



Gas-fired instantaneous water  
heaters for the production of  
domestic hot water

## Installation and instruction manual

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Please read this manual carefully before  
installing and using a gas water heater,  
Please keep this manual for reference.

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## Foreword

Dear consumer, thank you for using our company's domestic gas fast water heater. Installing and using this product correctly will add new enjoyment to your good life. Please read this manual carefully before installing and using this water heater, and keep it for future reference.

If a problem occurs during the use of this product, please refer to this manual to solve the problem.

The company will not be responsible for any accidents caused by failure to follow the precautions.

The company reserves the right to interpret the manual.

The pictures shown in this article are for reference only, please refer to the actual product. The information provided in this article is subject to change without notice.

### Company statement:

is in conformity with the following LVD + EMC directives & EU regulation:

- Essential requirement of the regulation of Appliance burning gaseous fuels (EU) 2016/426 Annex III, 1.
- Low Voltage Directive (2014/35/EU) and
- EMC-directive (2014/30/EU)

and that the following harmonized standards have been applied :

- EN 26:2015

- Relevant harmonised LVD standards:

IEC 60335-1: 2010 + A1: 2013 + AW: 2016

IEC 60335-2-102: 2017

EN 60335-1: 2012 +A11: 2014 + A13: 2017

EN 62233: 2008

- Relevant harmonised EMC standards:

EN 55014-1: 2017

EN 55014-2: 2015

EN IEC 61000-3-2: 2019

EN 61000-3-3: 2013

## ☰ Special warnings

1. This product can only be installed, repaired, dismantled and modified by professionals. Unauthorized acts of dismantling, repairing and modifying the company's products will cause the product to lose warranty and cause infringement. The company is not responsible for any failures or accidents that may occur with this type of product.

2. When the water heater is working, gas combustion consumes a large amount of oxygen and generates carbon monoxide gas, and inhaling excessive carbon monoxide gas will cause harm to human health and even cause death or injury. Therefore, the user must install and use the water heater strictly in accordance with the requirements of this manual to achieve a safe effect. The company will not assume legal responsibility for any adverse consequences caused by not installing and using in accordance with the requirements of this manual.

### 3.Prevent gas accidents:

a. Confirm the type of gas. The type of gas used must be the same as that specified on the nameplate of the water heater. Do not modify the water heater without permission or use different types of gas forcibly.

b. After use, check whether the water heater has stopped working and remember to close the gas valve.

c. Always use soapy water to check each gas joint for leaks. When a gas leak is found, immediately shut off the gas source and open doors and windows. If the gas smell is severe, leave the house. At this time, do not ignite or touch the switches of electrical equipment such as exhaust fans, and do not plug or unplug various power plugs. Otherwise, open flames or ignition will ignite the gas, causing fire and explosion accidents.

d. Gas hoses may be leaked due to cracks due to prolonged use. Check them frequently. Under normal circumstances, replace the hoses once a year.

e. If you use LPG, if you find that the combustion flame of the water heater is suddenly high suddenly low, it is likely that the pressure reducing valve connected to the gas outlet of the water heater is failure. You should stop using it immediately, replace it or ask a professional technician to repair it.

f. If users of natural gas find that the combustion flames r is suddenly high suddenly low, this is caused by the unstable pressure of the pipeline. At this time, the use of the water heater should be suspended. If forced use will damage the water heater and even cause an accident.

## ☰ Special warnings

### 4.Prevention of fire:

a. Never go out or go to sleep without the flame of the water heater going out.

b. It is forbidden to place towels, clothing and other flammable items at the exhaust and gas supply ports of the water heater

c. Never store flammable, explosive and volatile materials in the place where the water heater is installed.

d. Users of LPG, do not invert the LPG cylinder and supply the gas sideways. Otherwise, when liquid fuel accumulates in the bottle, it will be easily brought into the water heater and cause a fire.

### 5.Prevent carbon monoxide poisoning:

a. This water heater is a forced exhaust water heater, so a smoke exhaust pipe must be connected to the exhaust port of the water heater in order to discharge the combustion exhaust gas outdoors. It is necessary to maintain indoor air circulation at any time, because of the harm that may occur due to incomplete combustion of the water heater or cause injury or death. Since the gas supply pressure directly affects the combustion conditions of the water heater, users must choose a pressure reducing valve that conforms to national standards.

b. It must be confirmed that the type of gas actually used is consistent with the type of gas specified on the nameplate of the water heater. Any gas other than those specified on the nameplate must not be used. Gas heaters using natural gas must use their designated regional gas types. Different gas types or different types of gas types cannot be mixed.

c. Do not discharge smoke into the ventilation zone of the building.

d. Due to long-term use, dust and carbon deposits will block the heat exchanger and affect the combustion conditions; directly result in the increase of carbon monoxide emissions in the flue gas, endanger human safety or cause death. Therefore, a qualified professional technician is entrusted to clean up the dust and carbon deposits on the heat exchanger plate every six months to ensure that the flue gas emissions meet the national safety standards.

e. The water heater must be installed vertically. If it is installed obliquely, it will cause the flame to contact the heat exchanger, which may increase the carbon

## ☰ Special warnings

monoxide emissions in the flue gas, endanger human safety or cause death.

f. When using liquefied petroleum gas or natural gas, if the gas supply pressure is insufficient, it is likely to cause a flashback phenomenon and affect the normal operation of the water heater. At this time, the flame changes from blue to yellow with the abnormal sound of the burner "buzz". This phenomenon easily leads to a significant increase in carbon monoxide emissions in the flue gas. At this time, the use of water heaters should be suspended.

### 6. Prevent overheating burns

a. When using hot water intermittently, note that the temperature of the hot water flowing out will rise too high to prevent burns to the skin.

b. During use and immediately after use, the water heater shell should not be touched by hand except the decorative plate to prevent burns.

c. During and after use, the exhaust port and the exhaust pipe are in a high temperature state. Do not touch it with your hands.

7. In the process of using the water heater, if an abnormal situation such as abnormal smell or abnormal sound is found (or in other emergency situations), keep calm, immediately close the main gas valve, and contact the maintenance department or gas company for treatment. After the treatment is completed, please leave the odorous space until the odor disappears.

8. Due to the long-term accumulation of water in the water heater, the hot water supplied by the water heater is not suitable for drinking and can only be used for general water.

9. To prevent accidents, children must use the water heater under the guidance of an adult; the water heater must not be in working condition without being used or monitored.

10. Do not touch the socket, earth leakage breaker and emergency operation button when your hands are wet.

11. It is strictly forbidden to use water heaters during lightning and fire.

12. Do not block the inlet and outlet of the water heater during use.

13. Make sure that the installation site is constructed of non-combustible materials. If the installation site is combustible, it must be separated by a fire-proof plate. The thickness of the fire-proof plate should be greater than 1cm, and the size should be 15cm larger than the size of the water heater shell.

14. When the outdoor temperature is lower than 0 °C, the water in the machine must be drained according to requirements after use.

## ☰ Product introduction

The water heater is a forced-exhaust gas water heater. After the water heater starts, under the action of the water heater fan, the flue gas generated by the combustion will be forcibly discharged through the exhaust pipe, making it safer to use.

1. Suitable for bathroom installation. When this product adopts the  $\phi$  60/ $\phi$  100 double-pipe installation method, it is a form of combustion with forced air supply and exhaust. The air required for combustion is taken from the outdoors. The exhaust gas generated is forced to be discharged to the outside, which has no pollution and consumption of indoor air. Eliminates dangerous factors such as hypoxia and carbon monoxide poisoning, and can also be used in a bathroom without worry (only using  $\phi$  60 single smoke pipe installation method is prohibited in the bathroom)

2. Intelligent high anti-wind pressure technology: Built-in intelligent high anti-wind pressure system to solve the problem of accidental flameout in high-rise use;

3. Heat exchanger: Adopt oxygen-free copper heat exchanger, high-end, high-efficiency, environmental protection;

4. Water-controlled automatic ignition: Just open the water outlet valve, the pulse igniter automatically ignites, and then the hot water flows out;

5. Water temperature adjustment: different water temperature can be adjusted arbitrarily between 35 ~ 65 °C;

6. Forced exhaust: Forcing exhaust gas to the outside to keep indoor air fresh;

7. Low water pressure start: low starting water pressure, wide application range;

8. Flameout protection: When the water heater accidentally goes out during use, it can automatically close the gas valve of the machine to ensure that gas will not leak;

9. Water-gas linkage control: When the tap water supply is interrupted or the water outlet valve is closed, the water heater will automatically stop burning and shut down;

10. Over-pressure protection: When the water supply pressure is too high, the water heater safety valve can automatically release the pressure to avoid damage to the water heater;

## ☰ Product introduction

### 11. Anti-freeze protection:

a. It is equipped with anti-freeze drain valve. After using the water heater in cold areas (outdoor temperature below 0 ° C), drain the water inside the water heater to prevent the water stored in the water heater pipes from icing and damaging the water heater. ;

b. Water heater equipped with electric heating antifreeze device. When the surface temperature of the water pipe inside the water heater is lower than 4 °C ± 2 °C, the electric heating antifreeze device will automatically heat it. When the surface temperature of the water pipe is 10 °C ~ 16 °C, the electric heating antifreeze device will be heated. Automatic stop of work can effectively prevent the water in the water pipe from icing and damaging the water heater (some models is with this device, Pls see the sticker on the water heater for details);

12. Overheating protection: When the temperature of the hot water from the water heater is too high, the water heater will automatically close the gas valve of the machine and stop working

13. Timing protection: To avoid lack of oxygen, some gas water heaters have timing functions (such as 20 minutes or 40 minutes): When the gas water heater runs continuously for "X" minutes, the gas valve of the gas water heater is automatically closed and shuts down, and the EN code is displayed on the display. Please turn off the water and restart it after a few seconds to continue using it;

14. Intelligent constant temperature technology: The water heater uses a gas proportional valve to precisely control the change of the burner. The amount of air required for combustion is supplied by a high-performance AC / DC fan. It is intelligently controlled by a microcomputer. The set temperature and outlet temperature are measured by a water temperature sensor. Instantaneous calculation to determine the amount of gas and the amount of air required to achieve rapid rise or fall to reach the set outlet temperature. At the same time, through detection of the inlet water temperature, adjustments can be made at any time to ensure a constant outlet water temperature;

## ☰ Product introduction

15. Easy operation: Microcomputer intelligent control the water heater's working process: After turning on the power, press the ON key to start the water heater and set the required water temperature. The microcomputer intelligent control system will automatically start the water heater when the machine is in a safe state, and you can immediately enjoy the constant temperature hot water ;

16. Outlet temperature display: The water heater is with outlet temperature display function;

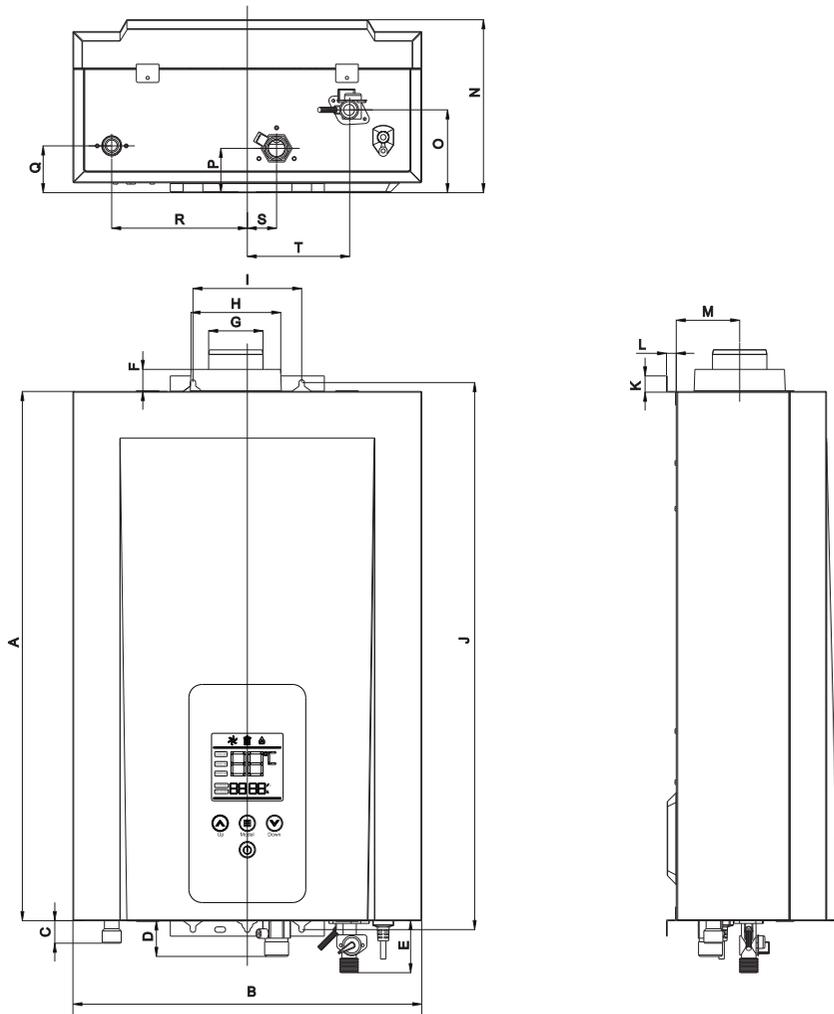
17. Flue blockage or fan failure protection: When a flue blockage or fan failure occurs, the water heater can be automatically turned off and cannot be turned on automatically;

18. Power-down memory function: After power-off, the set temperature parameters will not be lost, avoiding repeated setting;

19. Automatic fault diagnosis and fault code display function: Automatic fault diagnosis and fault code display function: The intelligent microcomputer monitors various safety devices, gas proportional valves and other components in real time. When a fault is found, the machine is stopped in time and the fault code is displayed, which makes it easier to use and maintain.

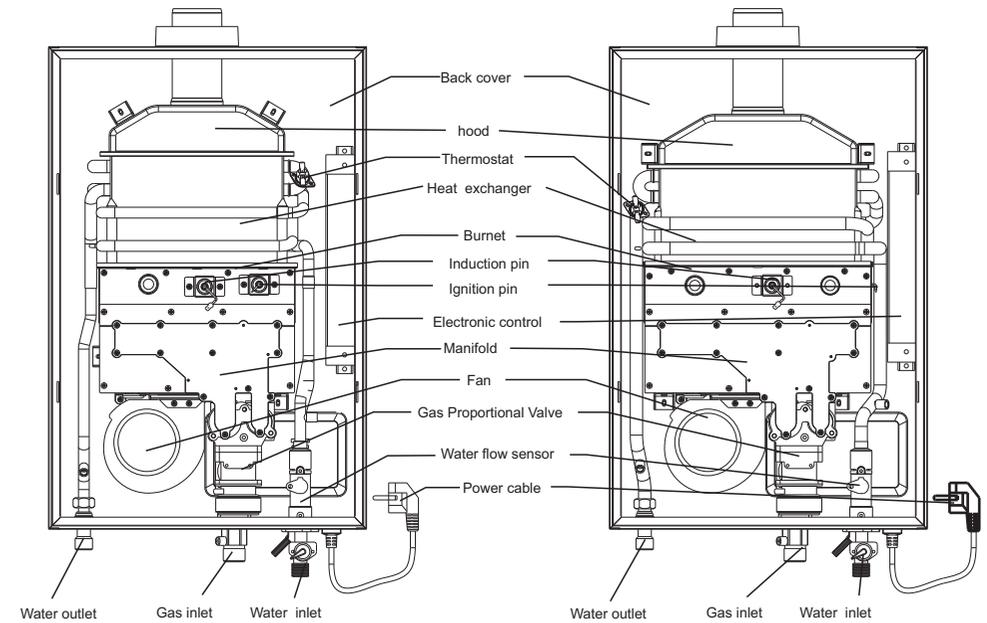
**The safety and protection performance of this product are all the conclusions drawn from laboratory conditions testing. In actual use, it may be affected by the environment. Users are requested to use it in a reasonable state. Do not use the water heater destructively to avoid damaging the water heater or even causing a safety accident.**

## Dimensions



Machine	Dimension (mm)																			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
13L	580	385	25	39	57	24	60	100	120	600	18	11	70	190	91	49	51	150	32	113
16L	580	385	25	39	57	24	60	100	120	600	18	11	70	190	91	49	51	150	32	113

## Part Name



JSQ22-11NT/JSQ25-13NT  
JSG22-11NT/JSG25-13NT

JSQ30-16NT  
JSG30-16NT

Gas		Gas parameter code table					
		G20-2000Pa			G30-2900Pa		
Liter		JSQ22-11NTXX	JSQ25-13NTXX	JSQ31-16NTXX	JSQ22-11NTXX	JSQ25-13NTXX	JSQ31-16NTXX
		JSG22-11NTXX	JSG25-13NTXX	JSG31-16NTXX	JSG22-11NTXX	JSG25-13NTXX	JSG31-16NTXX
Program code	FA			01			02
Max load PH	PH			PH-65-960Pa			PH-5b-950Pa
Min load PL	PL			PL-02-200Pa			PL-02-200Pa
Ignition DH	DH			DH-25-450Pa			DH-21-450Pa
Max load motor fan speed	FH			FH-90-4800r			FH-8c-4740r
Min load motor fan speed	FL			FL-34-2400r			FL-35-2400r
Max load motor fan overspeed protection	HC			97			97
Min load motor fan overspeed protection	LC			52			52
Injector Dia.(mm)				φ0.6/1.1mm			φ0.5/0.8mm

Warning: The conversion to another gas family, or another supply pressure, shall be accompanied by conversion instructions intended for the specialist.

## Product parameters

model	-	JSQ22-11NT JSG22-11NT	JSQ25-13NT JSG25-13NT	JSQ31-16NT JSG31-16NT	
rated power	kW	22	25	31	
minimal rated power	kW	5	5	6	
rated heat output kW 19.8 22.5 27.6	kW	19.8	22.5	27.6	
minimal rated heat output	kW	4.5	4.5	5.4	
rated heat efficiency	%	84%			
<b>Gas pressure</b>					
gas type	I2H	I2E	I2E+	I3B	I3B/P
Gas Category Type	G20	G20	G20/ G25	G30	G30
gas pressure (mbar)	20	20	20 / 25	28~30	30
destination	IT, DK, IE, GB, GR, ES, PT, AT, FI, SE, CZ, EE, LV, LT, SK, SI, IS, NO, CH, TR, BG, HR, RO	DE,LU,PL,NL	BE,FR	BE, CY, ES, FR, GB, GR, IE, PT	LU,NL,DK,FI, SE,CY,CZ,EE, LT,MT,SK,SI, BG,IS,NO,TR, HR,RO,IT,HU, LV
<b>Gas flow</b>					
NG (G20)	m <sup>3</sup> /h	0.5-2.3	0.5-2.7	0.6-3.2	
LPG (G30)	kg/h	0.3-1.7	0.3-1.9	0.4-2.3	
(15°C, 1013.25mbar)					
Flue gas rated flow	NG(G20)	kg/h			
	LPG(G30)	kg/h			
Average flue gas temperature	NG(G20)	°C		185	
	LPG(G30)	°C		180	

## Product parameters

<b>hot water data</b>				
Rated hot water production capacity (Temperature rise: Δt= 25K)	kg/min	11	13	16
max applicable water pressure	bar	8.5		
minimal applicable water pressure	bar	0.25		
<b>circuit data</b>				
power supply	-	AC: 220-240V, 50-60HZ		
Rated electric power	W			43
waterproof level	-	IPX4 (for JSG31-16NT, JSG25-13NT, JSG22-11NT) IPX2 (for JSQ31-16NT, JSQ25-13NT, JSQ22-11NT)		
<b>Connection pipe specifications</b>				
water inlet	inch	G1/2"		
gas inlet	inch	G3/4"		
water outlet	inch	G1/2"		
Exhaust/Intake pipe	mm	φ 60/ φ 100		
<b>dimension/weight</b>				
dimension	mm	580*385*190		
weight	kg			15.6
<b>Nozzle specifications</b>				
Nozzle quantity (rich/lean)	pcs	13+13	15+15	18+18
G20Nozzle diameter(rich/lean)	mm			0.6/1.1
G30Nozzle diameter(rich/lean)	mm			0.5/0.8

## Installation method

Before installing the water heater, please contact your local gas company or the gas management department to select qualified gas pipes, pressure regulators, steel bottles, clamps, smoke exhaust pipes, etc., and you must trust qualified professional and technical workers to install, please do not allow yourself installation, otherwise it may cause improper installation and cause safety accidents, endangering the life of users. Before installation, please confirm whether the type of gas you are using is the same as the gas type specified on the water heater nameplate.

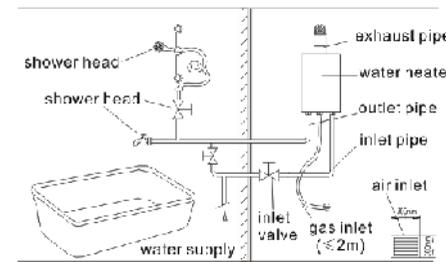
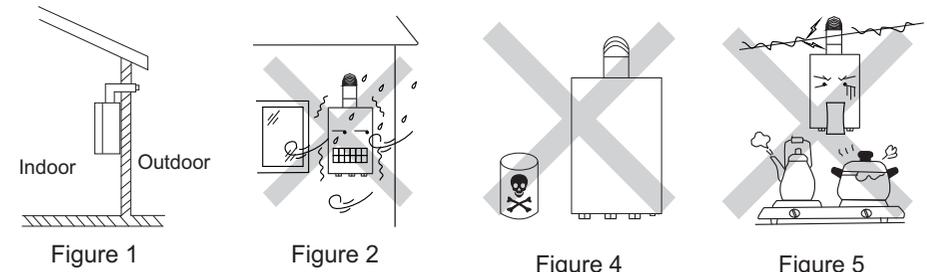
The water heater is a force exhaust water heater, and the flue gas produced by the water heater must be discharged into the outdoor atmosphere in strict accordance with the requirements before it can be used.

### ● Main body installation

#### Precautions:

- 1 The installation of the water heater should fully consider the direction of the exhaust pipe, especially the smoke outlet should meet the installation requirements of the exhaust pipe. Please note that the smoke outlet must be outside the house (Figure 1).
2. It is forbidden to install the water heater outside the house, and it shall be prevented from being blown by wind, sun and frost. (Figure 2)
3. Do not install the water heater in the closet, living room, bedroom, etc.
- 4 Do not install the water heater in unstable places such as vehicles and boats.
- 5 Do not install the water heater near flammable materials (such as curtains, gasoline / organic solvents, etc.) and corrosive chemicals (such as alcohol) to avoid the risk of fire or machine corrosion (Figure 4).

## Installation method



Note: The internal connector sequence will vary depending on the model. Please refer to the actual product when connecting.

Figure 3

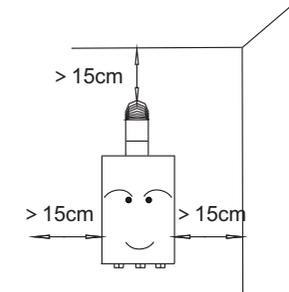


Figure 6

6. There should be no electric power lines, electrical equipment, gas pipelines, etc. above the installation position of the water heater. The horizontal distance between the water heater and the electrical equipment should be greater than 40cm (Figure 5).
7. Gas appliances such as gas ovens and gas stoves should not be set under the water heater; and they should not be near strong electric radiation appliances such as induction cookers and microwave ovens (Figure 5)
8. The distance between the installation of the water heater and the surrounding walls and ceilings must be more than 150mm. The installation site should be constructed of non-combustible materials. If the installation site is combustible, it must be separated by anti-combustion plates. The thickness of the anti-combustion plate should be greater than 10mm, and the size should be 100mm larger than the size of the water heater shell (Figure 6)

## Installation method

### Installation method:

Note: The use of this water heater is absolutely forbidden without installing the exhaust pipe

1. Determine the installation position (see the installation precautions for details) and the installation height. The height should be the same as that of the water heater's operation display panel and the level of human eyes (Figure 7). Drill holes according to the location and requirements shown in the figure (Figure 8). The holes should be drilled to ensure that the water heater can remain vertical after installation.
2. According to the requirements on the right, install expansion screws in the upper mounting holes, insert greenrubber particles in the lower mounting holes, then hang the water heater, put washers and nuts on top, tighten the nuts, and screw on the bottom Screws (Figure 9).
3. Connect the gas pipe, water pipe and electric circuit respectively as required.

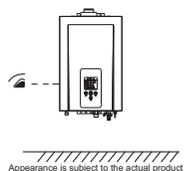


Figure 7

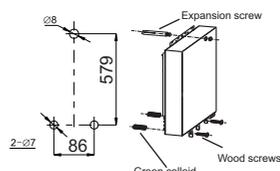


Figure 8

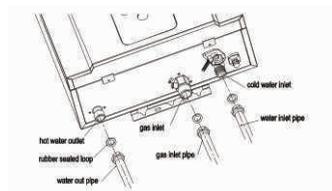


Figure 9

### Exhaust pipe installation

#### Precautions:

1. The water exhaust pipe must be installed when using this water heater. please use The special smoke pipes configured by our company. It is strictly prohibited to use other smoke pipes of models and specifications, and the smoke pipes cannot be modified without permission
2. The water heater can be extended up to 5m / 3 elbow. The length of the exhaust pipe and the reinforcement value can be calculated by the following

## Installation method

formula:

$$D=L+M \times 2$$

L: Length of connecting straight exhaust pipe (m) ;

M: Number of elbows (Each) ;

When the D value is more than 11, the water heater cannot be used.

3. After the smoke exhaust pipe is installed, it should ensure a slope of  $2^\circ$  outwards and downwards. The distance between the air intake hole and the smoke exhaust hole and the wall must be greater than 15cm.
4. When the flue passes through a wall made of combustible materials, it must be covered with a heat-insulating and flame-retardant material with a thickness of more than 20mm.
5. The flue should not be hidden in the ceiling as much as possible. In the case of last resort, it needs to be wrapped with flame retardant insulation material to cover a thickness of more than 2cm. The distance between the flue and the combustible materials should be more than 10cm.
6. The smoke exhaust port shall not be installed in the place where the building is ventilated and on the public flue.
7. The exhaust pipe outlet should not be installed on the wall with open windows, Because during use, if the window is opened, the exhaust gas may flow back to the room, causing a safety hazard (Figure 12).
8. The gap between the smoke exhaust pipe and the wall must be sealed with mud glue. If the smoke exhaust pipe is installed at the glass, the gap between the exhaust pipe and glass must be sealed with glass glue.

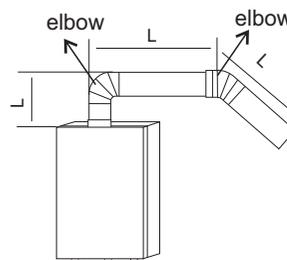


Figure 10

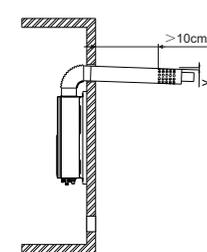


Figure 11

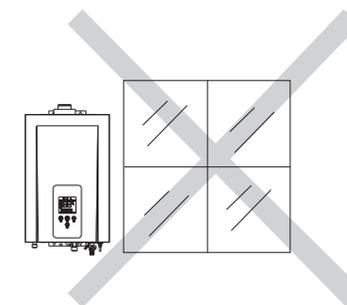


Figure 12

## ☰ Installation method

### Installation method:

- Open a through hole with a diameter slightly larger than the diameter of the exhaust pipe at a suitable position near the water heater. It is advisable to fit the horizontal exhaust pipe relatively loosely. The exhaust pipe is extended out of the house and the outdoor end is slightly inclined .
- The air outlet should be set at a higher position, and the minimum must not be lower than the height of the top of the water heater.
- After the flue is plugged in, each plug-in connector must be sealed with aluminum foil.
- Seal the gap between the smoke pipe and the installation wall.

### ● Installation of gas lines

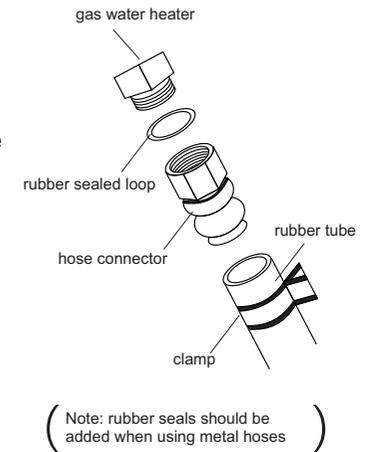
#### Precautions:

- Special rubber pipe or qualified rigid pipe and gas pressure regulator must be selected.
- Select the pipe size according to the joint specifications in the "Product Parameters" table during installation.
- For the needs of repair and maintenance, please set a gas valve near the air inlet, and the diameter of the gas valve should be above 9.5mm.
- When using liquefied gas, the length of the rubber tube cannot exceed 2m (refer to Figure 3).
- You must ensure that the gas pressure supplied by the piping system reaches the minimum required value before using the water heater. To reach the rated thermal load of the water heater, the gas pressure must reach the rated gas pressure in the parameter table. The minimum pressure of each gas is as follows:
  - The minimum pressure of natural gas is 1000Pa;
  - The minimum pressure of liquefied petroleum gas is 2000Pa.

## ☰ Installation method

### Installation Method:

- For users of liquefied gas, use a hose with an internal diameter of 9.5mm to connect the liquefied gas pressure regulating valve, and fasten it with a clamp after connecting it; Then insert the rubber tube to the gas joint to the end and fasten it with a clamp (as shown in the figure on the right).
- For users using pipeline gas, please contact the gas supply company or the relevant management department to connect the gas pipe.
- After the installation is complete, turn on the air source and check with soap and water to ensure that there is no air leak before use.



### ● Water pipes installation:

#### Precautions:

- The cold water inlet is best connected by stainless steel corrugated pipes, and rigid water pipes can also be used.
- The water inlet pipe should be connected to the water heater after clearing the dirt in the pipe first to prevent the dirt from blocking the water heater.
- The water inlet pipe should be directly connected to the water pipe to avoid being too long, too small or excessively bent, resulting in too little water inlet pressure and the water heater cannot be started.
- When the hot water outlet is directly connected to the bather, it can be connected with a hose or a rigid water pipe. If a control valve, faucet or shower with a switch is installed at the hot water outlet, the water heater must not use non-pressure-resistant and heat-resistant water pipes such as plastic pipes or aluminum pipes, so as to avoid burns due to pipe rupture.

## Installation method

5. If the installation position of the valve on the water outlet pipe is higher than the water heater, a drain valve should also be installed at a position lower than the water heater to discharge the accumulated water in the water pipe to prevent freezing.

6. The water outlet pipeline should use pipes that can withstand high temperature and high pressure to avoid the water outlet pipe from being cracked by heat and pressure.

7. The water outlet pipe should be as short as possible to reduce heat loss, otherwise please use heat insulation measures on the pipeline to reduce additional temperature loss.

8. Try to use a shower with a small pressure loss.

9. In order to ensure the normal use of the water heater, the pressure of the incoming water must be greater than the sum of the starting water pressure of the water heater and the loss of water pressure in the pipeline.

**NOTE:** Please purchase qualified water pipes and gaskets to connect the water inlet and outlet pipes of the water heater. Please avoid water pipe rupture due to improper operation during installation.

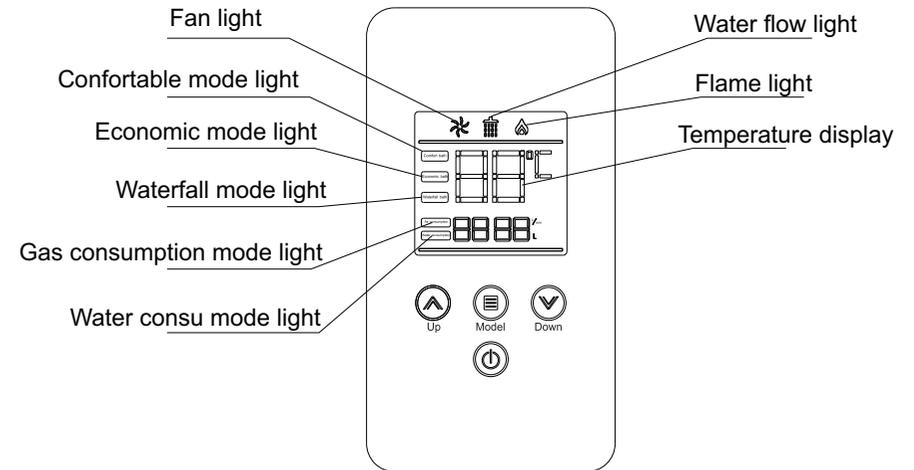
### ● Circuit installation

Precautions:

1. The power supply of the water heater is AC 220V / 50Hz, please choose the socket that matches the water heater.
2. To ensure personal safety, the power outlet must be reliably grounded. It is strictly forbidden to use a water heater when the ground wire is live.

## Instructions

- Description of operation buttons and status display panel: During actual operation, only the corresponding working status content is displayed, non-working status content is not displayed.



### ● Start water heater

1. Insert the power plug correctly into an independent power outlet of 220V ~ 50Hz.
- 2 Press the key “

### ● Display of temperature value:

1. Display actual water temperature.
2. Display information code: E0 ~E8 and En. For details, please refer to “Faults and Solutions”

## ☰ Instructions



a. The water heater is used for the first time or has not been used for a long time. Due to the air in the gas pipeline, the water heater needs to be turned on and off multiple times to exhaust the air in the pipeline before normal use.

b. At the beginning of use, the cold water in the water pipe must be drained before the hot water can come out.

c. If the water flow is too small, the water heater may not be able to ignite, and even if it is barely ignited, it may be turned off midway.

d. It is recommended not to install a water mixing valve for a gas water heater. If a water mixing valve has been installed, please rotate the water mixing valve to a state of full hot water when using the gas water heater.

### ● Temperature adjustment

1. Each time you press the temperature increase button "☺", the set temperature increases by 1 ° C, up to 65 ° C. After the temperature display flashes for 3 seconds, it is automatically confirmed and the current water temperature is displayed again.

2. Each time you press the "Cool Down" button "☹", the set temperature is reduced by 1 ° C and the lowest value is 30 ° C. After the temperature display flashes for 3 seconds, it is automatically confirmed and the current water temperature is displayed again.

3. To prevent being burnt, avoid showering directly on the head or body when showering with a shower. It is advisable to use your hands to confirm that the hot water temperature is appropriate.



### ● Temperature memory

When the water heater is turned on, it will automatically remember the temperature when it was last used.

## ☰ Instructions

### ● Stop using

Close the bath water valve, the water heater will stop working automatically. (When the power is not turned off, the next time you use it, you only need to open the water valve, and the water heater can be turned on again.)



If the water heater is not used for a long time, please unplug the power plug, close the gas valve, and close the cold water valve; Unscrew the filter and the pressure relief valve to drain the remaining water in the machine to reduce scale and prevent frost.

### ● Timing protection

To ensure safety, when the water heater runs continuously for 20 minutes, it will automatically stop working. You need to restart the water heater before using it. The timer function is turned off in the bathtub mode.

### ● Comfortable bath mode, economic bath mode, bathtub mode function

1. After the machine is powered on, touch the power button "☺" to enter the boot mode. Touch the mode key "☺" for the first time to enter the comfortable bath mode, the "comfortable bath mode" icon lights up, and the water temperature is automatically set to 45 ° C;

2. Touch the mode button "☺" for the second time to enter the economic bath mode. The "comfortable bath mode" icon goes out, the "economic bath mode" icon lights up, and the temperature is automatically set to 38 ° C.

Touch the mode key "☺" for the third time to enter the bathtub bath mode, the "Economic bath mode" icon goes out, the "Bathtub bath mode" and "8888L" icons light up, enter the bathtub bath mode to set the water volume, and the "8888 L" icon displays the last set of bathtub bath water volume. (The bathtub bath mode with memory function when power is constantly on, it will automatically remember the bath water volume set last time, if the power is off, the default water volume will be restored.). When the "8888L" icon flashes, You can adjust the water volume setting of the bath

## Instructions

margin mode through the heating and cooling buttons. you can adjust the bathtub bath mode setting water volume by temperature increasing and decreasing buttons. The factory default water volume is 50L . After the setting is completed, wait for 5 seconds for automatic confirmation. The "8888L" icon stops blinking and becomes constantly lit. The "8888L" icon displays the cumulative number of liters. At this time, the temperature setting of bathtub bath mode can be adjusted by the temperature increase and decrease buttons. The factory setting temperature is 42 °C. When the water output reaches the bathtub bath mode setting water volume, the "8888L" icon flashes to display the bathtub bath mode set water volume and continuously emits "B", "B""B" alarm sounds, indicating that the water volume has reached Setting the amount of water in the bathtub bath mode, then turn off the water or exit the bathtub bath mode to return to normal state: (Note: When the water setting of the bathtub bath mode flashes, press the mode button again to exit the bathtub bath mode function.)

Touch the mode button "⊕" to exit the mode for the fourth time, the "bathtub bath" and "8888L" icons go out; cycle in sequence.

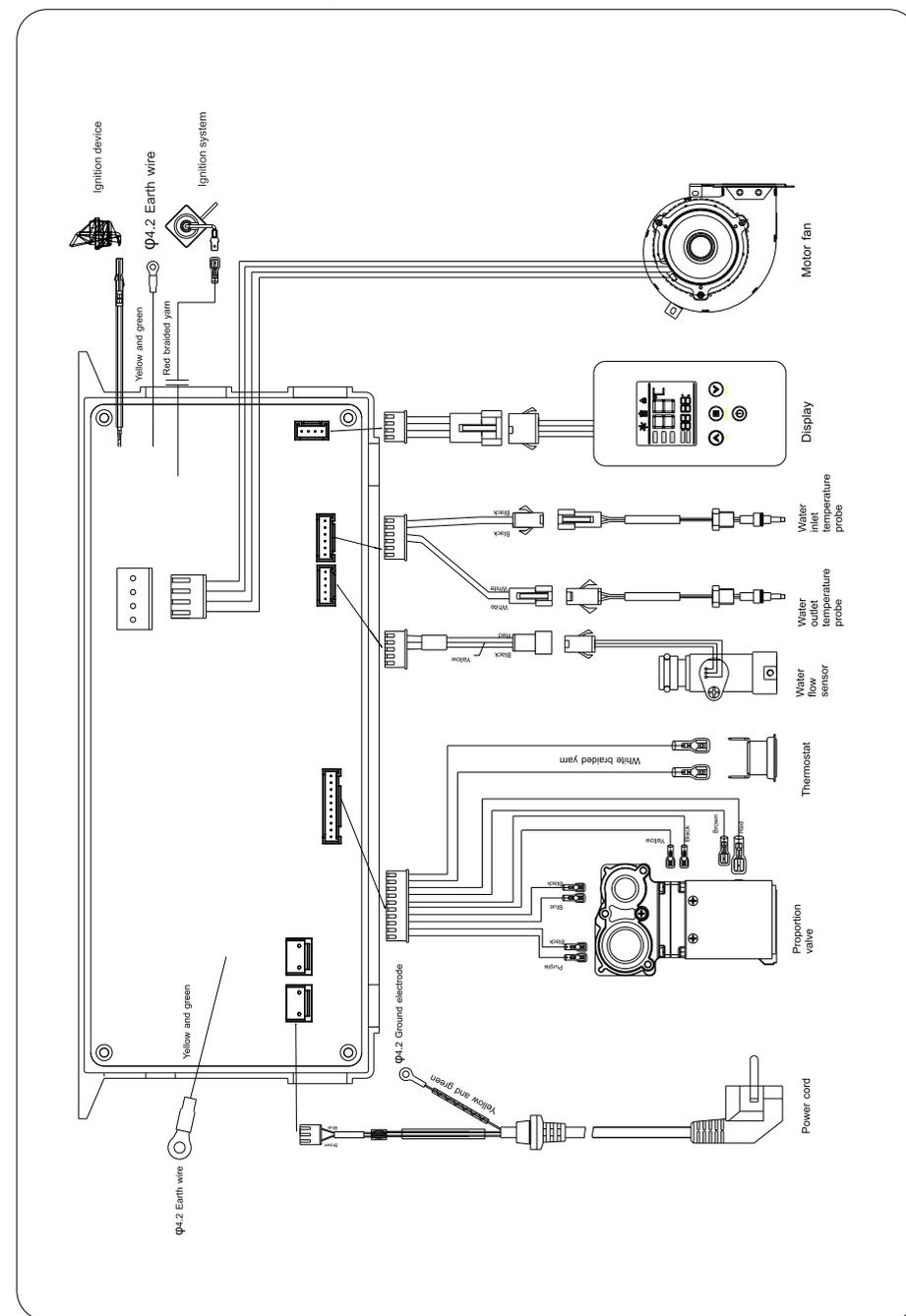
Note: In the comfort bath mode / economy bath mode, touch the temperature increase and decrease buttons to directly exit the comfort bath mode / economy bath mode and enter the manual setting temperature state.

### ● Gas consumption / water consumption:

1. After the machine is powered on, touch the power button "⊕" to enter the boot mode.

2. During the normal use of the water heater, in addition to the "bathtub bath" mode, the "Gas consumption 8888L / min" and "Water Consumption 8888L / min" icons light up for 5 seconds each. The "Gas Consumption 8888L / min" icon shows the real-time gas consumption flow, The "Water consumption 8888L / min" icon shows the real-time water flow.

## Electrical wiring diagram



## Safety Precautions

### ● Prevent gas accidents

1. Confirm the type of gas: The type of gas used must be the same as that specified on the nameplate of the water heater. Do not modify the water heater without permission, forcibly use different types of gas.

2. After use, check whether the burner has gone out, and remember to close each gas valve.

3. Always check the gas joints for leaks with soapy water. When a gas leak is found, immediately turn off the gas source and open the doors and windows. At this time, do not ignite and touch the switches of electrical equipment such as exhaust fans. Also do not plug or unplug various power plugs. Otherwise, open flames or ignition will ignite the gas, causing fire and explosion accidents.

4. Gas hoses may be leaked due to cracks caused by prolonged use. Check them frequently. Under normal circumstances, replace the hoses once a year.

5. If you use liquefied petroleum gas and find that the burning flame of the water heater is suddenly high or low, it is likely that the pressure reducing valve connected to the gas cylinder outlet has failed. They should immediately stop using it, replace it or ask a professional technician to repair it.

6. If you use natural gas or artificial gas, if you find that the burning flame is flickering, this is caused by the unstable pressure of the pipeline. At this time, the use of the water heater is suspended. If it is used forcibly, it will damage the water heater and even cause an accident.

### ● Fire prevention

1. Never leave the house or go to bed without the flame of the water heater going out.

2. It is forbidden to place towels, clothing and other flammable items at the exhaust and gas supply ports of the water heater.

## Safety Precautions

3. Do not store flammable, explosive and volatile materials in the place where the water heater is installed.

4. Users of liquefied petroleum gas should not invert the liquefied petroleum gas cylinder and supply the gas sideways. Otherwise, when liquid fuel accumulates in the inner layer of the cylinder, it will be easily brought into the water heater and cause a fire.

### ● Prevent carbon monoxide poisoning

1. This water heater is a forced exhaust gas water heater. Therefore, a smoke exhaust pipe must be connected to the exhaust port of the water heater in order to exhaust the exhaust gas generated during combustion and suck in the air required for combustion to prevent incomplete combustion.

2. It must be confirmed that the type of gas actually used is consistent with the type of gas specified on the nameplate of the water heater. Do not use gas other than those specified on the nameplate. Water heaters using artificial gas or natural gas must use their designated regional gas types. Do not mix different gas species or same gas species but from different regions.

3. Do not discharge smoke into the building ventilation area.

4. Due to long-term use, dust and carbon deposits may block the heat exchanger and affect combustion conditions, resulting in a significant increase in carbon monoxide. Therefore, a qualified special technician should be entrusted to clean up the carbon deposits and dust on the heat exchanger plate every six months to ensure the smooth discharge of flue gas.

5. The water heater must be installed vertically. If it is installed at an angle, the flame will contact the heat exchanger, which may cause a significant increase in carbon monoxide.

## Safety Precautions

### ● Prevent overheating burns

1. When using hot water intermittently, or when the setting temperature is in a high temperature area, pay attention to the hot water flowing out may be too hot and burn the skin.
  2. During use and immediately after use, do not touch the outer shell of the water heater with the exception of the display screen to prevent burns.
  3. During and after use, the exhaust port and the exhaust pipe are in a high temperature state, please do not touch it with your hands directly.
- Handling of abnormal conditions In the process of using the water heater, if there is any abnormal situation such as abnormal smell or abnormal sound, or in other emergency situations, you need to keep calm, immediately close the main gas valve, and contact the maintenance department or gas company for treatment.

### ● Other considerations

1. Do not use for drinking water supply: Because there is standing water in the water heater for a long time, the hot water supplied by the water heater is not suitable for drinking and can only be used for general water.
2. In use, if the water temperature is too high or too low, adjust the water temperature knob to obtain hot water with different temperatures.
3. Do not plug or unplug the power connector with wet hands
4. It is strictly forbidden to use water heaters during a thunderbolt or fire.
5. It is strictly forbidden to block the gas inlet and flue gas outlet of the water heater during use
6. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
7. Children should be supervised to ensure that they do not play with the appliance.

## Safety Precautions

8. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
9. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance.
10. Cleaning and user maintenance shall not be made by children without supervision.

## Maintenance

### ● User inspection

1. Frequently check whether the gas supply pipe (rubber hose) is intact, whether it is aging, cracking, etc. If any abnormal phenomenon is found, please contact the professionals to deal with it in time.
2. Check the smoke exhaust pipe every six months to see if there is any damage or leakage. If so, you must contact a professional to repair or replace the smoke exhaust pipe before using the water heater.
3. Every six months, a qualified professional technician is entrusted to check the heat exchanger for carbon deposits and blockages, and clean up in time to ensure the normal operation of the water heater.
4. When the ignition pin is found to have carbon deposits, please have a qualified professional technician maintain it to ensure the ignition quality.
5. Regularly clean the filter of the cold water inlet. In places with poor water quality, the frequency of cleaning should be increased.
6. From time to time, observe whether there is water leakage. After discovery, you need to find out the reason and repair it before you can use the water heater.

### ● User maintenance

1. The water heater uses a water flow detection device to open the gas passage. When the water pressure is lower than 0.02MPa, or the water output is too small, the water heater does not ignite, which is normal.

## ☰ Maintenance

2. The pressure relief valve (drain valve) drips water because the pressure of the water supply is too high, the pressure relief valve (drain valve) plays a protective role, that is, reducing the water pressure to protect the water heater, which is normal.

3. Several hot water sources are supplied at the same time, and the hot water amount at each point cannot be guaranteed, and even some points cannot be supplied.

4. The outdoor temperature is too low, and the exhaust smoke condenses into a white mist when it encounters cold air outside, which is normal.

5. The ambient temperature is high. When the temperature is set low and the water valve is opened too small, the hot water may be too hot. At this time, please adjust the water output of the water valve to the maximum position, and the temperature will drop.

6. After the water valve is closed, the water heater will stop working immediately, and the internal wind of the water heater will work for a delay of 20s in order to exhaust the smoke in the machine.

7. When using a multifunctional shower, the pressure of the shower water is too high, the inlet pressure of the water heater is too low, or the water flow is too small (below the starting water volume), which may cause the flameout or ignition failure. At this time, please choose a suitable shower functional gear.

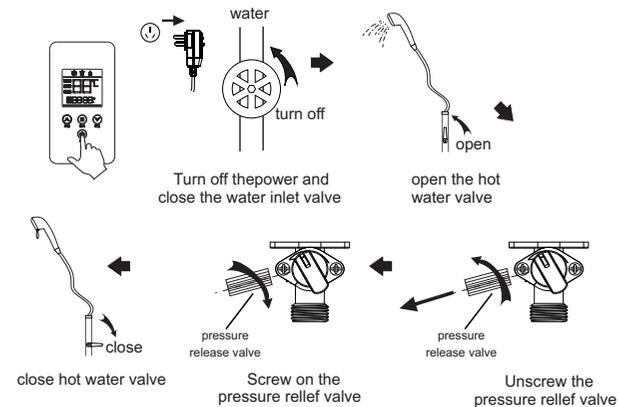
8. When the wind is blowing outdoors, too much wind will cause excessive wind pressure. The water pressure protection device of the water heater will automatically start to protect the water heater. At this time, the water heater will not start temporarily. Please suspend the use of the water heater. After the outdoor wind pressure returns to normal, you can continue to use the water heater.

9. In order to reduce the formation of scale, after using the water heater, close the gas valve. Allow the hot water in the water heater to flow out, and then close the cold water valve after the hot water is discharged from the hot water outlet.

## ☰ Maintenance

10. Freezing prevention: After using the water heater in cold areas (outdoor temperature below 0 °C), the water stored in the water heater must be drained cleanly to avoid damaging the water heater due to the freezing of water. The drainage method is as follows:

- a. Turn off the water heater, unplug it, close the water inlet valve, and close the gas valve.
  - b. Open the hot water valve.
  - c. Unscrew the pressure relief valve and remove the pressure relief valve.
- After draining water, install the pressure relief valve and close the hot water valve. There is a rubber washer in the pressure relief valve, so please turn it a bit harder.



11. Always keep the water heater's shell clean. The maintenance method is as follows:

- a. When there is dirt on the shell of the water heater, wipe it with a wet cloth and then dry it with a dry cloth. When it is particularly dirty, use a neutral detergent and wipe it dry.
- b. Do not use strong corrosive substances (such as hydrochloric acid) to clean the product surface.

## Failures and solutions

### ● Failure Handling

When the water heater fails, the error code will be displayed in the display window, and the buzzer will sound a continuous beep. Please handle according to the following table.

Error	failure cause	Treatment
E0	Water temperature probe failure: 1. Water inlet temperature probe is damaged; 2. Line connector comes off or has poor contact	1. Replace the water temperature probe; 2. Plug in the line connector.
E1	Ignition failure 1. Ignition does not start after two consecutive ignitions. 2. Accidental flameout during combustion; ignition Or the flame detection line comes off or has poor contact	1. Restart the water heater and repeat it several times. If it still fails, check whether the gas valve is open or the air supply circuit pressure is abnormally low or no pressure 2. Same as above; install patch cord or replace bad parts.
E2	False fire fault; flame signal detected before ignition	Restart the water heater and repeat it several times. If it does not light, replace the sensor pin or the controller.
E3	Thermostat failure: 1. Temperature controller overheating protection; 2. The temperature controller is damaged; Line connector is disconnected or Poor contact	1. Check whether the air supply circuit pressure is normal, eliminate the fault, and restore the normal pressure; increase the water supply pressure or lower the hot water set temperature; 2. Replace thermostat, install patch cord
E4	Water temperature probe failure: 1. Water inlet temperature probe is damaged; 2. Line connector comes off or has poor contact	1. Replace the water temperature probe; 2. Plug in the line connector.
E5	Fan failure: 1. The fan has debris stuck and stopped; 2. The fan is damaged; 3. The fan power control component is damaged; 4. The line connector is disconnected or has poor contact.	1. Clear the sundries and eliminate the stuck faults; 2. Replace the fan; 3. Replace the damaged parts (relevant components on the power board and main electric control board); 4. Install the patch cord or replace defective parts.
E6	Over-temperature fault: Water temperature sensor overheating protection.	Check whether the air supply circuit pressure is normal, eliminate the fault, and restore the normal pressure; increase the water supply pressure or lower the hot water set temperature
E7	Solenoid valve failure: 1. The line connector is disconnected or the contact is bad or damaged; 2. The control line has components damaged	1. Install the patch cord and replace the bad parts 2. Repair / replace damaged parts.
E8	Fan overspeed failure: 1. The smoke exhaust port is blocked; 2. It is windy outdoors and the wind pressure is too large.	1 Clear the obstruction of the smoke exhaust port; 2. Suspend the use of the water heater and wait until the outdoor wind pressure is normal.
En	Scheduled shutdown	Turn off the water after about 2 seconds and turn on the water heater
<p><b>If the above error code appears, if all checks are normal, and it can't resume normal use even after power off and restart. Please notify after-sales service personnel for repairs.</b></p>		

## Failures and solutions

### ● The machine is not malfunctioning when the following state occur:

phenomenon	Cause and treatment
White smoke from exhaust	The outdoor temperature is too low, and the exhaust smoke condenses into a white mist when it meets the cold outdoor air
The amount of hot water is too small, the hot water flowing out becomes cold water	If the hot water consumption is too small, the water heater will turn off and the effluent will become cold water. Therefore, the hot water consumption should not be too small
Failure to supply hot water in winter	When the water temperature setting is very high and the water volume adjustment knob is already at the maximum water intake position, it may exceed the heating capacity of the water heater itself. At this time, please adjust the water intake volume appropriately
Failure to supply low-temperature hot water in summer	The temperature of the water supply is high, set the low temperature and the hot water faucet is turned on for too little The water temperature is too high, please increase the amount of water appropriately
Suddenly turned off after 20 or 40 minutes of use	In order to prevent hypoxia, some models have a timing protection function, which will automatically turn off after 20 minutes or 40 minutes of continuous use. Please turn off the faucet and use it again later
Close the hot water valve, the fan does not stop immediately	This is the function of the fan to delay the shutdown. In order to completely exhaust the exhaust gas in the water heater to ensure the safety of the user
Open the hot water valve, Can't drain hot water immediately	There is a distance from the water heater to the hot water valve. Because cold water remains in the water pipe, Therefore, it takes a period of time to release hot water after the cold water remaining in the water pipe has been flowed; The longer the distance of the pipeline, the more time it takes to wait
Water often flows out of the pressure relief valve	This is because the water pressure in the water heater is too high, the safety pressure relief valve works, and the excessive pressure is released.

## Failures and solutions

### Common improper operation failures and solutions

Common improper operation failures and solutions		
phenomenon	failure cause	solutions
Gas water heater failure ignition	gas pressure is too high or too low	Check and adjust gas supply (requires professionals)
	Blocked flue or excessive external wind pressure	Clear the blockage or use after the wind pressure is reduced
	Water source not connected	Turn on the water
	Insufficient water pressure	Check and adjust water pressure
	Power is on or off	Power on
	Gas is not switched on or used up	Switch on gas
	Air in gas pipe	Exhaust before turning on the water heater
No hot water comes out even if the hot water switch is turned on.	The water inlet valve is not opened large enough	Water inlet valve fully open
	The water inlet valve is opened too small	Water outlet valve fully open
	the first time use	Turn the water heater on and off several times
	icing	Use after the ice has melted
	water or power outages or gas out	Use only after normal water supply, gas supply and electrical supply
	The pipe from the water heater to the water outlet is too long	Wait for a while after the water heater is started
Water temperature is too low	Water heater temperature is set too low	Increase the outlet temperature
	The water flow is too large and exceeds the heating capacity of the water heater	Turn down the water output
	Insufficient gas pressure	Detect and adjust gas supply (requires professionals)
	The gas valve is opened too small or the intake duct is too small	Fully open the gas valve or replace the large gas pipeline (requires professionals)

## Failures and solutions

Common improper operation failures and solutions		
phenomenon	failure cause	solutions
Water temperature is too high	Water heater temperature is set too high	Lower the water flow temperature
	Water flow is too small	Increase the water flow

## Packing list

Name	Quantity	
gas water heater	1 pcs	
Instruction manual	1 pcs	
Installation kit	Expansion screw	1 pcs
	Wood screws	2 pcs
	Intake nozzle apron	2 pcs
	Green colloid	2 pcs
	Clamp	1 pcs
	gas inlet and nut	1 pcs

### Out of the box list

smoke pipe	1 pcs
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