

MIZUDO

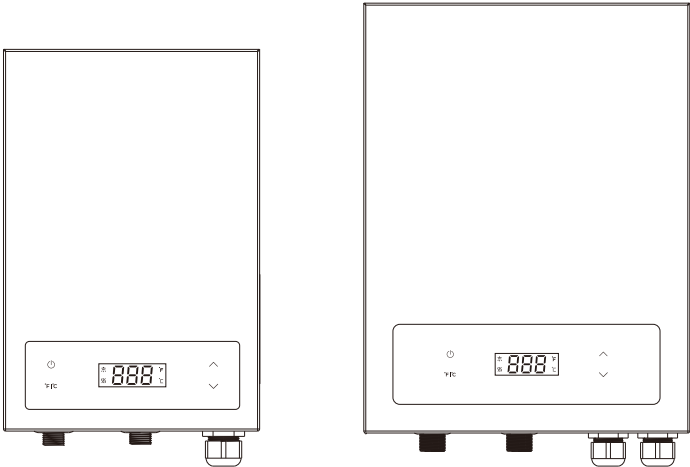
Comfort with Innovation

MODEL:

ET008 ET018

ET011 ET024

ET014 ET027



Electric Tankless Water Heater

Installation and Operation Manual



WARNING

Please read all instructions before using this water heater and keep it for future reference. Failure to follow the information in these instructions may result in fire, electric shock, property damage, injury or death.

CONTENTS

1 Explanation of Symbols and Safety Instructions	03
1.1 Recognize Safety Information	03
1.2 Understand Signal Words	03
1.3 Important Safety Messages	03
2 General Information	04
2.1 Function Introduction and Explanation	04
2.2 Dimensions and Connection Points	04
2.3 Technical Parameters	05
2.4 Component Diagram	06
3 Installation	08
3.1 Installation Instructions	08
3.2 Prepare for installation	08
3.3 Installation Method	09
3.4 Plumbing Installation	10
3.5 Electrical Connections	10
4 Operation	15
4.1 Operation Instructions	15
5 Maintenance	16
6 Troubleshooting	17
6.1 Diagnostic Codes	17
6.2 Fault Assessment and Troubleshooting	17
7 Circuit Diagram	18
8 Packing List	19
Warranty Policy	20



NOTICE

- SAVE THESE INSTRUCTIONS.
- As the appliance undergoes upgrades, there may be differences between the actual appliance and the one described in the manual, so the content is subject to change without prior notice. Please consult the actual product.

1 Explanation of Symbols and Safety Instructions

This manual has safety information and instructions to help you eliminate or reduce the risk of accidents and injuries.

1.1 Recognize Safety Information



This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

1.2 Understand Signal Words

A signal word will identify safety messages and property damage messages, and also will indicate the degree or level of hazard seriousness.



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.



CAUTION

Indicates a hazardous situation which, if not avoided, could result in property damage and minor or moderate injury.



NOTICE

This symbol indicates important information where there is no risk to people or property.

1.3 Important Safety Messages

1. Installation must comply with the National Electrical Code, local electrical and plumbing codes.
2. This device must be grounded.
3. All wiring and installation must be supervised by a qualified electrician.

4. This product has multiple power connection points. Disconnect all power sources before servicing.
5. This appliance is not suitable for use by persons (including children) with reduced physical sensory or mental capabilities or lack of experience and knowledge, unless the person responsible for their safety has supervised or instructed them to use this appliance. Children should be supervised to ensure they do not play with electrical appliances.
6. The device must be permanently connected to a fixed circuit breaker and must be installed vertically. Do not install this device where there is fire or strong magnetic fields.
7. If you think the device may be frozen, do not open the device as it may cause serious damage to the device. Wait until you're sure it's completely defrosted before opening it.
8. Before showering, please touch the hot water outlet temperature with your hands to make sure it is suitable for showering to avoid scalding.
9. Before connecting the pipes to the water heater hose, it is very important to flush the pipes to wash out any pipe dirt or residue from the pipes.
10. The surface of the heating body is covered with an insulating coating. When you use it for the first time, if there is a little smell or blue smoke, it is very natural.
11. If the wire is damaged, you must contact a qualified electrician to replace it with a special wire from our authorized dealer.
12. Precautions: Only for household and indoor use
13. There is a risk of electric shock if there is a wrong connection, it can only be connected to a circuit with ground protection.



WARNING

This product can expose you to lead, which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65warnings.ca.gov.

2 General Information

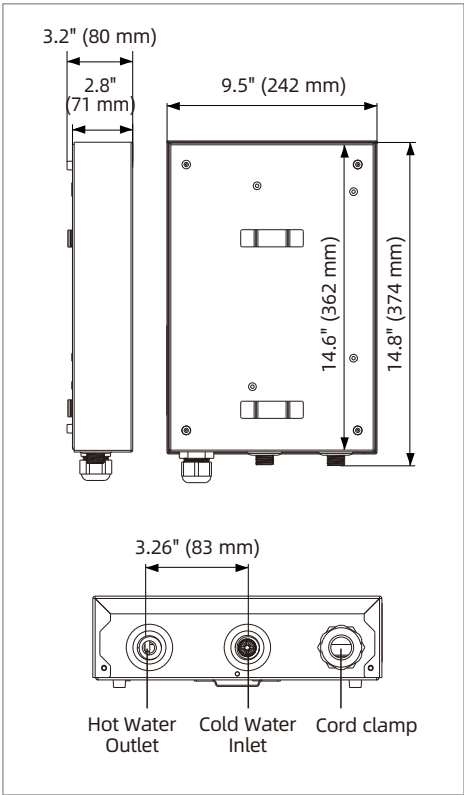
2.1 Function Introduction and Explanation

This instant electric water heater adopts patent technology and has various safety devices. In addition, the device has the following features:

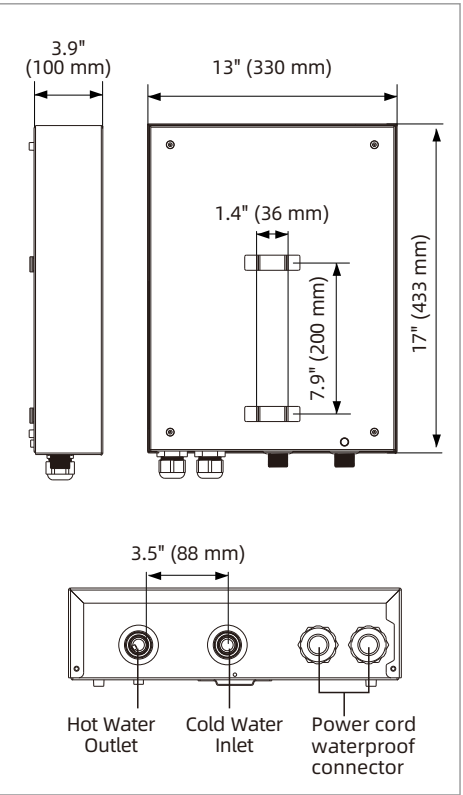
1. No water storage tank, instant heating, hot water can be provided according to demand, no preheating, no other heat loss, energy saving.
2. Microcomputer control technology, using patented heating technology, the surface is covered with multi-layer composite insulating materials to completely separate water and electricity.
3. Over-temperature protection: When the outlet water temperature reaches above 149 °F (65 °C), the power will be cut off to avoid burns, and the screen will display E1. When the temperature drops to the set temperature, the device will automatically start working.
4. Sensor failure: When the inlet water temperature sensor fails, the heater stops working and displays E3.
5. Long press the temperature switch to switch between Fahrenheit or Celsius.

2.2 Dimensions and Connection Points

ET008/ET011/ET014



ET018/ET024/ET027



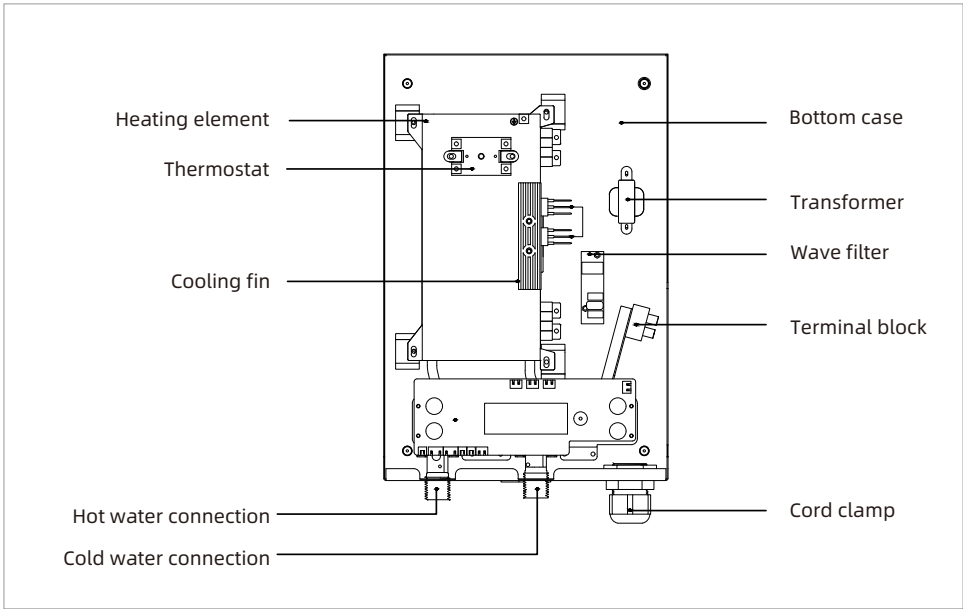
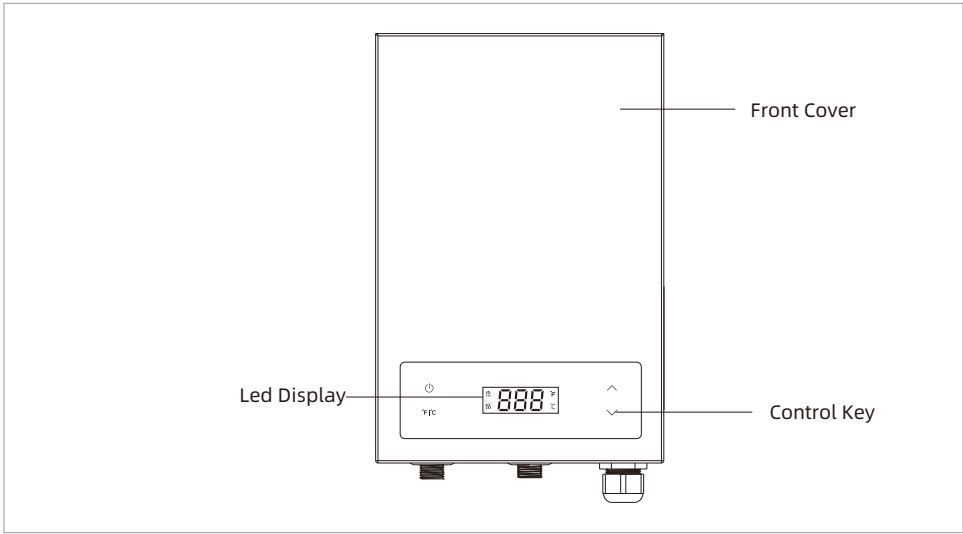
2.3 Technical Parameters

Model	ET008	ET011	ET014
Voltage	240 V	240 V	240 V
Wattage	8 kW	11 kW	14 kW
Min. Required Circuit Breaker Size	1 X 40 A	1 X 50 A	1 X 63 A
Max. Amperage	34 A	46 A	59 A
Recommended Wire Size	1 X 10 AWG	1 X 8 AWG	1 X 6 AWG
Min. Water Flow to Activate the Unit	0.4 GPM / 1.5 L/min	0.4 GPM / 1.5 L/min	0.48 GPM / 1.6 L/min
Safe Operating Pressure	3 PSI - 120 PSI		
Water Connections	1/2" NPT		
Installation	Wall mounted		
Temperature Setting	Digital Panel		
Dimensions	14.4" x 9.7" x 2.8" (365 x 245x 71 mm)		

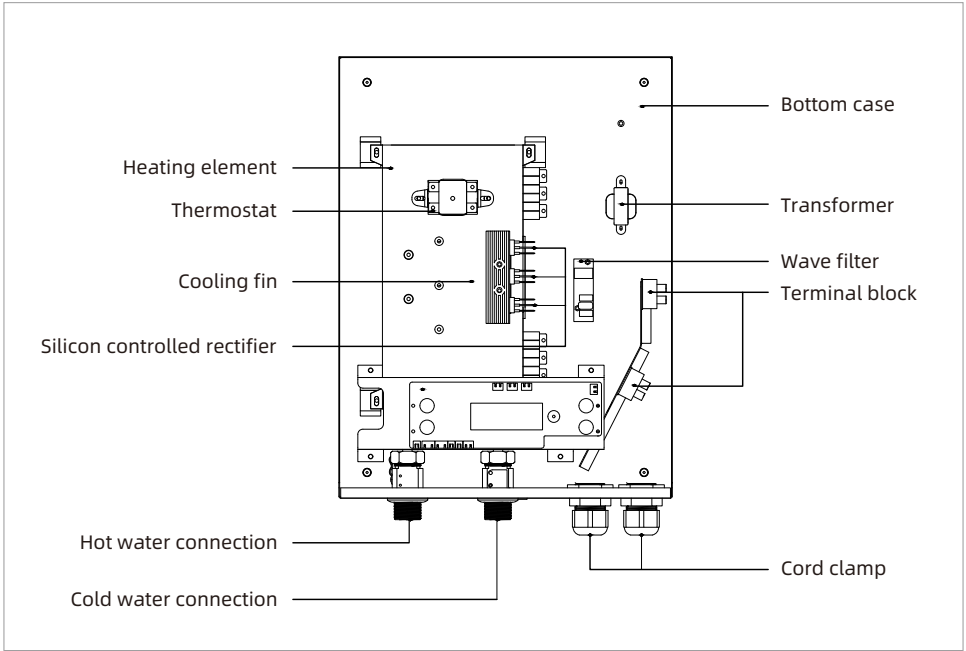
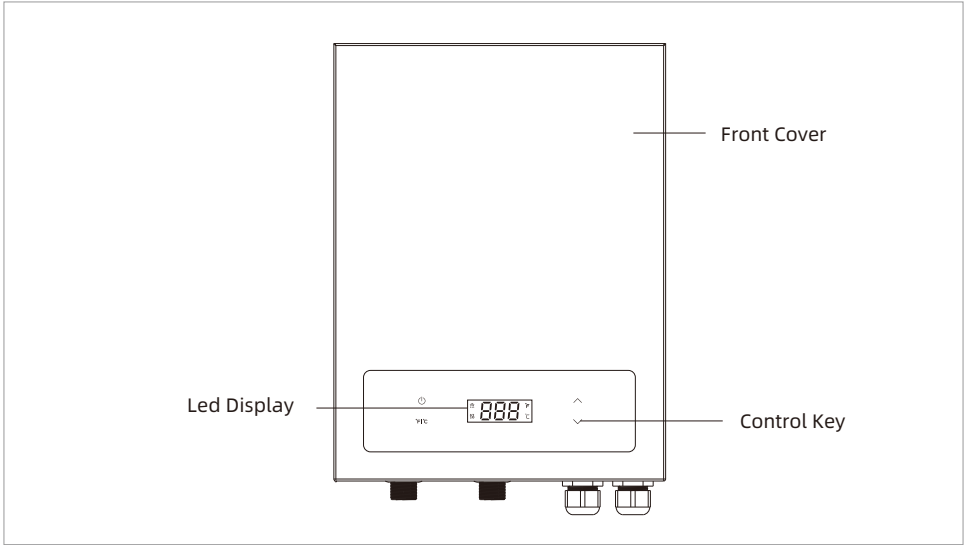
Model	ET018	ET024	ET027
Voltage	240 V	240 V	240 V
Wattage	18 kW	24 kW	27 kW
Min. Required Circuit Breaker Size	2 X 40 A	3 X 40 A	3 X 40 A
Max. Amperage	75 A	100 A	113 A
Recommended Wire Size	2 X 8 AWG	3 X 8 AWG	3 X 8 AWG
Min. Water Flow to Activate the Unit	0.66 GPM / 2.5 L/min	0.79 GPM / 3.0 L/min	0.79 GPM / 3.0 L/min
Safe Operating Pressure	3 PSI - 120 PSI		
Water Connections	3/4" NPT		
Installation	Wall mounted		
Temperature Setting	Digital Panel		
Dimensions	17.0" x 13.0" x 3.6" (433 x 330 x 91 mm)		

2.4 Component Diagram

ET008/ET011/ET014



ET018/ET024/ET027



3 Installation

3.1 Installation Instructions

- High voltage electrical installations should be prioritized by professional electricians.
 - Installation must comply with the National Electrical Code, local electrical and plumbing codes.
1. Make sure the product is intact and complete with accessories.
 2. Please ensure that the main power supply, water pressure, grounding conditions, ammeter and wires meet the installation requirements.
 3. The product must be installed in a circuit suitable for overcurrent. Must be grounded at the breaker panel.
 4. This appliance must be permanently connected to a fixed circuit breaker. If you are not using the heater, turn off the circuit breaker.
 5. Do not install the machine in the place of fire or strong magnetic field. This product needs to be installed vertically. This product should be connected to water first and then to electricity.

Guideline You Should Know

1. This product is designed to be installed indoors only. You may install your unit in an outdoor location so long as it is mounted in a suitable enclosure that protects it from rain, splashed water, freezing temperature, direct sunlight, debris and insects.
2. DO NOT install this product in a location where it may be subjected to freezing temperatures. If the water inside your tankless water heater freezes, it can cause severe and permanent damage that is not covered under your warranty.
3. DO NOT locate the water heater in a location that is difficult to access.
4. Make sure that the water heater and hot water outlet pipe are out of reach of children so they are unable to tamper with the temperature controls or injure themselves by touching the hot water outlet pipe. The outlet water pipe can get very hot.
5. Avoid installing your tankless water heater in a

location prone to excessive humidity, moisture or dust, or in an area where it may be splashed with water or other liquids.

6. DO NOT install under water pipes or air conditioning lines that might leak or condense moisture that could then drip onto the heater.
7. DO NOT install above electrical boxes or junctions.



CAUTION

The water heater should not be located in an area where leakage will result in damage to the area adjacent to it or to lower floors of the structure. Where such areas cannot be avoided, it is recommended that a suitable catch pan, adequately drained, be installed under the water heater.

3.2 Prepare for installation

■ Parts included



Electric Tankless Water Heater



User Manual



Assembly Kit



Mounting Bracket

■ Tools needed (Not included)



Phillips screwdriver



Slotted screwdriver



Hammer Drill With Concrete Bits



Ruler



Gloves



Pencil

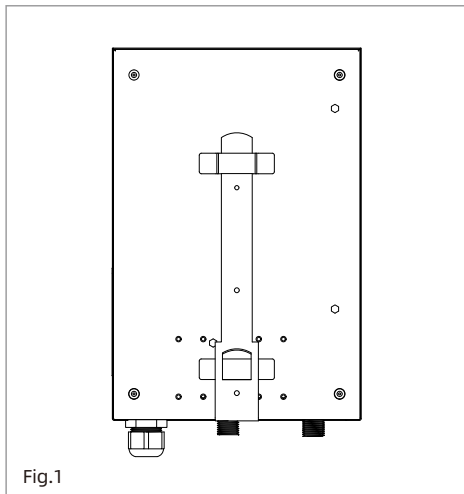
3.3 Installation Method



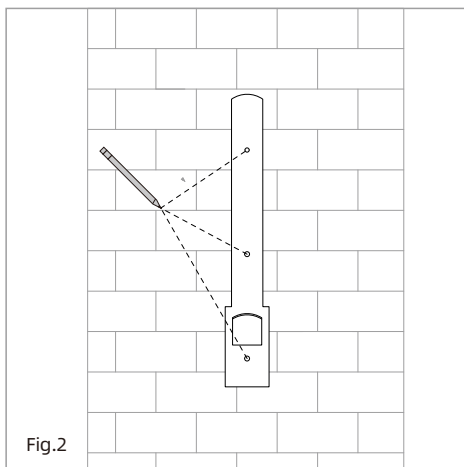
WARNING

Failure to follow this instruction may result in serious property damage, injury or death and this will void your warranty.

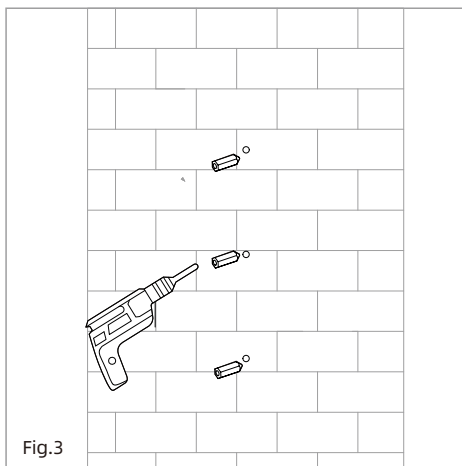
1. Find a suitable place to attach the electric tankless water heater to the wall.



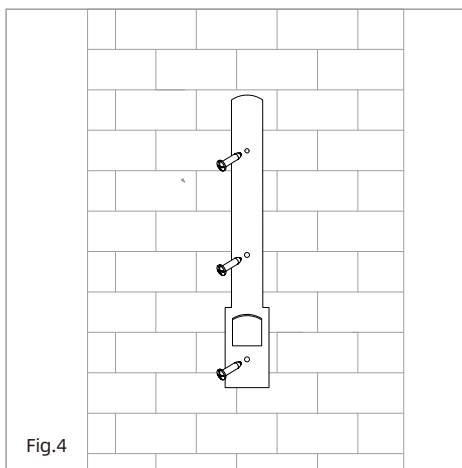
2. Figure out where to mount the water heater unit, mark 3 mounting holes on the wall according to the mounting bracket or the water heater (Fig.2).



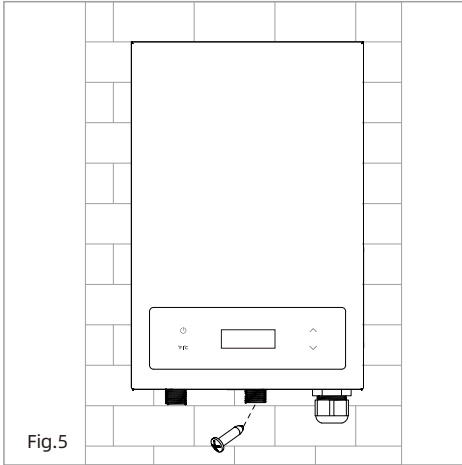
3. Use an electric drill to drill a hole according to the punching mark on the wall, with a diameter of 6mm, and put in the matching 3-M4 rubber plug (Fig.3).



4. Use a screwdriver to fix the supporting bracket on the wall horizontally with 3-M4x20 screws (Fig.4).



5. Use a screwdriver to fix the product on the bracket (Fig.5).

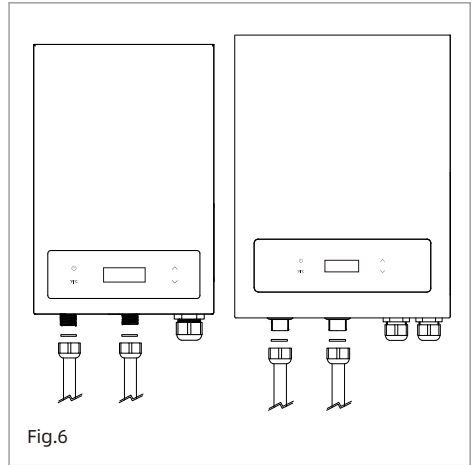


3.4 Plumbing Installation

1. All water pipes 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 the pipe with water to remove any debris or loose particles before pipe connections, so as to avoid clogging.
3. The Water heaters (models: ET008, ET011, ET014) require a 1/2" NPT water connection.

The Water heaters (models: ET018, ET024, ET027) require a 3/4" NPT water connection.

4. Flexible water hose are recommended to use with your hot water heater as part of installation, it makes future maintenance more convenient. Please remember to install rubber seal rings at the connections (Fig.6). When all water connections are completed, check for leaks and take the necessary actions before proceeding.
5. A set of service valves should be applied to the inlet and outlet fittings of the water heater if you live in hard water area, so you could get easy access of annual maintenance.

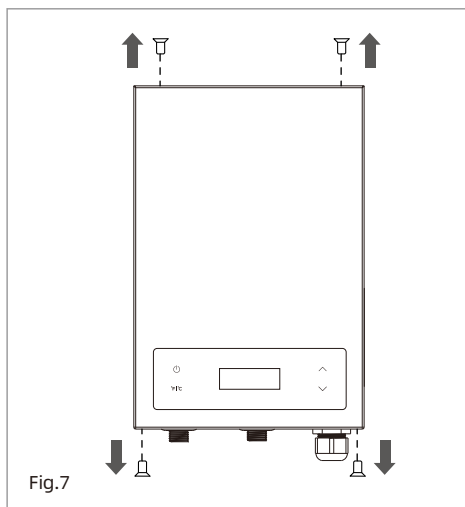


3.5 Electrical Connections

- All mounting and plumbing must be completed before proceeding with electrical hook-up.
- All electrical work must comply with national and applicable state and local electrical codes.
- The unit must be connected to a properly grounded dedicated branch circuit of proper voltage rating.
- Before beginning any work on the electric connections, make sure that the main breaker panel switch is OFF to avoid any danger of electric shock.
- While connecting the wires to the panel breaker, please make sure the metal wire ends and the blocks touch completely. Then tighten the screws to make sure the full current can go through.
- As with all high power appliances, make sure that you have turned off the vary circuit breaker for the water heater before installing, disassembling or repairing the water heater.

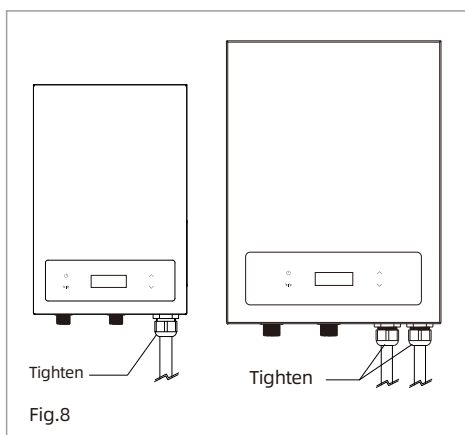
3.5.1 Open the front cover and connect the wiring

1. Use a screwdriver to unscrew the four screws at the top and bottom and open the front cover. (Fig.7)



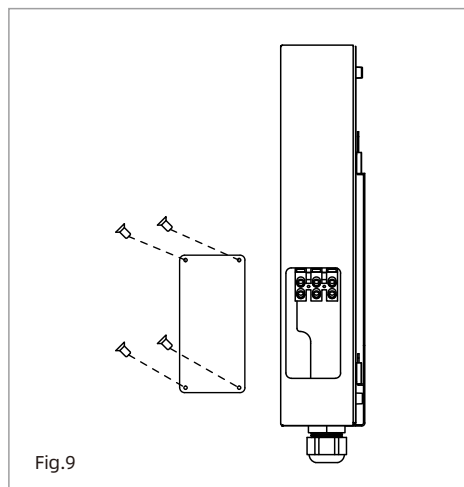
2. Connect the power cord according to the wiring identification of the power cord (**see 3.5.3 Important Wiring Instructions**).

3. After the cable connection is completed, install the front cover and tighten the four upper and lower screws with a screwdriver. Secure the cables (Fig.8).



3.5.2 Open the power cord cover and connect the wiring

1. Use a screwdriver to unscrew the four screws on the right, and open the power cord cover (Fig.9).



2. Connect the power cord according to the wiring identification of the power cord (**see 3.5.3 Important Wiring Instructions**).

3. After the cable connection is completed, replace the power cord cover and secure the cable (Fig.8).

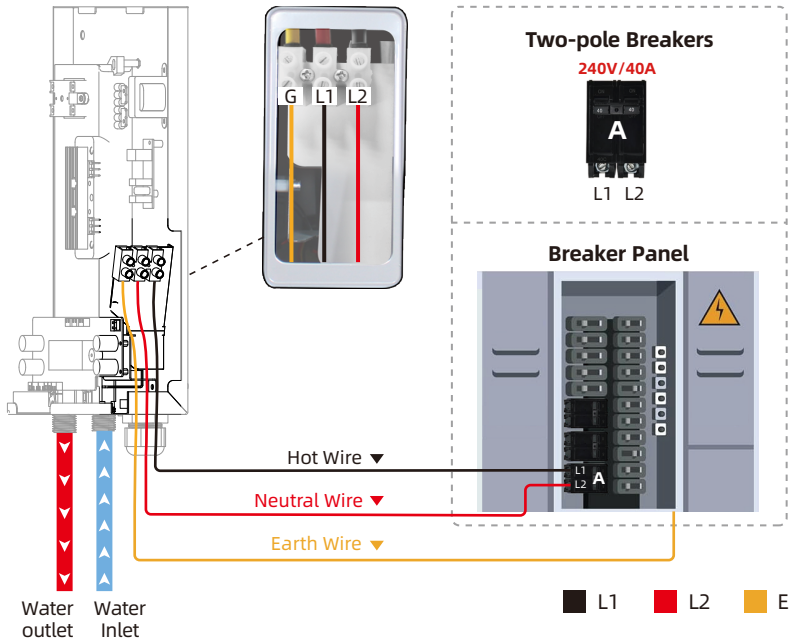
3.5.3 Important Wiring Instructions



WARNING

Please Make sure that each connected live line corresponds to the neutral line correctly.

ET008/ET011/ET014



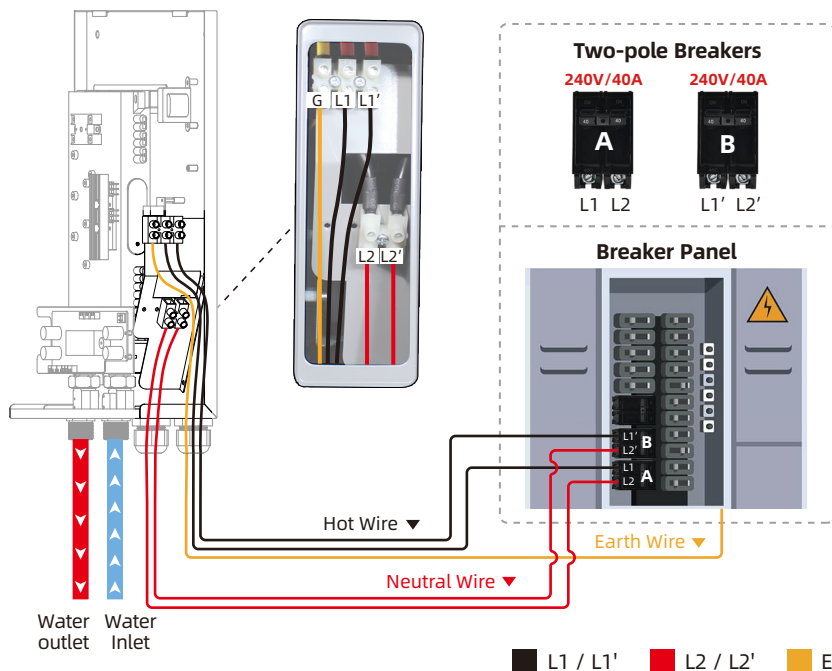
Model	ET008	ET011	ET014
Wattage	8 kW	11 kW	14 kW
Voltage	240 V / 34 A	240 V / 46 A	240 V / 59 A
Min. Required Breaker Size	1 X 40 AMP	1 X 50 AMP	1 X 63 AMP
Recommended Wire Size	1 X 10 AWG	1 X 8 AWG	1 X 6 AWG



WARNING

- **ET008, ET011 and ET014** must be connected to **1 sets of 240V power**. Each set power needs to be connected to a two-pole breaker.
- **L1 & L2 lines must be connected to breaker A.**

ET018



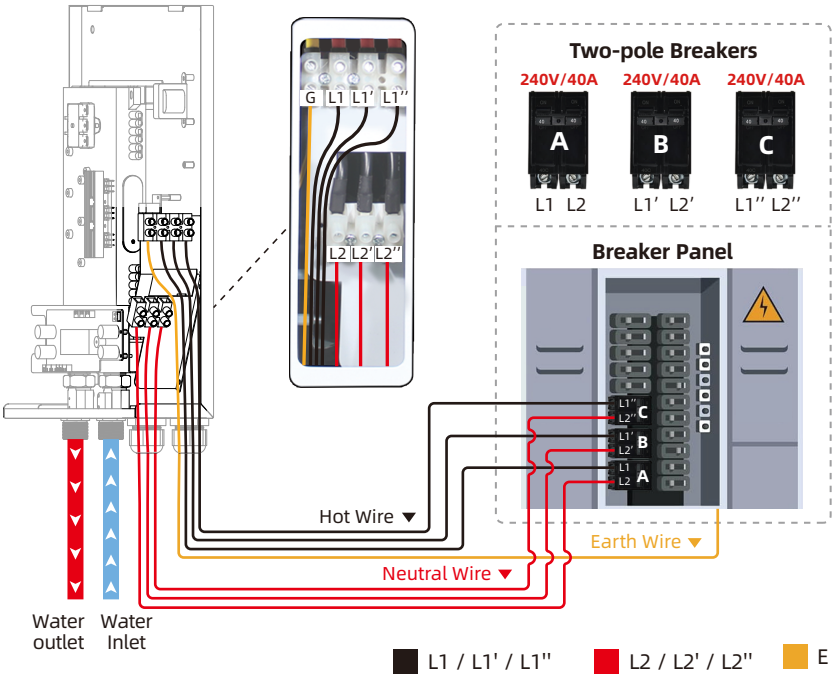
Model	ET018
Wattage	18 kW
Voltage	240 V / 75A
Min. Required Breaker Size	2 X 40 AMP
Recommended Wire Size	2 X 8 AWG



WARNING

- **ET018** must be connected to **2 sets of 240V power**. Each set power needs to be connected to a two-pole breaker.
- **L1 & L2 lines must be connected to breaker A**, **L1' & L2' must be connected to breaker B**.

ET024, ET027



Model	ET024	ET027
Wattage	24 kW	27 kW
Voltage	240 V / 100A	240 V / 113A
Min. Required Breaker Size	3 X 40 AMP	3 X 40 AMP
Recommended Wire Size	3 X 8 AWG	3 X 8 AWG



WARNING

- **ET024** and **ET027** must be connected to **3 sets of 240V power**. Each set power needs to be connected to a two-pole breaker.
- **L1 & L2 lines must be connected to breaker A**, **L1' & L2' must be connected to breaker B**, **L1'' & L2'' must be connected to breaker C**.

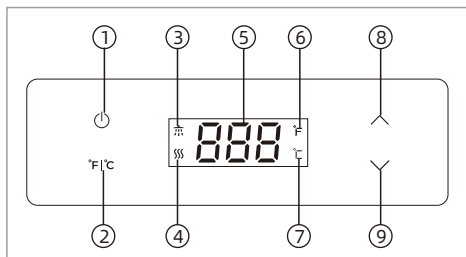
4 Operation

4.1 Operation Instructions



WARNING

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.



- | | |
|-------------------------------|--------------------|
| ① Switch button | ⑥ Fahrenheit |
| ② Fahrenheit/Celsius Priority | ⑦ Celsius |
| ③ Water flow signal | ⑧ Heat up button |
| ④ Water is heating up | ⑨ Heat down button |
| ⑤ Outlet water temp | |

1. Turn on the circuit breaker to supply electrical power to the unit.
2. Open the water faucet for a few minutes until the water flow is continuous and all the air has been purged from the water pipes.
3. After the device is powered on, there will be a "beep" sound, and the appliance keeps standby.
4. Press to turn the appliance on/off. When the unit is turned on, the LED displays the actual outlet water temperature. When the electrical appliance stops working, after 30 seconds, the screen switches to the screen saver state, and the indicator light on the display screen goes out. If the screen is touched, it will light up again.
5. Press " ^ " and " v " to adjust the outlet water temperature, Temperature setting range is 86 - 140 °F (30 - 60 °C).
6. Press " ⏻ " to start.
7. press " F/°C " switch between Fahrenheit and Celsius temperature display.

8. This product has an automatic memory function to avoid repeated operations. When you turn on the appliance, the temperature is set by default, which is the same as the previous setting.

- If the unit has been paused, you may initially get a short burst of very hot water when you turn it on again. Please run the water through for a few seconds to let the temperature settle down. Please check the hot water with your hand before taking a shower.
- If the unit is not used in winter drain out the water completely so that the heater does not freeze.
- Please clean the inlet filter and the shower periodically in order to keep a proper water flow.



WARNING

Minors are not allowed to operate the water heater themselves unless accompanied by a guardian.

5 Maintenance



CAUTION

Do not attempt to repair this water heater yourself if the unit is not working properly. Call a technician for assistance. The power supply always needs to be shut off before these operations are carried out.

To ensure consistent Maximum performance of the unit, it is recommended to follow these instructions:

1. Periodically remove scales and dirt that may build up at the aerator of the faucet or in the shower head.
2. There is a built-in filter at the inlet connection which should be cleaned from time to time. Please cut the water supply before doing this.
3. If you live in hard water area and you get a descale device installed prior to the tankless water heater, it is recommended that you should annually change the filter for the descale device, or do it according to the instruction of its manufacturer.

Important Note:

1. Any maintenance performed on the water heater unit may introduce air into plumbing pipes, it is important to purge all the air out before power on again.
2. If you have a water supply with high level of mineralization(hard water),you should increase the frequency of your maintenance. Check the declare device regularly to see if it is functional.
3. Do not use thinner, alcohol, petrol, or any other organic solutions to clean the set. use only a damp cloth with mild detergent.

6 Troubleshooting

6.1 Diagnostic Codes

Error Code	Fault description and troubleshooting step
E1	Over temperature protection: If the outlet water temperature is >149 °F (65 °C), stop heating; When the outlet water temperature is <140 °F (60 °C), resume the heating operation; When the outlet water temperature >158 °F (70 °C), stop working and display E1. After troubleshooting, power off and restart to restore.
E3	Inlet water temperature sensor failure (after troubleshooting, power off and restart to recover).
E4	Outlet water temperature sensor failure (after troubleshooting, power off and restart to recover).
E0	When the zero-crossing signal failure lasts for more than 1 second, the water heater stops working and displays E0.After the zero-crossing signal is restored, the water heater resumes working after troubleshooting.



NOTICE

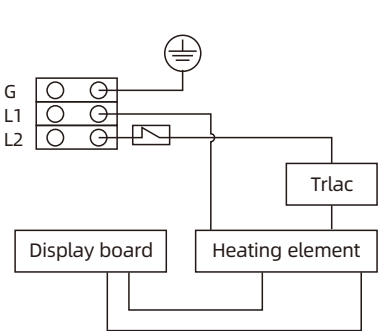
If the unit is still out of function after you have taken step above, pls contact MIZUDO after sales service by phone or e-mail.

6.2 Fault Assessment and Troubleshooting

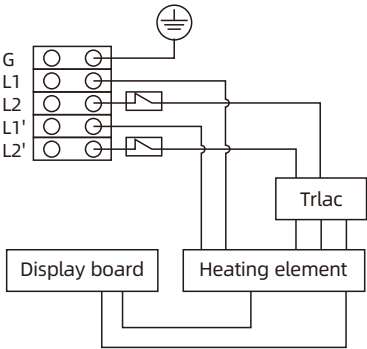
Problems	Possible Causes	Corrective Actions
Inlet and outlet fittings leaking	A. Fittings not tight B. Rubber washer worn-out	A. Tighten fittings. B. Change rubber washer.
LED no signal	A. Power not connected. B. LCD damaged.	A. Connect power to the unit. B. Change LCD.
Functional keys not working	A. 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.
The water temperature is too high	A.Too high temperature set. B.Water flow too small.	A. Set a lower temperature. B. Open valve bigger.
The water is too cold	A.Low temperature set. B.Water flow too much.	A. Set a higher temperature. B. Reduce water flow.
The water is smaller and smaller	Inlet strainer or shower clogged.	Clean strainer and shower.
Actual outlet water temperature is lower than display temperature.	Inlet water flow is too big.	Reduce the inlet water flow.

7 Circuit Diagram

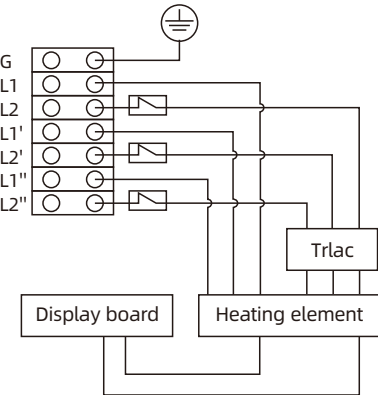
ET008/ET011/ET014



ET018



ET024/ET027



8 Packing List

Order	Design	Quantity
1	The water heater	1 piece
2	Mounting brackets (Packed with unit)	1 piece
3	Installation and operation manual	1 piece
4	Mounting template for the water heater	1 piece
5	Screw M4x20	3 pieces
6	Rubber plug	3 pieces
7	Inlet fliter	1 piece
8	Rubber gasket for outlet and inlet	2 pieces

Warranty Policy

What is covered

The Standard Limited Warranty covers any defects in materials or workmanship when the product is installed and operated according to Mizudo written installation instructions, subject to the terms within this Limited Warranty document. This Limited Warranty applies only to products that are installed correctly in the United States and Canada. Improper installation may void this Limited Warranty. Mizudo strongly recommends that this tankless water heater to be installed by a contractor who is licensed, state qualified, and trained on Mizudo's tankless products since improper installation may invalidate warranty coverage.

How long does coverage last

Item	Period of Coverage (from date of purchase)
	Residential Applications
All Other Parts and Components	12 months
*Shipping Costs	30 days

* Which excluding Alaska, Hawaii, and any location outside of the continental US and Canada

Limitation on warranties

During the Warranty Period, all repair parts must be genuine Mizudo parts; all repairs or replacements must be performed by a qualified professional who is professionally trained to do the type of repair. A component in the product fails because of a manufacturing defect, Mizudo will repair, replace, or refund the product to the owner at Mizudo's sole discretion and as determined to be appropriate by the Mizudo Support Team.

Mizudo does not authorize any person or company to assume for it any obligation or liability in connection with the replacement of the product. If Mizudo determines that repair of a product is not possible, Mizudo may replace the product with a comparable product at Mizudo's sole discretion. The warranty claim for product parts and labor may be denied if a component or product returned to Mizudo is found to be free of defects in material or workmanship; damaged by improper installation, use or operation; or damaged during return shipping.

No one is authorized to make any other warranties on behalf of Mizudo Corporation. Except as expressly provided herein, there are no other warranties, expressed or implied, including, but not limited to warranties of merchantability or fitness for a particular purpose, which extend beyond the description of the warranty herein. Any implied warranties of merchantability and fitness arising under state law are limited in duration to the period of coverage provided by this Limited Warranty, unless the period provided by state law is less. Some states do not allow limitations on how long an implied Limited Warranty lasts, so the above limitation may not apply to you. Mizudo shall not be liable for indirect, incidental, special, consequential, or other similar damages that may arise, including lost profits, damage to person or property, loss of use, inconvenience, or liability arising from improper installation, service, or use. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

How To Obtain Service

To make a warranty claim through this Limited Warranty, the owner must contact Mizudo's Customer Service team at us.mizudo@fogatti.com, schedule a call or live chat on the Mizudo Whatsapp. It is within Mizudo's sole discretion when a repair, replacement, or refund will be issued. Any return for refund must be approved by Mizudo's Customer Service team prior to shipping the product back to Mizudo. Please refer to Returning Your Product for Repair or Refund Policy provided with the Product.

Within the first 30 days of purchase, Mizudo will cover all ground shipping costs for warranty related issues in the US and Canada, excluding Alaska, Hawaii, and any location outside of the continental US and Canada. After the first 30 days of purchase, the owner is responsible for all shipping to Mizudo, regardless of reason or circumstance. Mizudo will cover the warranty related shipping costs when returning the product to the owner after repair/inspection. The method for warranty related shipping will be ground equivalent with the provider within Mizudo's sole discretion.

What information you will need for processing of your warranty claim:

- Proof of purchase
- Serial numbers
- Photos of the installation
- Photos of the damage part (if there is one)

All shipments of any type of product coming to Mizudo for any reason must have a Return Goods Authorization ("RGA") number for any repairs to be made. Please contact Mizudo to obtain an RGA number prior to shipping anything to Mizudo. Failure to do so could result in loss of product. Mizudo will not be responsible for replacement due to loss or damage if above steps are not properly followed.

Any returns to Mizudo must be sent in the original packaging. If your returned product does not have the original packaging and/or is missing any of the components that came with the product, there will be a nonnegotiable 15% restock fee.

What Is Not Covered

The following exclusions apply to this Limited Warranty:

1. A repair, replacement, or refund will not be provided under this Limited Warranty unless the Product containing the defective component is properly installed and maintained according to Mizudo's Installation Manual and Use & Care Manual and in compliance with all applicable federal, state/province, and local laws, regulations, codes, policies, and licensing requirements. Any abuse, misuse, alteration, neglect, or misapplication of the product will void this Limited Warranty.
2. A repair, replacement, or refund will not be provided if the product is damaged by services performed by third party service providers other than Mizudo Systems.
3. Mizudo systems is not responsible for any expenses arising from labor services, including but not limited to, installation or removal services due to a warranty claim.
4. A repair, replacement, or refund will not be provided if the product is damaged because of improper installation, including sizing, length, elevation, condensation drainage, or inadequate airflow.
5. A repair, replacement, or refund will not be provided if the product is damaged because of improper use, including freezing within the unit or surrounding piping, incorrect sizing for the application, scale build up, or incorrect gas and/or water pressure.
6. This product shall not be used as a pool or spa heater. Use of the Product as a pool or spa heater shall be considered misuse and will void this Limited Warranty.

-
7. A repair, replacement, or refund will not be provided if the product is damaged by the use of non-potable, untreated or poorly treated well water, or water with high PH levels or hardness levels in excess of 12 grains per gallon (200 mg/L).
8. A repair, replacement, or refund will not be provided under this Limited Warranty if the original serial number on the product has been removed or altered in a way that causes the serial number to not be readily determined.
9. Mizudo will not pay increases in electricity for any reason whatsoever, including additional or unusual use of supplemental electrical heat.
10. Mizudo will not be responsible for any default or delay in performance under this Limited Warranty caused by any factor or contingency outside of its control.

The water heater		Serial number
Product name		
Product model		
Purchasing date		

MIZUDO
Comfort with Innovation