

**MODENA**

# **User Manual Book Gas Instant Water Heater**

**Rapido Series**

GI 1020 B, GI 0620 B

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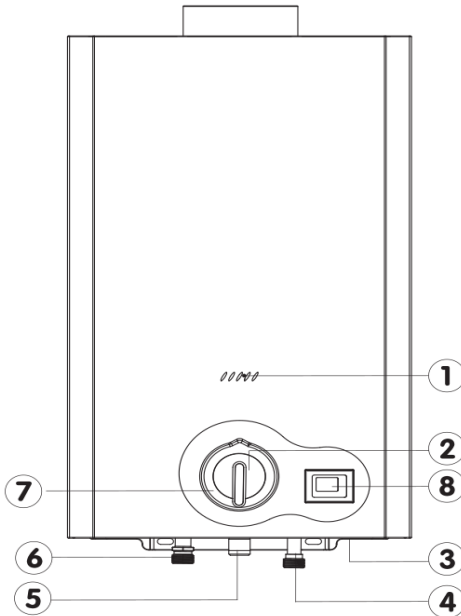
This manual book explains everything you need to know about your new product. Please contact our Customer Care should you need further assistance through [www.modena.com](http://www.modena.com).

## PART 1: IMPORTANT SAFETY INFORMATION

When the water heater is operated, gas combustion will consume a large amount of oxygen and exhaust much carbon monoxide. To avoid the great harm for human health or even death caused by excessive carbon monoxide inhalation, MODENA sincerely advise all users to:

- Read this manual book carefully before installing and operating the water heater for the first time.
- Do not install the water heater in the bathroom.
- Fit out a good quality of gas pressure reducer and the special gas hose
- Installing and using the water heater must be in accordance with the requirements stipulated in these usage instructions.
- Install a smoke exhaust duct to vent exhaust gas out of the room.
- Make sure that the room where the water heater is installed has enough fresh air and well-ventilated.
- Once the outer wrapping and the inner wrappings of the various parts have been removed, check and make sure that the appliance is in perfect condition. If you have any doubts regarding to the quality and the completion of the appliance accessories, do not use this appliance yet and contact MODENA Customer Care.
- This water heater must be installed by qualified technician.
- In the case of a failure and/or malfunction, all repairs or settings must be done with maximum care and attention by qualified technicians. For this reason, we recommend you to contact MODENA Customer Care; explaining the trouble in details; and mention the name of the model.
- The packaging materials used (such as cardboard, bags, polystyrene foam, nails, etc.) must not be left anywhere in easy reach for children because the packaging materials could potentially cause a hazard. To safeguard the environment, all packaging materials are environment-friendly and recyclable.
- If there any questions about the operation procedure & the safety instruction of this water heater, contact MODENA Customer Care.

## PART 2: NAME OF PARTS



### Remark:

1. Flame Observation Window
2. Water Volume Controller Knob
3. Battery Box
4. Cold Water Inlet
5. Hot Water Outlet
6. Gas Inlet
7. Flame Controller Knob
8. Water Temperature Display

### NOTE

All pictures displayed in this manual are based on the standard appearance of the gas instant water heater and only for illustration. The actual appearance of this appliance is based on purchased model.

## Characteristics and Usage

This gas instant water heater can supply hot water quickly and continuously, so it is suitable to provide hot water for bathing, washing and other cleaning.

This type of water heater equipped with the following features:

1. **Digital Display** for displaying the hot water temperature.

2. **Water Control Automatic Ignition:** by simply open the water valve and the igniter, this feature will ignite automatically and the hot water will immediately be available.
3. **Water Temperature Controller:** adjust the water temperature as needed.
4. **Flue-type Exhaust Device:** vent the exhaust gas out to keep the indoor air fresh.
5. **Water Temperature Display:** provided with low battery indicator function.
6. **“Low Water Pressure” Start-Up:** this water heater can be turned on with low water pressure. This feature equipped with a wide range of application.
7. **Steady Water Volume:** effectively avoid the impact of the water pressure fluctuation on the water volume and the outlet water temperature, as well as prevent the over-hot water output due to high water pressure.
8. **Flame-Out Safety:** the water heater will automatically cut off the gas if the flame accidentally flows out during the use period.
9. **Water-Gas Linkage Controller:** the water heater will automatically stop the combustion and shut down if the water supply line is blocked or the inlet valve is closed.
10. **Over Pressure Protection:** when the pressure of the water supply is too high, the safety valve can automatically relieve the pressure to avoid any damage to the water heater.
11. **Thermal Protection:** the water heater will automatically cut off the gas and stop working when the temperature of the water output exceeds 90 °C or dry-heating occurs.
12. **Auto Cut-Off:** the water heater will automatically cut off the gas and power after 20 minutes of continuous operation. It can continue to work after re-start.

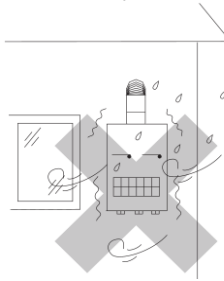
## PART 3: INSTALLATION

### Installation Requirement

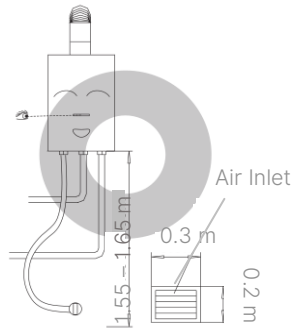
1. Do not install this gas instant water heater in the bathroom.



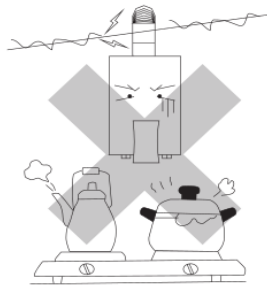
2. Do not install the water heater in a place where the strong wind occurs, otherwise the flame of the water heater will be blown out or the combustion will be incomplete.



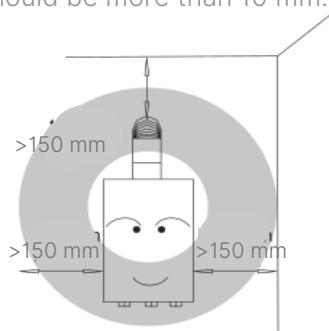
3. Do not install the water heater outside the room (without roof).
4. Do not install the water heater in the confined room. Install the water heater in well-ventilated room with a volume more than  $7.5 \text{ m}^3$ . There should be an air inlet with a cross section more than  $0.06 \text{ m}^2$  connected to the outdoor. The smoke exhaust pipe must also be installed.
5. Install the water heater in a place where the line of human sight and the flame observation window are in the same height that is  $1.55 \text{ m} - 1.65 \text{ m}$  above the ground. The water heater also must be far away from flammable materials.



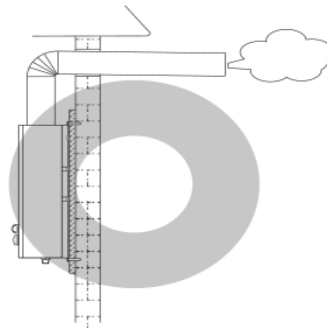
6. Do not place any opened power cord, electric appliances, or gas pipeline above the installation site of the water heater. Keep a horizontal distance more than 40 cm between the water heater and other electric appliances. Do not install any gas appliance such as gas oven and gas stove underneath this water heater.



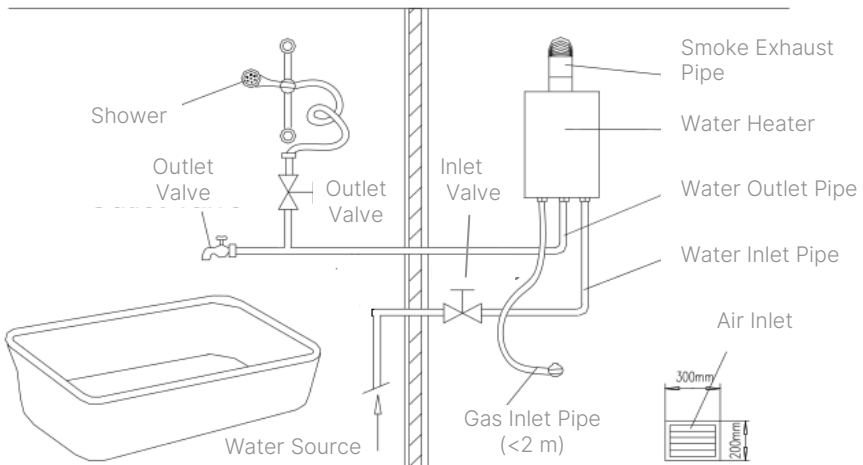
7. Keep the distance more than 150 mm between the water heater, its surrounding walls and the ceiling. Build the installation site/location with non-combustible materials. Otherwise, insulate it with heat insulating panel. The distance between the insulating panel and the surrounding wall should be more than 10 mm.



8. Install an inlet valve to the water inlet pipe of the water heater.
9. Place the end of the smoke exhaust pipe outside the room.



10. For the liquefied petroleum gas (LPG) users, use the qualified gas pressure regulating valves and hoses to ensure the water heater could operate properly and be used safely. For pipeline gas users, ask the gas company or the relevant management authority to connect the gas pipe.
11. After the water heater is installed with a smoke exhaust pipe, during the use, do not turn on any mechanical ventilation equipment such as the smoke exhaust ventilator and the exhaust fan in the room where the water heater is installed or to which the water heater is connected.





## NOTE

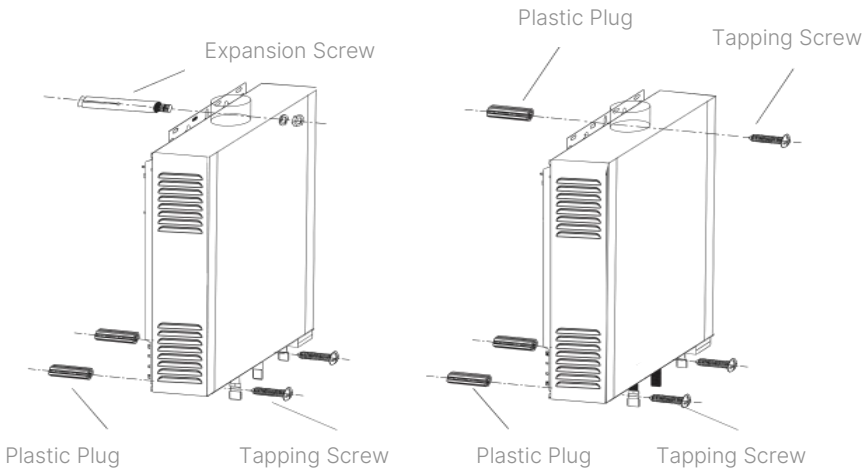
The connectors of the water heater in the picture shown above would be in different order for different water heater model. Look up to the real object for reference during installation process.

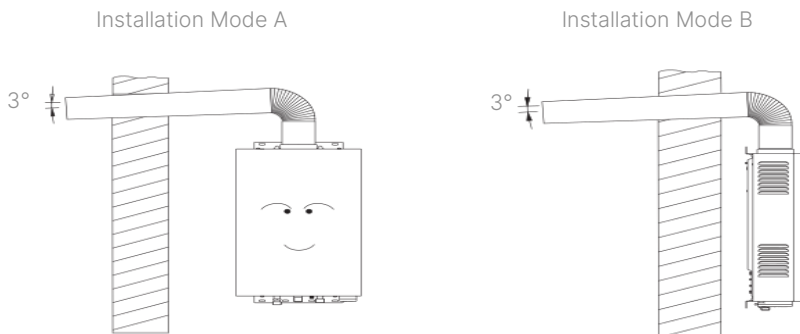
## Installation Mode

### WARNING!

It is strongly forbidden to use this water heater with no smoke exhaust pipe installed.

- a. Keep the water heater vertical and not tilt during the installation. As shown in the below picture, drill the holes vertically on the wall for the installation. Insert the expansion screws into the installation holes on the top; and insert plastic plugs into the installation hole at the bottom. After installing (mounting) the water heater, install gaskets and nuts onto the expansion screws and screw up the nuts. Screw on the *tapping* screw at the bottom. User can choose A or B installation mode according to the situation.

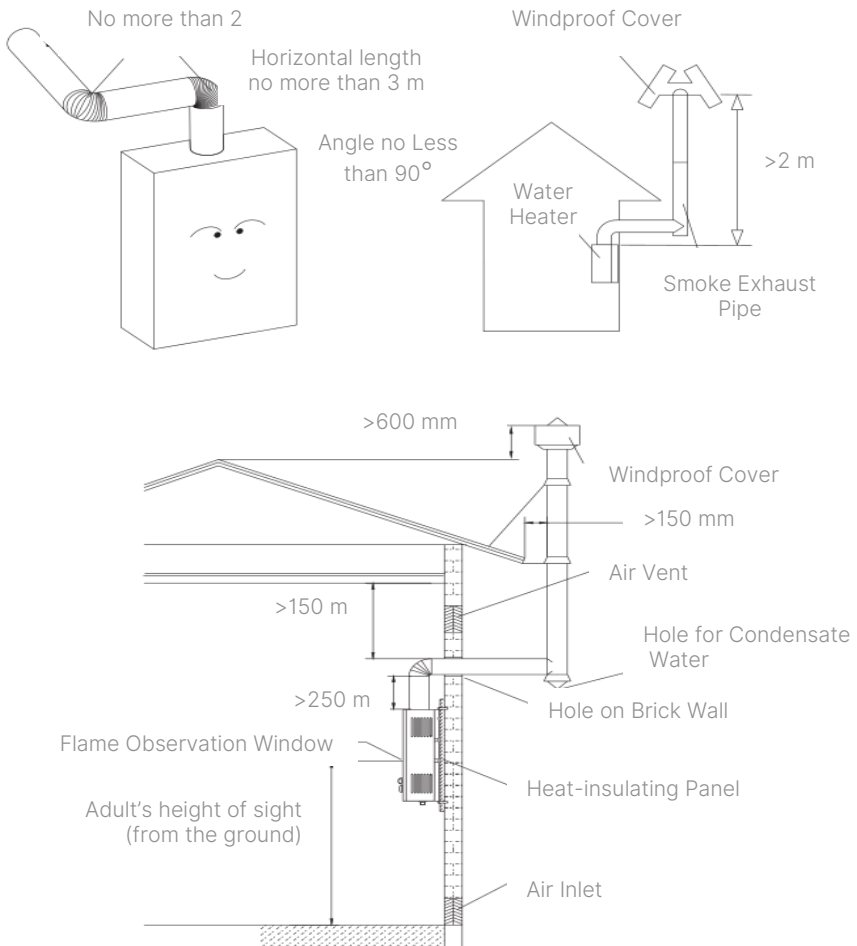




- b. For the installation of smoke exhaust pipe, please pay attention the following matters :
- The water heater must be installed with smoke exhaust pipe during the use. The pipe dimension refers to the 'Specification' section in this manual book. The smoke exhaust pipe should be installed according to the requirements in this manual book.
  - Determine the length of the corrugated pipe as needed, but the total height of the pipe should be more than 2 m, and the horizontal length is no more than 3 m. The vertice quantity should be no more than 2, and the angle is no less than 90° to reduce the smoke exhaust resistance.
  - Fasten the corrugated pipe and the smoke vent of the water heater with clamps to prevent exhaust gas being vented inside the room.
  - Tilt the smoke exhaust pipe 3° outward and downward to facilitate the outflow of condensate water.
  - Cover the smoke exhaust pipe with heat-insulating and fire-proof materials which its thickness must be more than 20 mm. Cover the pipe that is installed around the flammable wall.
  - Do not hide the smoke exhaust pipe inside the ceiling. Otherwise, wrap up the pipe with heat-insulating material that has more than 20 mm thickness. Make a distance more than 150 mm between the smoke exhaust pipe and flammable materials (such as ceiling and furniture).
  - For maintenance, do not use cement to fill the gap between smoke exhaust pipe and the access hole of the pipe on the wall.

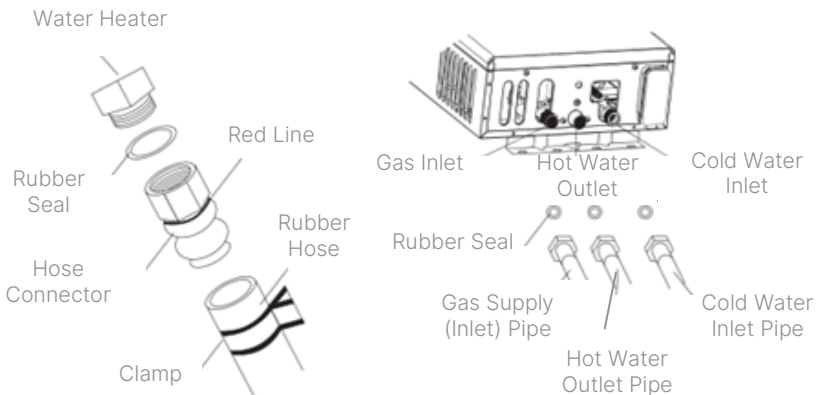
c. Installation of the smoke exhaust pipe:

1. Make a hole on the wall near the water heater; the hole should have diameter that is slightly more than the smoke exhaust pipe outer diameter; extend the smoke exhaust pipe outside the room and make the outdoor part slightly tilted downward.
2. Place the air vent at higher position than the water heater.
3. Place the air inlet at lower position to prevent the outdoor air from directly entering the combustion chamber.
4. Install a windproof cover firmly.



d. Gas Pipe Installation :

1. Select the qualified rubber hose or rigid pipe and gas pressure relief valve.
2. Select the dimension of the pipe refer to the '*Specification*' section in this manual book.
3. The length of rubber hose cannot be more than 2 m if using liquefied petroleum gas.
4. Install a rubber ring seal between the gas inlet of the water heater and the hose connector. The rubber hose must be connected to the red line of hose connector and must be fastened with a clamp.
5. After finishing the installation, use soapy water to check whether there is gas leak or not.



Remark :

Gas Inlet--- Gas Supply Pipe

Hot Water Outlet--- Hot Water Outlet Pipe

Cold Water Inlet --- Cold Water Inlet Pipe

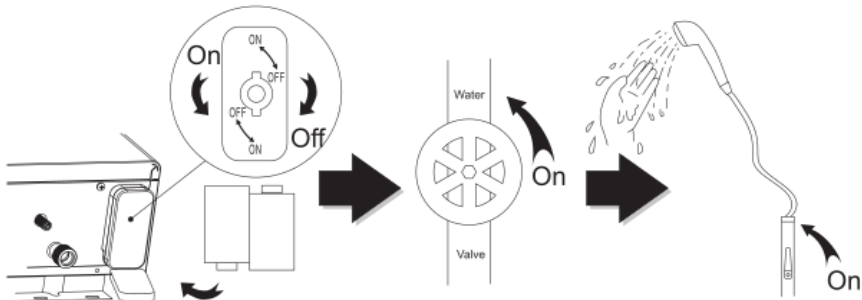
**NOTE**

- Apply a rubber seal ring when using the metal hose.
- The connectors of the water heater in the picture shown above would be in different order for different water heater model. Look up to the real object for reference during installation process.

## PART 4: HOW TO USE

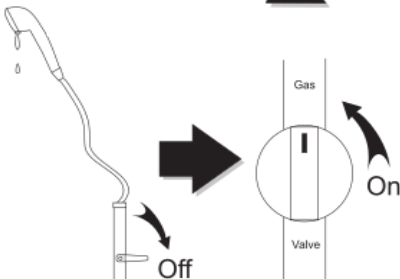
### Preparation before Ignition

1. Before using the water heater for the first time, open the battery box and insert two pieces of D size batteries according to the correct polarity (installation of negative and positive battery poles).
2. Turn the water inlet valve to the maximum position; then open (switch on) the hot water outlet valve to check whether the water can flow out or not.
3. Then, close (switch off) the hot water outlet valve and fully open the main gas valve.



Install batteries in a correct way.

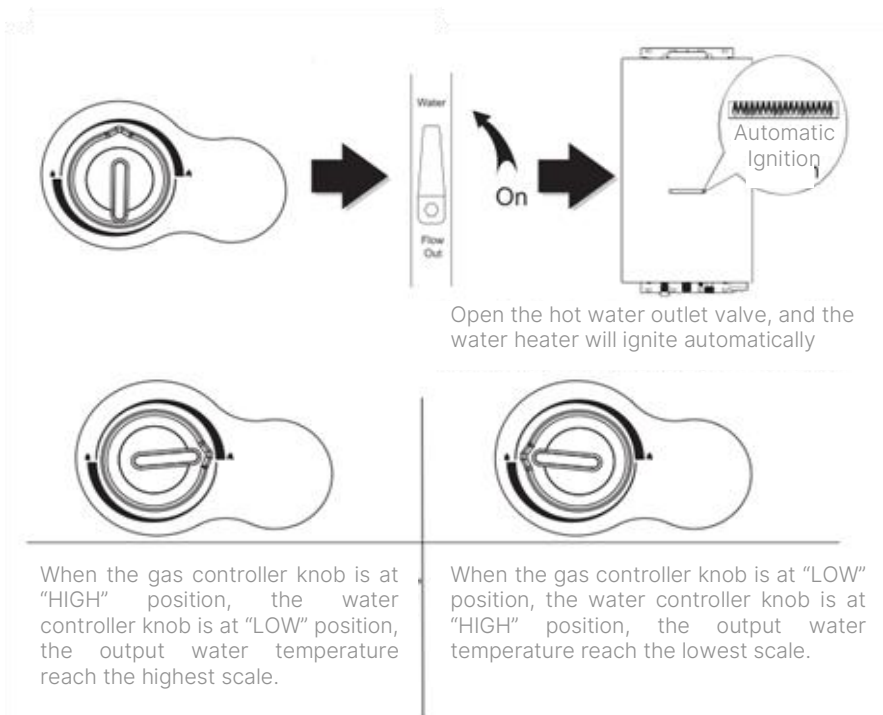
Open the water inlet valve; open the hot water outlet valve to check whether there is water flowing out.



Switch off the hot water outlet valve and switch on the gas valve.

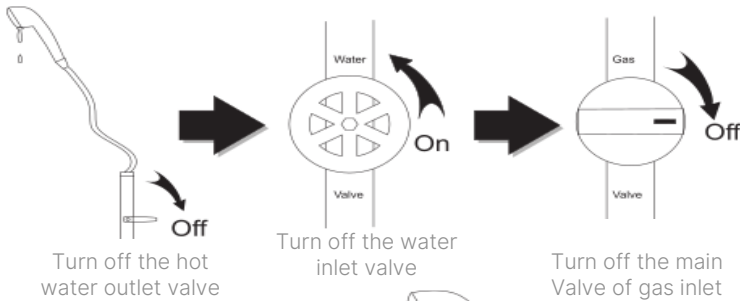
## Ignition/Operation

1. **Ignition.** After finishing the preparation, open the hot water outlet valve; the water heater will make “pop” sound; then the hot water will immediately flow out. If the water heater cannot be turned on at once, close the hot water outlet valve; and restart the water heater after 15 – 20 seconds.
2. **Outlet Water Temperature Controller.** Rotate the flame controller knob to “Max” position or rotate the water volume controller knob to “High” position, the outlet water temperature will increase. On the contrary, rotate the flame controller knob to “Min” position or rotate the water volume controller knob to “Low” position, and then the outlet water temperature will decrease. If the temperature of the supply water is 25 °C, then the maximum temperature of hot water that could be reached is 70 °C.



## Discontinuing the Use

1. Turn off the hot water outlet valve, and the water heater will automatically shut down.
2. Turn off the water inlet valve.
3. Turn off the gas inlet valve.



### **WARNING!**

If the water heater is used again after a while, do not wash your body with the water which comes out first. It is due to the hot water temperature inside the water heater will be very high. In order to avoid scalding, let the hot water flows out for a few seconds before applying it to human skin.

## Replacing Batteries

1. If the time interval of "pop" sound during the ignition is quite a bit long or flame extinguish as soon as it is ignited, replace the batteries immediately with the new ones.
2. Use sealed damp-proof iron clad batteries. Normally, batteries replacement should be done every half year.

## PART 5: PREVENTIVE ACTION

### WARNING!

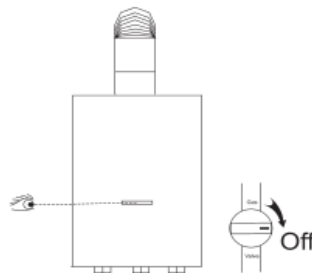
MODENA will not be liable for any accidents caused by unauthorized dismantling of this water heater or failure to comply the installation and operation instructions outlined in this manual book.

### Prevention of Gas Accident

1. Determine the type of gas. Make sure that the gas type you use is similar with the specified type of gas in the rating label of the water heater. Do not disassemble the water heater without authorization and use different type of gas by force.
2. Check whether the flame on the burner is extinguished after the water heater is being used; and remember to turn off the main gas valve.
3. Check frequently whether there is a gas leak at the connector or gas line pipe. Normally, change the rubber hose once a year.
4. For liquefied petroleum gas (LPG) users, if the flame is detected floating, the pressure relief valve that connected to the vent of gas tank may fail to work properly. Stop using the current pressure relief valve and replace it with a good one.



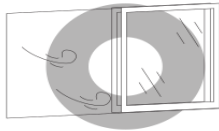
Frequently check the connector or gas line pipe to avoid gas leak.



Check whether the flame on the burner is extinguished, and turn off the main gas valve.



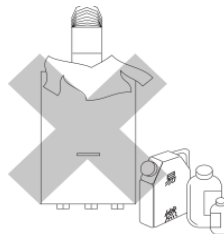
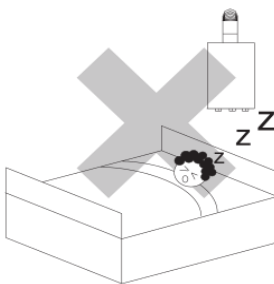
5. If gas leak is detected, do not ignite the water heater or turn on any electrical appliances; open all the doors and windows to automatically exhaust the gas out of the room; turn off the water heater and contact MODENA Customer Care or the gas company.



6. It is forbidden to operate the troubled water heater. Contact MODENA Customer Care once any trouble occurs.
7. This water heater is only used for hot water supply and shower. Do not use it for any another purposes.

## Fire Prevention

1. Do not go out or go to bed while the water heater is on.
2. Do not place any flammable material near the draft hood. Do not use towel, clothes, and other things to cover the vent.

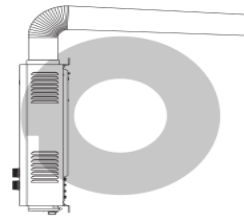


## Prevention of Carbon Monoxide Poisoning

1. A large amount of oxygen is needed when the water heater is operated. Therefore, the room where the water heater is installed must have enough air supply and must be well-ventilated. It must also have fixed opened air inlet. The closed doors and windows cannot be classified as the effective air inlet.
2. A large amount of exhaust gas will be generated during the water heater operation. Therefore, the water heater must be installed with a smoke exhaust pipe to vent the exhaust gas from the combustion process out of the room.

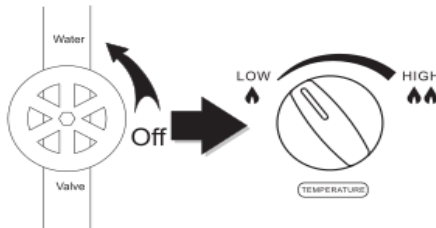


There must be a fixed open air inlet.



A smoke exhaust pipe must be installed.

3. If the gas supply pressure is too low, there may be result on *tempering* that affects the normal operation of the water heater. At this point, the flame will turn from blue to yellow and the exhaust carbon monoxide will increase significantly. Stop using the water heater shortly.



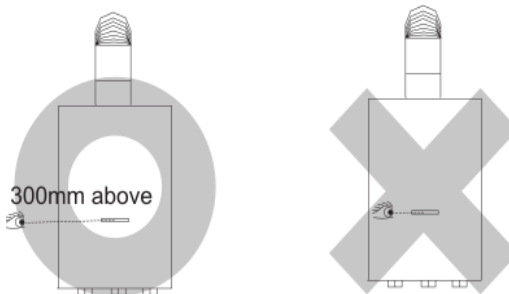
Turn off the water inlet valve and rotate the water temperature regulation knob to "Low" position.

## Other Cautions

1. **Non-potable.** Since there is long-time stored water, the hot water generated by this water heater is not potable.



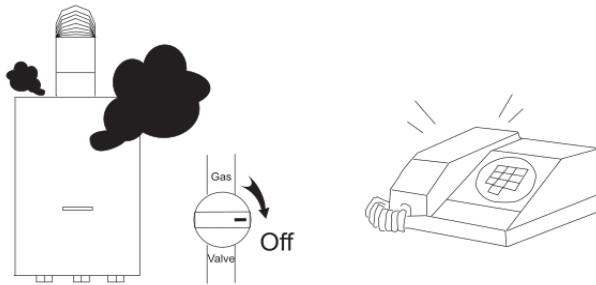
2. During the ignition process, it is strongly forbidden to observe the ignition with eyes near to the observation window. The distance between the eyes and the observation window should be at least 300 mm.



3. If the water heater will not be used for a long time, take the batteries out from its box. It is to prevent the battery box from corrosion due to the damage of the batteries that later on can badly affect the use of the water heater.

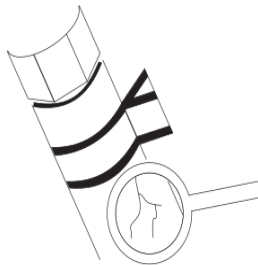
## Treatment of Abnormalities

If the abnormalities are detected such as gas leak, abnormal combustion (e.g. tempering, flame lifting, yellow smoke or black smoke emission), peculiar smell and abnormal sound, or other emergency situations, immediately shut the gas valve off and contact MODENA Customer Care or the gas provider company to achieve the solution (recommended actions).

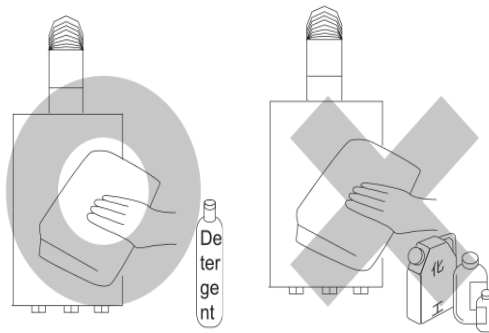


## Maintenance

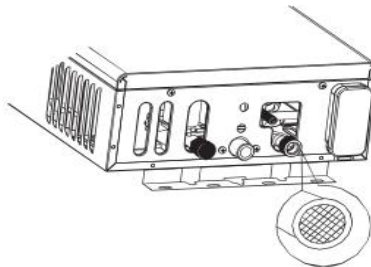
1. Frequently check whether the gas inlet pipe (rubber hose) is in good condition and there are no troubles caused by aging and defectiveness of the water heater. Regularly change the rubber hose and frequently use the soapy water to identify whether there is a gas leak by checking the bubble appearance at the pipeline connectors.



2. After being used for a period of time (normally about a half year), it is necessary to check and clean the water heater to ensure it operates normally. Frequently, the combustion condition especially the flame should be observed. If the flame turns from blue to yellow and then appears black smoke, contact **MODENA** Customer Care for cleaning and repair.
3. Regularly use soft cleaning cloth to wipe the hull (the outer body) of the water heater with clean water or neutral detergent rather than with chemical detergent or volatile solvent. Otherwise, the color of the hull will fade away or tarnish.



4. Regularly clean the water inlet filter.

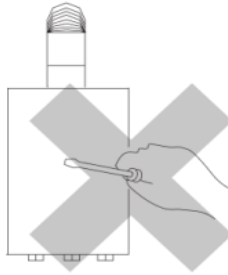


Water Inlet Filter





5. If the water heater will not be used for a long time, screw the drainage valve off and drain the remaining water inside the water heater to avoid any damage.

## Repairing Service

1. The water heater must be regularly checked and cleaned by professional technician.
2. Non-professional technician may not open the front cover of the water heater.



## Packing List

Name and Illustration	Quantity	Name and Illustration	Quantity
Water Heater 	1		
User Manual Book 	1	10L: Plastic Plug Tapping Screw, M6 Expansion Screw 	1
6L: Plastic Plug Tapping Screw 	1		

## PART 6: TROUBLESHOOTING

The following cases are not damage:

Problem	Possible Cause and Recommended Action
The ventilation releases white smoke.	The room temperature is too low, so the exhaust gas is condensed into white fog when meets the outdoor cold air.
Hot water output becomes cold because of the low water flow.	When the water flow is low (below the start-up water pressure), the water heater will automatically shut off and the output water become cold. Therefore, do not use the water heater if the water flow is too low.
The water heater shuts off suddenly after being used for 20 minutes continuously.	This water heater has timing protection function after 20 minutes of continuous use, and this function will automatically extinguish flame. Turn the hot water valve off; wait a moment; and turn the water heater on again to re-start the ignition.

Check the details below if the problems occurs

Problem	Possible Cause and Recommended Action	
Water heater cannot be turned on.	• Gas inlet valve is closed.	Open the main gas inlet valve.
	• There is air in the gas pipeline.	Switch on and then switch off the water outlet valve several times until the ignition starts.
	• Power is not switched on.	Switch on the power.
	• Gas pressure is improper.	Contact MODENA Customer Care to check the pressure regulator valve.
	• Water supply (inlet) pressure is insufficient and the water inlet valve is not fully opened.	Fully open the water inlet valve and contact MODENA Customer Care to check water pressure.
	• Flue pipe is blocked and air pressure is too high.	Contact MODENA Customer Care to remove debris and re-start the water heater after the air pressure becomes low.
	• There is an internal failure.	Contact MODENA Customer Care

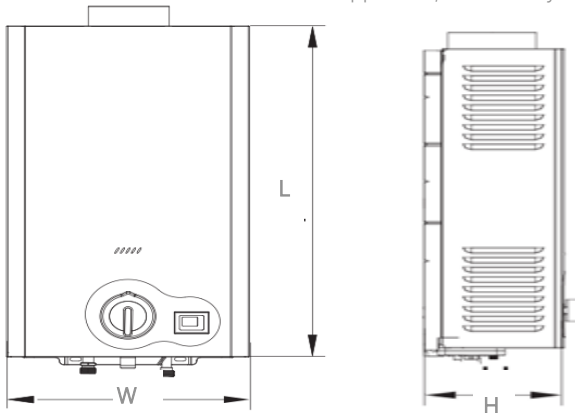
Problem	Possible Cause and Recommended Action	
No hot water flows out	<ul style="list-style-type: none"> <li>Water inlet valve is not fully opened (the water heater will turn off if the water flow is low).</li> </ul>	Fully open the water inlet valve.
	<ul style="list-style-type: none"> <li>Ignition time is too short.</li> </ul>	Wait for a moment.
	<ul style="list-style-type: none"> <li>Water pipe is too long and it will take a moment for the hot water to flow out.</li> </ul>	Wait for a moment.
	<ul style="list-style-type: none"> <li>Gas runs out.</li> </ul>	Add gas / replace gas tank.
Water is not hot enough	<ul style="list-style-type: none"> <li>Water flow is too high and the heating capacity of the water heater is insufficient.</li> </ul>	Reduce the water flow.
	<ul style="list-style-type: none"> <li>Gas inlet valve is not fully opened.</li> </ul>	Fully open the gas inlet valve.
	<ul style="list-style-type: none"> <li>Temperature setting is too low</li> </ul>	Increase the temperature setting.
	<ul style="list-style-type: none"> <li>Mode is at "Flame Low – Water Flow High".</li> </ul>	Switch to "Flame High – Water Flow Low".
Over-high Water temperature	<ul style="list-style-type: none"> <li>Water flow is too low.</li> </ul>	Increase the water flow.
	<ul style="list-style-type: none"> <li>Temperature setting is too high.</li> </ul>	Decrease the temperature setting.
	<ul style="list-style-type: none"> <li>Mode is at "Flame High – Water Flow Low".</li> </ul>	Switch to "Flame Low – Water Flow High".



## PART 7: SPECIFICATION

Model	GI 0620 B	GI 1020 B
Gas Type	LPG	
Rated Gas Pressure	2800 Pa	
Rated Thermal Load	12 kW	20 kW
Control Mode	Outlet Control	
Exhaust Type	Flue Type	
Ignition Method	Water Control Automatic Continuous Pulse Ignition	
Applicable Water Pressure	0.025~0.8MPa	
Rated Hot Water Yield Capacity (Temperature Increase :25°C)	6 kg/min	10 kg/min
Connector Specification	Gas Inlet	G 1/2
	Cold Water Inlet	G 1/2
	Hot Water Outlet	G 1/2
Dimension (L x W x H)	310 x 120 x 440 mm	330 x 175 x 550 mm
Net Weight	5.1 kg	8.2 kg
Smoke Vent Diameter	90 mm	110 mm

Specifications of this appliance may change without notice to improve the quality of the product. Pictures in this manual are schematic and may not match your product exactly. Values stated on the machine labels or in the documentation accompanying it are obtained in laboratory in accordance with the relevant standards. Depending on the operational and environmental conditions of the appliance, values may vary



# APPENDIX: WIRING DIAGRAM

