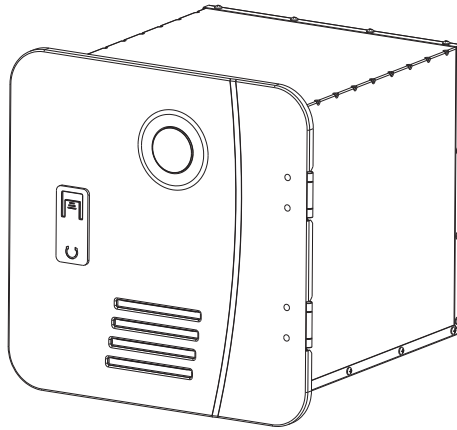


Instruction Manual

RV Instantaneous Gas Water Heater



If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS**
 - Evacuate all persons from the vehicle.
 - Shut off the gas supply at the gas container or source
 - Do not touch an electrical switch, or use any phone or radio in the vehicles
 - Do not start the vehicle's engine or electric generator.
 - Contact the nearest gas supplier or qualified service technician for repairs.
 - If you can not reach a gas supplier or qualified service technician, contact the nearest fire department
 - Do not turn on the gas supply until the gas leak(s) has been repaired.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

Preface

Respected user:

Thank you for using our RV instant gas water heater. Correct installation and use of this product will bring new enjoyment to your RV lifestyle. Please read and follow all safety rules before installing and using this heater. Please keep the instructions safely for future reference.

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Function Introduction and Explanation

The water heater is simple and convenient to operate. The microcomputer intelligent control system controls the whole process of the water heater. Press the key to start the water heater and set the required temperature. After the microcomputer intelligent control system detects the qualified water flow, it starts the ignition device. After that, the gas valve is turned on to light the gas burner, and then the user can enjoy a steady stream of constant temperature hot water. The microcomputer automatically detects the entire process, safely and reliably. In case of failure, the microcomputer system will automatically shut down the gas to prevent accidents. The water heater is a forced exhaust system. After the water heater is turned on, the air outside will pass through the air intake grill, enter the combustion chamber after the dust-proof net, and the flue gas or air mixture is discharged outdoors.

1. Digital constant temperature system: microcomputer control system, which constitutes the “computer” of the whole heater, controls the water, electricity, and gas of the water heater in a coordinated manner, and controls the output water temperature to the selected temperature.

2. Low water pressure startup: Low water pressure at startup and it will be easier to use.

3. Flameout protection: When the water heater accidentally flames out during use, it can automatically cut off the gas to ensure that the gas will not leak.

4. Speed changing and wind resistance function: When there is a blockage of the flue or the exhaust is blocked, the built-in microcomputer system will increase the running speed of the fan and eliminate the generation of harmful gases. When the speed reaches the predetermined maximum speed, the microcomputer system will issue the cease-gas and cease-fire instruction to effectively safeguard the heater and occupants.

5. Water and gas linkage control: When the water supply is interrupted or the water outlet valve is closed, the water heater will automatically stop the combustion and shut down.

6. Outlet water temperature display: with outlet water temperature display.

7. Frost protection function: When the temperature of the water pipe in the water heater is lower than $6\pm 1^{\circ}\text{C}$ ($43^{\circ}\text{F}\pm 2^{\circ}\text{F}$), the line controller will display “Fd” character, the machine will start ignition and run with a certain load, the water heater will automatically shut down after the whole machine runs for 5 seconds. When the water temperature in the working water heater reaches $32\pm 1^{\circ}\text{C}$ ($90^{\circ}\text{F}\pm 2^{\circ}\text{F}$), it will shut down automatically.

- After shutdown, wait for 3 minutes for self-testing. When the temperature is lower than $6\pm 1^{\circ}\text{C}$ ($43^{\circ}\text{F}\pm 2^{\circ}\text{F}$) or antifreeze thermostat control stops working, it will start to run again.

- In the process of starting the antifreeze function, when a fault occurs, the corresponding fault is reported and the corresponding code is displayed. After 15 minutes, the system automatically clears the fault code. If the antifreeze start condition is still met, the antifreeze will automatically start again.

8. Fault auto-diagnosis and fault code display function: The intelligent microcomputer can in real-time monitor various safety devices; gas proportional valves and other components; find faults and if necessary, safely shutdown. Advanced fault code display function, is easy to use and maintain.

☰ Safety Warnings And Operational Safety Guidelines

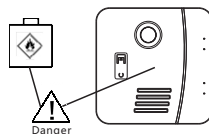


Please observe the safety warning information and operating safety instructions in this manual to avoid possible injury or death. Failure to comply with these warnings and safety guidelines can result in fire, explosion, and even death.

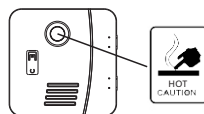
1. Please only install it in recreational vehicles (RVs). RV is a tourist caravan, or motorhome with its own power, gas and water supply. An RV can be self-propelled or towed.



2. To prevent fire or explosion accidents, do not place flammable, explosive and volatile articles nearby the water heaters and flue exhausted pipe.



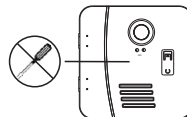
3. During operation of the water heater and after use, the temperature of the flue exhaust pipe and the surrounding components is high. Please do not touch any of it with your hands to avoid scalding.



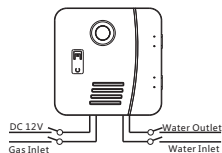
4. In the shower or bath, in order to prevent scalding, you should firstly test the water temperature by hand, and then use it after confirming it is suitable for shower.



5. Do not modify the water heater in any way. Self-modification is dangerous and will void the warranty.



6. When the water heater is not used for a long time, in order to prevent hydro block of the water heater from freezing and leaking, it shall be drained, and turn off the water inlet valve, turn off the gas as well as the power supply. When the environment temperature is lower than 0°C, it must be drained of water. Or turn on DC 12V the power supply and open the gas valve to start anti-freezing Gas Inlet function, (For details, refer to the relevant section of the manual.)



7. During use, please perform regular maintenance as instructed in this manual. Please regularly check if the exhaust venting pipe and air intake port have any blockage, accumulation of snow, ice, insect nests or dirt. Make sure the water heater can draw in clean air and the exhaust gas produced by combustion can be discharged smoothly.

8. Water heaters are used only for the supply of hot water and cannot be used for other purposes to prevent accidents.
9. Do not use the battery charger to power or test the water heater. The on-board power supply used by the vehicle-mounted gas water heater must be power supply complying with class 2 safety-isolated. Please use a qualified power supply to avoid damage to the water heater.
10. Do not modify the positive grounding system of the water heater.
11. Do not test the water heater with high voltage power unless the water heater power switch is turned off.
12. Do not use a water heater while the vehicle is in motion. Do not use the water heater while the vehicle is refueling, and turn off the water heater.
13. Pay attention to protect the surrounding buildings from hot exhaust fumes.
14. Do not connect the water heater to the exhaust system of other appliances.
15. Make sure the bottom of the water heater is installed parallel to the horizontal plane. When using a water heater, choose a flat place to park the vehicle.
16. Do not use accessories other than ours.



- Evacuate all personnel to leave the vehicle.
- Turn off the gas supply.
- Do not use any electric appliance or telephone on the vehicle.
- Do not start the vehicle's engine or generator.
- Contact the nearest authorized service provider or gas supplier for repairs.
- If you cannot contact an authorized service provider or gas supplier, contact the nearest fire department.
- Do not open the air supply until the gas leak is repaired.

Prohibit use cases:

- Do not use in a watery environment.
- It is prohibited for indoor heating.
- It is prohibited to use in mobile homes.
- It is prohibited to use in food trucks or roadside food carts.
- It is prohibited to use in construction trailers.
- Not to be used as a pool heater.

Installation Instruction for FS06B1



WARNING

- This product is not suitable for DIY installation.
- Installation and maintenance must be carried out by a professional person, service company or gas water heater suppliers.
- Improper installation, commissioning, alteration or maintenance will lead to property damage, personnel injury or death.
- The product must be installed and repaired by an authorised installation service company, otherwise we will not be responsible for any accidents caused by improper installation or maintenance and warranty will be void.



WARNING

- Any parts removed from this model, please keep them in places where children cannot reach them, so as to avoid personal injury.



WARNING

- NOT TO BE USED AS A POOL HEATER.

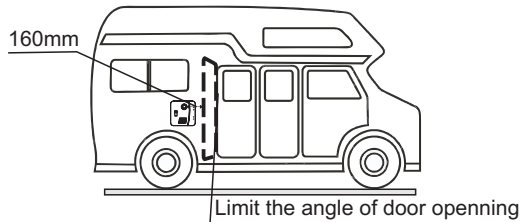
The installation must be done in accordance with the information supplied in this manual. All other relevant national, state and local regulations must also be adhered to including (but are not limited to):

- Australian Standard AS3500.1 – Water Services.
- Australian Standard AS3500.4 – Heated Water Services.
- Australian Standard AS3000 – Electrical Installation.
- Australian Standard AS/NZS5601 – Gas Appliance Installation.
- Local Water, Gas & Electrical Authority Regulations.
- Municipal Building Codes including local OH&S requirements.

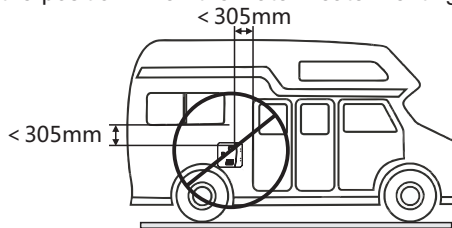
The installation must conform to one or more of the following as applicable:

- The following instructions are applicable to the Fogatti RV gas water heater. If you have any other questions about a particular installation or application, please consult to our company or the company authorized by our company authorised by us for installation and maintenance services.
- The water heater must be properly installed to ensure the air flow is free of air flow at any time when the air inlet louvers and exhaust pipes are in place.
- During any stress test of the system, the device should be disconnected from the air supply piping system.

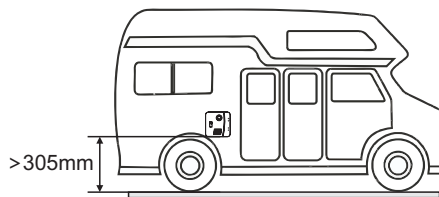
- Do not install this product under any overhanging structure such as awnings.
- This product should be installed in any place where the door will not be covered or blocked. If the condition is not allowed, you must limit the distance of the door to provide a minimum 160mm gap between the water heater vent and the door when the door is opened.



- If the wall is not fire-proof, the gap between the back of the product and the surrounding flammable structure and combustible materials must be filled with heat-proof and flame-resistance materials.
- The equipment should not be installed on vinyl panel, due to the difference in the vinyl panel.
- Do not install at the position when the water heater venting pipe is less than 305mm from the door.

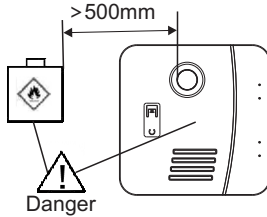


- The water heater should be installed at a higher level than 305mm above the ground.



- Do not install the water heater or other electrical appliances in the exhaust port facing an area covered with awning, canopy or any other enclosure.
- The water heater can be installed in the trailer or under the retractable awning, but the awning must be well ventilated.
- The water heater must be installed uprightly, otherwise it will affect the normal use of the water heater.
- When the water heater is installed, it should be reliably grounded.
- Clean any dirt in the supply pipes before they are connected to the heater.
- You must install a filter that is easily accessible for cleaning in the water supply line/s after the pump and before the heater. Failure to do so voids warranty.

- Valves should be installed in gas pipe, inlet pipe and outlet pipe for easy maintenance.
- Check the gas leakage and water leakage after installation, make sure there is no any gas and water leakage.
- The minimum distance from the exhaust outlet to the flammable surface should be >500mm.



- The gas pressure range for the normal operation of the water heater is that the maximum inlet pressure cannot exceed 3.3 kPa (13" w.c.) and the minimum pressure cannot be lower than 1.99 kPa (8" w.c.). Out of range will not work normally.
- Forbid using this gas water heater in the altitudes up to 609.6m.

If a relief valve discharges periodically, this may be due to thermal expansion in a closed water supply system. Contact the water supplier or local plumbing inspector on how to correct this situation. Do not plug the relief valve.



WARNING

Sharp edges can cause cuts and injury!

- Always wear protective gloves to avoid injuries from sharp edges during installation work and while handling the appliance.



WARNING

- Before installing the water heater, a water mixing valve must be installed. At the rated setting, the equipment to provide water is not more than 51°C. When water flow is small or high inlet water temperature, water heater will heat the water to the likely above 51°C. temperature. At this moment, please open the mixing valve to provide you with a comfortable shower temperature.

●Model And Specifications

Model	FS06B1
Gas Intended for	Universal LPG
Total Nominal Gas Consumption	44.3MJ/h
Number of Injector	6
Injector Size	0.91mm
Max. Working Water Pressure	0.8MPa
Min. Working Water Pressure	0.1MPa
Nominal Test Point Pressure	2.75kPa
NominalManifold Pressure	1.28kPa
Electrical Power	12VDC, <10 amp
Water Heating Capacity(temp rise 25K)	6L/min
Maximum Water Temp.	51°C
Heat Output	12.3kW

Gas pressure test position

●Gas inlet pressure test: Install a joint with a pressure measuring nozzle at the inlet joint of the water heater. The size of the pressure measuring nozzle requires a cylindrical outer diameter of 6 mm and an inner diameter of not more than 1 mm. The gas pressure is measured from the pressure measuring nozzle. (Please refer to Figure c)

● Gas manifold inlet pressure test: As shown in Figure D , open the door, remove the pressure measuring nozzle sealing screw, and measure the gas pressure from the pressure measuring nozzle.

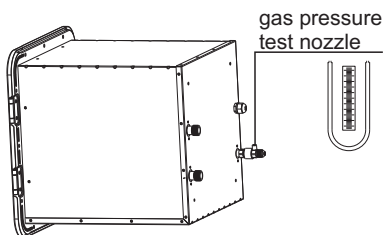


Figure C

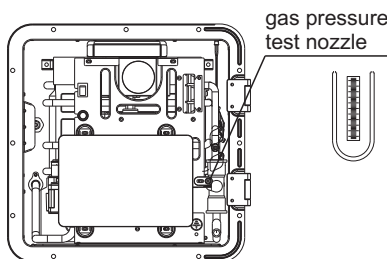
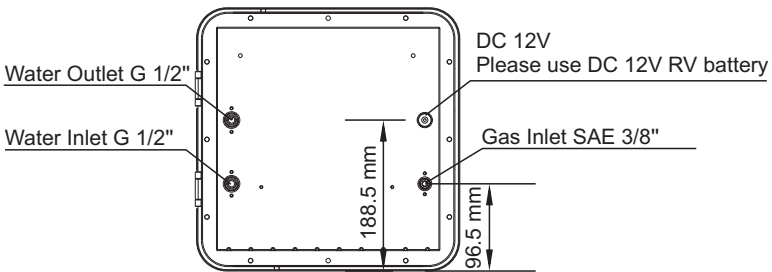
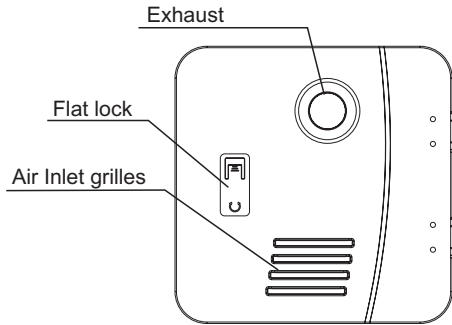
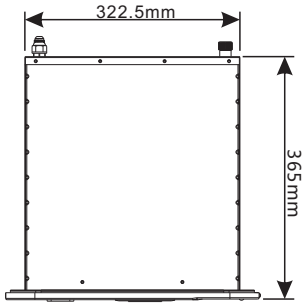
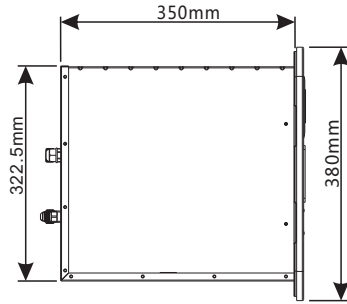
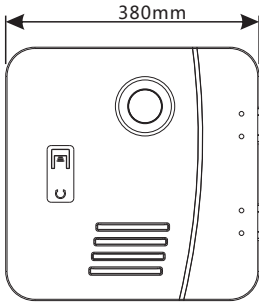
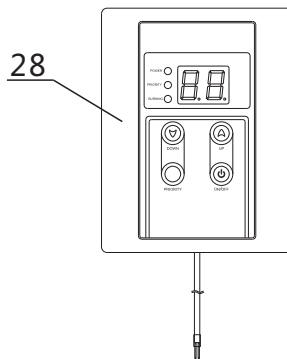
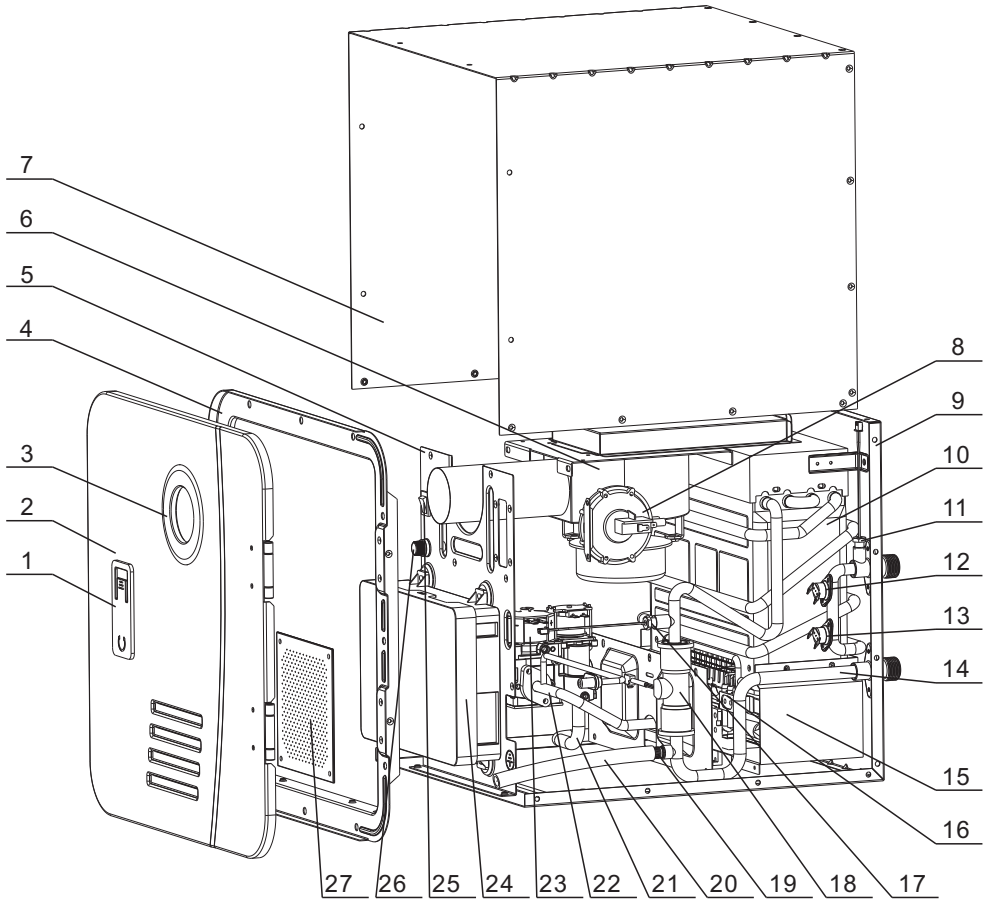


Figure D

●Appearance



●Main Parts Name

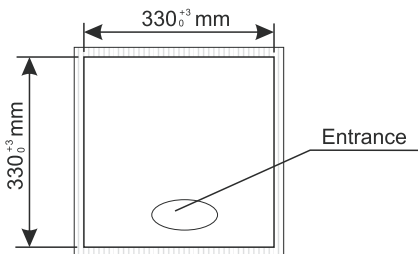


NO.	Name	NO.	Name
1	Flat Lock	16	Ignition Pin
2	Front Panel	17	Water Inlet Temp. Probe
3	Decorative Ring	18	Water Flow Sensor
4	Blind Flange	19	Relief Valve
5	Fixing Plate	20	Drain Pipe
6	Fan Volute	21	Gas Inlet Assembly
7	Housing Upper Hoarding	22	Connecting Pipe for Burner and Valve
8	Wind Pressure Switch	23	Gas Proportional Valve
9	Housing Nether Hoarding	24	Controller
10	Heat Exchanger	25	ON/OFF Switch
11	Water Outlet Temp Probe	26	Fuse Box
12	Anti-freezing Thermostat	27	Anti-dust Mesh
13	Thermostat	28	Wire Controller
14	Water Inlet Pipe		
15	Burner		

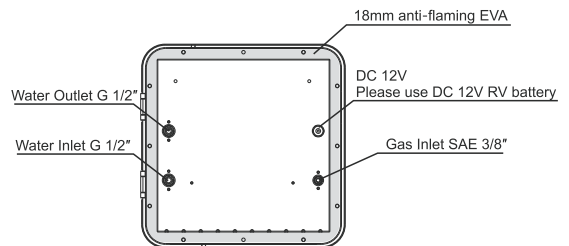
●Installation Steps:

1. Select the installation location on the RV before installation. Do not install the water heater in the RV aisle. It should be installed on the exterior wall of the RV. The exhaust port should face outside the RV. RV hot water heater should be installed on a solid, or on a non-combustible frame. In order to install a water heater firmly, the unit's bottom should be supported by a non-combustible floor or frame. If the surrounding of the opening is a combustible material, use a flame-retardant insulating material such as heat-insulating felt or heat-insulating board to completely separate the back surface of the water heater from the combustible surface. And the minimum thickness of the filling material must be greater than 20mm. The housing connection gap behind the water heater should be sealed with a high temperature sealant during installation to isolate it from the inside of the RV. In this way, the burning air does not come from the inside of the RV, but from the outside of the RV. The exhaust gas generated by the combustion is discharged outside the vehicle.. Cut a hole sizing 330x330 mm. The opening depth should be sufficient to accommodate the gas pipe, wire, and water pipe when the water heater is pulled out of the hole. And at the bottom or back of the hole, please reserve space for gas inlet, inlet, outlet pipe, power line and other channel holes. Reserve extra gas pipe, wire, pipe length should be greater than the opening depth 1.5 times for maintenance and testing. The perimeter of the hole should ensure sufficient strength to fix the water heater (please refer to Figure 1). The hole can be strengthened by adding support frames under the water heater bottom in order to ensure the weight of water heater does not make any damage on the wall of the RV.

2. Correctly connect the G1/2" cold and hot water pipe to the back of the water heater. Correctly install the SAE 3/8" liquefied gas pipe on the back of the water heater. Correctly connect the volt power cable to the power cable on the back of the water heater. . Red is positive, black is negative; connect the line controller with the two blue lines on the back of the water heater, it is not necessary to divide the positive and negative poles; pay attention to the water pipe, trachea, and wires on the back of the water heater to leave enough length to pull the water heater from the mounting hole. (Please refer to Figure 2) Installation of wiring and wired controller must be installed by professional person, service company or gas water heater suppliers.



(Figure 1)



(Figure 2)



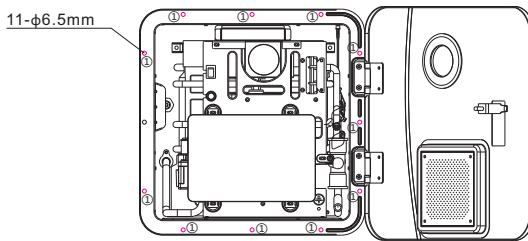
WARNING

This water heater is designed for RV users. The working voltage is DC 12V RV battery and the gas source is propane.

Excessive force will damage the water heater's cold water and hot water connections.

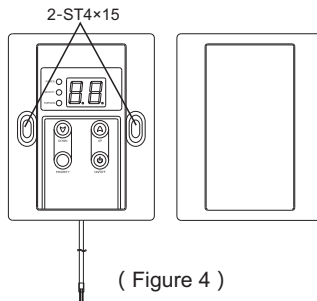
When installing the gas joint, tighten the joint with two wrenches to avoid damaging the water heater joint.

3.The water heater flange cover is glued with 18mm wide single-sided adhesive anti-flaming EVA. The paste should be flat and connected seamlessly. (Be careful not to be too thick) Then press this product into the opened hole. Secure the water heater to the RV body with 11screws (ST5×25mm). Air and water should be isolated from openings to prevent entry into the interior of the RV. (Please refer to Figure 3)



(Figure 3)

4.Choose a convenient location to place the wire controller. The connection between the line controller and the water heater should be reasonably laid out according to the specific environment. Remove the front panel of the wire controller. Secure the wire controller to the RV body with two screws (ST4×15mm). Then install the front panel back on the wire controller .(Please refer to Figure 4)



(Figure 4)

RV water heater is fitted with water pressure relief valve, it will operate if the inlet water pressure too high, then water will flow out of relief valve position in order to protect water pipe from high pressure damage.


Checking steps:

1. Confirm there is no leakage happening between any gas connections. For example, put soapy water on gas connection, to see whether there are bubbles. If there are no bubbles, it means no leakage; if bubbles occur, please check connections.

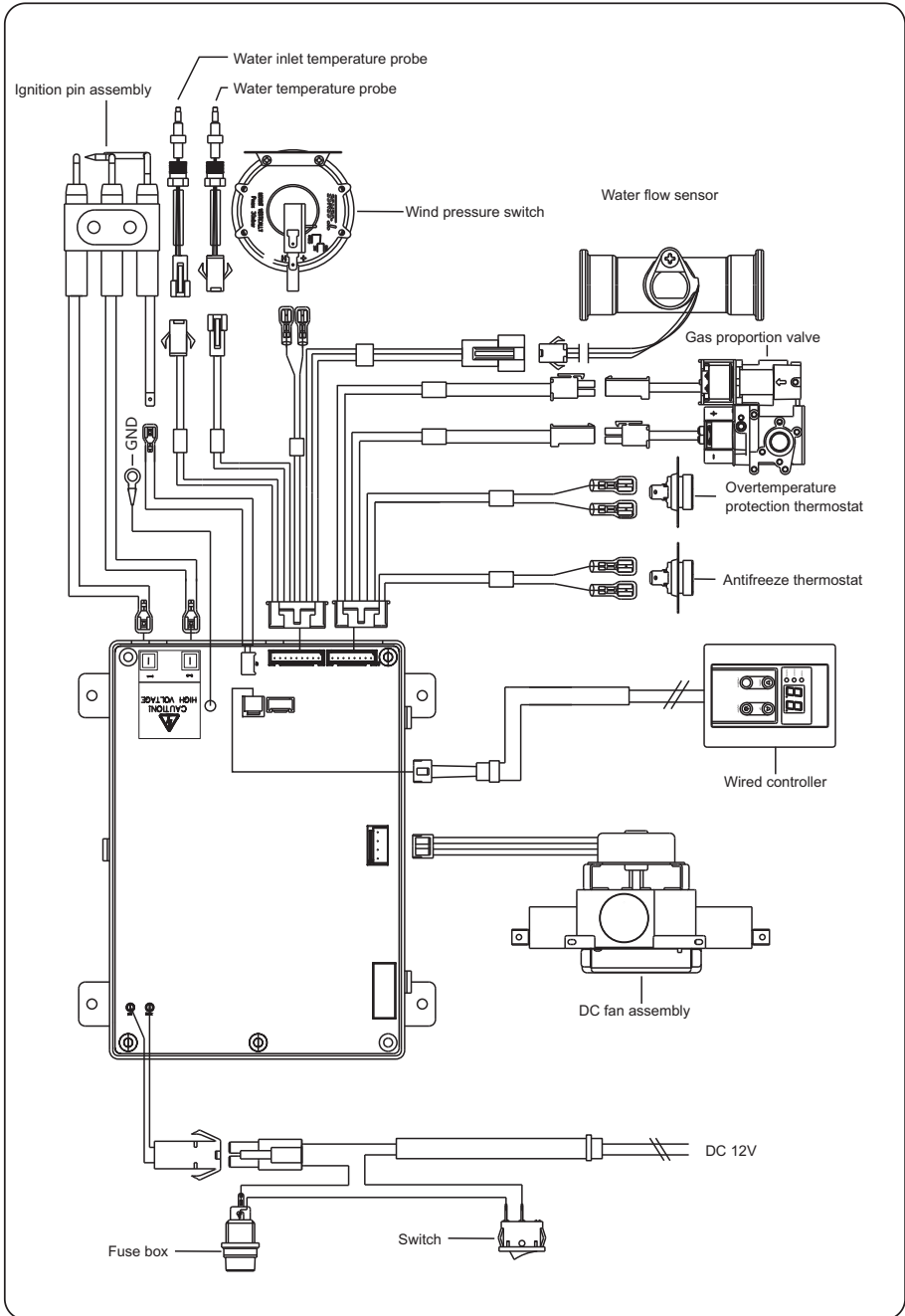
2. Confirm there is no water leakage;

3. Installer shall check the operation of water heater, after being sure there are no leaks happening between any gas connections; for checking steps refer to Page 14.

- The minimum distance from the smoke outlet to the flammable surface should be >500mm.
- Do not install the water heater or other electrical appliances in the exhaust port facing an area covered with awning, canopy or any other enclosure.
- The water heater can be installed in the trailer or under the retractable awning, but the awning must be well ventilated
- This RV water heater is intended to be used with a gas cylinder not less than 9Kgs conforming to local code.

Cylinder	Approximate size	Dimensions
	9kg(8.5kg)	480mm height 310mm diameter

Product Wiring Diagram



Operation Instructions

- DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION.
- DO NOT USE OR STORE FLAMMABLE MATERIALS IN OR NEAR THIS APPLIANCE.
- DO NOT PLACE ARTICLES ON OR AGAINST THIS APPLIANCE.
- DO NOT MODIFY THIS APPLIANCE.


WARNING

- Before installing the water heater, a water mixing valve must be installed. At the rated setting, the equipment to provide water is not more than 51°C. When water flow is small or high inlet water temperature, water heater will heat the water to the likely above 51°C. temperature. At this moment, please open the mixing valve to provide you with a comfortable shower temperature.

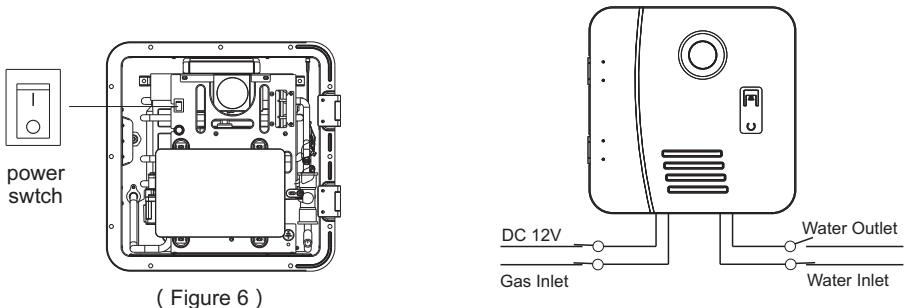

WARNING

- Prior to first operation, please remove any packing protection, like plastic film, plastic bag, plastic sealing tape or any packing material can block the outlet of water heater.

The installer must provide an installation certificate that the water heater is installed correctly before the initial use, carefully check that the connections are properly connected and leak free. After confirming it, please follow the below steps:

The steps for starting the unit :

1. Confirm that the power switch in the water heater is turned on;(Please refer to Figure 4)
2. After confirming the power is on, press the wire controller key “U” ;
3. Turn on the water inlet valve and gas valve at the gas cylinder;
4. Turn on the water outlet valve (hot water tap), the water heater is ignited, and hot water flows out.





- Children and juveniles are not advised to operate the water heater by themselves unless they are accompanied by a guardian.



- The door shall be kept closed during operation.

The gas valve will be cut off after power off or power interruption. The user shall close the gas at the gas cylinder when power off or power interruption happens during operation. Please check the electrical connections of 12vdc before next operation.

- TO BE INSTALLED ON FIRE RESISTANT MATERIAL
- DO NOT OPERATE THIS APPLIANCE BEFORE LEAK CHECKING HOSES AND GAS CYLINDER CONNECTION.
- SUITABLE ONLY FOR INDOOR INSTALLATION



- For continued safety of this appliance it must be installed, operated and maintained in accordance with the manufacturer's instructions.
- Before installing the water heater, a water mixing valve must be installed. At the rated setting, the equipment to provide water is not more than 50°C. When water flow is small or high inlet water temperature, water heater will heat the water to the likely above 50°C temperature. At this moment, please open the mixing valve to provide you with a comfortable shower temperature.
- Children are not allowed to operate this water heater without the guidance of their parents or guardian.
- Any parts removed from this machine should be kept in a place where children are not accessible.



- DO NOT** OPERATE THIS APPLIANCE BEFORE READING THE INSTRUCTION BOOKLET.
- DO NOT** PLACE ARTICLES ON OR AGAINST THIS APPLIANCE
- DO NOT** STORE CHEMICALS OR FLAMMABLE MATERIALS, OR SPRAY AEROSOLS NEAR THIS APPLIANCE.
- DO NOT** OPERATE WITH PANELS, COVERS OR GUARDS REMOVE FROM THIS APPLIANCE

Wire Controller Instructions:

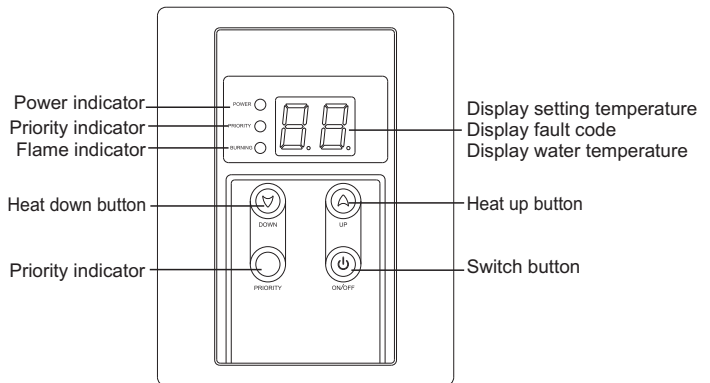
1. The wire controller emits a buzzer sound "B,B,B" when the power is turned on. The display shows the gas source code, and this code will only be displayed for 3 seconds. The wire controller's indicator light is on and the back light of power switch button is on.
2. After pressing the power button, the flame and outlet temperatures are displayed in real time according to the operating status.
3. In the event of a fault alarm, the display will change to display fault code;
4. The buzzer sound "B" occurs when the system is powered on or is operating effectively. When fault alarm occurs in the system, the buzzer sound "B, B, B" is issued for continuously for 10 times, and every one second for each sound.
5. After finishing using the water heater, please press "⏻" to turn off the heater (water and gas should be turned off at the same time)
6. When using more than one wired controller, press the Priority key to get the priority of operation, then you can set the temperature or operate other process by this prior controller. The non - priority wired controller cannot control the water heater. Then if you press the on/off button to shut down or turn off the water for 15 minutes without any operation, the priority will automatically clear.

Steps Of Setting Water Temperature:

1. The setting range of the outlet water temperature of this machine is 35°C~51°C; Designed for operation at outlet water temperature(s) not in excess of 51°C (123°F).
 2. Each time you press the "▲" key, the temperature will rise by 1 °C, and the temperature rises by 1 °C every 0.25 seconds while you keep pressing this key continuously.
 3. Each time you press the "▼" key, the temperature will drop by 1 °C and the temperature drops by 1 °C every 0.25 seconds while you keep pressing this key continuously.
- Celsius Degree and Fahrenheit Degree Comparison (Please refer to Table 1)

35°C (95°F)
36°C (96°F)
37°C (98°F)
38°C (100°F)
39°C (102°F)
40°C (104°F)
41°C (105°F)
42°C (107°F)
43°C (109°F)
44°C (111°F)
45°C (113°F)
46°C (114°F)
47°C (116°F)
48°C (118°F)
49°C (120°F)
50°C (122°F)
51°C (123°F)

(Table 1)



FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapours and liquids in the vicinity of this or any other appliance.

Fault Judgment And Processing

Fault treatment: When the water heater fails, the display will show the fault code, and the buzzer will continuously issue alarms "B, B, B". Please follow the table below for the corresponding treatment.

Error Code	Cause	Solutions
<p>When the system is turned on or working, the wired controller displays code "E0", and the buzzer alarms the fault</p>	<ol style="list-style-type: none"> 1. The outlet water temperature sensor connector is loose or has poor contact; 2. The outlet water temperature sensor is damaged (open circuit, short circuit or metal parts); 	<ol style="list-style-type: none"> 1. Clamp the outlet water temperature sensor terminal; 2. Replace the water temperature sensor.
<p>When the system is turned on or working, the wired controller displays code "E1" and the buzzer alarms the fault.</p>	<ol style="list-style-type: none"> 1. The gas valve is not open; 2. The gas supply pressure or gas composition is abnormal, causing accidental flameout; 3. The igniter, ignition needle is damaged or the line is faulty; 4. Damage to the flame induction needle or wire failure; 5. The combustion system (burner, nozzle, air control panel, proportional valve, sectional valve) is damaged, the specifications are inconsistent or the wiring is wrong, resulting in abnormal combustion; 6. The control program or parameter settings are incorrect, resulting in unstable combustion; 7. The fan speed is abnormal, resulting in unstable combustion; 	<ol style="list-style-type: none"> 1. Open the gas valve to ensure that the water heater can get normal gas supply; 2. Confirm that the gas type and pressure meet the requirements of the water heater; 3. Check if the igniter, ignition pin and circuit are damaged, and replace the damaged parts; 4. Check if the flame induction needle is damaged and replace the damaged parts; 5. Check if the combustion system is damaged, if the wiring is wrong, and replace the damaged parts; 6. Check whether the program and parameters meet the values in the parameter table; 7. The wind speed of the fan is abnormal. Check whether the program and parameters meet the values in the parameter table.

Error Code	Cause	Solutions
When the system is turned on, the wired controller displays code“E2” and the buzzer alarms the fault.	<ol style="list-style-type: none"> 1. The feedback pin is bent and in contact with other metal parts; 2. The feedback pin plug-in terminal is loose and hits the metal part; 3. Feedback pin wire is broken. 	<ol style="list-style-type: none"> 1. Replace the ignition feedback needle assembly; 2. Plug the feedback pin terminal correctly and firmly into the feedback pin; 3. Check if the wire is disconnected and replace the wire.
When the system is turned on or working, the wired controller displays code“E3” and the buzzer alarms the fault.	<ol style="list-style-type: none"> 1. The thermostat opens or the wire is faulty; 2. The gas supply pressure or gas composition does not match, causing abnormal combustion; 3. The control program or parameter settings are incorrect, resulting in abnormal combustion; 4. The combustion system is damaged or the specifications are inconsistent, resulting in abnormal combustion; 	<ol style="list-style-type: none"> 1. Check the temperature controller or circuit and replace the damaged parts; 2. Confirm that the gas type and pressure meet the requirements of the water heater; 3. Check whether the program and parameters meet the values of the parameter table; 4. Check the combustion system for damage and replace damaged parts.
When the system is turned on or working, the wired controller displays code“E4” and the buzzer alarms the fault.	<ol style="list-style-type: none"> 1. The inlet water temperature sensor connector is loose or has poor contact; 2. The inlet water temperature sensor is damaged (open circuit, short circuit or metal parts). 	<ol style="list-style-type: none"> 1. Clamp the water temperature sensor terminal; 2. Replace the water temperature sensor.
When the system is turned on or working, the wired controller displays code“E5” and the buzzer alarms the fault.	<ol style="list-style-type: none"> 1. The fan signal is not detected or the speed is too low in the system startup 5S; 2. During operation, the fan speed is not detected for 2 s consecutively, or the speed is too low; 3. The power supply voltage is too low, causing the fan speed to slow down. 	<ol style="list-style-type: none"> 1, 2, the fan assembly, controller damage or line failure, causing the fan not to run or the speed is too low, check the fan, the main controller is damaged, the wiring is damaged, loose, replace the damaged parts; 3. Confirm whether the power supply and fan voltage meet the design requirements.

Error Code	Cause	Solutions
<p>During the system working process, the wired controller displays code“E6” and the buzzer alarms the fault.</p>	<ol style="list-style-type: none"> 1. The gas supply pressure or gas composition does not match, causing abnormal combustion; 2. The control program or parameter settings are incorrect, resulting in abnormal combustion; 3, the water temperature sensor specifications do not match, the display temperature is much higher than the actual temperature; 4. The combustion system is damaged or the specifications are inconsistent, resulting in abnormal combustion; 5. The heat exchanger fins of the heat exchanger are poorly welded, and the heat transfer is slow. <p>After the water valve is closed, the water in the tube is continuously heated.</p>	<ol style="list-style-type: none"> 1. Confirm that the gas type and pressure meet the requirements of the water heater; 2. Check whether the program and parameters meet the values of the parameter table; 3. Test whether the actual water outlet temperature and the wired controller display temperature are close ($\pm 3\text{ }^{\circ}\text{C}$), and replace the wrong outlet water temperature sensor; 4. Check the combustion system for damage and replace damaged parts; 5. Detect if the heat exchanger fins are poorly welded and replace the damaged parts.
<p>When the system is turned on or working, the wired controller displays “E7” and the buzzer alarms the fault.</p>	<ol style="list-style-type: none"> 1. The valve connector is loose or has poor contact; 2. The valve is short-circuited; 	<ol style="list-style-type: none"> 1. Clamp the water temperature sensor terminal; 2. Check if the valve coil is short-circuited and replace the damaged parts.

Error Code	Cause	Solutions
<p>When the system is turned on or working, the wired controller displays code“E8” and the buzzer alarms the fault.</p>	<ol style="list-style-type: none"> 1. During operation, the fan speed continuously exceeds the set value of 5S speed; 2. The outdoor wind pressure is too high, and the fan speed exceeds the upper limit of the speed; 3. A large amount of carbon in the heat exchange fins (when the gas source is used incorrectly), causing the air passage to be blocked, and the fan speed increase exceeds the upper limit of the speed. 	<ol style="list-style-type: none"> 1. Check if the exhaust passage is blocked. 2. Stop starting, and start after no strong wind in the outdoor; 3. Remove the heat exchanger, use a brush to gently clean the carbon on the fins, and ensure that the type and pressure of the gas used subsequently meet the requirements of the water heater.
<p>During the system working process, the wired controller displays “En” and the buzzer alarms the fault.</p>	<p>In order to prevent oxygen deficiency, some models have timing protection. Please turn off the tap and use it after a while.</p>	<ol style="list-style-type: none"> 1. Set the appropriate time according to the usage habits, and the timed shutdown time can be set to 20, 30, 40, 50, 60 minutes; 2. It is not necessary to set “OF” to turn off the timing function.
<p>Fault alarm release and reset method: If the above code appears, please check that all moisture is normal, press the on/off switch or power off to restart. (when you start and or turn on the water, press the “on/off ” switch within 15 minutes and then press the “on/off ” switch 5 times (the fan starts for 5 times), the water heater will lock and cannot start. After the icon disappears or it waits for 15 minutes, it can be automatically unlocked (reset). The water heater returns to normal use. If the above operations cannot be returned to normal use, please inform the after-sales service personnel.</p>		

· It is not a failure when the following conditions occur:

Example	Reason and handling method
White smoke at exhaust	When the outdoor temperature is too low, the exhausted smoke encounters outdoor cold air and condenses into a white mist.
Water is not heating	If the water flow is too low, the water will become cold. A minimum water flow of 1 gallon per minute is required to ensure the stable operation of the water heater.
Water not hot enough	The inlet water temperature is too low and the water flow exceeds the heating capacity of the water heater. Please adjust the amount of water appropriately.
After 20 minutes or 40 minutes, the water heater suddenly goes out	In order to prevent oxygen deprivation, some models have 20 or 40-minute timing protection. Please turn off the tap and use it after a while.
Close the hot water valve, but the fan cannot stop immediately	This is the function of delaying the shutdown of the fan, in order to completely discharge the exhaust gas of the water heater to ensure the safety of the user.
The hot water valve cannot open hot water immediately	From the water heater to the hot water tap there is a distance, because there is cold water left in the water pipe, it will take some time to use the original cold water before the hot water. The longer the pipeline is, the more time it takes.
After the machine is powered on, the wire controller does not respond	Open the door of the water heater door and make sure the switch inside the door is on and the fuse is intact. If the fuse blows, replace the fuse of the same size. (Fuse: 10A 125V)

Maintenance

●SERVICE SHALL BE CARRIED OUT ONLY BY AUTHORIZED PERSONNEL AND THE APPLIANCE SHALL NOT BE MODIFIED

For your comfort and safety , we recommend to check and maintain the product monthly. Disconnect the power supply and allow the unit to cool down before performing maintenance. Do not disassemble gas passages and safety device during maintenance. The unit has some electronic components inside. Please do not open it, and avoid using any type of liquid to clean the electronic components.

Daily inspection:

1. Check the air intake grill and exhaust vent for dust, to avoid blockages.
2. Check the unit for unusual appearance.
3. Check the unit for noise during operation.
4. Check water and gas leakage.
5. When carbon deposits are found, the heater should be promptly taken to the after-sales service provider for maintenance. The serviceman will remove the burner with the jets facing down, using a bristled brush to remove the carbon,

● Maintenance Instruction

1. Clean the unit regularly. Do not use chemical lotion and volatile solvents.
2. 1. To ensure better performance, please clean the air intake grill, dust filter and exhaust port regularly. This ensures there is no obstruction of the flow of combustion and ventilation air.
- 3.To remove the air intake filter: open the panel, remove four thumbscrews. Clean with water.
4. Turn off the water inlet, remove water inlet pipe, clean the filter and reinstall.
5. Drain water from the RV regularly and flush the heat exchanger with an approved detergent.
6. Wipe the display with a damp cloth. Do not use gasoline or grease detergents to avoid shape changes.
- 7.When travelling on dusty roads please check and clean the interior of the water heater and blow excess dust away carefully using a compressed air gun. Excessive build up of dust can affect the operation of this unit, it is your responsibility to keep the units interior clean.

● Keeping appliance area clear and free from combustible materials, gasoline, and other flammable vapours and liquids.

● There is a hot water scald potential if the thermostat is set too high.

● Should overheating occur or the gas supply fails to shut off, turn off the manual gas control valve to the appliance.

● Caution: Label all wires prior to disconnection when servicing. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

ServicingCentre: Australian RV

Phone: 03 97581761. we will direct you to your nearest service centre

The way to set minimum heat load:

Method#1

- 1.Plug in electricity, it will show “O”
- 2.Press ▼ for 3 seconds,, it will show “PP”
- 3.Press ⏻ to show FA; Press ⏻ to show specifications: set the value to be 00. Press ⏻ to exit.
- 4.Press ▲ to show PH; Press ▲ to show PL.Then please turn on the gas and water. Then water heater will run in minimum heat load.
- 5.After testing above, press ▲ to switch specifications like PL, DH, FH, FL.....till it shows “qu”, then press ⏻ to save and exit setting.




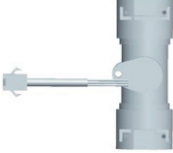
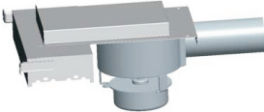













Method #2

Set the temperature on wired controller to be 35°C , then if the water inlet temperature is high enough to make outlet water temperature higher than 35°C,it proves that the water heater is running in its minimum heat load.

Here is the place to replace the spare parts:

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Parts	Photo	Parts	Photo
Lock		Wind pressure switch	
Gas control valve		Water flow sensor	
Draught fan assembly		Inflow temperature probe	
Burner		Water temperature probe	
Ignition pin assembly		Overtemperature protection thermostat	
Gas inlet assembly		Antifreeze thermostat	
Water inlet assembly		Burner controller	
The connection pipe of burner and valve		Water inlet filter	
Wired controller		FUSE(125V 10A)	

☰ Drain And Store Instruction

Water must be drained to prevent freezing during winter.

1. As shown in Figure 8, the water inlet connector is connected to the water outlet pipe with switch valve by a tee fitting. The water outlet connector is connected to the compressed air with switch valve using a tee fitting. Turn off water inlet A, open water outlet B before draining.

Turn water outlet D, open the compressed air valve C.


Compressed air blows water out of the drain. (Note: Turn off the power and gas valve before draining. Apply compressed air (less than 300kPa). Close the compressed air valve when the pipe is dry. Blowing water for a long time will cause damage to the internal parts of the water heater.)

2. Turn off the power supply, air supply, and pump on the water system. Turn on the water outlet tap.

3. Flush the entire water system according to RV manufacturer's instructions.

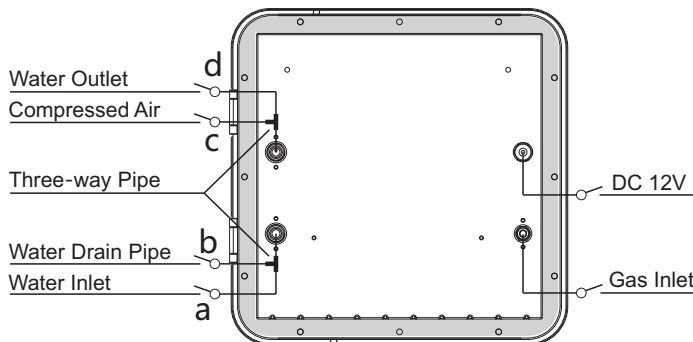
Note: When the RV water system re-fills with water, only start the water heater after air is purged from the system.

Note: Water must drain out of the RV through the pipe.



WARNING

No valve is to be placed between the relief valve and water heater. The discharge from temperature and pressure relief valves will be via the supplied discharge hose. Do not obstruct the discharge hose.



(Figure 8)

Antifreeze System

Water heaters must be protected before travelling to a possible freezing environment. Freezing damage is not covered by the warranty. The anti-freezing function operation method is:

1. Drain away water inside the water heater. Applicable when the unit is not in use for long period. (For specific operations, see "Drain and Store Instructions")
2. Add antifreeze recommended by the RV manufacturer.
3. Start the antifreeze function to prevent freezing. Turn on the power switch and the gas valve, turn off the water inlet. The water heater will be on antifreeze mode automatically (please ensure there is enough gas in the RV).
 - When the water temperature in the water heater is lower than $6\pm 1^{\circ}\text{C}$ ($43^{\circ}\text{F}\pm 2^{\circ}\text{F}$), the wire controller displays "Fd", the machine starts the ignition and runs with a certain load. After the whole machine runs for 5 seconds, the water heater will automatically shut off or when the temperature of the water pipe reaches $32\pm 1^{\circ}\text{C}$ ($90^{\circ}\text{F}\pm 2^{\circ}\text{F}$) in 2 seconds, it will shut down automatically. Heater will run the test again after shut down for 3 minutes.
 - In the process of starting the antifreeze function, if a fault occurs, the corresponding fault is reported and the corresponding code is displayed. After 15 minutes, the system automatically clears the fault code. If the freeze protection start condition is still met, the anti-freeze will start again.

Warranty Notice

Dear users: thank you for using our products.

The relevant provisions of the law provide you with quality services.

To ensure your interests, please fill in the warranty card carefully. This warranty is only applicable to Fogatti RV gas water heater.

2. Customers who purchase products of Zhongshan Powtek Appliance Mfg. Ltd., the warranty period of each product of our company is (with the purchase certificate)

(from the date of shipment) : one year (12 months).

3. Please do not use it for business purposes, which will shorten the service life of the product. If using it for business purpose, there is a charge even within the warranty period.

4. The following situations are not within the scope of free warranty service. Our company can provide you with paid product services.

A. Beyond the validity period of the free warranty time, the product can still be used after repair;

B. Damage to products caused by improper transportation or storage of the user or failure to operate in accordance with the instructions;

C. Disassemble or repair the product without our company's permission, and repair the product after repair at the non-authorized service agents;

D. Products without valid purchase certificate;

E. Products that have been effectively altered;

F. The voltage is unstable or beyond the normal voltage range (DC 24V), or the power line installation is not in conformity with the national electrical installation standard requirements;

G. The specification specifies that the product should not be used or damaged due to the wrong operation method.

Packing List

Order	Design	Quantity	Remarks
1	Gas water heater	1 piece	
2	Instruction Manual (including warranty card)	1 piece	
3	Controller	1 piece	
4	Screw	11 pieces	ST5×25

Warranty Card

User name		Bar code number
Product name		
Product model		
Purchasing date		

Warning! For your safety, please ensure that your installation conditions meet the following requirements: (applies only to water heater products)

- The power supply of the water heater must be reliably grounded and equipped with a leakage protection device to prevent accidental circuit leakage.
- Power outlet, connector may be subject to water penetration. Use a splash-proof power outlet and take care of the watertight joints.
- Water heaters should be used on the RV. Do not use indoors. Exhaust gas must be discharged outside the vehicle to prevent carbon monoxide poisoning.
- Gas supply and water supply must be reliably installed without leakage to prevent damage due to leakage.
- The installation of the water heater should comply with local laws and regulations.

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