

# **AQUAH™**



## **Electric Tankless Water Heater**

Models: AQE-8, AQE-10, AQE-12, AQE-15, AQE-18, AQE-21

### **Installation and Instructions Manual**

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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.

Thank you for purchasing AQUAH electric tankless water heater. To enjoy your hot water for life at its best, please take time to read this manual thoroughly and keep it handy for future reference.

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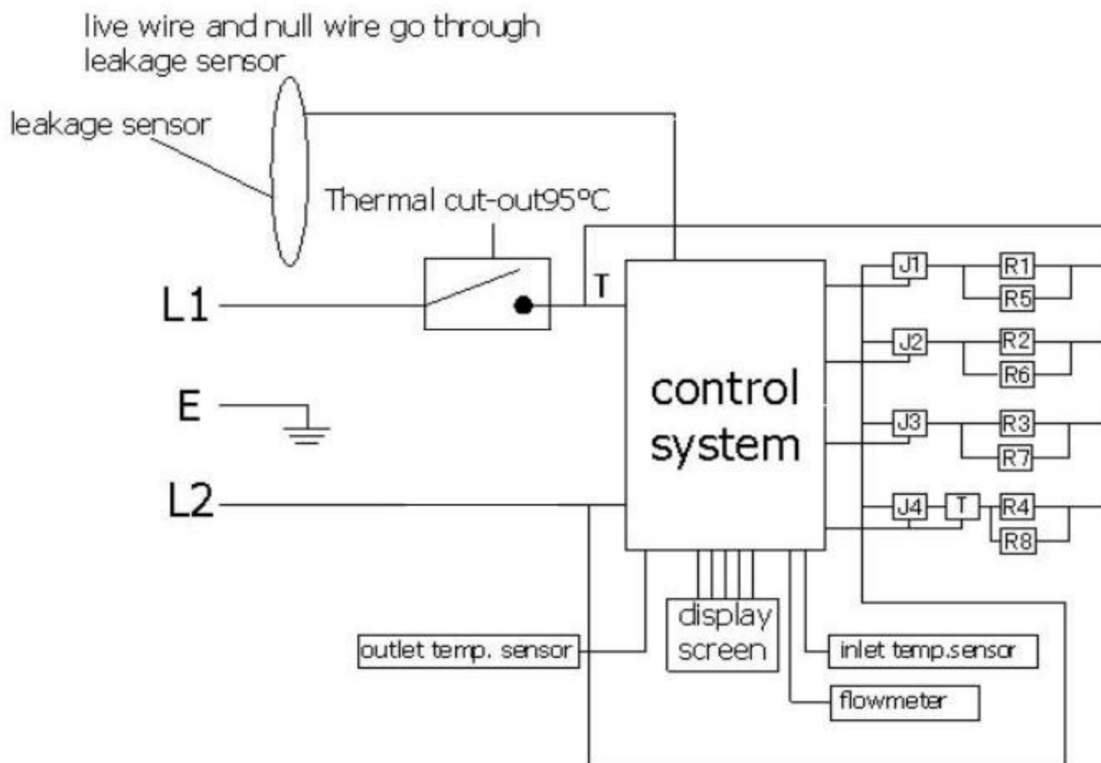
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## ■ Product Features

The AQUAH electric tankless water heaters are incorporated with China national patent technology (Patent No. ZL 2008 2 0081568.0) with multiple 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, and energy-saving.
2. Micro-computer controlled and using patent heating technology. Water is completely separated from electricity by multi-layers of composite nano insulation material.
3. Over-temperature protection. When the output water temperature reaches 140°F/60°C, electricity will be cut off to avoid scalding and the screen will display E1. The appliance will start to work again automatically when temperature drops to the set temperature.
4. Leakage protection. There is a leakage induced magnet ring. If the magnet ring detects electricity leakage, electricity will be cut off within mil seconds and the screen will display E2.
5. Malfunction of sensor. When the temperature sensor malfunctions, the heater will stop working and the screen will display E3
6. Conversion between Fahrenheit and Celsius.

## ■ Electrical Diagram



remark: J: relay R: heating system T: triac

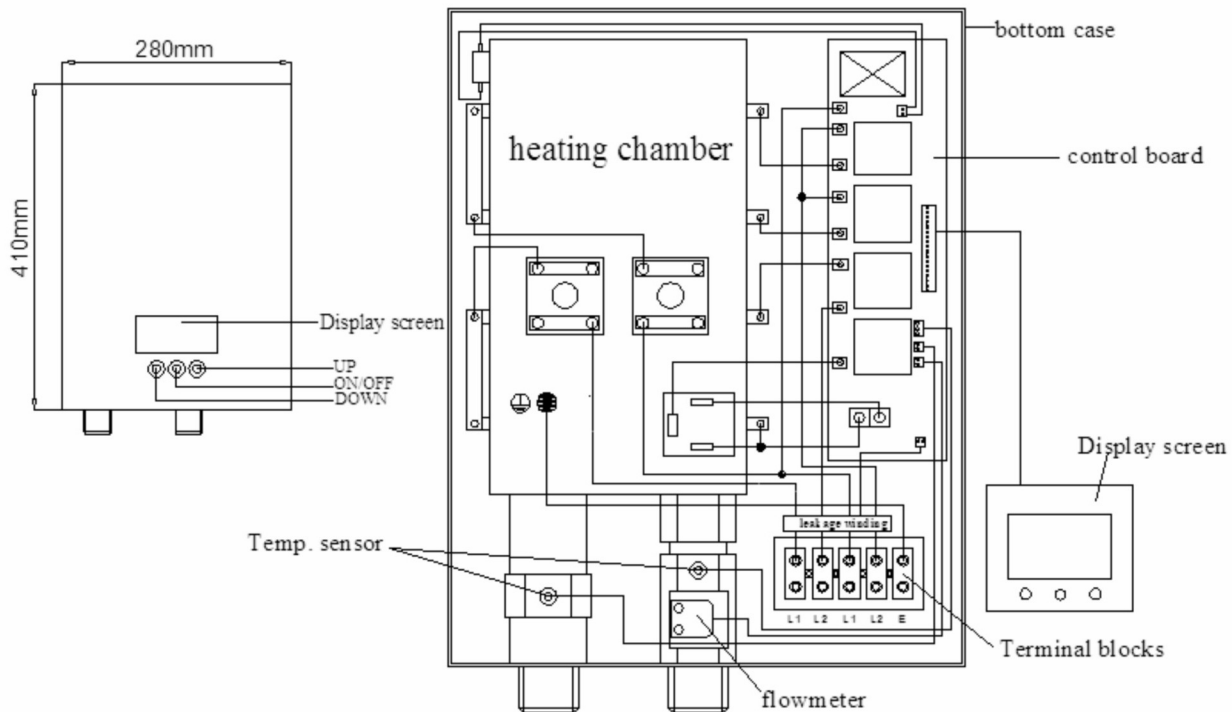
AC 240V/60Hz

## ■ Technical Data

Model		AQE-8	AQE-10	AQE-12	AQE-15	AQE-18	AQE-21
Phase		1	1	1	1	1	1
Voltage	V	240	240	240	240	240	240
Wattage	kW	8	10	12	15	18	21
Max. Amp. load	A	34	42	50	63	75	88
Min. required circuit breaker	A	45	60	60	2 X 40	2 X 50	2 X 60
Min. wire size	AWG cooper	8	6	6	2 X 8	2 X 8	2 X 8
Min. water flow to activate	GPM / L/min.	0.53 / 2	0.53 / 2	0.53 / 2	0.92 / 3.5	0.92 / 3.5	0.92 / 3.5
Working pressure	PSI/bar	Max.150/10					
Weight	kg	3.5	3.5	3.5	5.5	5.5	5.5
Product Dimensions	mm	385x260x93	385x260x93	385x260x93	385x260x93	385x260x93	385x260x93
Water connections	NPT	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"

Note: Appropriate pressure relief devices shall be provided when the product is being installed.

## ■ Product Inner Structure



## ■ Insatallation Guidelines

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 wire meet the installation requirements.
3. The appliance must be connected to dedicated and properly grounded branch circuits of proper voltage rating. Ground must be connected to the “ground” at the circuit breaker panel.
4. This appliance **MUST** be permanently connected to the fixed circuit breaker. If the heater is not in use, please switch off the circuit breaker.
5. **DO NOT** install this appliance close to any place with tinder or strong magnetic field. The unit must be mounted only in a VERTICAL position close to the water fittings. Please live test the machine after water line is connected.

## ■ Installation

### ● Fixed installation on the wall

AQE Series

Locate an appropriate place on the wall.

Fig 1 → Front and back of the appliance

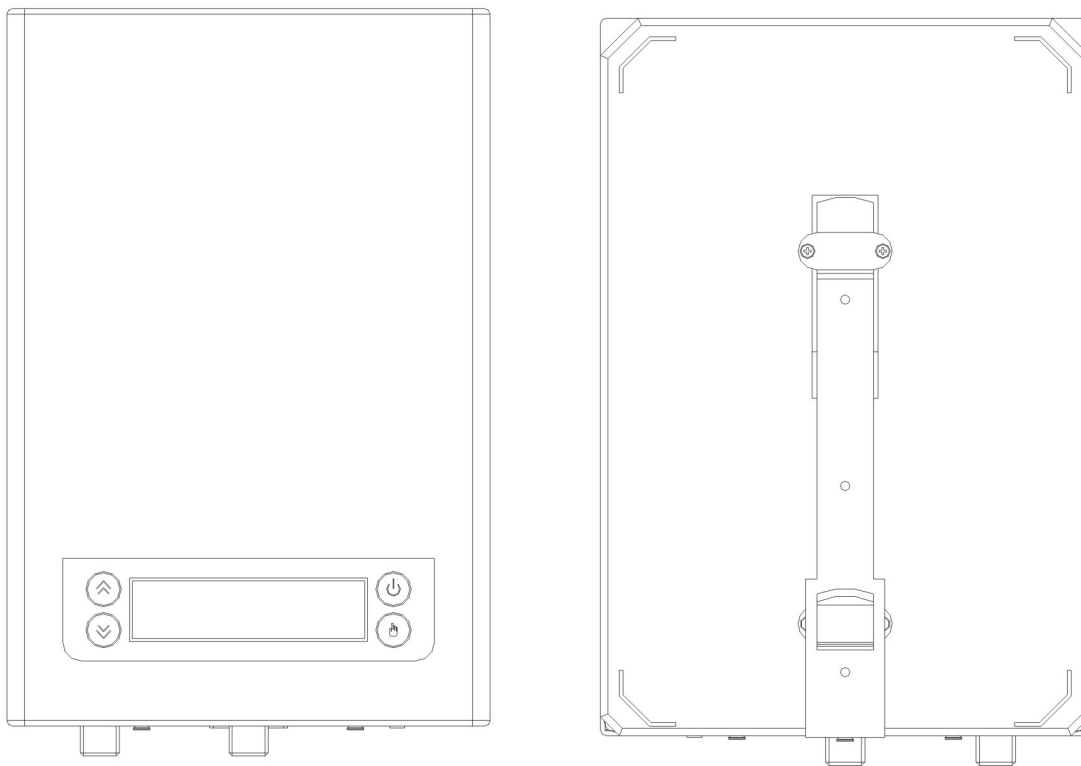
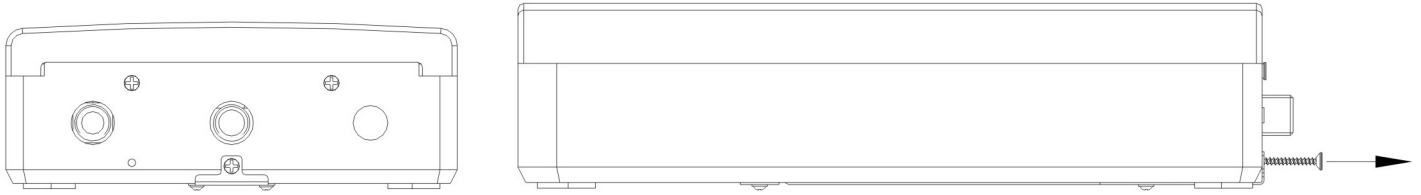
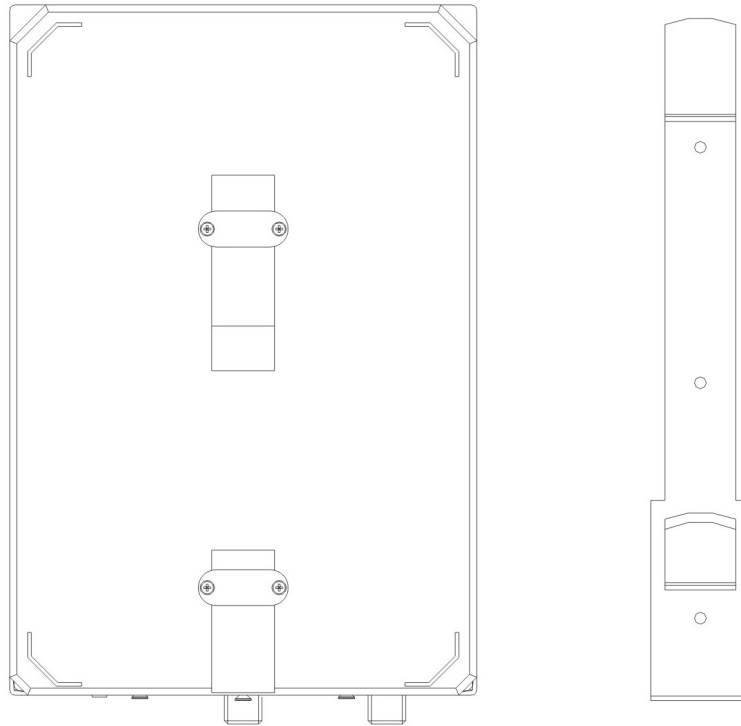


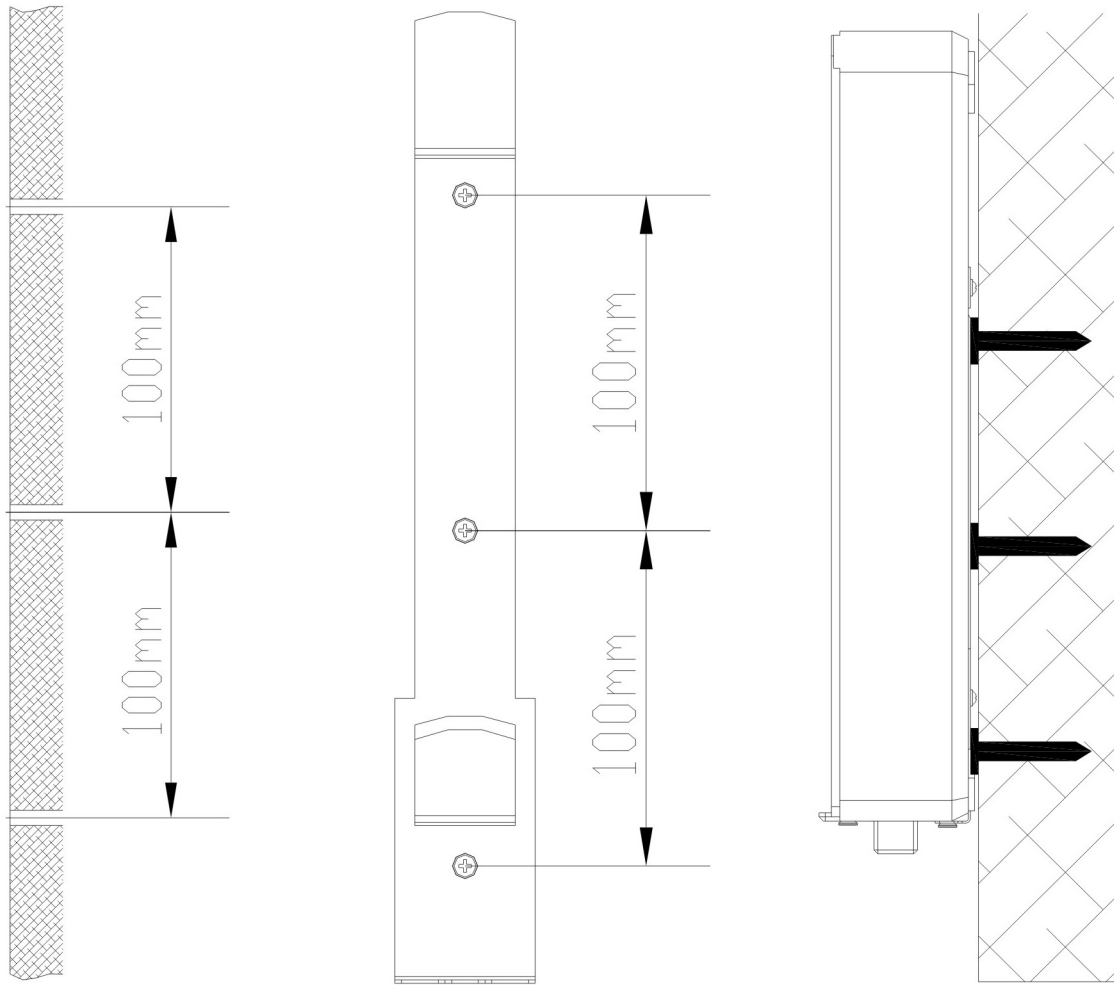
Fig 2 → Remove screw which holds the bracket to the back of the appliance.



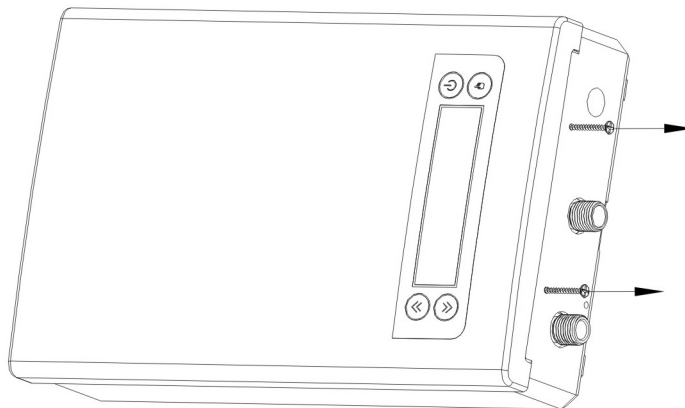
**Fig 3** → Remove the bracket from the appliance

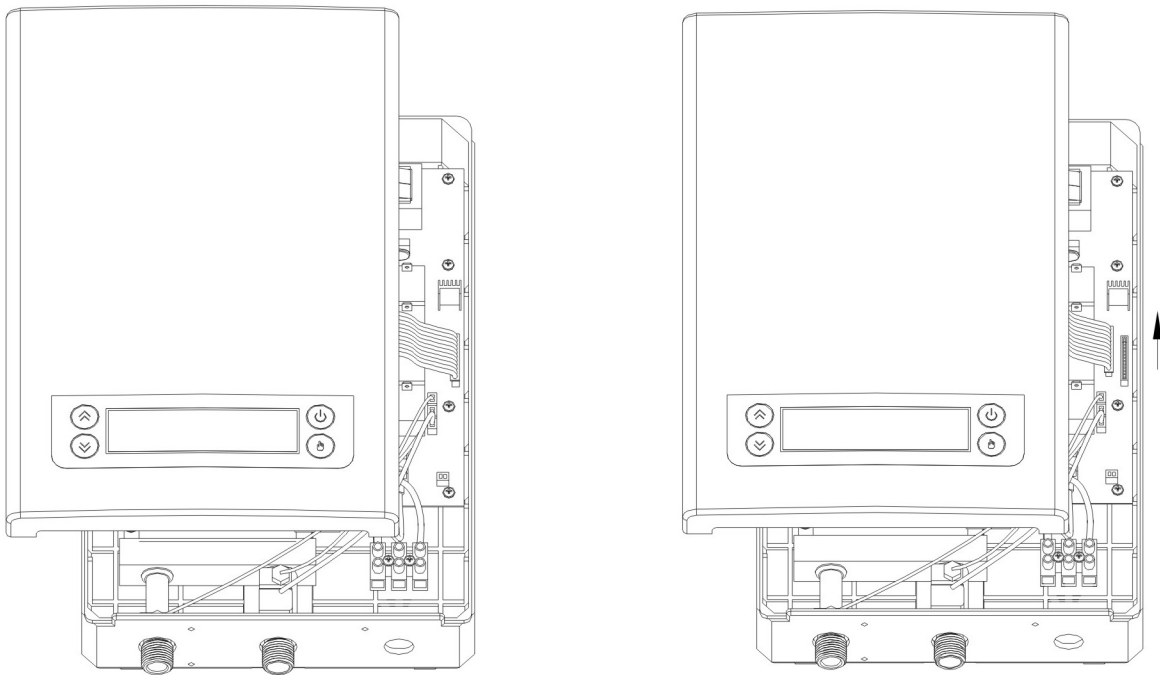


**Fig 4** → Hold the back bracket hanger in position against the wall and mark the three mounting holes. Drill three holes of 6.00mm diameter. The distance between every two holes is 100mm. (Insert plastic anchor into the hole, mount the bracket on the wall, and secure the hanger using the screws supplied or other appropriate alternatives.)

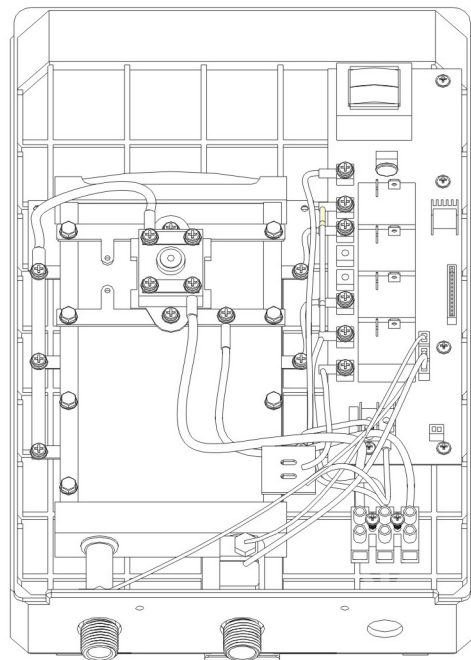


**Fig 5** → Uninstall screws on appliance to remove the front cover. Please use hand to pull out the LED screen cable plug carefully before removing the front cover.



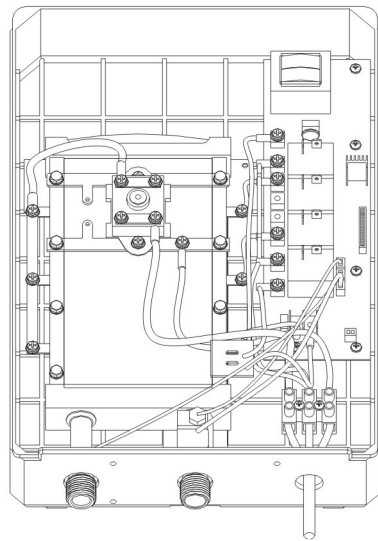


**Fig 6** —————> Fasten the appliance to the bracket which has been screwed to the wall. Make sure to mount the unit bracket onto the back metal hanger correctly

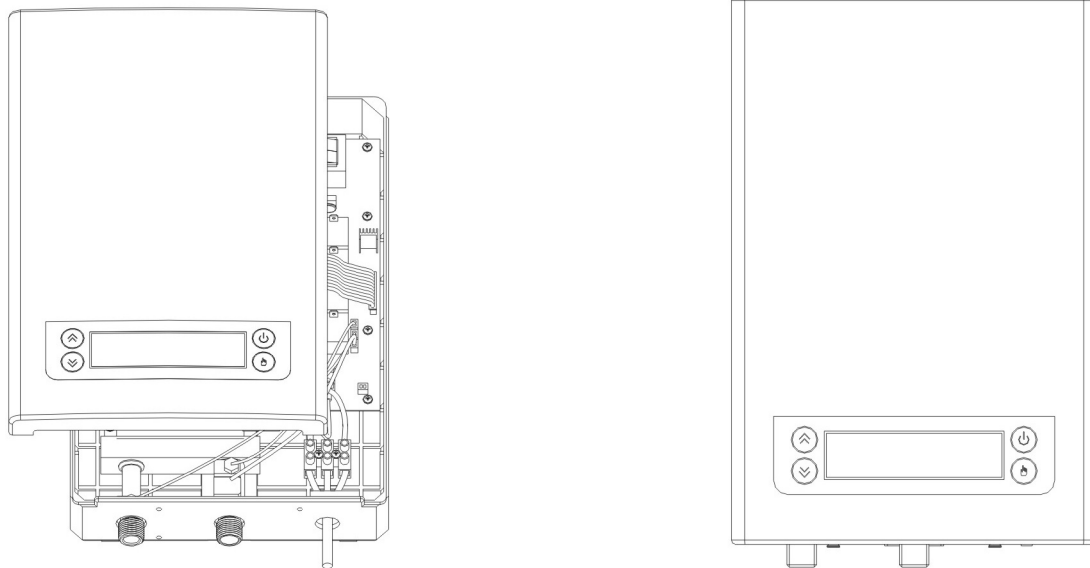


**Fig 7** —————> Connect the cable to the terminal blocks following the guide logo below the terminal blocks. AQE-8, AQE-10, and AQE-12 shall be connected to one circuit breaker. AQE-15, AQE-18 and AQE-21 shall be connected to two circuit breakers.

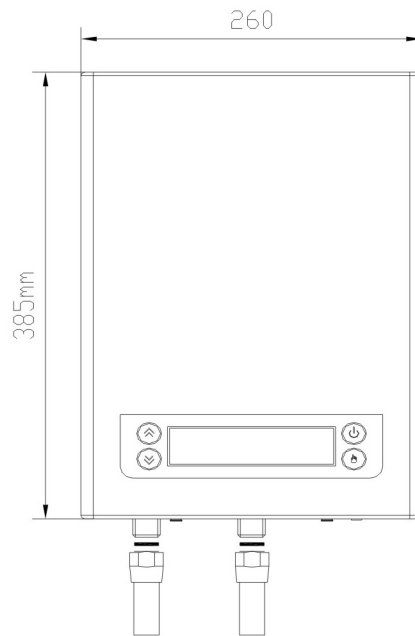




**Fig 8** —————> Connect the LED screen cable plug and mount the front cover back on appliance. Then tighten the screws to secure the front cover.



**Fig 9** —————> Connect the water pipe to the water inlet and water outlet of the appliance. Make sure to install the rubber washers.



#### ●Water connections

1. All water pipes must comply with national and applicable state and local water pipe codes.
2. A pressure relief valve must be installed if the cold water supply pressure exceeds 150PSI (1Mpa)
3. The unit should be connected directly to the main water supply. Flush pipe with water to remove any debris or loose particles
4. It is required that 1/2" NPT water connectors be used for the models of AQE-8, AQE-10, and AQE-12, and 3/4"NPT water connectors for the models of AQE-15, AQE-18 and AQE-21.
2. Please make sure to install rubber washers at the connections. When all water connections are completed, check for leaks and take corrective actions before proceeding.

#### ●Electrical connection

1. All electrical work must be done in compliance with national and applicable state and local electrical codes
2. The unit must be connected to a properly grounded and dedicated branch circuit of proper voltage rating.
3. AQE-8, AQE-10, and AQE-12 can be connected to a single circuit. Use a supply cable protected by a double pole breaker. AQE-15, AQE-18 and AQE-21 require two independent circuits. Use two supply cables protected by two separate double pole breakers.
4. While feeding the cable to terminal blocks, please make sure that the metal wire ends and the terminal blocks are connected firmly and completely. Tighten the screws up to make sure that full current can go through.
5. 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

#### AQE Series

1. Turn on the circuit breaker 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.
2. 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 is in standby mode.
3. Press "⏻" to turn ON/OFF the appliance. When the unit is ON, LED screen will display the actual output water

temperature. When the appliance stops working, the LED screen will switch to screen saver in 5 seconds and the LED will black out. If the LED screen is touched, it will light again.

4. Press  and  to adjust the output water temperature. The temperature setting range is 30--53°C/ 82-127°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 taking a shower.
- If the unit is not used in winter, drain the unit completely so that the heater will not get frozen.
- Please periodically clean inlet strainer and the shower head to ensure a free water flow.

5. Press  to convert the temperature display between Fahrenheit and Celsius.

6. 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. LED damaged.	A. Connect power to the unit. B. Change LED.
3. Functional keys not working.	A. No water out of shower head. B. Water pressure too low. C. Key or PCB damaged.	A. Open valve to get water. B. Open valve 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. Water flow at outlet gets smaller and smaller.	Inlet strainer or shower head clogged.	Clean strainer or shower head.
7. LED displays E1	Output temp. over 60°C/140°F.	A, Reduce temperature. B, Increase the water flow.
8. LED displays E2	Electricity leakage.	Please contact your local dealer.
9. LED displays E3	Temperature sensor failure	Please contact your local dealer.
10. LED displays overload	Input water flow is too big.	Reduce the input water flow

**7, 8 and 9 should only be performed by qualified electrician. The person who initially installed the unit is the best one to contact for help.**

## ■ Routine 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 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 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).