main purpose of use
	<p>① ON timer Sets the time to start temperature adjustment.</p>		<ul style="list-style-type: none"> * Starts temperature adjustment 1 hour later and increases the heating plate temperature to the set temperature.
	<p>② OFF timer Sets the time until completion.</p>		<ul style="list-style-type: none"> * Completes temperature controls 2 hours after starting operation. After that, continues to natural cooling. * Maintain the current temperature for 30 minutes, complete the temperature adjustment and return to room temperature.
	<p>③ SV-OFF timer Starts the countdown timer when the set temperature is reached. Turns OFF when the time ends.</p>		<ul style="list-style-type: none"> * Increases the temperature of the heating plate to the set temperature. When the heating plate reaches the set temperature, maintains the temperature for 1 hour and then finishes operating.

Explanation of Timer Operation



Three types of timer operation are possible. Timer setting times are between 1 minute and 99 hours 59 minutes in units of 1 minute.



* To prevent erroneous operation and setting errors, perform test operations at low temperature and for short periods without placing any sample on the heating plate. Make sure to check that the temperature adjustment shows START or OFF.

	<ul style="list-style-type: none"> Turn the power ON and enter the setting temperature (SV). Use the UP/DOWN key to set the desired temperature. * Same as for normal operation. 	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <div style="display: flex; justify-content: space-around;"> 25 40 </div> <p>Heating plate temperature 25°C Set temperature 40°C</p> </div>
	<ul style="list-style-type: none"> Select whether to use the timer. Press the UP/DOWN key and select 0 or 1. 0: Without timer 1: With timer * When selecting 0, press the next TIMER MODE key to return to the temperature-setting screen. 	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <div style="display: flex; justify-content: space-around;"> -E10 1 </div> <p>Timer used</p> </div>
	<ul style="list-style-type: none"> Select the timer function. Press the UP/DOWN key and select 2, 5, or 7. 2: (1) ON timer 5: (2) OFF timer 7: (3) SV-OFF timer 	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <div style="display: flex; justify-content: space-around;"> -E1F 2 </div> <p>ON timer selected</p> </div>
	<ul style="list-style-type: none"> Set the timer time. Press the UP/DOWN key to set the time. * The unit is [hh.mm (hours and minutes)]. Between 1 minute and 99 hours 59 minutes. 	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <div style="display: flex; justify-content: space-around;"> -E1n 132 </div> <p>Set to 1 hour 32 minutes</p> </div>
	<ul style="list-style-type: none"> Display of timer's remaining-time monitor. Start of timer operation. When using the (1) ON or (2) OFF timer, press the TIMER START key and start the timer. When using the (3) SV-OFF timer, the timer starts when the set temperature value is reached. * The TIMER lamp flashes during timer counting. The TIMER lamp turns on when the timer operation ends. * The TIMER START key works only in this screen. 	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <div style="display: flex; justify-content: space-around;"> -E1R 000 </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> -E1R 132 </div> <p>Showing timer's remaining time</p> </div>
	<ul style="list-style-type: none"> Return to the temperature-setting screen. 	

Precautions



- * During timer operation, it is not possible to resume operation and continue for the remaining time after pausing. Pressing the TIMER START key during timer operation, will end timer operation. (If it is during (2) OFF timer operation, the remaining time on the timer will change to 0.00 and heater output will switch off.) After pressing TIMER START again, it will restart from the original set time.
- * There may be a case where the operation ends without reaching the set temperature in (2) OFF timer if the set time is too short.
- * Be sure to prevent heating an empty container due to evaporation of the sample when performing timer operation for an extended period.

Product Specifications

Product name	Hot plate
Model	HI-1000G
Service temperature range (°C)	Room temperature +5 to 300
Temperature display accuracy	±2°C
Heating plate dimensions (W × D mm)	400 × 300
Heating plate material/Surface treatment	Al
Load capacity (kg)	10
External dimensions (W × D × H mm)	440 × 372 (including protrusions) × 123
Weight (kg)	11
Mica Heater capacity (W)	1,600
Power supply	230 V AC(±5%), 50/60 Hz / 2M 3P : O-Type
Safety mechanism	Manually reset overheating prevention system.
Ambient temperature range (°C)	5 to 35

Made In Japan

Resetting the overheating prevention system

When the overheating prevention system is activated, turn OFF the power switch and unplug the power plug.

Wait until the heating plate and the main unit cools down to room temperature.

*Handling the product when it is hot is very dangerous and may cause injuries such as burns. In addition, the overheating prevention system cannot be reset until the temperature has fallen to a safe level.

To reset the product, insert a stick (made of an electrically non-conductive material) into the reset hole located on the underside of the main unit and press the switch inside.

Before restarting the product, remove the cause that activated the overheating prevention system.

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