

Tankless Electric Water Heater



Model:
ES18-D
ES27-D

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.

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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 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 **EARTHED**.
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.**
5. This appliance is not intended for use by persons (include 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. 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 and it must be installed vertically. **DO NOT** install this appliance near to tinder or strong magnetic field place.
7. This appliance is **forbidden** to be switch 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 outlet 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 hoses, 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

natural if there might be a bit of smell or green blue smoke when the unit is used for the first time.

11. If there is damage to the wire, you must contact qualified electrician to replace it with dedicated wire from our authorized dealers.

12. CAUTION: FOR HOUSEHOLD AND INDOOR USE ONLY

13. Risk of electric shock, CONNECT ONLY TO A CIRCUIT THAT IS PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER (GFCI).

14. Save this instruction.

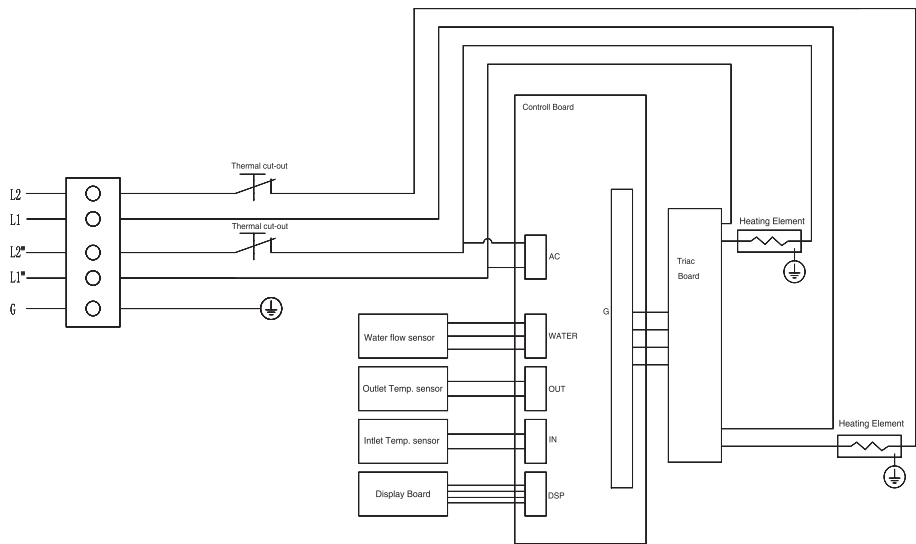
■ Product Features

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

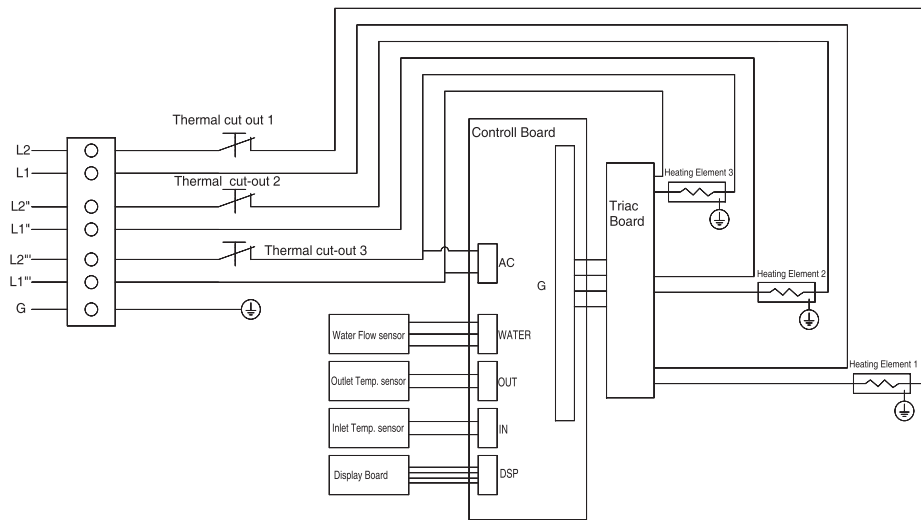
1. Tankless, instantaneous heating for on demand hot water, No pre-heating. No stand-by heating loss. energy-saving.
2. Micro-computer control, Adopting patent heating technology. Water is completely separated from electricity by multi-layers of composite nano insulation material.
3. Over temperature protection: when the outlet water temp. reaches over 167°F/75°C, the electricity will be cut off to avoid getting scalded and the screen displays E1. the appliance will start to work automatically while temp. drop to the set temperature.
4. Malfunction of sensor- when there is malfunction with the inlet temperature sensor, the heater stops working and displays E3.
5. Malfunction of sensor- when there is malfunction with the outlet temperature sensor, the heater stops working and displays E4.
6. Conversion between degree Fahrenheit and degree Celsius.

■ Electrical Diagram

ES18-D



ES27-D



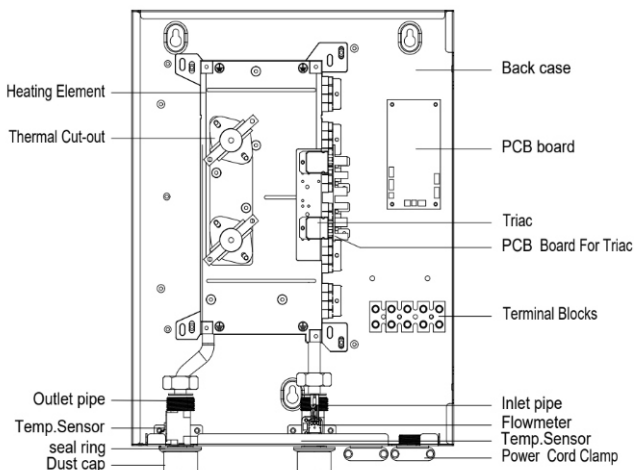
■ Technical Data

Model	ES18-D	ES27-D
Phase	1	1
Voltage	240V	240V
Wattage	18kW	27kW
Max. Amp. load	75A	112.5A
Min. required circuit breaker	2 x 40A	3 x 40A
Min. wire size	2 x 8# AWG	3x 8# AWG
Min. water flow to activate	0.32 GPM	0.32 GPM
Working pressure	0.02-0.6MPa	
Temp. setting range	30°C-60°C/86°F-140°F	
Product Dimension	426*308*103mm	
Water connections	3/4" NPT	

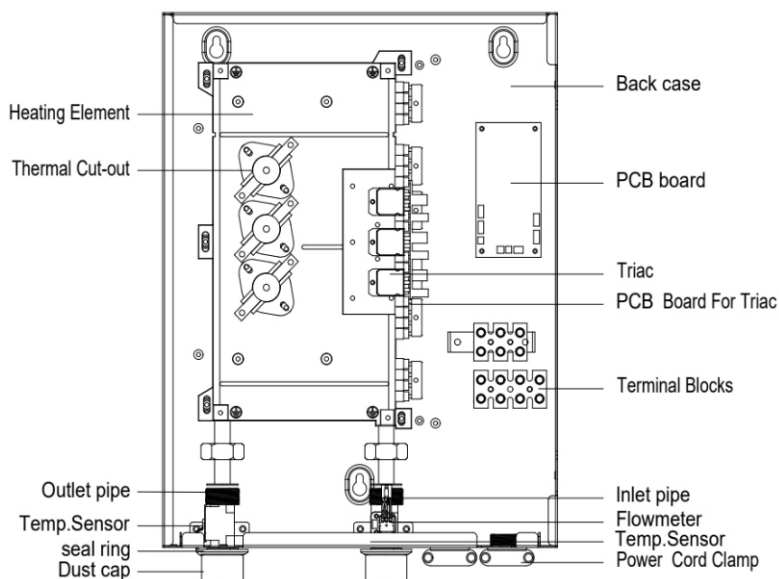
Note: *suitable recognized strain relief means shall be provided when the product installed

■ Product Inner Structure

ES18-D



ES27-D



■ 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 wire reach the standard of installation requirement.
3. The appliance must be connected to properly grounded dedicated branch circuits of proper voltage rating. Ground must be brought to the “ground” at the circuit breaker panel.
4. This appliance **MUST** be permanently connected to the fixed circuit breaker. If you don't use the heater, please switch off the circuit breaker.
5. **DO NOT** install this appliance near to tinder or strong magnetic field place. The unit must only be mounted in a VERTICAL position near by the water fittings. Please electrify try the machine after getting through waterway.

■ Installation Method

● Fixed installation on the wall

Locate an appropriate place on a section of wall as above mentioned.

Fig 1 —————> Front and back of the appliance

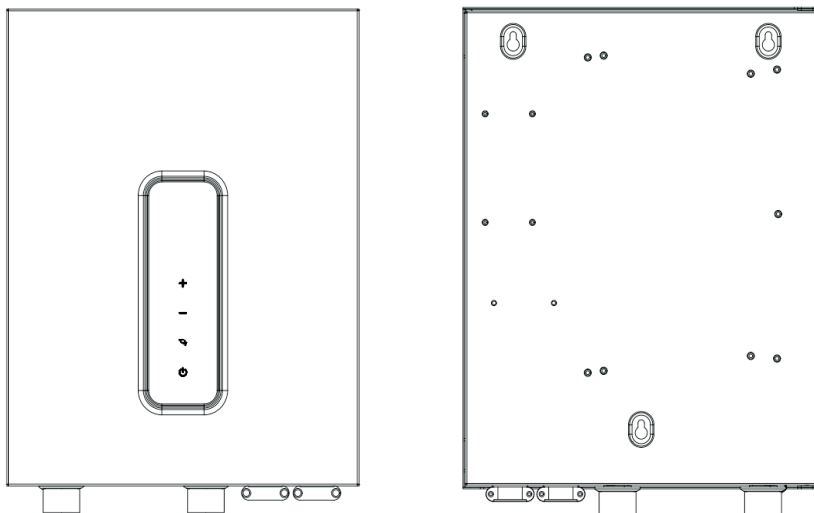


Fig 2 —————> Remove screw which fixed the front case and back case and then open the front case.

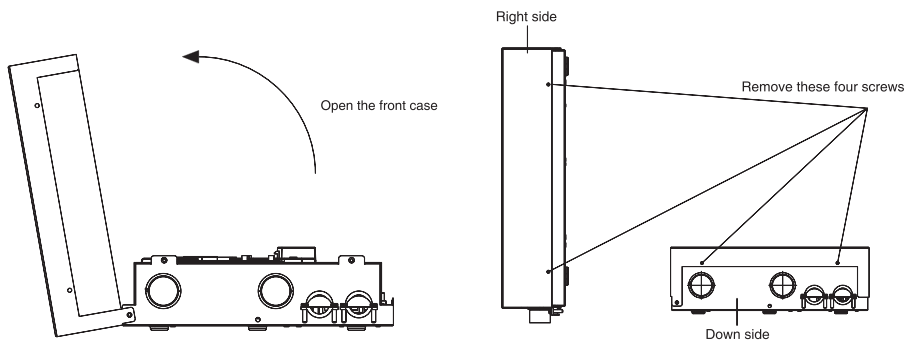


Fig 3 → Route power cord through power cord clamp inside water heater, connect the cable to the terminal blocks, please notice the guidance logo below the terminal blocks. ES18-D, will be connected to two circuit breakers, ES27-D will be connected to three circuit breakers.

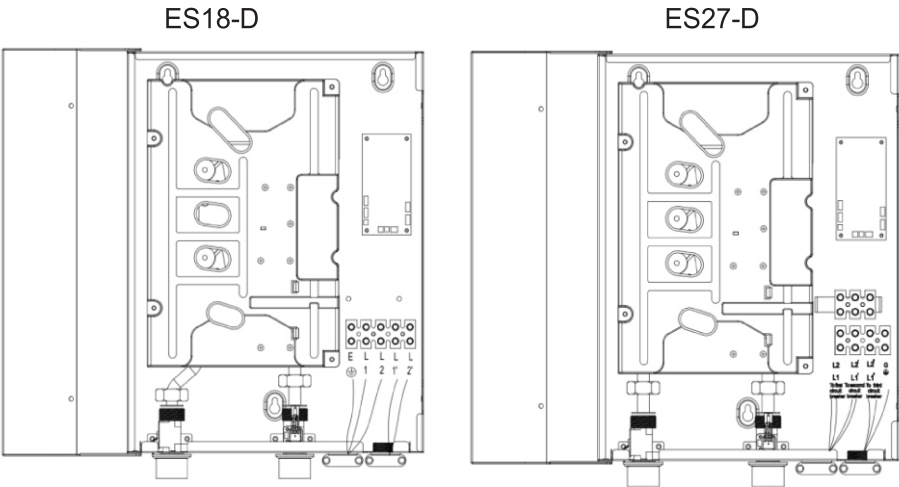


Fig 4 → Fix the front case on appliance, fix the power cord clamp, and plug in the screen row line plug. Then nail the screws to fix the front case.

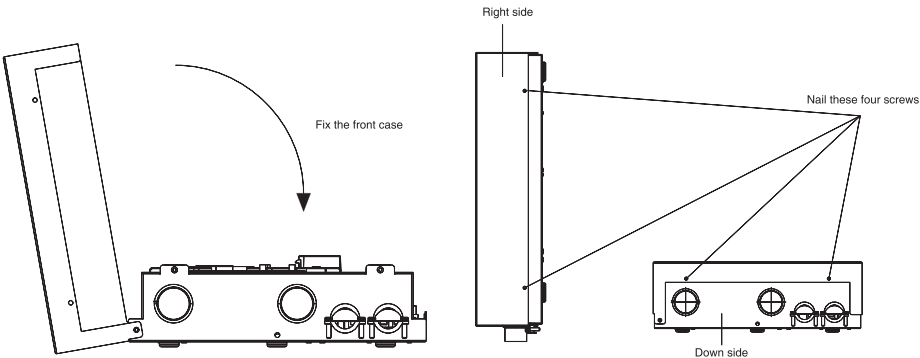


Fig 5 → Use the cardboard to make 3 marks for punching, then drill 3 holes with 6mm diameter, nail in the wall.

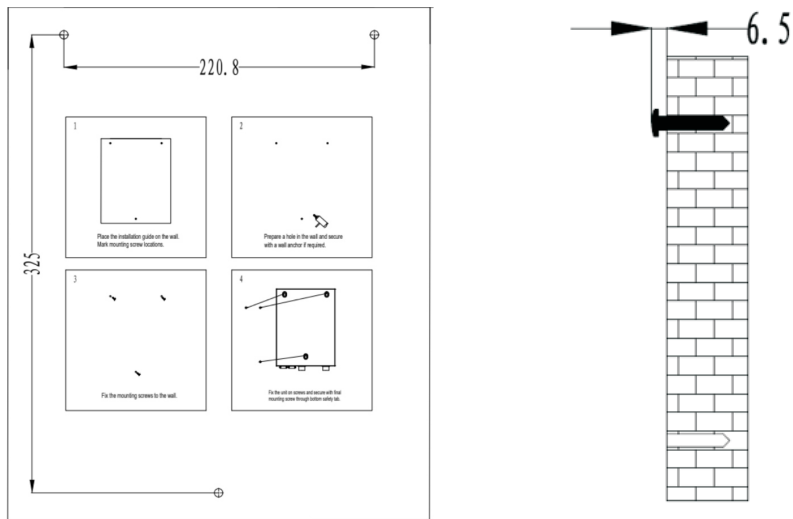


Fig 6 → Fix the appliance on the wall.

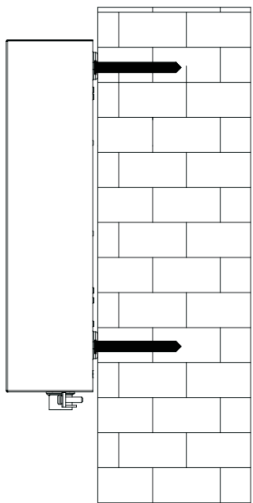
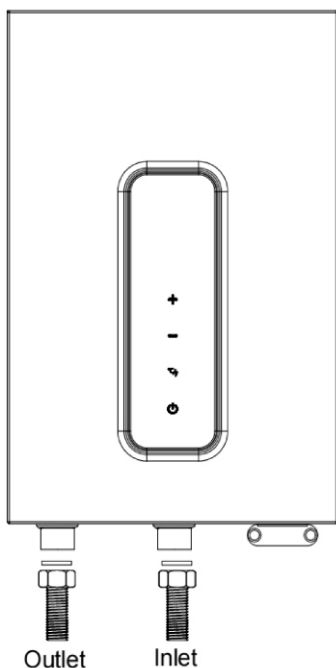


Fig 7 —————→ Connect the water pipe to the water inlet and water outlet connections, please remember to install the rubber seal ring.



■ 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 use 3/4" NPT water connections to fit the models of ES18-D and ES27-D.
- 4, Please remember to install rubber seal rings at the connections. When all water connections are completed, check for leaks and take corrective action before proceeding.

■ Electrical connection

- 1, All electrical work must comply 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, ES18-D require two independent circuits. Use two supply cables protected by two separate double pole breakers.
- 4, ES27-D require three independent circuits. Use three supply cables protected by three separate double pole breakers.
- 5, While fed the cable to terminal blocks, please make sure the metal wire ends and the terminal blocks to touch completely. Then tighten the screws up to make sure the full current can go through.
- 6, Before beginning any work on the electric installation, be sure that main breaker panel switch is OFF to avoid any danger of electric shock, all mounting and plumbing must be completed before proceeding with electrical hook-up.

■ Operation Instructions

1. Turn on the circuit breaker to bring electrical power to the unit.
- 2, Open water faucet for a few minutes until water flow is continuous and all air is purged from water pipes. The unit must be operate after the breakers are turned on.
3. After the unit is supplied with power, LED lights for 2 seconds, no other display, the appliance keeps standby.
4. Press “” to turn ON/OFF the appliance. When the unit is ON, LED displays actual water temperature of the outlet. While the appliance stops working, after 30 seconds, the screen switch to the screen saver. the display screen light will be off. If there is touch to the screen, it will be light again.
5. Single touch “+” and “-” to adjust the outlet temperature. Temperature setting range is 30-60°C/ 86-140°F.

- If the unit has been paused, you may initially get a short burst of very hot water while you turn on again. Please run the water through for a few seconds to let the temperature settle down. Please check hot water with hand before you taking a shower.
- If the unit will not be used in winter, drain out water completely so that the heater will not be frozen.
- Please periodically clean inlet strainer and the shower to keep a free water flow.

6. In ON mode, press $^{\circ}\text{C}/^{\circ}\text{F}$ to convert the temperature display between Fahrenheit degree and Celsius degree.

7. In ON mode, press $^{\circ}\text{C}/^{\circ}\text{F}$ and “-” for 5 seconds to lock the operation panel, in locking state, the light of  will keep on, then touch $^{\circ}\text{C}/^{\circ}\text{F}$ and “-” and hold for 5 seconds to unlock the operation panel, the light of  will be off.

8. In OFF mode, press “+” for 5 seconds, appliance enter into WIFI stand-by mode, the WIFI indicator  flashes quickly, and when WIFI connected successfully, the WIFI indicator  will keep on.

9. There is an automatic memory function to avoid repetitive operation, while you turn on the appliance, the default set temp. will be the same as last time set.

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

11. During OTA upgrade, it will display" --- ". the appliance cannot work when upgrade, please do not turn off the power. The appliance will start to work when the OTA upgrade is completed.

■ Trouble-shooting

Problems	Possible Causes	Corrective Actions
1. Inlet and outlet fittings leaking	A. Fittings not tight 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 from shower. 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. Too high temperature set. B. Water flow too small.	A. Set a lower temperature. B. Open valve bigger.
5. Water too cold	A. Low temperature set. B. Water flow too much.	A. Set a higher temperature. B. Reduce water flow.
6. Outlet gets water smaller and smaller.	Inlet strainer or shower clogged.	Clean strainer and shower.
7. LED displays E1	Outlet temp. is over 75°C /167°F	A, Reduce the temperature B, Turn up the water flow
8. LED displays E3	Inlet temperature sensor failure	Please contact with your local dealer
9. LED displays E4	Outlet temperature sensor failure	Please contact with your local dealer

■ Normal Maintenance

Note: Do not attempt to repair this water heater yourself. Call a service person for assistance. Always turn off of these operations the power supply needs to be shut off.

It is not required any regular maintenance. However, to ensure consistent water flow, it is recommended following maintenance.

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 inlet connection which should be cleaned from time to time. Please turn off the water flow before doing this.

Packing List

Item	Unit	Quantity
Electric Water Heater	Unit	1
Rubber plugs and screw	Set	1
Operation and Installation instructions	copy	1



Intertek
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