

USER'S MANUAL

Electric water heater



✘ ML-FVDS1-30L

✘ ML-FVDS1-50L

✘ ML-FVDS1-80L

✘ ML-FVDS1-100L

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Precaution

The water heater which is used in situation It must be earthed and must be connected with the independent single-press three-plug connector which is also well earthed!

The water heater which is used for the first time must be filled up with water before you switch on the current.

The safety valve of our company which is attached with the water heater must be installed on the inlet pipe of the water heater!

If the temperature of the water you set is over 50 °C ,it may burn your body ,so it must be mixed with cold water before use .

Please don't make the spray-head towards human body when you open or close the valve or adjust the temperature of the water to avoid being burnt by a little stream of hot water.

The temperature of the pressure-relief vent of the safety valve is high , so it may scald your body!

1. Before use, make sure that the electric water heater is installed correctly and completely. When using it for the first time or after emptying it, the electric water heater must be filled with water before it is allowed to connect to the power supply. Do not use this product when there is no water supplied to the electric water heater.

2. The electric water heater must be properly and reliably grounded.

3. Before installation or use, you must read and understand the instructions and safety warnings. If you do not follow the instructions and safety warnings, it may cause serious injury or death.

4. Make sure that the power supply matches the rated power and rated frequency. Make sure the power plug is not damaged to prevent the risk of electric shock.

5. In order to prevent the danger caused by the wrong reset of the temperature limiter, do not connect this device through any external switching device (such as timer or circuit device controlled by public facilities)

6. Before using this product, the safety valve provided with the product must be installed at the water inlet of the electric water heater. The maximum inlet water pressure is 0.7MPa and the minimum inlet water pressure is 0.02MPa. Ensure that the safety valve is always in working condition to prevent pressure accumulation, prevent the backflow of water entering the electric water heater and discharge excess pressure when the inner pressure of the electric water heater is high, so as to ensure the life of the inner tank and avoid the occurrence of bursting accidents. During the heating period, the pressure relief port of the safety valve may drop water droplets. This is a normal phenomenon. Do not block the pressure relief port due to this, so as to avoid serious safety accidents caused by the failure of the electric water heater to relieve pressure.

7. If the water pressure of the tap water used by the user is too high, the pressure relief port of the safety valve may frequently release the pressure and discharge water. At this time, a pressure reducing valve should be installed on the water inlet pipe, and the pressure reducing valve should be installed in a place away from the water heater.

8. 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.

9. Children should be supervised to ensure that they do not play with the appliance.

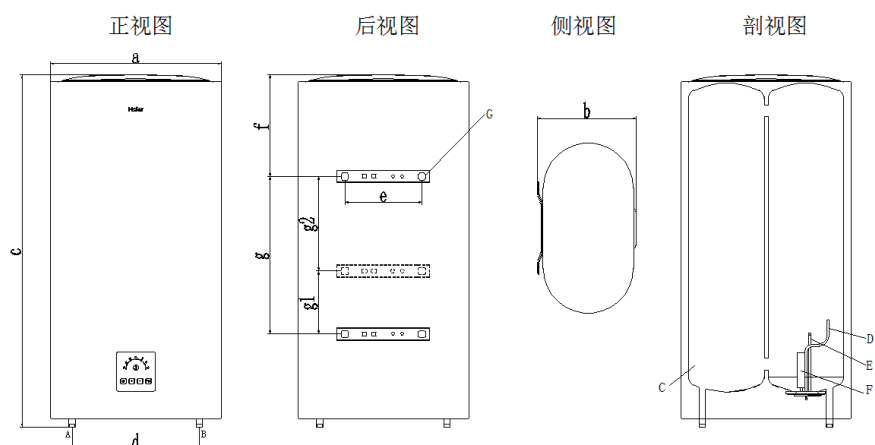
10. This appliance can be used by children aged from 8 years and above and persons with reduced

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. Cleaning and user maintenance shall not be made by children without supervision.

11. Too high water temperature can cause serious burns and scalds.
12. Before repairing or checking the electric water heater, make sure the power is cut off.
13. The instruction manual must be placed next to or near the device for future reference.
14. When using the electric water heater for bathing, do not turn off the power of the electric water heater through the switch on the socket. If the power cord is damaged, in order to avoid danger, it must be replaced by the full-time personnel of the manufacturer or after-sales department.

product description

Product size and hanger size

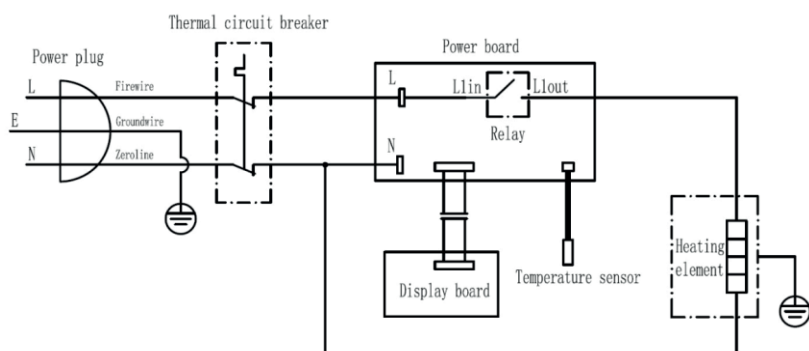


model	a	b	c	d	e	f	g/g1+g2
30L	462	274	628	367	244	165	200
50L	462	274	896	367	244	288	345
80L	542	314	964	439	244	170	500
100L	542	314	1149	439	244	355	200+300

A hot water outlet **B** cold water inlet **C** inner tank **D** electric heating tube **E** temperature measuring tube **F** magnesium rod **G** wall rack

Note: The allowable error range of the above parameters is $\pm 10\%$

Electrical schematic



MT: Manual reset thermostat BT: Thermostat EH: Dual power electric heating tube HL1: Power indicator HL2: Heating indicator

PE: ground wire (yellow and green) L: live wire (brown) N: neutral wire (blue)

Product Specifications

project	unit	30L	50L	80L	100L
Rated voltage	V	220-240	220-240	220-240	220-240
Rated frequency	Hz	50	50	50	50
preset pressure	MPa	0.7	0.7	0.7	0.7
Maximum power	W	2000	2000	2000	2000
net weight	Kg		25	34	
maximum temperature	° C	80	80	80	80
Rated volume	L	30	50	80	100
waterproof level	/	IPX4	IPX4	IPX4	IPX4

Packing List

Model number name	Electric water heater (set)	Safety valve (pcs)	Expansion bolt	Gasket	Manual (this)	hanger (pcs)
30L	1	1	2	2	1	2
50L	1	1	2	2	1	2
80L	1	1	2	2	1	2
100L	1	1	4	2	1	3

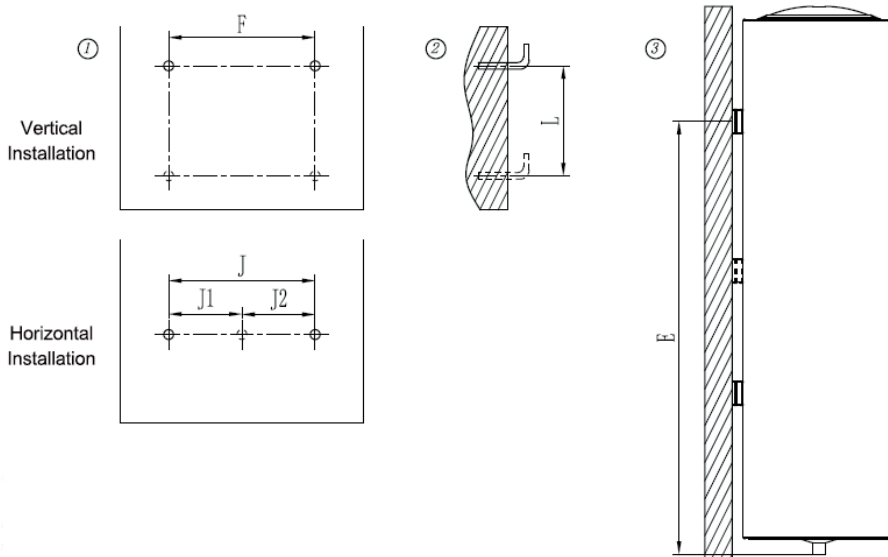
Installation Notes

1. Installation precautions

1. The installer must install in strict accordance with the national standard "Electric Water Heater Installation Specifications"!
2. It is strictly forbidden for users to install electric water heaters by themselves! When installing, please contact the local dealer or the after-sales department of the company to arrange for professionals with qualifications for electric water heater installation.
3. When installing the electric water heater, the grounding must be absolutely guaranteed! For those that do not meet the installation requirements of electric water heaters, the installer should clearly inform the user, explain the reasons and put forward rectification suggestions. The user should ask professionals to eliminate the safety hazard before installation. For those that cannot be rectified, the installation should be refused!
4. This product should be installed indoors, avoid direct sunlight, and the ambient temperature is above 0 ° C; avoid places where flammable gas leaks or environments with strong corrosive gases; avoid places with strong electromagnetic field interference; try to avoid Places prone to vibration; try to shorten the connection length between the water heater and the water intake point.
5. Assemble the safety valve in the accessories during installation! The drain hose connected to the pressure relief port of the safety valve should be continuously inclined downward and kept open to the atmosphere. The drain hose and safety valve should be installed in a frost-free environment to avoid ice blockage. There should be a well-drained floor drain near the drain hose to avoid water accumulation.
6. The method is: lift the handle of the safety valve up to see if there is water flowing out of the drain hose. If the pressure relief function is normal, the water will flow out of the drain hose, otherwise the pressure relief is not normal. When abnormal pressure relief occurs, stop using this product and contact the after-sales department for processing.
7. Before installation, check whether the wall on which the electric water heater is installed is firm. There should be no pre-buried cables in the wall. It is strictly forbidden to install the electric water heater on a hollow wall. The bearing capacity of the wall should not be lower than 4 times the mass of the electric water heater after it is filled with water, and the installation position should ensure that there is at least a 30 cm wide space on the right side of the electric water heater.
8. The power socket must be installed in a place that is not exposed to water or out of reach of children.

2. Installation steps:

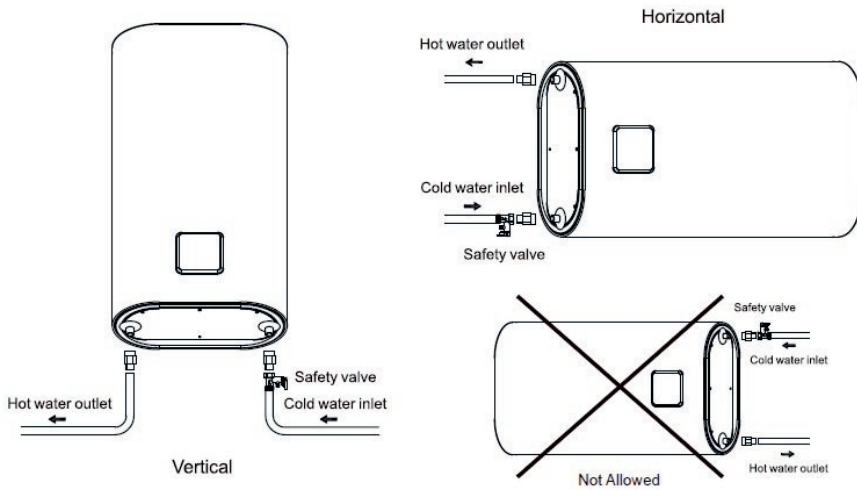
1. Use a power drill to make the holes to a depth of at least 90 mm in the wall. These holes must be level on the same line
2. Insert two wall plugs in the hole, screw in the screw hooks and place them facing upwards, then raise the electric heater and aim for the hooks, fasten it firmly into position and check the wall plugs are not loose to ensure that the electric heater is firmly mounted.



NUMBER	MODELOS			
	30L	50L	80L	100L
E(mm)	463	608	794	794
F(mm)	244	244	244	244
L(mm)	/	/	/	300
J/J1+J2(mm)	200	345	500	200+300

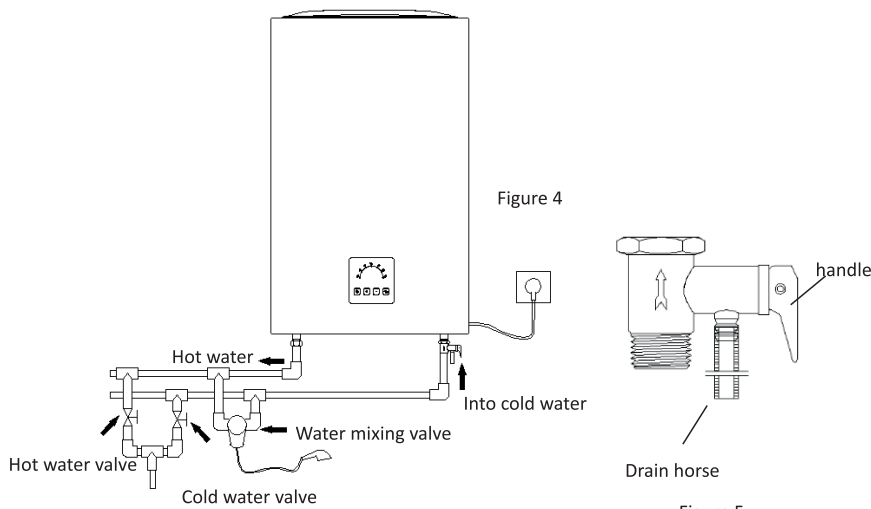
3. Connect the water heater intake and outlet with pipes or accessories that are able to withstand temperatures over 100°C at a pressure that exceeds working pressure (8 bar) . Therefore, we strongly recommend that no materials should be used that cannot withstand high temperatures.

4. When fitting the water pipes follow the basic rules to prevent corrosion: "Do not use copper before iron or steel in the direction of the water flow". To prevent galvanic pairs and their destructive effect, use Teflon tape to thread the insulating hoses supplied with the heater to its two pipes.



Ants to supply hot water in multiple places, please refer to (Figure4) for pipeline connection and installation.

Note: When installing the safety valve, be sure to recognize the water flow direction sign on the safety valve and install it correctly, and tighten the upper and lower installation nuts to avoid water leakage. After installation, lift the handle (Figure 5) , check whether the safety valve is normal, and then reset.



2. Pipe connection:

2.1 Electric water heaters should be installed on the correct size pipes and fittings and should be clean

2.2 The specification of the water inlet pipe of this product is G1/2", and the threaded port needs to be sealed with a sealing waterproof tape or a sealing ring.

2.3 In order to facilitate the installation and disassembly of the water heater, it is recommended to install G1/2 unions at the appropriate positions of the water heater inlet and outlet pipes. Determine the location of the water supply, connect the water inlet pipe and the tap water pipe to the water source respectively, fill the inner tank with water, and check whether the waterway leaks. If there is water leakage, it must be reconnected

2.4 Install the safety valve with a rated pressure of 0.7MPa (its interface is G1/2) on the water inlet pipe in the direction of the arrow on the safety valve (the arrow points to the water heater). When the water heater is energized and heated, the water in the water tank is heated and expanded. In order to reduce the water pressure in the tank, a small amount of water droplets will flow out from the pressure relief hole of the safety valve. The pressure relief hole should be kept open to atmosphere and must not be blocked.



2.5 Installation method of the safety valve drain pipe: screw one end of the drain pipe to the safety valve. On the pressure relief hole, the drain pipe can be shortened or lengthened according to the actual situation, and the other end of the drain pipe is connected to the sewer mouth, so as to avoid dripping water from splashing the room when the pressure is released. The water may drip from the discharge pipe of the safety valve and that this pipe must be left open to the atmosphere. The discharge pipe connected to the pressure-relief device is to be installed in a continuously downward direction and in a frost-free environment.

3. Power connection:

3.1 Electrical connections and wiring should be made by an experienced and qualified electrician.

3.2 All wiring must comply with local regulations.

3.3 The storage-type electric water heater requires a power supply of 230V to single-phase 9.1A (2000W).

3.4 Connect the power supply to the connector that provides the power supply to supply power to the storage-type electric water heater. Make sure the ground terminal is firmly connected to the ground connection.

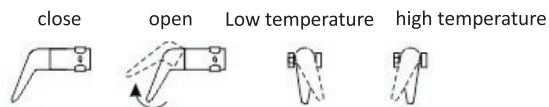
3.5 The ground wire must be green and it must be connected to  the terminal with the ground wire symbol.

3.6 All wires must be properly connected and covered with wire ducts.

Instructions

Preparation before use

1. Water injection: Open the water mixing valve, lift the handle of the mixing valve, turn it clockwise to the highest point in the high temperature area, and then open the water inlet valve. At this time, water will be injected into the inner tank until the hot water outlet is normal. At this time Indicates that the inner tank has been filled with water, close the water mixing valve, and turn the handle counterclockwise to the lowest point in the low temperature zone.

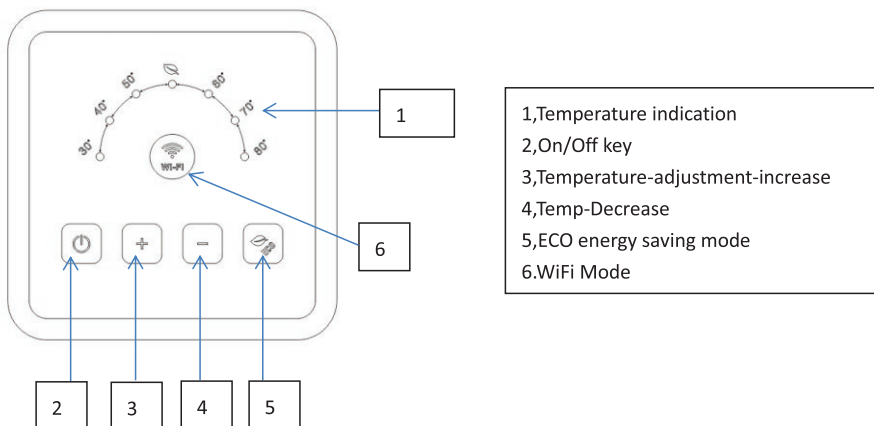



2. When the water temperature reaches the set temperature, the heating indicator on the panel will go out, and the water heater will automatically stop heating. The water temperature has reached the set temperature and enters the heat preservation state. At this time, the user can turn on the switch of the mixing valve and slowly turn from the low temperature zone to the heat preservation state. Rotate the handle of the mixing valve in the high temperature area, carefully test the water temperature with your hands, adjust it to the water temperature you need, and then you can use it with confidence. When the water temperature drops to a certain temperature, the water heater will automatically reheat.

Note: the water temperature may be slightly higher, please test the water temperature before use, do not test the water temperature on the human body, so as to avoid burns!

Function Description

Operating instructions:




1. Switching on the machine
 - 1.1 Plug in the power plug and use the on/off key  to switch on/off the machine. After switching on the machine, it enters the instant heating mode and keeps warm after heating to the set temperature;
 - 1.2 System with power failure memory function. When power failure occurs, the function mode and setting

parameters will be memorised and restored to their working state after powering up again;

2. Function modes

2.1 Instant mode; In instant mode, the heating temperature can be heated within the range of 30°C~80°C, after heating the water temperature to the set temperature, it is always in the heat preservation state, as long as the water temperature is lower than the set temperature by more than 5-8°C, the system will start to heat up to the set temperature.


2.2 ECO 模式; Tap and press the function key  to enter ECO mode, the default heating temperature is 55°C.

3. Setting the heating temperature.

3.1 In instant heating mode, you can use the adjustment key  to set the heating temperature directly;

3.2 After entering the heating temperature setting state, if there is no key operation for a long time, it will automatically confirm the value and exit the setting state.

3.3 In ECO mode, the heating temperature cannot be set.

3.4 The function of the adjustment key  is the same as , but the order of adjustment is reversed.

4. Other

4.1 Anti-freezing function; in order to prevent the liner from freezing and cracking outdoors in winter, after the system is powered on (regardless of whether it is switched on or not), it will start heating by itself as long as the water temperature is $\leq 5^{\circ}\text{C}$, and then it will automatically disconnect the heating when the water temperature reaches 10°C.

4.2 Screen saver function: non-heating state, no key operation for more than 180 seconds, the indicator brightness is halved. Electric heater start heating or key operation, that is, exit the screen saver function.

4.3 Buzzer sound: key effective operation once the buzzer rings once. When there is a malfunction, the buzzer sounds ten times.

5. Indicator and display

5.1 Under the power-on state,   the key indicators lights up.

5.2 In ECO mode,  the indicator light is on.

5.3 When the temperature is set, the corresponding       indicators lights up.

6. Remote control function:

When on, press and hold the WIFI button for 2 seconds to enter Wi-Fi connection mode.

During the connection process and successful connection, the button should be lit.

Diagnosis mode: When on, press and hold the WIFI button for 5 seconds to enter the Wi-Fi connection diagnosis mode. To reset the Wi-Fi connection, hold the WIFI button for 10 seconds (the button will turn off).

WiFi connection method:

6.1. The application must be installed on your smartphone smart life. If you haven't installed the app, you can scan the QR code to install.

6.2. Register an account and log in.

6.3. After entering the application, connect your smartphone first to a Wi-Fi (2.4 GHz) network that needs to be configured to work before connecting, after which the smartphone will detect a nearby heater and the electric water heater indicator will light up during and after connection.

6.4. After entering the interface, you can use the mobile browsing app to control the status of the water heater.

maintenance

1. Before cleaning the surface of the electric water heater, make sure that the water heater is disconnected from the power supply. When cleaning, use a damp towel dipped in a little neutral detergent to gently wipe the surface of the product, and then dry it with a dry towel. Do not spray directly with water, and do not use gasoline, polishing powder and other volatile substances or strong acid and strong alkaline cleaners for cleaning.

2. When the electric water heater is not used for a long time, please disconnect the power supply, unplug the power plug, and drain the water in the inner tank.

3. Regularly (about one year) clean the scale on the electric heating tube and the sediment in the inner tank. In areas with hard water, users can install an anti-scaling device at the front end of the water inlet pipe. Regular replacement of magnesium rods according to local water quality conditions. Please contact the local dealer or after-sales department for the assistance of professional technicians.

Troubleshooting Guide

question	reason	Solution
Light does not shine	1. Internal circuit failure	Please notify the after-sales department for maintenance
	2. The power is not turned on	Check whether the power supply line is normal
low water temperature (The heating indicator does not light up)	1. The set temperature is too low	Increase the set temperature value
	2. Internal circuit failure	Check and confirm that there is a power supply
	3. Thermostat failure	Please notify the after-sales department for maintenance
low water temperature (The heating indicator light is on)	1. Short heating time	Use after keeping warm
	2. Malfunction of mixing valve	Replace the mixing valve
	3. Electric heating tube failure	Please notify the after-sales department for maintenance
	5. Internal circuit failure	
water leakage	1. The inner tank is not well sealed	Please notify the after-sales department for maintenance
	2. The inner tank leaks	

Note: If your electric water heater is abnormal and cannot be used normally, please check it according to "Troubleshooting". If the above fault is the problem of the electric water heater itself, it must be repaired by professionals.

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