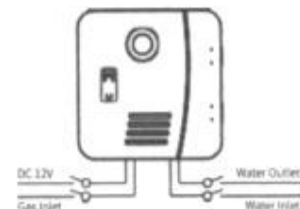
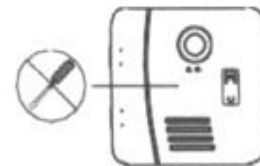
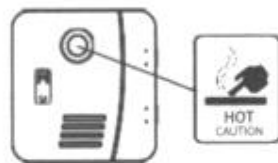


## Safety instructions

- 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.
- To prevent fire or explosion accidents, do not place flammable, explosive and volatile articles nearby the water heaters and flue exhausted pipe.
- 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.
- 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.
- Do not modify the water heater in any way. Self-modification is dangerous and will void the warranty.
- 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.)
- 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.

- Water heaters are used only for the supply of hot water and cannot be used for other purposes to prevent accidents.
- 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.
- Do not modify the positive grounding system of the water heater.
- Do not test the water heater with high voltage power unless the water heater power switch is turned off.
- 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.
- Pay attention to protecting the surrounding buildings from hot exhaust fumes.
- Do not connect the water heater to the exhaust system of other appliances.
- 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.
- Do not use accessories other than ours.

## DANGER!

### WHAT TO DO IF YOU SMELL GAS?

Evacuate all personnel to leave the vehicle.

Turn off the gas supply.

Do not use any electric appliance or telephone on the vehicle.

# Operation instructions

**Note:** DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION.

**Note:** DO NOT USE OR STORE FLAMMABLE MATERIALS IN OR NEAR THIS APPLIANCE.

**Note:** DO NOT PLACE ARTICLES ON OR AGAINST THIS APPLIANCE.

**Note:** DO NOT MODIFY THIS APPLIANCE.

- Before installing the water heater, a water mixing valve must be installed.

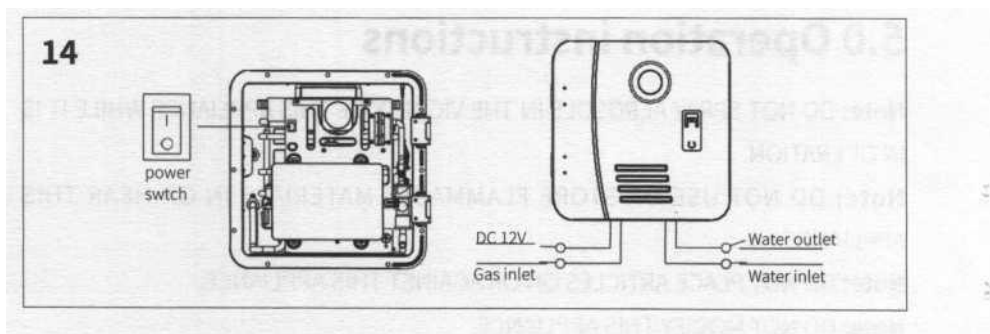
At the rated setting, the equipment to provide water is not more than 51°C . When water flow is small or inlet water temperature is high, water heater will heat the water to the likely above 51° C . At this moment, please open the mixing valve to provide you with a comfortable shower temperature.

- 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:

## 5.0 The steps for starting the unit

- Confirm that the power switch in the water heater is turned on; See FIG.14.
- After confirming the power is on, press the wire controller key" (J)
- Turn on the water inlet valve and gas valve at the gas cylinder;
- 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 12V DC 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.

## DANGER!

- 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.

## DANGER!

- **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 REMOVED FROM THIS APPLIANCE.**

## 5.0 Wire controller instructions

- 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.
- After pressing the power button, the fan, shower, flame and outlet temperatures are displayed in real time according to the operating status.
- Set the temperature to be what you want, the setting temperature will flash for 5 times, then it will automatically switch to display the water temperature.
- Press "Celsius/Fahrenheit" to switch Celsius/Fahrenheit degrees.
- In the event of a fault alarm, the display will change to display fault code.
- 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 continuously for 10 times, and every one second for each sound.
- After finishing using the water heater, please press " power key " to turn off the heater ( water and gas should be turned off at the same time).

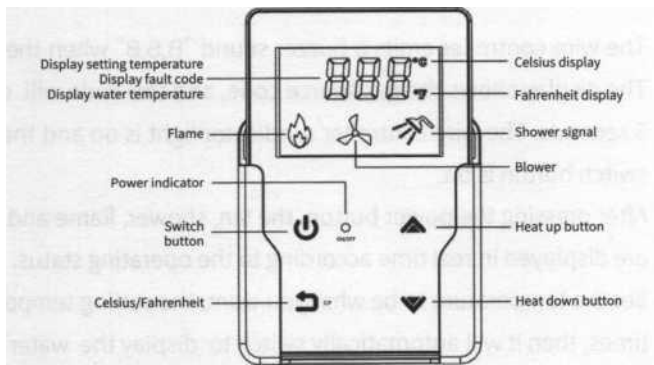
## 5.1 Steps of setting water temperature

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).

Each time you press the " A " 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.

15

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 )



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.

### **DANGER!**

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

## 6.0 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	Failure description and treatment
E0	The outlet temperature probe is open or shorted.
E1	Ignition failure, no ignition. Please check whether the gas is supplied normally and check it before use.
E2	Unexpected flameout failure, accidental flameout during work.
E3	The thermostat malfunctions, and the temperature control is detected during the start-up or water heater operation.
E4	The inlet temperature probe is faulty and the inlet temperature probe is open or shorted.
E5	Fan failure, no fan signal detected during start-up or water heater operation. Over-temperature fault.
E6	The display will show faulty code when the water temperature remains continuously for 3 seconds at more than 60°C (140° F). Please check if the water supply pressure is too low.
E7	Before normal combustion, the main valve opens or is shorted; the proportional valve opens. In normal combustion, the main valve opens or is shorted; the proportional valve opens.
E8	Wind pressure switch failure, when the power is turned on for 5 seconds, the wind pressure switch is closed or the wind pressure is continuously disconnected for 2 seconds.
EN	Water heater set timer time to ("nE" is set to open).

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.

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

<b>Example</b>	<b>Reason and handling method</b>
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, out 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.

<b>Example</b>	<b>Reason and handling method</b>
The hot water 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: 10A125V)

## 7.0 Maintenance

**Note:** 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.

### 7.1 Daily inspection

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

### 7.2 Maintenance instructions

- Clean the unit regularly. Do not use chemical lotion and volatile solvents.
- 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.
- To remove the air intake filter: open the panel, remove four thumbscrews. Clean with water.
- Turn off the water inlet, remove water inlet pipe, clean the filter and reinstall.
- Drain water from the RV regularly and flush the heat exchanger with an approved detergent.
- Wipe the display with a damp cloth. Do not use gasoline or grease detergents to avoid shape changes.
- 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.







### 7.3 The way to set minimum heat load

Method#1:

- Plug in electricity, it will show "0".
- Press down for 3 seconds,, it will show "PP".
- Press " (!)" to show FA; Press " (!)" to show specifications: set the value to be 00. Press " (!)" to exit.
- Press **up** to show PH; Press **up** to show PL. Then please turn on the gas and water. Then water heater will run in minimum heat load.
- After testing above, press **up** to switch specifications like PL, DH, FH, FL.... till it shows "qu", then press " (!)" to save and exit setting.

### 7.4 Parts

Parts	Photo
Lock	
Gas control valve	
Draught fan assembly	
Burner	

- Set the temperature on wired controller to be 95 °F, then if the water inlet temperature is high enough to make outlet water temperature higher than 95 °F , it proves that the water heater is running in its minimum heat load.

Ignition pin assembly



Gas inlet assembly



Water inlet assembly



The connection pipe of burner and valve



Wired controller

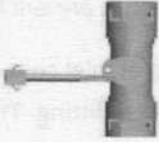




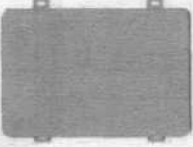



FUSE (125V 10A)



Wind pressure switch



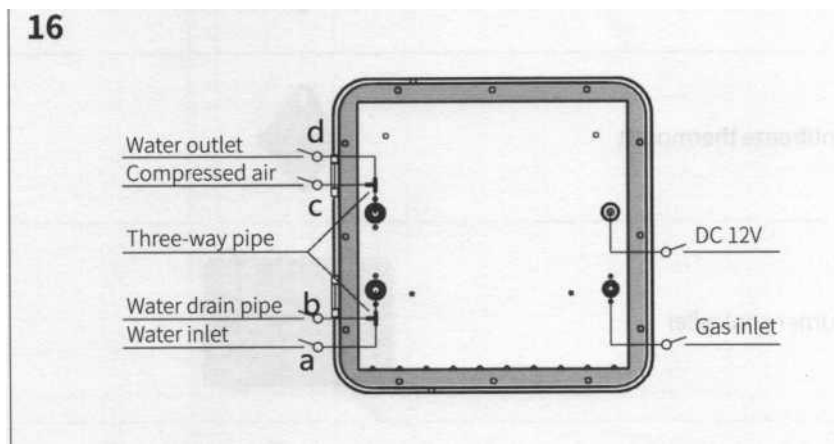
Parts	Photo
Water flow sensor	
Inflow temperature probe	
Water temperature probe	
Overtemperature protection thermostat	
Antifreeze thermostat	
Burner controller	
Water inlet filter	

EN

## 8.0 Drain and store instructions

Water must be drained to prevent freezing during winter.

- See FIG.16, 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 longtime will cause damage to the internal parts of the water heater.)
- Turn off the power supply, air supply, and pump on the water system. Turn on the water outlet tap.
- Flush the entire water system according to RV manufacturer's instructions.



**Note:** When the RV water system is refilled 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.

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.

## 9.0 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:

- 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**")
- Add antifreeze recommended by the RV manufacturer.
- 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. Fleater 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.
- Customers who purchase products of ARANA Technology (Shenzhen) Co., Ltd., the warranty period of each product of our company is (with the purchase certificate) (from the date of shipment): one year (12 months).
- 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.
- 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	