

ELECTRIC INVERTER WATER HEATER

USER AND INSTALLATION MANUAL

TDI-1923-11 kW

TDI-1923-24 kW





Our dear customer;

Thank you for choosing our product and we wish you to use your device in good times. We want you to get the best out of your product. For this reason, we recommend that you read this manual carefully before you start using your product and keep it with the device as a reference for future reference.

This guide will help you use your device more efficiently and safely. For this reason, pay attention to the items we have mentioned below.

- Before using and operating the product, be sure to read the user manual.
- Follow the information and rules we provide regarding safe use.
- Please note that the user manual may also apply to other models. The differences between the models are clearly stated in the manual.

CAUTION

Before assembling the device, on the page in the user manual;

- Assembly instruction
- Electrical connection warnings
- Read the warnings and information titled Matters needing attention.

The device is out of warranty due to installation and electrical connections made without paying attention to the relevant instructions, warnings and information.



IMPORTANT

SAFETY AND WARNINGS

- Only authorized services should work on the product.
- In case of misuse or improper use; may be life-threatening, and material damage may occur to the product or its surroundings.
- This product is intended as a heating device for the preparation of hot water for closed heating systems, as well as for obtaining hot water for use with its secondary heat exchanger.

Intended use

- Consideration of the operating, installation and maintenance manuals supplied with the product and other components of the system.
- Installation and assembly of the product and system according to the assembly rules
- It is the fulfillment of all control and maintenance conditions in the manuals.
- Not suitable for any use other than or exceeding those described in this manual.
- Any direct commercial and industrial use is not suitable for its intended use.

Attention!

Any kind of malicious use is prohibited.

Before starting to work on the product;

- Turn the product off by turning off all power supplies.
- Check that there is no voltage Wait at least 2 minutes until the entire load is discharged.
- There is a risk of death from electric shock if you touch live components, care must be taken.

Risk of scalding from hot water

- Risk of scalding at hot water taps at a domestic water temperature of over 55 °C. available. Small children or elderly people can be affected even by low temperatures. For this reason, it is appropriate to set the domestic water temperature at a level where no one will be disturbed.
- Do not place objects or other objects on the device.





Assembly

- Use suitable tools for tightening or loosening union connections.
- Sprays, solvents, cleaning agents containing chlorine, paints, adhesives, ammonia compounds, powders, etc. substances can cause corrosion of the product.
- It should be ensured that chemical substances are not stored at the installation site.
- It is not suitable for installation in wet and humid environments.
- Applicable National instructions, standards, directives and laws, regulations must be taken into account in the selection and assembly of the assembly site.
- Install the necessary safety devices for the system.
- The cable cross-sections to be used in the assembly part of the booklet must be complied with.
- Appropriate voltage energy voltage specified in the manual should be used for the combi.
- Ensure that the voltage-energy coming to the combi is not variable, intermittent or fluctuating.
- The product should only be installed indoors.
- The installation location should be chosen in accordance with the line layout (water inlet and outlet).
- The product should not be installed near stairwells, emergency exits or air conditioning systems.
- The product should not be mounted on a device whose use would cause product damage. (for example, on a stove with an oil steam or water vapor outlet).
- The product should not be installed in areas where there is a risk of water inlet and flooding.
- Do not install the product in places where there is a danger of freezing.
- Connect the grounding cable to the product's grounding connection and to the appropriate grounding connection of the home installation, this way you will avoid short circuits to the product (eg due to water ingress).
- Be careful when using it at a sleeping place.
- Before the device is installed, the heating and hot water installations must be ready. The installation must have been designed, approved and made by an authorized engineering office. The expenses of all these operations belong to the user.
- Do not keep any objects, materials or other devices that may damage the device, or that may be damaged by the installation connections of the device, under, above or next to the location where the device is mounted.





Fault

- You can find the Fault information titles on the screen in the user manual.
- If a fault occurs in the product, you can see it with a fault description on the screen.
- By looking at the fault information in the manual, you can try to correct the fault with guidance.
- If it is not possible to fix the fault, you can call Thermodynamic customer service.
- Take care to have a general inspection and maintenance every year. You may need to determine the frequency of your maintenance period depending on the results of the inspection. Maintenance operations must be done by Termodinamik Authorized Sales points.
- We recommend using original Termodinamik parts during maintenance or repair work.
- Have the necessary electrical installation prepared for the combi, but do not connect electricity in any way. Only Authorized Person is authorized to make the electrical connection of the device.
- After the assembly is completed and the device is ready for commissioning, make sure to have the device commissioned by the Authorized person.
- The strength of the wall on which the device will be mounted must be able to support the weight of the device. The wall should be thick enough.
- Your device must be mounted on a fireproof wall. If the wall is made of combustible material, the hanging surface points must be well protected with non-combustible material.

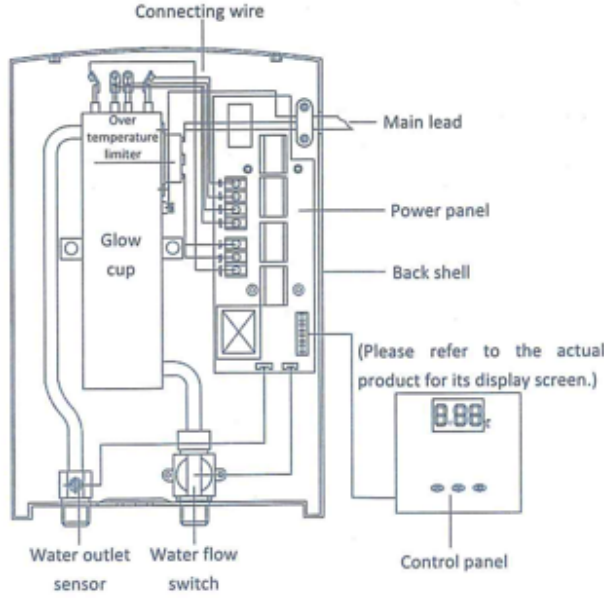
Important information

- Please pay attention to the information in the manual about water hardness.
- Take care to have a filter in the installation line.
- Make sure that your installation pump connection is on the installation return line.

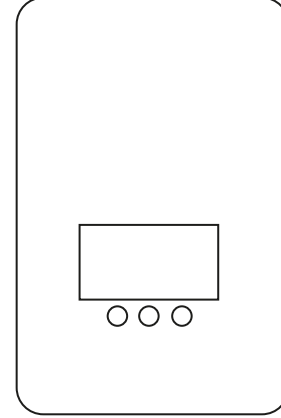


Technical Specifications

P.S: Pictures are for reference only, please refer to the actual product for its appearance.



Product Structure Diagram



Rated Power	Rated Current	Electric Meter Requirement		Air Switch	CSA of Power Line	Display
		Electronic	Electromechanical			
4600 W	20.9A	≥ 10[40] A	≥ 10[40] A	≥ 32A	≥ 2.5 mm ²	Yes
5500 W	25.0A	≥ 10[40] A	≥ 10[40] A	≥ 32A	≥ 2.5 mm ²	Yes
6050 W	27.5A	≥ 10[40] A	≥ 10[40] A	≥ 32A	≥ 4 mm ²	Yes
7500 W	34.1A	≥ 10[40] A	≥ 10[40] A	≥ 40A	≥ 6 mm ²	Yes
8000 W	36.4A	≥ 10[40] A	≥ 10[40] A	≥ 40A	≥ 6 mm ²	Yes
8500 W	38.6A	≥ 10[80] A	≥ 10[60] A	≥ 60A	≥ 6 mm ²	Yes
9000 W	40.9A	≥ 10[100] A	≥ 10[80] A	≥ 60A	≥ 6 mm ²	Yes
9500 W	43.2A	≥ 10[100] A	≥ 10[80] A	≥ 60A	≥ 6 mm ²	Yes
10000 W	45.5A	≥ 10[100] A	≥ 10[80] A	≥ 60A	≥ 6 mm ²	Yes
Minimum Water Inlet Pressure	0.1 MPa	Control Mode	Manuel	Installation Mode	Vertical	
Maximum Water Inlet Pressure	0.75 MPa	Adjustable Range of Water Temperature	Within 55 °C	Waterproof Rate	IPX4	
Rated Voltage and Frequency	220 V =/50 Hz	Over Temperature Protection	55 °C	Heating Mode	Electrical Heated Tube	

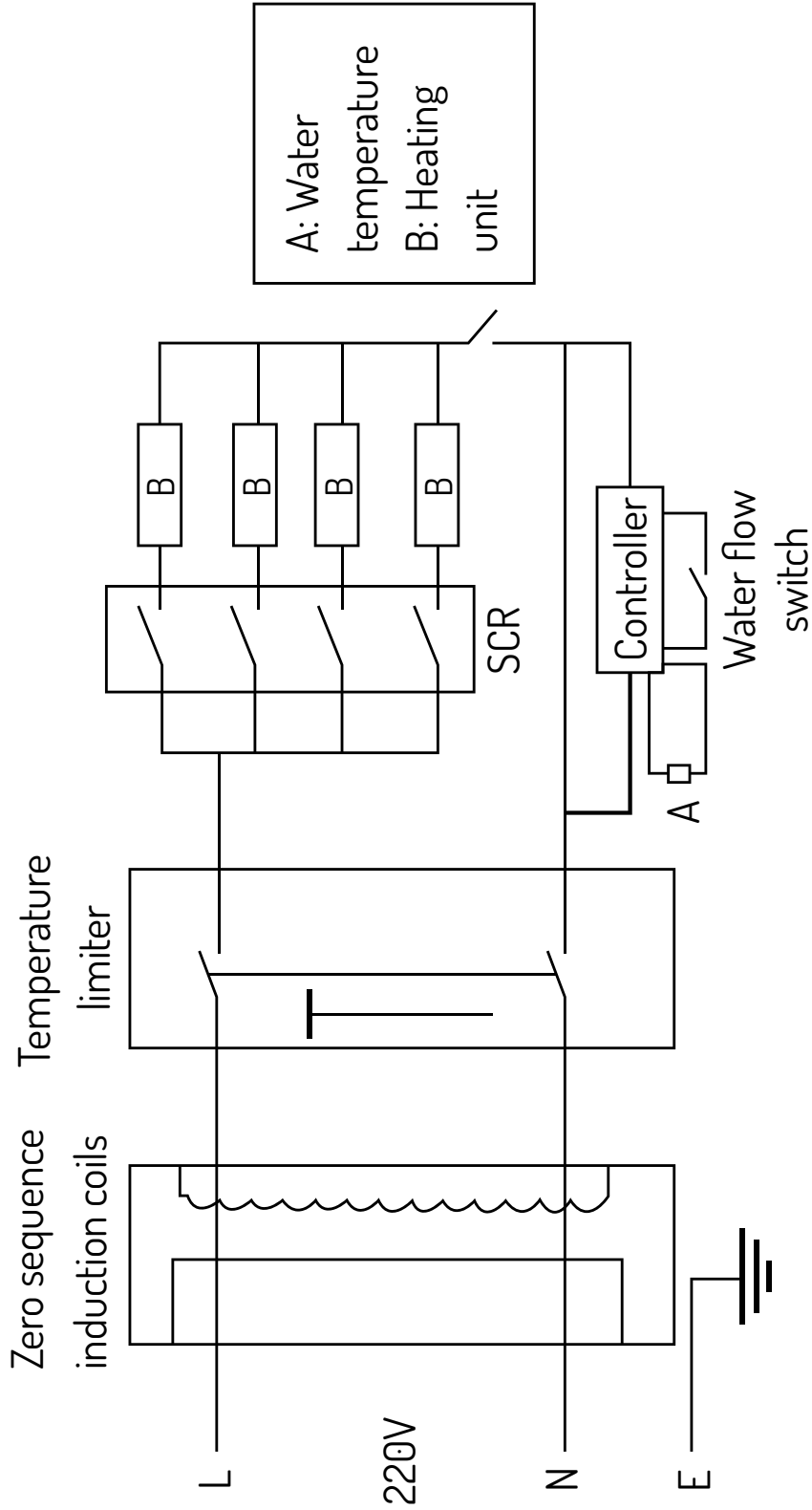
* EMO: According to the wet signed installation project and project conformity certificate prepared by an Electrical Engineer with a visa from the Chamber of Electrical Engineers, the device can be started for the first time.

* Line length must be taken from the meter.

* EITY (Electrical Indoor Installation Regulation) should be taken into consideration when planning the use of single-phase devices in homes.

* We reserve the right to make changes in dimensions, prices and appearances.

Electrical Wiring Diagram





Notice for Installation

- A. The heater must be installed with reliable grounding wire, water pipe and drainpipe cannot be used for grounding.
 - B. The heater must be installed with specialized leakage circuit breaker and please turn it off if the heater is not being used.
 - C. Do not install the heater near combustible materials, the heater must be installed vertically, do not make the test-run before water flows in.
- Warning:** Do not turn on the heater if the water inside is likely to freeze.
- D. If the main lead is found broken during the process of using, please do not replace it with other main lead, instead, please contact the manufacturer or the retailer for replacement.

Installation Preparation

- A. The heater must be installed by professionals, please get ready all the equipment needed for Installation and also the necessary qualified testing instruments.
- B. Check whether the heater is in good condition and whether the random documents and attachments are complete.
- C. Read the instruction book carefully, so as to know the function, usage, installation requirements and installation methods of the heater.
- D. Check the power supply, water pressure, drainage and grounding condition in the user's house, ask whether the electric meter and wires meet the installation requirements (if not, do refit them before installation).
- E. Help the user choose a safe installing position.

Installation Environment

- A. Avoid the environment where inflammable gases leak or etchant gases exist.
- B. Avoid the places which have strong artificial electricity, are directly affected by magnetic field, or can be easily reached by children.
- C. Avoid the places where noise and vibration usually appear.
- D. Try to minimize the distance between the heater and the room for using hot water, install the heater in a position where water can be drained easily and will not splash the power supply.
- E. The heater of this type can only be used indoor and should be installed vertically on the wall (only A8 are suitable for horizontal installation).
- F. The installation surface of the heater should be solid, so as to guarantee the heater's normal operation and to avoid dangers.
- G. Due to the high power of this heater, user's electric meter, wires and fuses should meet the rated current requirement of the heater (please refer to "technical parameters and installation requirements" for more information).



Installation Methods

Main Body Installation

Firstly, mark the positions of two screw holes, which are about 1.5m-1.7m above the floor (Figure 3) and away from each other at an appropriate distance (Figure 1), on a solid installation surface. Secondly, drill the holes by 6mm with a percussion drill and plug rubber particles into them. Thirdly, tighten the screws with a screwdriver and install the hooks on the wall (Figure 2). Finally, insert the heater's hanging panel into the hooks and make sure that the heater is firmly installed (Do not hang the heater on soft walls).

* Water-Related Equipment Installation

1. Connect one end of the corrugated pipe to water inlet and the other end to water pipe with valve (Do use new pipes rather the old ones).
2. Install shower head at the water outlet.
3. Install electricity-proof device, if you have one, at the water outlet.
4. Install thermostatic valve, if you have one, at the water inlet.

* External Circuit Installation

1. Circuit check: Check whether the electric meter and circuit capacity can match the heater's rated current before installation (please refer to "technical parameters and installation requirements" for more information).
2. Air switch installation: Install qualified air switch on the wall.
3. Circuit connection: Connect heater's main lead successively with air switch's live wire, neutral wire (L: live wire (brown), N: neutral wire (blue)) and ground wire.

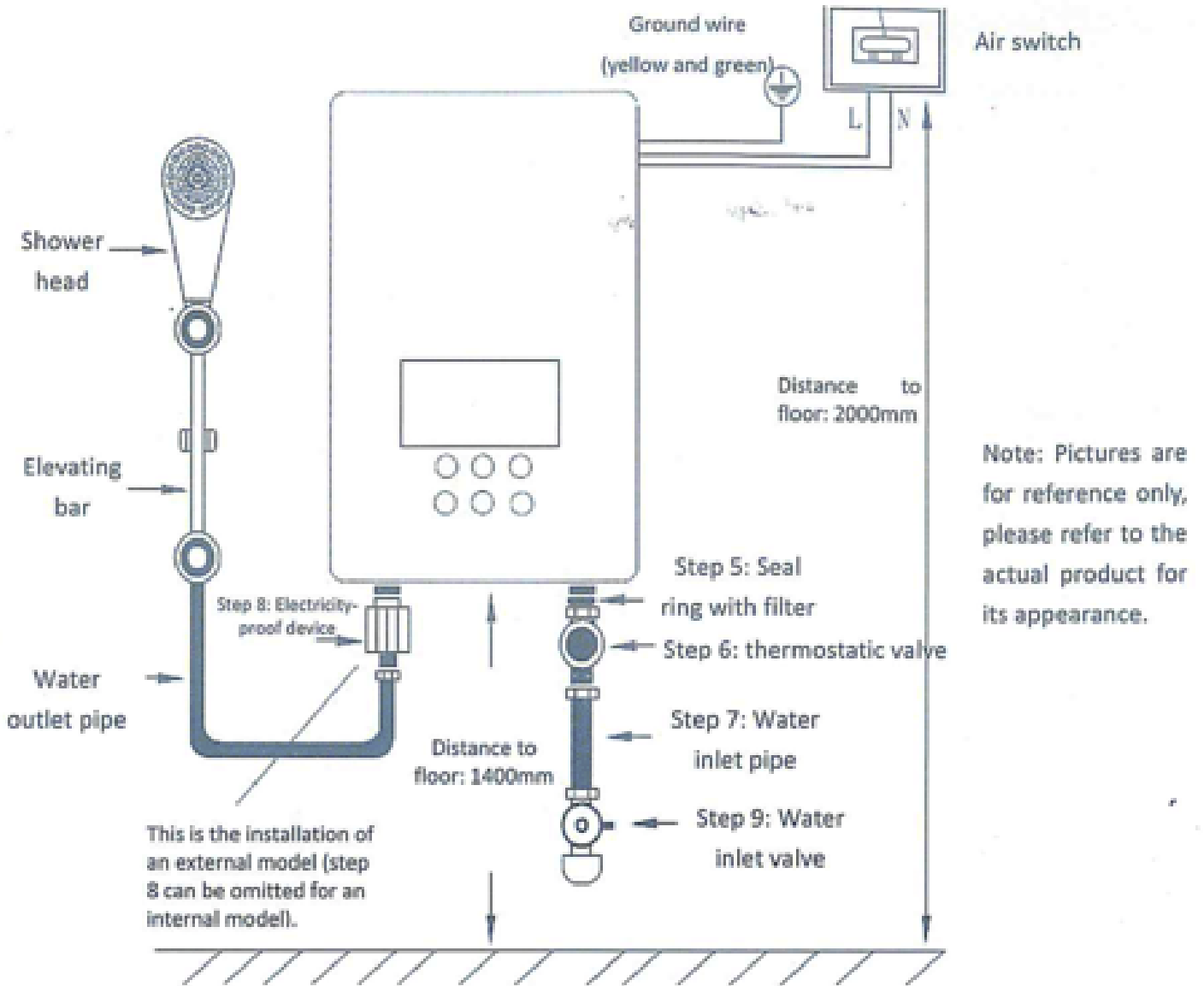


Figure 3



Check and Test-run

Please check after installing the heater, and you should pay special attention to:

1. Make sure the pipe's connection and trend are appropriate and whether there is water leakage at each junction.
2. Make sure the electrical configuration is safe and correct.
3. Make sure the mechanical connections firm and reliable.
4. Make sure all the functions can be realized and the control units can work smoothly.

Please make a test-run according to the requirements in this instruction book.

Product Usage

* Heater with adjustable power switch operating method

Let in the water after the heater' installation and then turn off the water valve. Afterwards, please follow the instructions below:

1. Pull down the leakage circuit breaker's handbrake, then the buzzer will emit a beep while the display screen will illustrate a sign of "--".
2. Press the "start" button below the display screen and the current temperature will be shown on the screen. Press the "heating" button to increase the power and the "cooling" button to decrease the power. P1 ~ means level 1; P2 ~ means level 2. The power only changes by one level every time you press these two buttons. Higher power means higher temperature and lower power means lower temperature.
3. Once the power level is set, turn on the water inlet valve for hot water. At this time, the word "heating" and the corresponding icons (splashing shower head, flickering flame, spinning fan) appear on the display screen, showing that the heater has entered the heating process and the water temperature will gradually rise. When the icon of "over-large water flow" flickers, please use the water flow control valve to turn it down.
4. The heater will stop heating when the valve that controls running water is turned off. Because of the memory function, the heater will automatically recover to the previous working condition if that valve is turned on again.
5. Notice
 - 5.1 To avoid the excessive high temperature of outlet water, the heater is designed with outlet water temperature protection. When high power or small water flow leads to a temperature of more than 55 Celsius, the heater will stop heating and signal the "E3" alarm until the temperature drops to a point where the heater can automatically back to work. You may solve this problem by reducing the power or increasing the water flow.
 - 5.2 If the word "heating" and the corresponding icons do not appear when water flows out from the heater, it means that the heater cannot enter the heating process. To solve this problem, please adopt the following solutions:
 - 5.2.1 Adjust the water flow valve or the water inlet valve to increase the water flow.
 - 5.2.2 Check whether the water inlet filter is blocked, clean it if necessary.
 - 5.2.3 Check whether the electricity-proof device or the shower head is blocked, clean it if necessary.





5.2.4 If the above solutions are ineffective, it is likely that the starting switch inside the heater is blocked. Please let running water flow in from the water outlet and out from the water inlet for several minutes and then put the water pipe back to the normal position.

5.2.5 If the water pressure is low (for some areas where self-built water tower is used), install booster pump at the water inlet to increase water pressure.

Thermostatic heater operating method

Let in the water after the heater' installation and then turn off the water valve. Afterwards, please follow the instruction below:

1. Pull down the leakage circuit breaker's handbrake, then the buzzer will emit a beep while the display screen will illustrate "outlet water temperature".
2. Press the "start" button below the display screen (the icon of "tiny water flow" means water has not flowed in).
3. Press the "heating" button to increase the preset temperature, the temperature will be displayed and flicker on the screen. The preset temperature only increases by one Celsius every time you press the "heating" button (maximum: 55 Celsius) When your preferred preset temperature is selected, it will be confirmed after the temperature display flickers for three seconds (for bathing, usually 40-42 Celsius).
4. Press the "cooling" button to reduce the preset temperature, the temperature will be displayed and flicker on the screen. The preset temperature only decreases by one Celsius every time you press the "cooling" button (minimum: 30 Celsius). When your preferred preset temperature is selected, it will be confirmed after the temperature display flickers for three seconds (for bathing usually 40-42 Celsius).
5. Once the preset temperature is confirmed, turn on the water inlet valve for hot water. At this time, the word "heating" and the corresponding icons (splashing shower head, flickering flame, spinning fan) appear on the display screen, showing that the heater has entered the heating process and the water temperature will gradually rise. When the icon of "over-large water flow" flickers, please use the water flow control valve to turn it down.
6. If the word "heating" and the corresponding icons do not appear when water flows out from the heater, it means that the heater cannot enter the heating process. To solve this problem, please adopt the following solutions:

6.2.1. Adjust the water flow valve or the water inlet valve increase the water flow.

6.2.2. Check whether the water inlet filter is blocked, clean it if necessary.



6.2.3. Check whether the electricity-proof device or the shower head is blocked, clean it if necessary.

6.2.4 If the above solutions are ineffective, it is likely that the starting switch inside the heater is blocked. Please let running water flow in from the water outlet and out from the water inlet for several minutes and then put the water pipe back to the normal position.

6.2.5 If the water pressure is low (for some areas where self-built water tower is used), install booster pump at the water inlet to increase water pressure.

PROBLEMS AND SOLUTIONS

1. Check regularly whether the main lead and the air switch are in good contact and whether the grounding wire is connected to earth properly.
2. The impurities contained in running water can accumulate at the shower head and filter. This will have a negative impact on water outflow, which may further influence the heater's normal operation and even damage it. Thus it is necessary to do a regular cleaning.
3. If the heater stops being used for a long time, please turn off the water inlet valve and the external power switch and drain the water inside (to drain the water, first turn off the water inlet valve and then dismantle the thermostatic valve and the water outlet pipe).
4. The display of "00" means that inlet water temperature is closed to 0 Celsius. At this time water may freeze inside the heater, so do not use it until the ice inside melts.
5. The broken main lead must be replaced with specialized alternative by the maintenance crew appointed by the manufacturer or retailer.
6. Only professionals are qualified to repair the heater.
7. Power must be cut off before cleaning the heater. Dip the wet cloth in neutral detergent (not in gasoline or other solution) and wipe the heater gently, then wipe it again with dry cloth.



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Installation Methods

Problems	Reasons	Solutions
1. Leakage at water inlet or outlet	A. Water pipe is in poor connection B. Seal washer is damaged	A. Reconnect the water pipe B. Change the seal washer
2. No display on the screen	A. Power is off B. Display screen is broken C. Temperature limiter inside the heater is activated.	A. Switch the power on B. Change the screen C. Contact the maintenance department
3. Unavailable buttons	A. No water flows out from the shower head. B. Water pressure is low C. Buttons or circuit boards are broken	A. Turn on the water inlet valve to let out water from the shower head. B. Turn up the water valve to increase pressure. C. Change buttons or circuit boards.
4. High water temperature	A. Working power is too high B. Water outflow is too small	A. Turn down the working power B. Increase the water outflow
5. Low water temperature	A. Working power is too low B. Water outflow is too large	A. Turn up the working power B. Reduce the water outflow
6. A gradual decrease of water outflow	Water inlet filter or shower head is blocked.	Clean the filter or the shower head
7. Alarm E1	Signify electric leakage	Contact the maintenance department
8. Alarm E2	Signify a problem of outlet water flow prob	Contact the maintenance department
9. Alarm E3	Signify a problem of inlet water low prob	Contact the maintenance department
10. Alarm E4	A. Signify overheating B. Signify the circuit board is damaged C. Signify a problem of the temperature prob of the outlet.	A. It will recovery when the temperature is lower than 55°C B. Contact the maintenance department C. Contact the maintenance department



Product Packing List

Name	Quantity
Heater	1
Shower head kit	1
Hook (optional)	1
Screw & Rubber particle	2 for each
Instruction book	1
Water flow control valve	1

Guide for User Service

Dear users, in order to protect your interests, please read this three-part warranty card carefully before installation. The working crew will fill in and sign the warranty card after the installation and test-run are complete. For users, you should first sign your name, then give part B (with product code) and C to our working crew and keep part A appropriately. With part A of the warranty card, you can also enjoy our product quality tracking service.

1. Ask the retailer for an invoice (with date of purchase and official seal) after purchasing and keep it appropriately for after-sales service.
2. With part A of the warranty card and the invoice, users can receive free service at any domestic maintenance point one year from the date of purchase (for product quality problems only).
3. Our electric appliance department will carry out intelligent management and product quality tracking service for users after receiving part B. Otherwise, users cannot enjoy maintenance or other services.

The following conditions within the warranty period are excluded from our free maintenance service.

- Damages due to human factors (e.g. falling, crashing, putting close to corrosive materials, etc.).
- Damages due to forces majeure (e.g. earthquake, conflagration, windstorm, etc.).
- The heater has been repaired by a technician that's not appointed by the company.
- Damages caused by operations against instruction book's requirements.
- The product model on the warranty card is not identical to that being repaired.
- Did not give back part B of the warranty card or gave back part B without the product code.

For conditions above, we can only provide paid services. Customers' requirements for changing products cannot be realized unless products' appearance and packing have no impact for future selling.