



Intertek
4002422

GNK Enterprises, Ltd.
8059 Corporate Blvd. Plain City, OH 43064 USA
(614) 504-4381

Tankless Electric Water Heater



AQS Serise

Installation and Instructions Manual

Keep this Instructions Manual in a safe place once your unit is installed.
You may need to refer to it for general instructions or future maintenance.

Please read and follow the installation and operation instructions carefully to ensure the long life and reliable operation of this appliance.

CONTENTS

Important Safety Instructions	----- page 2
Electrical Diagram	----- page 3
Technical Data and Product Structure	-----page 4
Installation Guideline	-----page 6
Operation	-----page 9
Trouble-shooting	-----page 9
Maintenance	-----page 10
Warranty	-----page 10

WARNINGS

This is not a do-it-yourself project. Failure to have this appliance installed by a licensed plumber and electrician will void all warranties.

Under no circumstances should you attempt to install, repair or disassemble the AQUAH tankless electric water heater without first shutting off all power to the unit directly at the circuit breaker box.

Installation of this product is restricted to indoor locations only by licensed plumbing or electrical contractors.

■ Important Safety Instructions

1. The installation must be in compliance with the National Electrical Code, your local electrical and plumbing codes.
2. This appliance must be **GROUND**ED.
3. All wiring and installation must be supervised by a qualified electrician.
4. **CAUTION: This product has more than one power-supply connection point. Disconnect all power supplies before servicing (for models AQS-15 AQS-18, AQS-21, AQS-24, AQS-27, only).**
5. 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 the use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
6. This appliance **MUST** be permanently connected to the fixed circuit breaker(s) and it must be installed vertically. **DO NOT** install this appliance close to tinder or strong magnetic field place.
7. This appliance is **forbidden** to be switched on if you think it may be frozen, as this could result in serious damage to the unit. Wait until you are sure that it has completely thawed out before you switch it on.
8. Please feel the output hot water temperature with hand to make sure it is suitable for showering before taking shower to avoid getting scalded.
9. Before connecting pipes to the water heater lines, it is extremely important to FLUSH the pipes to wash away all plumbing paste or residue in the pipes.
10. The heating chamber is treated with composite nano insulation material; it is normal if there is a little bit of smell or green blue smoke when the unit is used for the first time.
11. If there is damage to wires in the heater, you must contact qualified electrician to replace them with dedicated wires from our authorized dealers.
12. **CAUTION: FOR HOUSEHOLD AND INDOOR USE ONLY**
13. **To avoid risk of electric shock, CONNECT ONLY TO A CIRCUIT THAT IS PROTECTED BY A GROUND-FAULT CIRCUIT INTERRUPTER(GFCI).**
14. **SAVE THIS INSTRUCTION.**

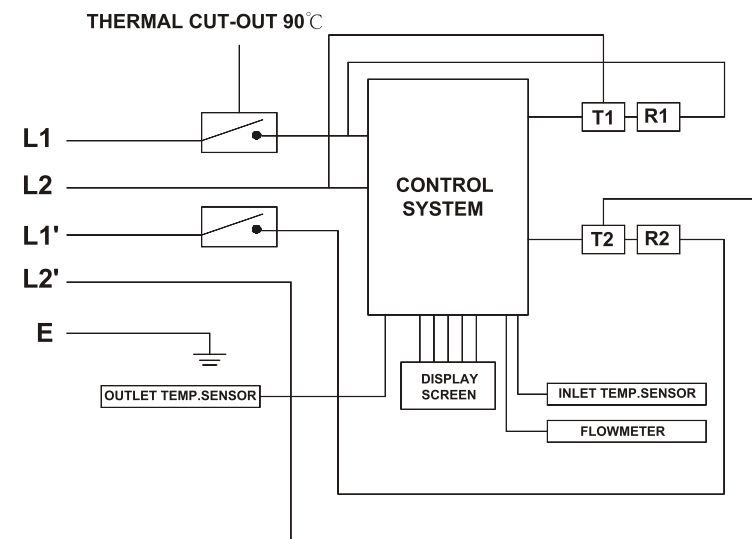
■ Product Features

The **AQUAH** tankless electric water heaters are incorporated with China national patent technology with multi-safety devices. Besides, the unit has the following features.

1. Tankless, instantaneous heating for on demand hot water. No pre-heating. No stand-by heating loss. Energy-saving.
2. Micro-computer control: With patent heating technology, water is completely separated from electricity by multi-layers of composite nano insulation material.
3. Overheating protection: When the output water temperature reaches 153°F/67°C, the electricity will be cut off to avoid injury and the screen displays E1. The appliance will start to work automatically when temperature drops to the set temperature.
4. Malfunction of sensor: When there is malfunction with the temperature sensor, the heater stops working and displays E3
5. Conversion between Fahrenheit and Celsius.

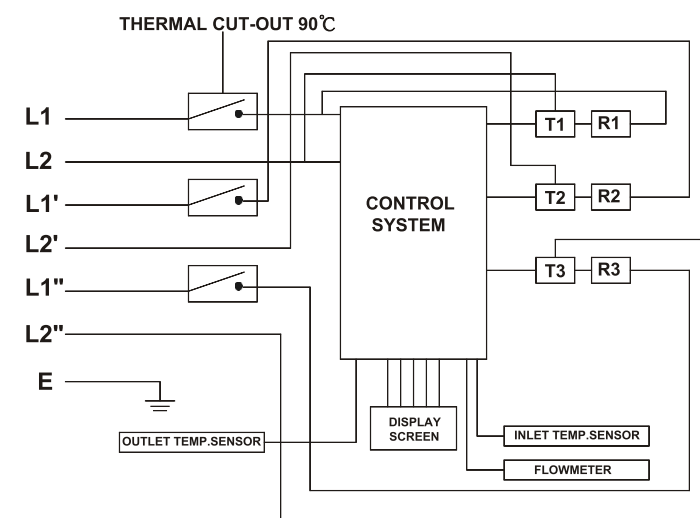
■ Electrical Diagram

AQS-15 AQS-18



REMARK: R:HEATING SYSTEM T:TRIAC

AQS-21 AQS-24 AQS-27



AC 240V/60Hz

REMARK: R:HEATING SYSTEM T:TRIAC

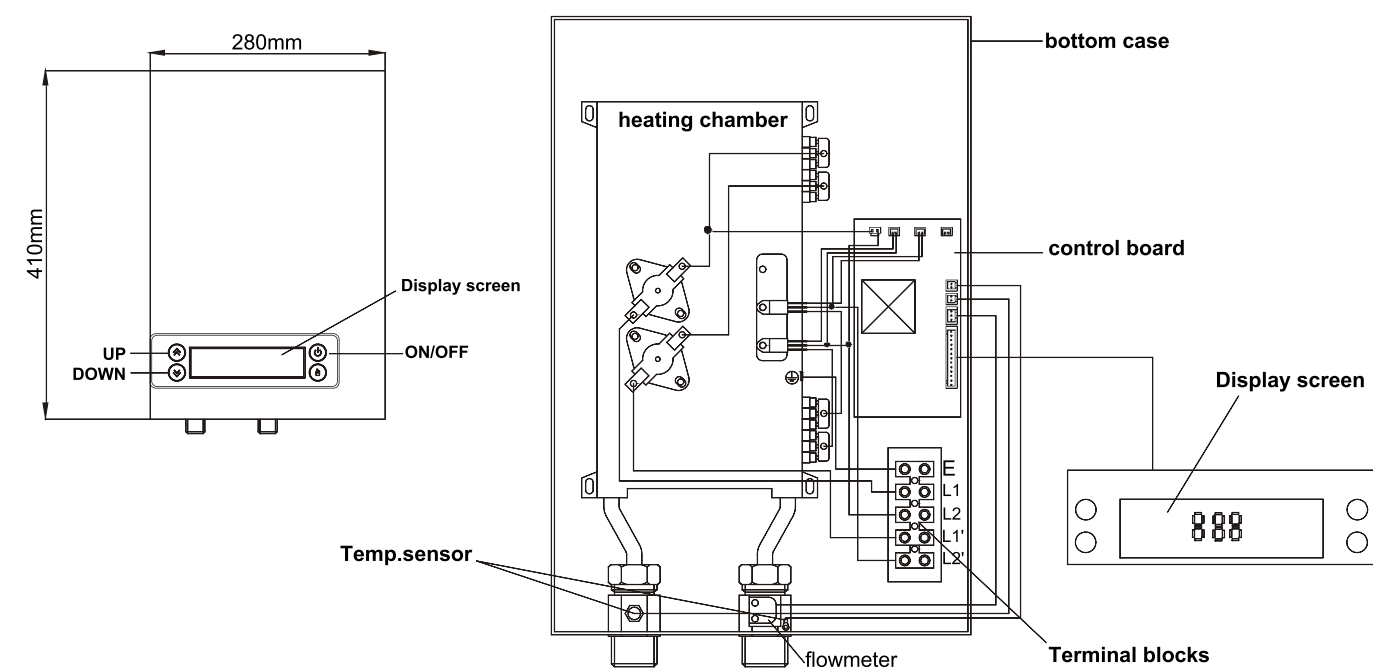
■ Technical Data

Model		AQS-15	AQS-18	AQS-21	AQS-24	AQS-27
Phase		1	1	1	1	1
Voltage	V	240	240	240	240	240
Wattage	kW	15	18	21	24	27
Max. Amp. load	A	63	75	88	100	113
Min. required circuit breaker	A	2 X 40	2x50	3 X 40	3 X 40	3 X 50
Min. wire size	AWG cooper	2 X 8	2 X 8	3 X 8	3 X 8	3 X 8
Min. water flow to activate	GPM / L/min.	0.85 / 3.2	0.85 / 3.2	0.85 / 3.2	0.85 / 3.2	0.85 / 3.2
Weight	kg	8	8	8.3	8.3	8.3
Product Dimensions	mm	410x280x90				
Water connections	NPT	3/4"	3/4"	3/4"	3/4"	3/4"

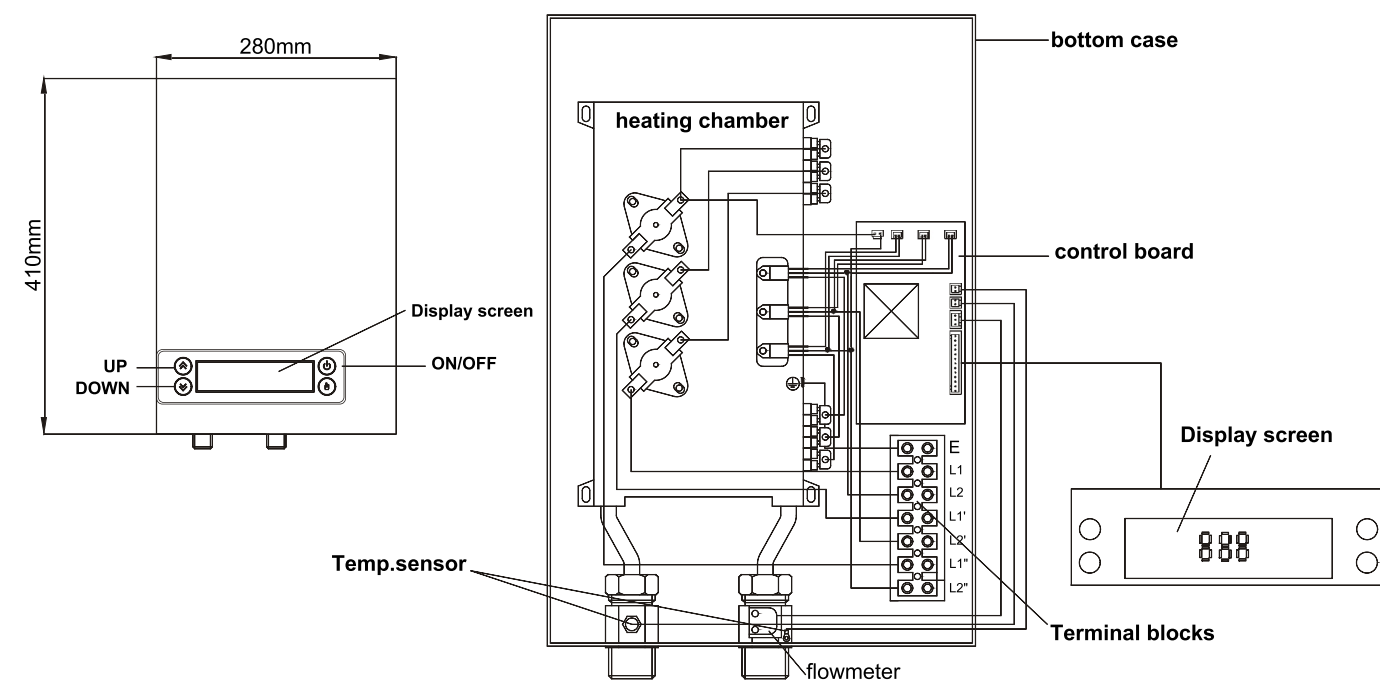
Note: *suitable recognized strain relief means shall be provided when the product installed.

■ Product Inner Structure

MODEL AQS-15 AQS-18



AQS-21 AQS-24 AQS-27



■ Installation Guideline

The installation must be in compliance with the National Electrical Code, your local electrical and plumbing codes.

1. Make sure the appliance is intact and the fittings are complete.
2. Please make sure the main power supply, water pressure, grounding condition, ammeter and wires meet the standards of installation requirements.
3. The appliance must be connected to properly grounded dedicated branch circuits of proper voltage rating. Grounding wire must be connected to the "ground" at the circuit breaker panel.
4. This appliance **MUST** be permanently connected to the fixed circuit breaker(s). If you do not use the heater for a while, please switch off the circuit breaker.
5. **DO NOT** install this appliance close to tinder or strong magnetic field place. The unit must only be mounted in a VERTICAL position near the water fittings. Please live test the heater after water line is connected and turned on.

■ Installation

● Fixed installation on the wall

Locate an appropriate place on the wall.

Fig 1 → Front and back of the appliance

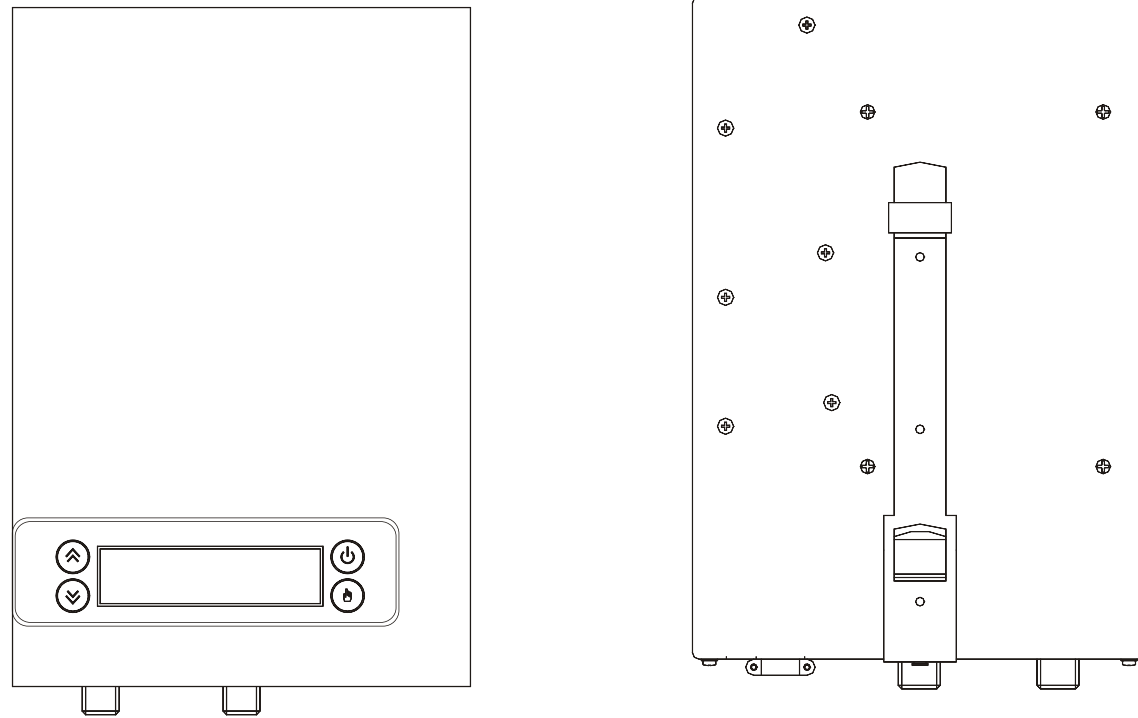


Fig 2 → Remove screw which fixed the bracket on back of the appliance.

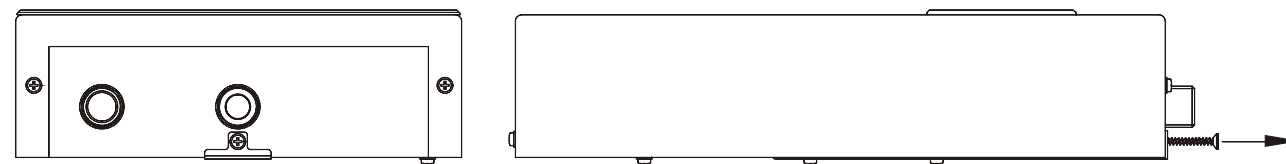


Fig 3 → Remove the bracket from the appliance

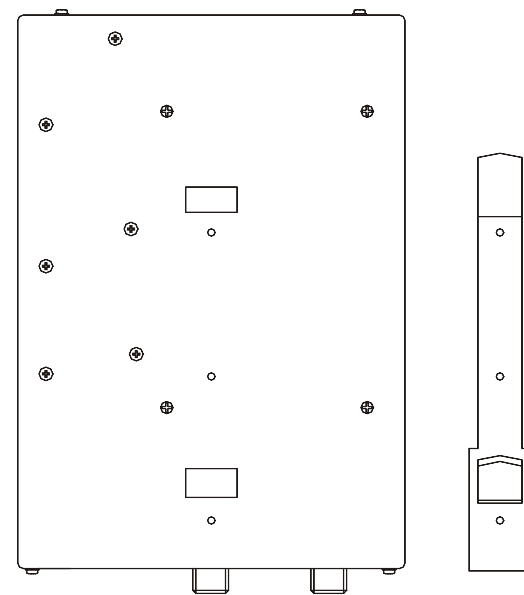


Fig 4 → Hold the back bracket hanger in position against the wall and mark the three mounting holes. Drill three holes of 6.00mm diameter, the distance between every two holes is 100mm. (Put plastic anchor in the hole, fix the bracket on the wall. and secure the hanger using the screws supplied or an appropriate alternative method)

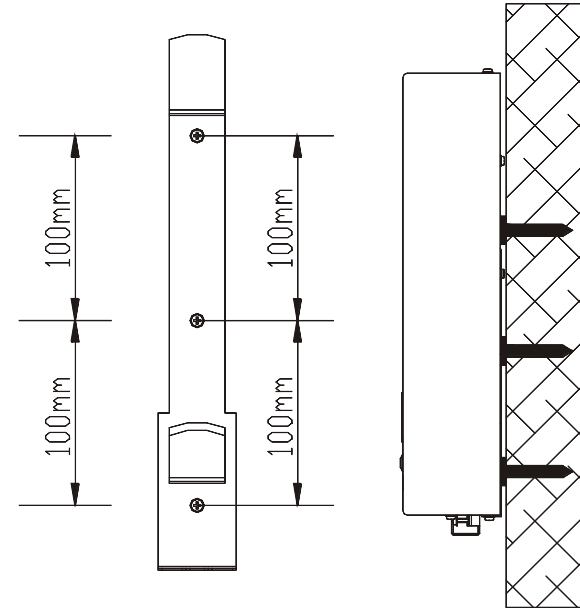


Fig 5 → Remove the four screws holding the wire inlet cover.

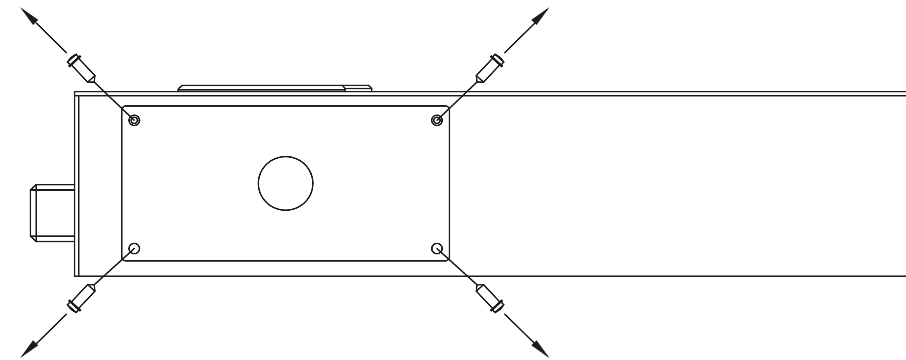


Fig 6 → Hang the heater onto the bracket which has been nailed on the wall. Make sure to mount the unit bracket onto the back metal hanger correctly.

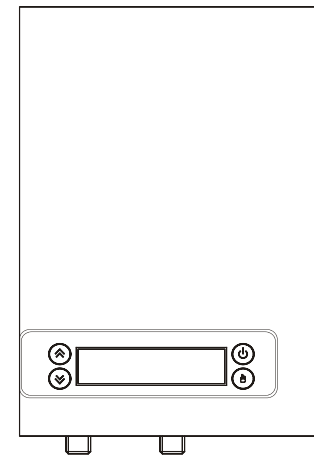


Fig 7 → Connect the wires to the terminal blocks following the indicators below the terminal blocks. AQE-12 will be connected to one circuit breaker, AQS-15 and AQS-18 to two circuit breakers, and AQS-21, AQS-24 and AQS-27 to three circuit breakers.

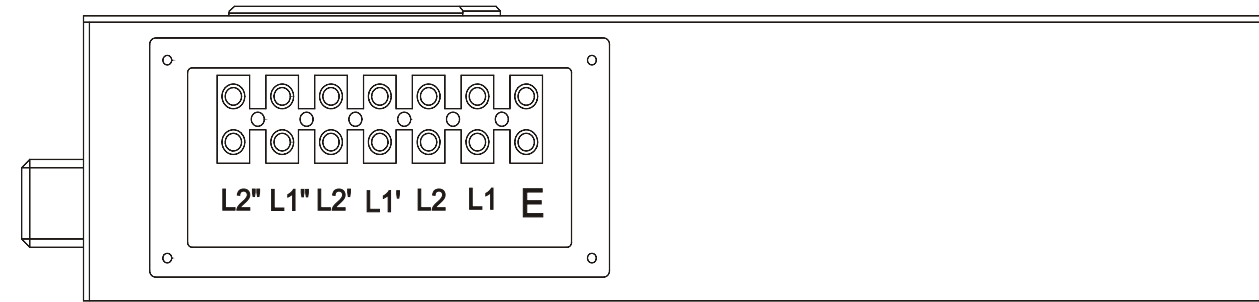
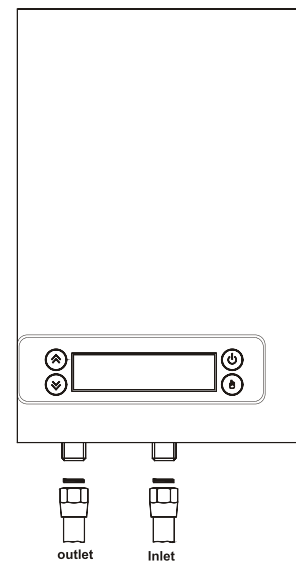


Fig 8 → Connect the water pipe to the water inlet and water outlet connections, please remember to install the rubber seal ring.







●Water connections

- 1, All water pipe must comply with national and applicable state and local water pipe codes.
- 2, The unit should be connected directly to the main water supply. Flush pipe with water to remove any debris or loose particles
- 3, It is required that 3/4" NPT water connections be used for the models of AQS-15, AQS-18, AQS-21, AQS-24, and AQS 27.
- 4, When all water connections are completed, check for leaks before proceeding.

●Electrical connection

- 1, All electrical work must be done in compliance with national and applicable state and local electrical codes.
- 2, All unit must be connected to a properly grounded dedicated branch circuit of proper voltage rating.
- 3, AQS-12 can be connected to a single circuit. Use one supply cable protected by a double pole breaker.
- 4, AQS-15 and AQS-18 require two independent circuits. Use two supply cables protected by two separate double pole breakers.
- 5, AQS-21, AQS-24 and AQS- 27 require three independent circuits. Use three supply cables protected by three separate double pole breakers.
- 6, While feeding the cable to terminal blocks, please make sure the metal wire ends and the terminal blocks are connected firmly and completely. Tighten up the screws to make sure the full current can go through.
- 7, Before beginning any work on the electric installation, be sure that main breaker panel switch is OFF to avoid electric shock. All mounting and plumbing must be completed before proceeding with electrical hook-up.

■ Operation

1. Turn on the circuit breaker(s) to connect electrical power to the unit.
2. Turn on water faucet and keep it on for a few minutes until water flow is consistent and all air is purged from water pipes. Operate the unit only after the breakers are turned on.
3. After power is connected to the unit, a beep can be heard and the LED screen will light for 2 seconds. No other signals will be displayed and the appliance will be in standby mode.
4. Press  to turn ON/OFF the appliance. When the unit is ON, the LED screen will display output water temperature. When the appliance stop working, the LED screen will switch to the screen saver in 5 seconds and the LED screen will black out. If the LED screen is touched, it will light up again.
5. Press  and  to adjust the output temperature. Temperature setting range is 30--52°C/ 86-125°F.
 - Whenever the unit is turned off and turned on again, you may initially get a short burst of very hot water. Please run the water for a few seconds to let the temperature settle down. Please feel the water with hand before you taking a shower.
 - If the unit is not used in winter, drain water completely so that the heater will not get frozen.
 - Please periodically clean the inlet strainer and the shower head to keep a free water flow.
6. Press  to convert the temperature display between Fahrenheit and Celsius.
7. Previous operation is automatically memorized. When you turn on the appliance, the default temperature will be the same as it was set previously.

■ Trouble-shooting

Problems	Possible Causes	Corrective Actions
1. Inlet and outlet fittings leaking	A. Fittings not tight enough. B. Rubber washer worn-out	A. Tighten fittings. B. Change rubber washer.
2. LED no signal	A. Power not connected. B. LCD damaged.	A. Connect power to the unit. B. Change LCD.
3. Functional keys not working	A. No water out of faucet. B. Water pressure too low. C. Key or PCB damaged.	A. Turn faucet on to get water. B. Turn faucet on to get pressure. C. Change key or PCB.
4. Water too hot	A. Temperature set too high. B. Water flow too small.	A. Set a lower temperature. B. Open valve wider.
5. Water too cold	A. Temperature set too low. B. Water flow too big.	A. Set a higher temperature. B. Reduce water flow.
6. Outlet water flow gets smaller and smaller.	Inlet strainer or fixture clogged.	Clean strainer or fixture.
7. LED displays E1	Outlet temp. is over 67°C/153°F.	A, Lower the temperature. B, Increase water flow.
8. LED displays E3	Temperature sensor failure.	Please contact with your local dealer.
9. Display overload	Input water flow too big.	Reduce the input water flow.

8 Repair should only be performed by qualified electrician. The person who initially installed the unit is the best one to contact for help.

■ Maintenance

Note: Do not attempt to repair this water heater yourself. Call a service person for assistance. Always turn off the unit and shut down the power supply.

Regular maintenance is not required. However, to ensure consistent water flow, the following maintenance is recommended.

- 1, Periodically remove scale and dirt that may build up at the aerator of the faucet or in the shower head.
- 2, There is a built-in filter screen at the tip of the water inlet which should be cleaned from time to time. Please turn off the water supply before servicing.

■ Warranty

Heat Exchanger

If the heat exchanger fails within three (3) year after the original installation and operation, the manufacturer will furnish a replacement heat exchanger.

Exceptions

This warranty will not apply:

1. To defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with the printed instructions provided.
2. To damage or abuse, accident, neglect or freezing and other acts of nature.
3. To damage resulting from operation with either the overheat sensor removed.
4. To failure of the heat exchanger resulting from the operation of the water heater in a corrosive atmosphere or at water temperatures exceeding the maximum rating, or if the water heater is not supplied with portable water.
5. To defects or damage caused by any attachment or modification, including any energy-saving device.

All Other Parts

If any other part fails within one (1) year after original installation and operation, the manufacturer or retailer will furnish a replacement part free of charge.

Shipping Costs

Any parts or product claimed to be defective must be shipped freight prepaid to the manufacturer or retailer and the repaired or replaced product or parts will be returned to the sender freight at customer's expense.

Service Labor Costs

This warranty does not cover any labor costs associated with services, removal or re-installation of part(s). All such costs must be borne by the Purchaser. Additionally, this warranty does not cover any labor costs associated with services, removal or re-installation of the original water heater or a replaced water heater.

Note: the water heater must be free of damaging scale deposits and not subject to voltage greater than those shown on the rating plate, which must not be altered, defaced or removed.

How to make a claim

Any claim for warranty parts should be made to your local dealer, distributor or manufacturer. In most cases, the dealer or distributor will be able to promptly honor your claim. However, all replacements are made subject to validation by dealer or distributor of in-warranty coverage. The damaged or defective item must be made available in exchange for the replacement.

Miscellaneous

No one is authorized to make any other warranties on behalf of the manufacturer. It is expressly understood that the replacement warranty of manufacturer shall be in lieu of any and all other warranties, express or implied, including warranties of merchantability or fitness for a particular use or purchase, and further that the manufacturer shall not be liable for any loss or damage directly or indirectly arising from the use of the hot water heater, or for any consequential damages arising from such use, (including damages from water leakage). The manufacturer's sole liability with respect to any defect shall be for the replacement of the defective part(s).