

Model

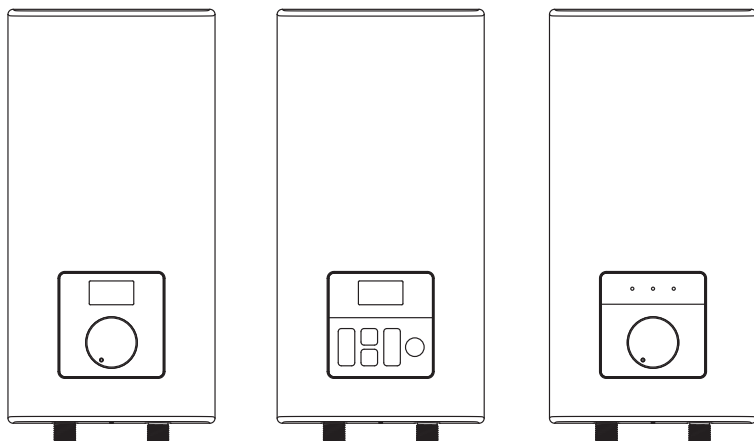
TWH-60EFNTH(K)-RS

TWH-48EFNTH(W)-CB

TWH-38EFNTH(W)-CB

TWH-48MFNTH(W)-WB

TWH-38MFNTH(W)-WB



Read this manual carefully before installation and use

THE USER NEEDS TO TEST THE BUILT-IN RESIDUAL
CURRENT DEVICE (RCD) AT LEAST ONCE A MONTH

Sincerely thank you for selecting our electric water heater. Please read this manual carefully before use; correctly grasp the methods for installation and use of this electrical water heater, to make full use of its excellent performances. Please do preserve the instruction manual for future reference.

For any improper installation and incorrect operation of this product, our company will not be liable for any responsibility.



TABLE OF CONTENTS

<u>TITLE</u>	<u>PAGE</u>
1.Product introduction	(5)
2.Methods of using (TWH-60EFNTH(K)-RS).....	(8)
3.Methods of using (TWH-**EFNTH(W)-CB).....	(11)
4.Methods of using (TWH-**MFNTH(W)-WB).....	(14)
5.Maintenance	(16)
6.Troubleshooting	(17)

SAFETY INSTRUCTIONS

All instructions described should be carefully read and followed.




- These instructions are precautions to prevent the risks of serious injury or death of the user, and any damages to property.

MARKINGS	
 WARNING	WARNING indicates high possibility of serious injury (*1) or death of the user.
 CAUTION	CAUTION indicates high possibility of injury (*2) or property loss (*3).






(*1) Serious injury – injury which requires hospitalization, lengthy treatment, or blindness, hot and cold skin burn, electric shock, broken bones or poisoning.











(*2) Injury – injury, skin burn or electric shock which does not require hospitalization or lengthy treatment.

(*3) Property loss – extended loss of houses, furniture, domestic animals or pets.

SYMBOLS	
 PROHIBITED!	⊘ PROHIBITED! Indicates prohibited actions. Detailed instructions would be indicated on the inside of the circle or around the symbol in figures or in writing.
 IMPORTANT	● IMPORTANT Indicates mandatory actions. Detailed instructions would be indicated on the inside of the circle or around the symbol in figures or in writing.
 CAUTION	△ CAUTION Recommends to take precautions. Detailed instructions would be indicated on the inside of the triangle or around the symbol in figures or in writing.





* Precautions for usage

 WARNING	
 Household Use	This electric water heater is for household, and it can be installed wherever place that need hot water. Can not be used for business use.
 Burns	Pay attention to the output temperature of hot water during use to avoid scalding.
 Burns	Do not directly touch to Hot Water Pipe. It may result serious burns. The Hot Water Pipe surface may be hot accordingly with setting temperature.
 Burns	When the shower is used by someone such as child, old person, sick person and physical handicapped person, the concern person is kindly requested to pay attention and check the shower temperature by using hand from time to time.

	In time of lightning/thunder, switch "Off" the Miniature Circuit Breaker (MCB) in advance to protect the electric water heater against possible damage.
 Prohibited!	Do not place flammable materials or Gases near to the Electric water heater. It may result fire or explosion.
	In order to avoid a hazard due to inadvertent resetting of the Earth Leakage Circuit Breaker (ELCB), this electric water heater must not be supplied through an external switching device, such as timer or connected to a circuit that is regularly switched "On" and "Off" by the utility.
 Prohibited!	Do not block the hot water flows. It may result the water leakage.
 Prohibited!	Electric water heater is equipped with adjustable flow capacity safety valve. For safety use, please do not change its installation location and do not block its water outlet.
	This electric water heater can be used for other purpose, eg. Washing hands, dishes or foods, and so on. (Multi directional water supply is not available).
 Prohibited!	Do not open Front cover. This may cause electric shock.
 Validation	If long time no use the electric water heater, check the electric water heater first before use. Electrify after the water flows out stably.
 Prohibited!	Do not spray water to air switch or body of this electric water heater directly, to avoid moist.
 Prohibited!	Metallic/chromes hose and conductive control valve shall not be used. This may cause electric shock.



CAUTION

 Prohibited!	Do not connect the hot water pipe to other equipments such as washing machine, dish washer or others to avoid water leakage.
 Prohibited!	Do not switch on if there is a possibility that the water in the heater is frozen.
 Cleaning	The shower head must be descaled regularly. Remove and clean the filter inside the flow regulating valve and water inlet connector regularly
 Validation	The electric water heater may be damaged if the water hardness is too high. To ensure longer product lifespan, please install and put it into use on condition that the local water hardness is less than 450mg/L (CaCO ₃)

* Precautions for inspection and maintenance



WARNING

	Do not cut off power supply before maintenance, to avoid danger like electric shock.
 Validation	Ensure the function of built-in ELCB(once a month). If using the ELCB under out of order condition, it may result electric shock.
 Validation	Check the earth connection periodically (1 times a year) by the Electrician. Otherwise you may receive an electric shock. This may result to a serious injury or death.
	In order to avoid a hazard due to inadvertent resetting of the Earth Leakage Circuit Breaker (ELCB), this electric water heater must not be supplied through an external switching device, such as timer or connected to a circuit that is regularly switched "On" and "Off" by the utility.



CAUTION

 Validation	Press the TEST button on the electric water heater at least once a month to check whether the ELCB function is normal.
	When not in use for more than one month, turn off the air switch and the power, and close the water inlet valve.
 Validation	If long time no use the electric water heater, check the electric water heater first before use. Electrify after the water flows out stably.

* Precautions for repair/transfer



WARNING

 Do not disassemble	Do not disassemble or attempt to service. It may cause fire, electric shock, injury or skin burn. Leave all services not listed in the operation instructions to qualified service personnel is needed.
 Professional	The damaged power cord must be replaced by a good power cord provided by the manufacturer, and the replacement should be done by a qualified technician or engineer or professionals of the similar products.
	When selling this product to another person or transferring it, in order to use it safely by the new owner, tape this tool instruction Manual with a tape in conspicuous part of the main body of the product.

* Precautions for trouble



WARNING

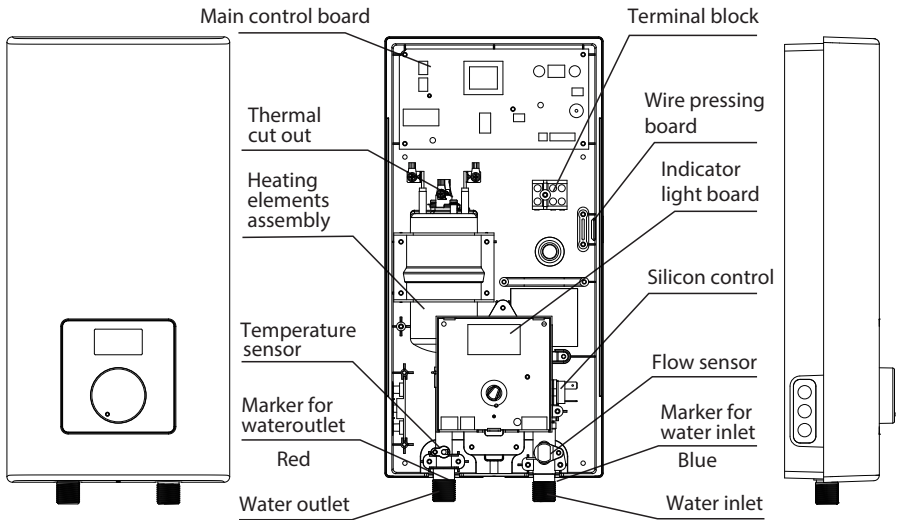
	Turn power and circuit breaker off when burning smell or water leakage is observed. Immediately Report to the nearest qualified service provider or the shop where purchased for immediate checking and maintenance. Please check the product warranty for the correct contact information. Do not use the product. It may result fire or electric shock.
--	---

1. PRODUCT INTRODUCTION

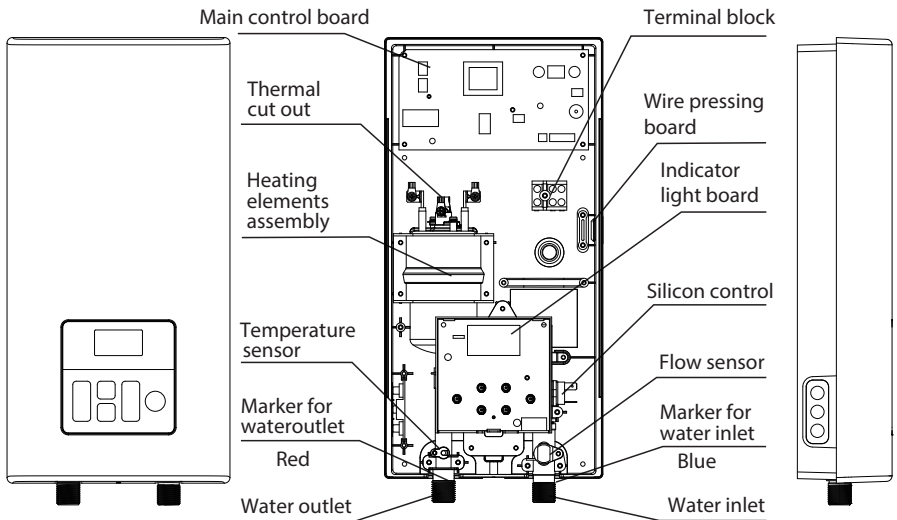
1.1 Technical Performance Parameters

Series	TWH-***FNTH(*)-**		
Model	TWH-60EFNTH(K)-RS	TWH-48EFNTH(W)-CB TWH-48MFNTH(W)-WB	TWH-38EFNTH(W)-CB TWH-38MFNTH(W)-WB
Rated Voltage	220 V ~	220 V ~	220 V ~
Rated Frequency	50 Hz	50 Hz	50 Hz
Rated Power	6000 W	4800 W	3800 W
Rated Current	27.3 A	21.8 A	17.3 A
Dia. Of Wire Core	4.0 mm ²	2.5 mm ²	2.0 mm ²
Air Switch with ELCB	≥30 A	≥25 A	≥20 A
Rated Pressure	0 MPa	0 MPa	0 MPa
Minimum Flow Rate	1.5 Liters/minute	1.5 Liters/minute	1.5 Liters/minute
Minimum Pressure	0.03 MPa	0.03 MPa	0.03 MPa
Maximum Pressure	0.3 MPa	0.3 MPa	0.3 MPa
Protection Class	I	I	I
Water Proof Class	IP25	IP25	IP25
Products Size (W×D×H)	200×99×400 mm	200×85×400 mm 200×99×400 mm	200×85×400 mm 200×99×400 mm
Water Pump	No Pump	No Pump	No Pump

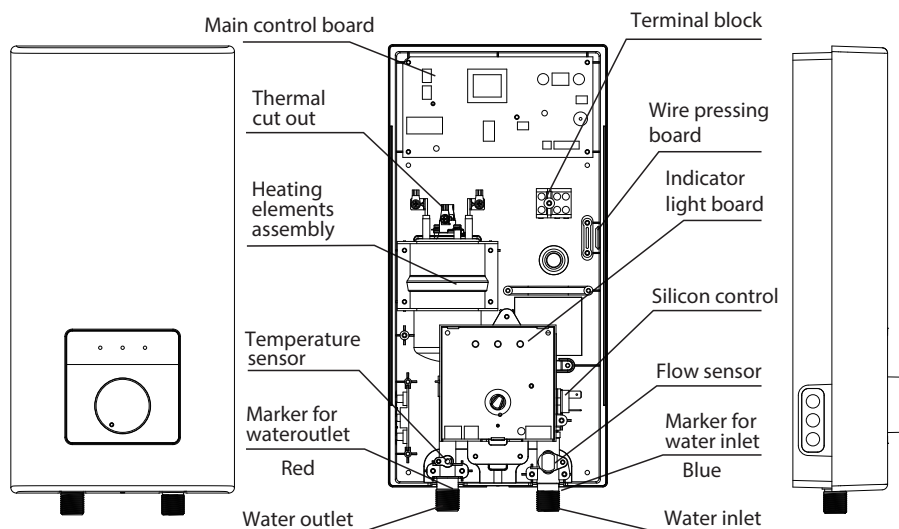
1.2 Parts Identification



↑ PRODUCT STRUCTURE FOR TWH-60EFNTH(K)-RS

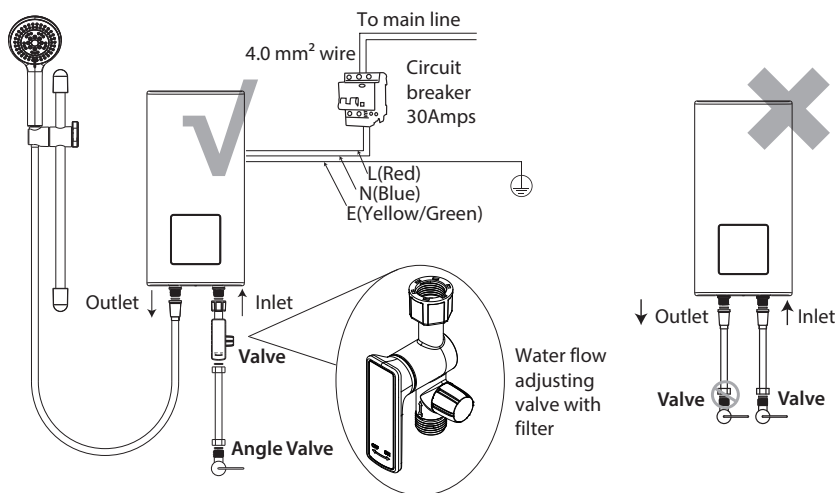


↑ PRODUCT STRUCTURE FOR TWH-**EFNTH(W)-CB



↑ PRODUCT STRUCTURE FOR TWH-***MFNTH(W)-WB

Single point installation layout



✓ Correct installation

✗ Wrong installation



WARNING

It is prohibited to close the water outlet using a valve or restrict water flow by other means or devices. The water outlet should always remain opened ensuring free continuous to avoid the water heater damage, leakage and security incidents !
Water flow adjusting valve with filter must be used when install the unit. Blue marker stands for water inlet, red marker stands for water outlet. Do not overexert to avoid damaging the water heater.

2. METHODS OF USING(TWH-60EFNTH(K)-RS)

2.1 User Guidance

For your safety, the heating system will not be functioning if there is no earth wiring being installed. In this case, the display and the running situation will be as the following shows.
So please connect ground wire to the product properly.

The connection and installation of ground wires must be operated by professional installers.

Display Introduction



① ELCB Icon:

While normal operation in use safely, it turns on. Once detecting the leakage, ELCB will work for the protection with icon turning off and the display goes off.

② Set temperature:

The current set temperature "88" is displayed. When the set temperature flashes, it means full power heating and the set temperature cannot be reached. The hot water temperature can be set among 30 to 48 °C by turning the knob.

③ Safety (ground) icon:

When the "S" icon green light is on, it means that the heater has no hidden dangers and can be used safely; When the icon red light flashes once a second, it means that the machine ground is not connected.

④ Temperature unit:

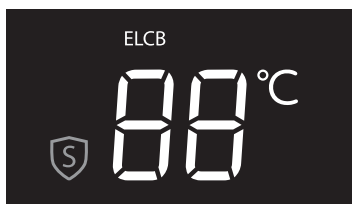
When the "°C" icon is on, it will be displayed in synchronization with the set temperature.

⑤ Heating Indication Icon:

The icon turns ON while the product is in heating up condition only,
Setting temperature is between 30-37 °C, the "🌡️" icon lights in green colour;
Setting temperature is between 38-44 °C, the "🌡️" icon lights in orange colour;
Setting temperature is between 45-48 °C, the "🌡️" icon lights in red colour and flashing.

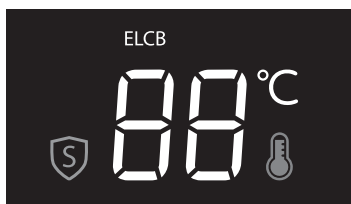
⑥ Knob:

Turn the knob clockwise to turn on the water heater, and the set temperature will increase from 30 °C to 48 °C, and vice versa.



Without Earth Wiring Connection

- ① "ELCB" icon is on
- ② Temperature icon "88" is on
- ③ The red icon "S" keeps flashing
- ④ Heating Indication icon "🔥" is off
- ⑤ The "°C" icon is on



Normal Operating Condition





- ① "ELCB" icon is on
- ② Temperature icon "88" is on
- ③ The green icon "S" stays on
- ④ Heating Indication icon "🔥" is on
- ⑤ The "°C" icon is on




NOTE

Without earth wiring connection, the S icon will turn red and keep flashing, other icons will be off after 5 minutes. The electric water heater is not working, there is No hot water output.

2.2 Operating Of The Unit

Switch on the power supply, the LED will be on, When the water flow exceeds 1.5L/min, switch on heating power. the  will show the set temperature. If the safety icon  is twinkling flicker, it means that is not connected to the ground. If the  is twinkling flicker, it means the heater is working by its maximum power but the out-water temperature is below the set temperature. if the heater is not working, the  will be off after 5 minutes.

2.3 Leakage Testing

When the water heater is working normally, press "TEST" button, if the leakage test circuit is no problem, The screen will shut off and the heater will stop heating. Press "RESET" button, if there is not leakage happen, the test will be canceled. The screen will return normal. If there is leakage, the test process cannot be cancelled. The icon "" is flashing red all the time which shows the heater is not grounded. Therefore, heating are prohibited.

2.4 To Adjust Water Flow

Rotate the handle of water flow adjusting valve to adjust the water flow.

2.5 Electricity Leakage Protection

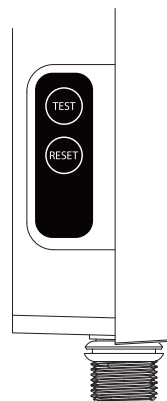
When the leakage detection circuit works normally, if leakage current is tested between 7.5mA and 15mA, the screen will shut off and heater can work only after the problem being solved.

2.6 To Adjust Water Temperature

Rotate the handle of water flow adjusting valve to adjust to proper water flow. The set temperature range is 30-48 C, which can be adjusted by rotating the "TEMPERATURE" knob.

2.7 Use After Overheating Protection

If the water flow is small and power is high while using the unit, outlet water temperature is rather high; the unit will stop heating automatically. At this time, please lower the the power and adjust the water flow faster in order to avoid inconsistency of water temperature.



NOTE

For first time using, ensure electrify after the unit is filled fully with water and there is stable water flow comes out from shower head.

The electric water heater may be damaged if the water hardness is too high. To guarantee the normal service life, please install and put it into use on condition that the local water hardness is less than 450mg/L (CaCO₃).

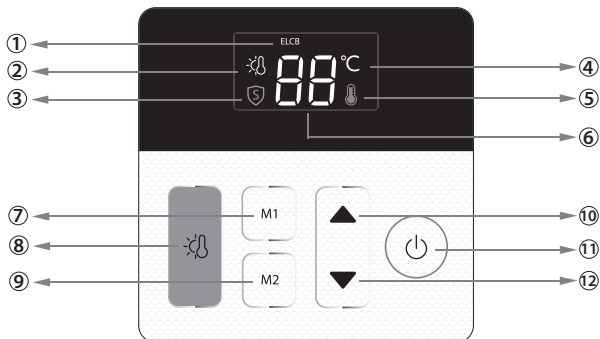
3. METHODS OF USING(TWH-**EFNTH(W)-CB)

3.1 User Guidance

For your safety, the heating system will not be functioning if there is no earth wiring being installed. In this case, the display and the running situation will be as the following shows.
So please connect ground wire to the product properly.

The connection and installation of ground wires must be operated by professional installers.

Display Introduction



① ELCB Icon:

While normal operation in use safely, it turns on. Once detecting the leakage, ELCB will work for the protection with icon turning off and the display goes off.

② Self-Adapt Icon:

The outlet water temperature is set by the detected inlet water temperature. When the Self-Adapt mode is turned off, press the "⚡" button to turn on Self-Adapt mode, and the "⚡" icon is on. and vice versa.

Inlet water temperature	Set temperature
≥28 C	40 C
22-27 C	42 C
16-21 C	44 C
≤15 C	46 C

③ Safety (ground) icon:

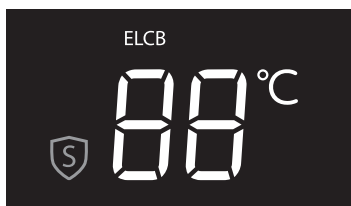
When the "⚡" icon green light is on, it means that the heater has no hidden dangers and can be used safely; When the icon red light flashes once a second, it means that the machine ground is not connected.

④ Temperature unit:

When the "°C" icon is on, it will be displayed in synchronization with the set temperature.

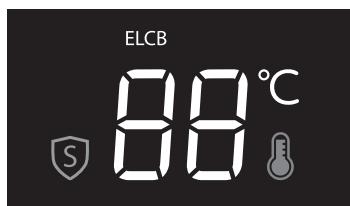
⑤ Heating Indication Icon:

The icon turns ON while the product is in heating up condition only,
Setting temperature is between 30-37 C, the "🔥" icon lights in green colour;
Setting temperature is between 38-44 C, the "🔥" icon lights in orange colour;
Setting temperature is between 45-48 C, the "🔥" icon lights in red colour and flashing.



Without Earth Wiring Connection

- ① "ELCB" icon is on
- ② Temperature icon "88" is on
- ③ The red icon "S" keeps flashing
- ④ Heating Indication icon "🔥" is off
- ⑤ The "°C" icon is on



Normal Operating Condition

- ① "ELCB" icon is on
- ② Temperature icon "88" is on
- ③ The green icon "S" stays on
- ④ Heating Indication icon "🔥" is on
- ⑤ The "°C" icon is on



NOTE

Without earth wiring connection, the S icon will turn red and keep flashing, other icons will be off after 5 minutes. The electric water heater is not working, there is No hot water output.

⑥ Set temperature:

The current set temperature "88" is displayed. When the set temperature flashes, it means full power heating and the set temperature cannot be reached. The hot water temperature can be set among 30 to 48 °C by pressing "▲" or "▼" button.

⑦ M1 Mode:

The default setting temperature is 38 °C, Press and hold the "M1" button for 3 seconds, and the buzzer will chime once to enter the "M1" parameter setting. At this time, the set temperature will flash once a second. After pressing the "▲" or "▼" button to adjust to the desired set temperature value, press the "🔌" button to save, or stop setting for 5 seconds, and then automatically save. Then press the "M1" button to heat according to the stored set temperature value.

⑧ Self-Adapt Button :

When the Self-Adapt mode is turned off, press the "🔄" button to turn on Self-Adapt mode, and the "🔄" icon is on. and vice versa.

⑨ M2 Mode:

The default setting temperature is 42 °C, Press and hold the "M2" button for 3 seconds, and the buzzer will chime once to enter the "M1" parameter setting. At this time, the set temperature will flash once a second. After pressing the "▲" or "▼" button to adjust to the desired set temperature value, press the "🔌" button to save, or stop setting for 5 seconds, and then automatically save. Then press the "M2" button to heat according to the stored set temperature value.

⑩ "▲" Button :

The set temperature is increased 1 °C by pressing "▲" once.





⑪ "🔌" Button :

In the shutdown state, press the "🔌" button, the buzzer will beep, and the water heater will enter the standby state.


⑫ "▼" Button :

The set temperature is reduced 1 °C by pressing "▼" once.

3.2 Operating Of The Unit

Switch on the power supply, the LED will be on, When the water flow exceeds 1.5L/min, switch on heating power. the  will show the set temperature. If the safety icon  is twinkling flicker, it means that is not connected to the ground. If the  is twinkling flicker, it means the heater is working by its maximum power but the out-water temperature is below the set temperature. if the heater is not working, the  will be off after 5 minutes.

3.3 Leakage Testing

When the water heater is working normally, press "TEST" button, if the leakage test circuit is no problem, The screen will shut off and the heater will stop heating. Press "RESET" button, if there is not leakage happen, the test will be canceled. The screen will return normal. If there is leakage, the test process cannot be cancelled. The icon "" is flashing red all the time which shows the heater is not grounded. Therefore, heating are prohibited.



3.4 To Adjust Water Flow

Rotate the handle of water flow adjusting valve to adjust the water flow.

3.5 Electricity Leakage Protection

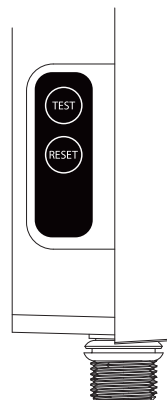
When the leakage detection circuit works normally, if leakage current is tested between 7.5mA and 15mA, the screen will shut off and heater can work only after the problem being solved.

3.6 To Adjust Water Temperature

Rotate the handle of water flow adjusting valve to adjust to proper water flow. The set temperature range is 30-48 C, which can be adjusted by by pressing "" or "" button.

3.7 Use After Overheating Protection

If the water flow is small and power is high while using the unit, outlet water temperature is rather high; the unit will stop heating automatically. At this time, please lower the the power and adjust the water flow faster in order to avoid inconsistency of water temperature.



NOTE

For first time using, ensure electrify after the unit is filled fully with water and there is stable water flow comes out from shower head.

The electric water heater may be damaged if the water hardness is too high. To guarantee the normal service life, please install and put it into use on condition that the local water hardness is less than 450mg/L (CaCO₃).

4. METHODS OF USING(TWH-**MFNTH(W)-WB)

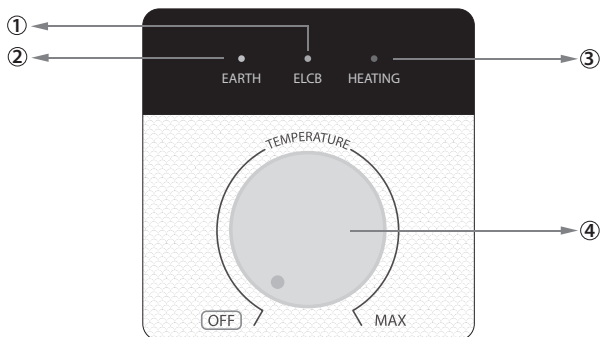
4.1 User Guidance

For your safety, the heating system will not be functioning if there is no earth wiring being installed. In this case, the display and the running situation will be as the following shows.

So please connect ground wire to the product properly.

The connection and installation of ground wires must be operated by professional installers.

Display Introduction



① ELCB Indicator:

In normal use, the indicator light is always green. Once leakage is detected, the ELCB indicator flashes green, it means the water heater has problems and can't be used, heating will stop.

② EARTH Indicator:

When the indicator light is green, it means that the heater has no hidden danger and can be used safely; When the indicator is off, it means that the heater is not grounded and has no function.

③ HEATING Indicator:

When the HEATING indicator light is always red, it means that the heater is in heating state, When the HEATING indicator light is off, it means that the heater is not heated.

④ Knob:

Turn the knob clockwise to turn on the water heater, and the set temperature will increase from 30 °C to 48 °C, and vice versa.



NOTE

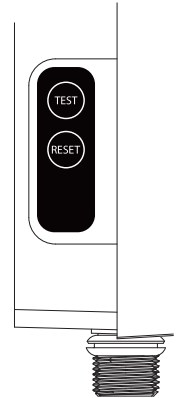
Without earth wiring connection, the EARTH indicator will be off, The electric water heater is not working, there is No hot water output.

4.2 Operating Of The Unit

Switch on the power supply, the unit will take self-inspection, "ELCB"; "EARTH" blue indicator light will be on (well connected to the Ground). Green indicator light will be on (under the condition of no electricity leakage). When the water flow exceeds 1.5L/min, rotate the knob clockwise to switch on heating power rotate switch, the HEATING indicator light will be on, the unit start to work.

4.3 Leakage Testing

When the water heater is working normally, press "TEST" button, if the leakage test circuit is no problem, "ELCB" green indicator light will be blinking, and the unit will not heat. Press "RESET", testing will be canceled, and "ELCB" green indicator light will be on, the unit will be back to working state set before. If the circuit leaks, press "RESET" button can't cancel leakage testing, "ELCB" indicator light is twinkling flicker, it means the water heater has problems and can't be used, heating will stop. If "EARTH" blue indicator light is off, it means the heater cannot be connected to the Ground firmly and the water heater will not work. Please check the Grounding before using.



4.4 To Adjust Water Flow

Rotate the handle of water flow adjusting valve to adjust the water flow.

4.5 Electricity Leakage Protection

When the electricity leakage testing circuit is working normally, if the leakage current is bigger than certain value between 7.5mA and 15mA, the "ELCB" indicator light will be twinkling flicker, no heating; it can only be used after the failure is excluded. (When electricity leakage is tested, red and green indicator lights are all off, stop heating.)

4.6 To Adjust Water Temperature

Rotate the handle of water flow adjusting valve to adjust to proper water flow. Adjust power by rotating knob, clockwise rotate, power will be increased and water temperature increase accordingly or vice versa.

4.7 Use After Overheating Protection

If the water flow is small and power is high while using the unit, outlet water temperature is rather high; the unit will stop heating automatically. At this time, please lower the power and adjust the water flow faster in order to avoid inconsistency of water temperature.



NOTE

For first time using, ensure electrify after the unit is filled fully with water and there is stable water flow comes out from shower head.

The electric water heater may be damaged if the water hardness is too high. To guarantee the normal service life, please install and put it into use on condition that the local water hardness is less than 450mg/L (CaCO₃).

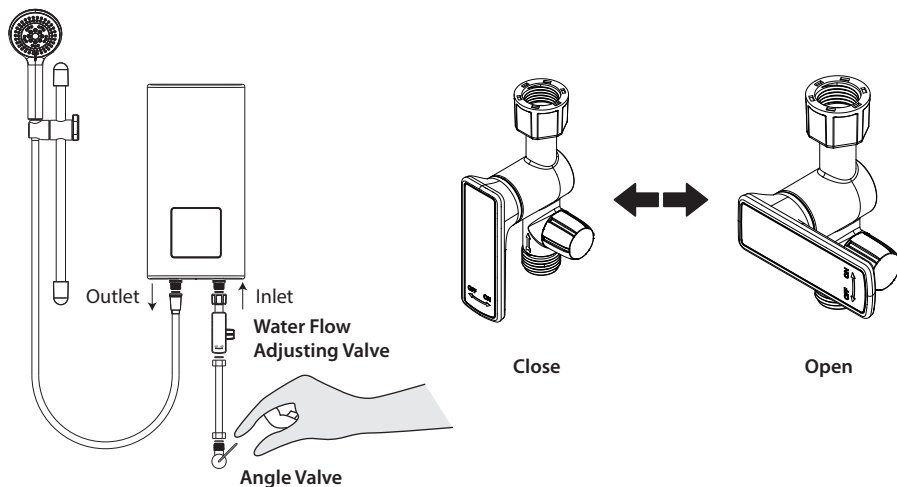


NOTE

1. When the water inlet temperature is too low, or the voltage is too low, it may not reach the set temperature because the total power is limited, in this situation, please turn the water flow down to reach your desired water temperature.

2. If you use the water heater every day, you don't need to turn off the angle valve and the air switch every time, and the temperature knob doesn't need to turn off counter clockwise every time. You just need to close the flow regulating valve after using the water heater every time.

(It is not necessary to open the angle valve to the maximum position. When the flow regulating valve is opened to the maximum position, close the angle valve to the right position for the water flow. In the future, it is not necessary to adjust the angle valve every time.)



5. MAINTENANCE

- This electric water heater should be installed at the place without sunshine or rain spray. Please cut off power supply if not use for long time.
- Please blow down the water for about 10 seconds to drain away the impurities in the pipe before connecting the water source to the electric water heater to avoid blockage of water heater.
- If long time no use the unit, check the water heater first before use. Electrify after the water flows out stably.
- Do not spray water to air switch or heater body directly, to avoid moist.
- Please cut off the power in the weather of thunder and rain to avoid damaging the water heater.
- If not use for long period of time, please cut off water inlet to prolong the lifespan of the water heater.
- Check the power cord connecting terminals frequently to make sure that they are well and reliably contacted, no overheating phenomenon, and grounding is good or not.
- Disassembly shower head and sealing ring with filter to clean periodically.

DECLARATION: This water heater can only be maintained by authorized service personnel, incorrect installation and using method may cause serious injury or loss of property.



WARNING

Do cut off power supply before maintenance, to avoid danger like electric shock.

6. TROUBLESHOOTING

SYMPTOMS	REASONS	SUGGESTIONS
Switch on the power supply, The screen displays nothing	1. Power supply error; 2. PCB error; 3. Electricity leaks.	1. Check whether power is cut ; 2. Contact authorized service personnel for repair.
The heating indicator light is off and the outlet water is cold.	1. The power supply is not turned on; 2. PCB error ; 3. The water flow is less than 1.5L/min ; 4. The flow sensor is faulty ; 5. The rotor of the flow sensor is blocked by impurities.	1. Turn on the power supply; 2. Repair or replacement the PCB; 3. Adjustable water flow ; 4. Change the flow sensor ; 5. Open the flow sensor and clean the rotor.
The heating indicator light is on and the outlet water is cold	1. The silicon control is broken; 2. Heating elements is broken.	1. Change the silicon control; 2. Change the heating elements.
No water flows out from the shower head.	1. The running water supply is cut off; 2. The inlet valve of running water is not open.	1. Wait for restoration of running water supply; 2. Open the inlet valve of running water.
Outlet water temperature sometimes is hot, sometimes is cold.	1. Water pressure is not stable 2. Outlet water temperature is too high, overheating protection again and again.	Adjust the heating power lower, make the water flow bigger
The display shows "E1" or "E3" and flashes.	1. Flashing "E1" on the screen indicates that the outlet temperature sensor is faulty. 2. The screen flashing "E3" indicates heating element dry burning and Triac abnormal.	Contact authorized service personnel for repair.
The display shows "EC" and flashes to indicate communication failure	1. Poor connection between main control board and display board; 2. The display board software or main control board software is incorrect, resulting in abnormal communication; 3. The main control board dials the code incorrectly.	1. Check whether the connection between the main control board and the display board is loose, unplug and plug it in again; 2. Contact authorized service.
The "⊕" on the screen Flash and heater doesn't work	The heater is not connected to the ground wire.	Test the ground resistance with a grounding resistance meter. Connect ground wire properly
"ELCB" indicator flashes	Leakage of electricity occurs.	Cut off the power supply and Contact authorized service.
"HEATING" indicator flashes.	The outlet water temperature sensor is faulty.	Contact authorized service.
The "⊠" on the screen Flash and Water is not hot.	The outlet water temperature cannot reach the set temperature.	Turn down the inlet water flow or reduce the set temperature.

