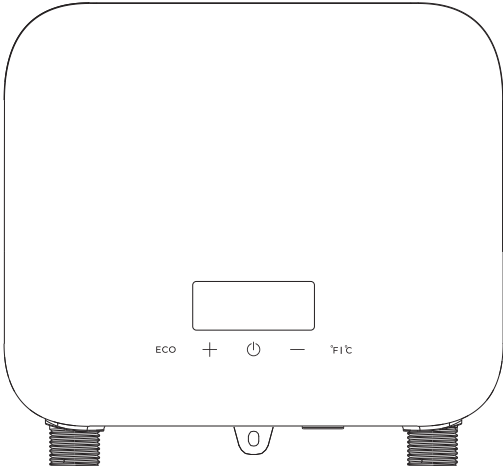


MIZUDO

Comfort with Innovation

MODEL:

ET003



Electric Tankless Water Heater

Installation and Operation Manual



WARNING

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

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1 Safety Information

1.1 Safety Definitions

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



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.

1.2 General Information

- Read this entire manual. Failure to follow all the guides, instructions and rules could cause personal injury or property damage.
- Improper installation, adjustment, alteration, service and use of this unit can result in serious injury.
- This unit must be installed by a licensed electrician and plumber.
- The installation must comply with all national, state and local plumbing and electric codes. Proper installation is the responsibility of the installer. Failure to comply with the installation and operating instructions or improper use voids the warranty.
- Save these instructions for future reference. The installer should leave these instructions with the consumer.

- If you have any questions regarding the installation, use or operation of this water heater, or if you need any additional installation manuals, please call our technical service line.

1.3 Important Safety Messages

Observe the following safety information and regulations.

Operate the appliance only when fully installed and with all safety equipment fitted.

1.3.1 Intended Use

The appliance is used to heat domestic hot water and can only supply one point of abstraction.

Any other use beyond that described shall be deemed inappropriate, and may void the manufacturers warranty.

Observation of these instructions is also part of the correct use of this appliance.

1.3.2 Safety Precautions



DANGER: Electrocution



Before proceeding with any installation, adjustment, alteration, or service of this appliance, all circuit breakers and disconnect switches servicing the appliance must be turned off. Never remove the appliance's cover unless the electricity servicing the appliance is turned off. Failure to do so could result in personal injury or death.

The appliance must be properly grounded. Failure to electrically ground the product could result in serious personal injury or death.



DANGER: Burns

Water temperatures over 125°F (52°C) can cause severe burns instantly or death from scalding. A hot water scalding potential exists if the thermostat on the appliance is set too high. Households with small children, disabled or elderly persons may require that the thermostat be set at 113°F (45°C) or lower to prevent possible injury from hot water.



WARNING: injury

Where children or persons with limited physical, sensory or mental capabilities are to be allowed to control this appliance, ensure that this will only happen under supervision or after appropriate instructions by a person responsible for their safety. Children should be supervised to ensure that they never play with the appliance.



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 Introduction and Explanation

The units are designed to supply hot water for a house, apartment or certain commercial applications.

Unlike a conventional storage type water heater, the units tankless water heater does not store hot water. Instead, water is heated instantaneously as it flows through the unit. The units offers greater energy efficiency than storage type water heaters due to the absence of stand-by losses and reduced hot water pipe runs.

The input of heat into the water is controlled electronically. The units will deliver any water temperature between 80 °F (26 °C) and 130 °F (55 °C). Set the desired temperature using the knob on the front cover. The units temperature adjustment knob can be set to: OFF, 80-130 °F (26-55 °C). The maximum temperature is electronically limited to 130 °F (55 °C).

For reasons of appliance efficiency and durability (scaling), the optimum temperature setting lies between 86 °F (30 °C) and 120 °F (50 °C).

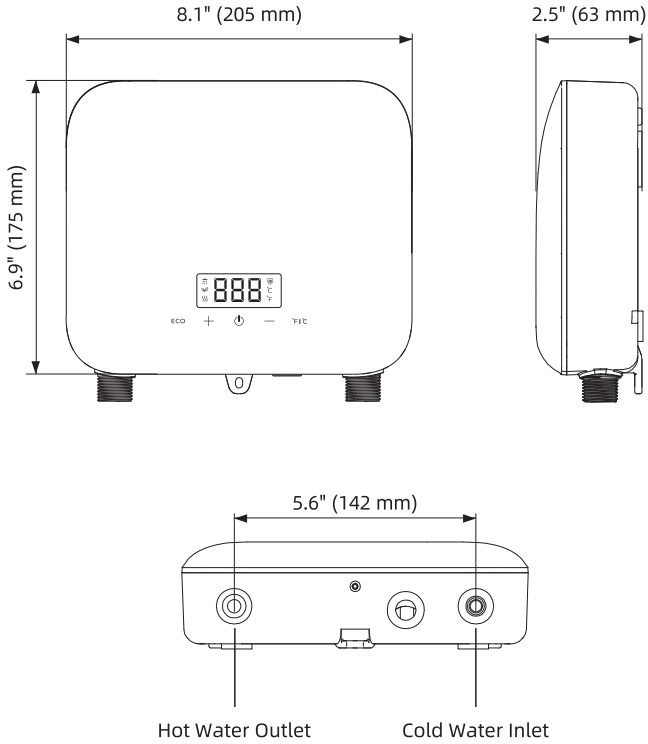
1.3.3 Test Symbols

See the type label on the appliance.

1.3.4 Licences / certificates

- UL (U.S.A) Std. 499
- CSA (Canada) Std. C22.2 No.64

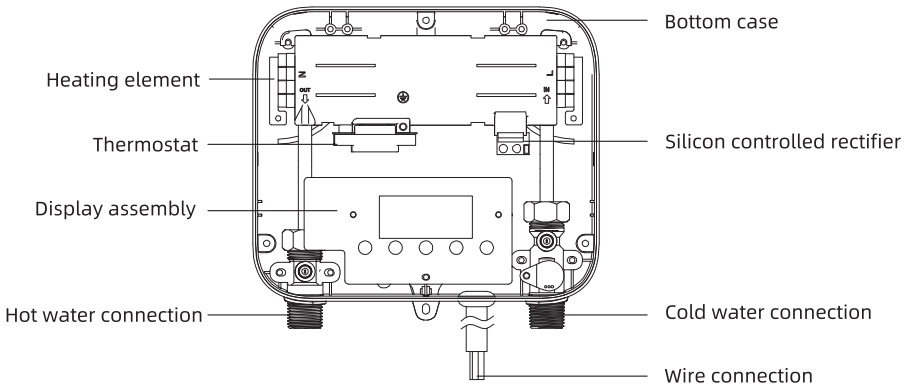
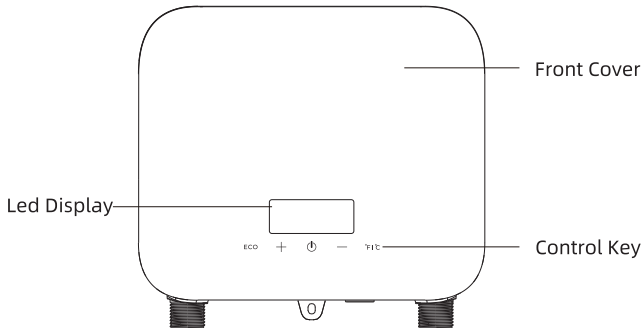
2.2 Dimensions and Connection Points



2.3 Technical Parameters

Model	ET003
Voltage	120 V
Wattage	3.5 kW
Min. Required Circuit Breaker Size	30 A
Max. Amperage	29 A
Recommended Wire Size	1 X 10 AWG
Min. Water Flow to Activate the Unit	0.3 GPM / 1.2 LPM
Operating Pressure	Max. 150 PSI
Water Connections	1/2" NPT
Installation	Wall mounted
Temperature Setting	Digital Panel
Temperature Adjustment Range	80-130 °F
Dimensions (H x W x D)	6.9" x 8.1" x 2.5" (175 x 205 x 63 mm)

2.4 Component Diagram



3 Installation

3.1 Installation Instructions



WARNING

- High voltage electrical installations should be prioritized by professional electricians.
- Installation must comply with the National Electrical Code, local electrical and plumbing codes.



NOTICE

Unit must be installed in a vertical position with the water fittings pointing downward.



WARNING

Do not install unit where it would routinely be splashed with water. Electric shock may result.



CAUTION

Hot water outlet pipes leaving unit can be hot to the touch. Insulation must be used for hot water pipes below 36" (0.9 m) due to burn risk to children.



NOTICE

This unit should not be installed in a location where it may be exposed to temperatures less than 36 °F (2 °C). If the unit may be subject to freezing temperatures all water must be drained from the unit. Failure to comply with this instruction voids all warranties.

The unit should be located in an area where water leakage from the unit or connections will not result in damage to the area adjacent to the unit. If such a location cannot be avoided it is recommended that a drain pan be installed under the unit.

- Make sure the product is intact and complete with accessories.
- Please ensure that the main power supply, water pressure, grounding conditions, ammeter and wires meet the installation requirements.

- The unit must be installed in a circuit suitable for overcurrent. Must be grounded at the breaker panel.
- This unit must be permanently connected to a fixed circuit breaker. If you are not using the unit, turn off the circuit breaker.
- Do not install the unit in the place of fire or strong magnetic field. This unit needs to be installed vertically. This unit should be connected to water first and then to electricity.

Guidelines You Need to Be Aware of

- This unit is designed for indoor installation only. However, it may be installed in an outdoor location as long as it is mounted in a suitable enclosure that provides protection from rain, splashed water, freezing temperatures, direct sunlight, debris, and insects.
- Install unit as close as possible to the main hot water draw off points.
- Install unit in a frost free area. If frost might occur, remove unit before freezing temperatures set in.
- Leave a minimum of 5" (120 mm) of clearance on all sides for servicing.
- DO NOT install under water pipes or air conditioning lines that might leak or condense moisture that could then drip onto the unit.
- DO NOT install above electrical boxes or junctions.

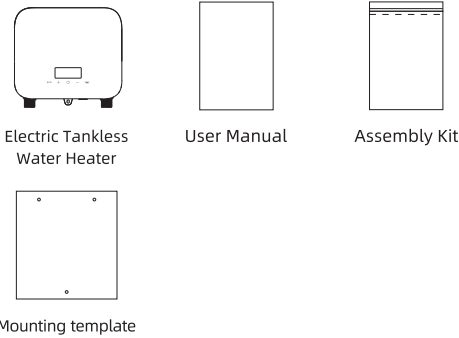


CAUTION

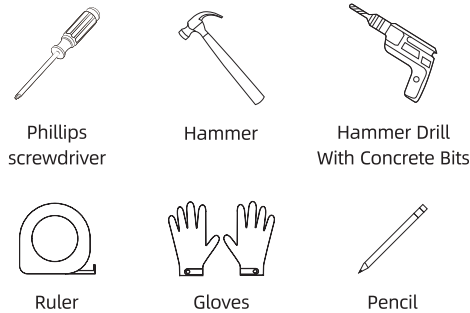
The water heater should not be located in an area where leakage will result in damage to the area adjacent to it or to lower floors of the structure. Where such areas cannot be avoided, it is recommended that a suitable catch pan, adequately drained, be installed under the water heater.

3.2 Prepare for Installation

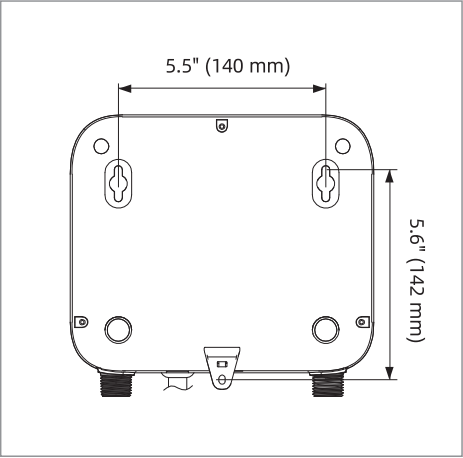
■ Parts included



■ Tools needed (Not included)

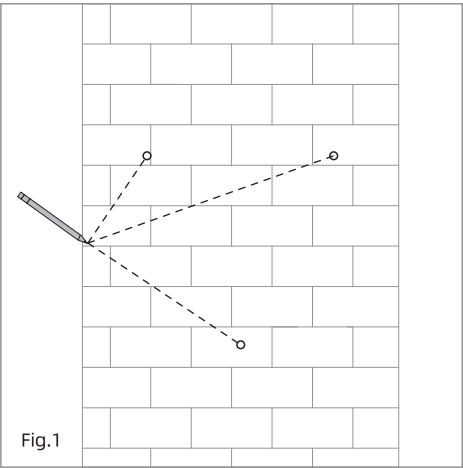


3.3 Installation Dimensions

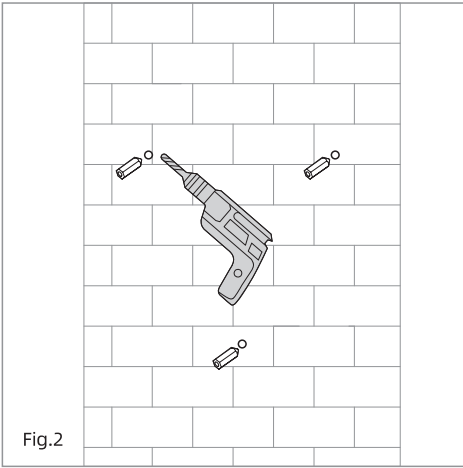


3.4 Installation Method

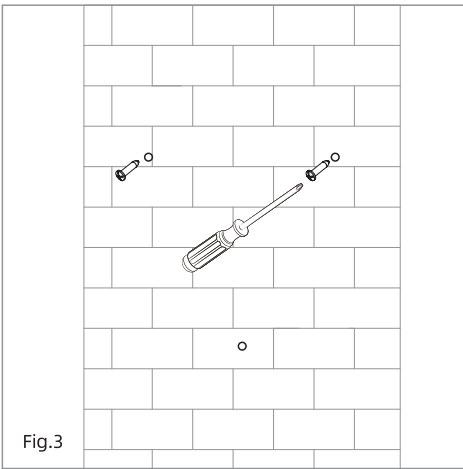
1. Figure out where to mount the water heater unit, mark 3 mounting holes on the wall according to the water heater or installation guide. (Fig.1).



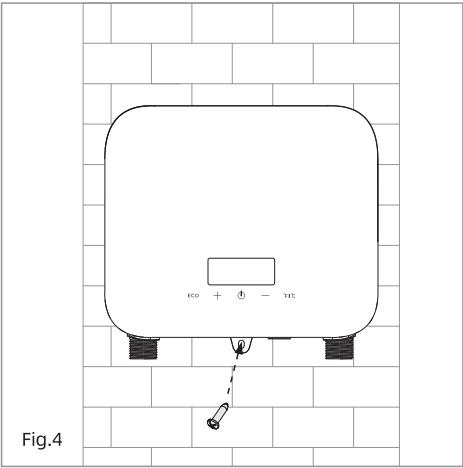
2. Use a hammer drill with concrete bits to create a hole in the wall according to the punching mark, ensuring it is 0.24" (6mm) in diameter and 1.02-1.1" (26-28mm) in depth. Then, insert the matching 3-M4 plastic wall anchors into the hole (Fig.2).



3. Insert M4 screws into the two upper holes, leaving about 0.12 inches to 0.2 inches (3-5mm) not tightly fastened (Fig.3).



4. Hang the machine on the two previously installed screws, that secure the lower a screw (Fig.4).



3.5 Water Connections



NOTICE

Excessive heat from soldering on copper pipes near the Unit may cause damage.

The cold water connection to the unit must be disconnected periodically in order to clean the filter screen. It is required to use water connections that are easily detachable such as braided steel flex connectors.

- All plumbing work must comply with national and applicable state and local plumbing codes.
- A pressure reducing valve must be installed if the cold water supply pressure exceeds 150 PSI (10 bar).
- Make certain that the cold water supply line has been flushed to remove any scale and dirt.
- The unit has a built in filter screen that should be cleaned from time to time. Clean screen and put the screen and the washer back into their original position.

- 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. When all water connections are completed, check for leaks and take the necessary actions before proceeding.
- 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.

**CAUTION**

Hard water or water with a high mineral count may damage the unit. Damage to the unit caused by scale or a high mineral count is not covered under the warranty.

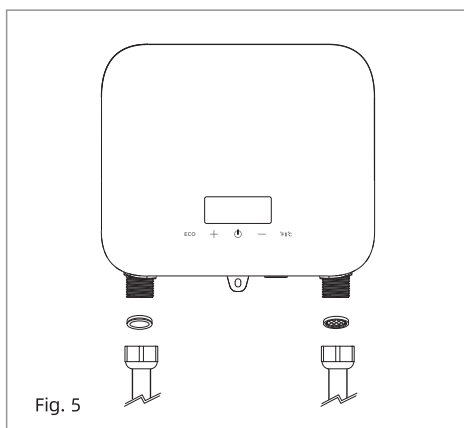


Fig. 5

**NOTICE**

Recommended installation with filter screen.

3.6 Electrical Connection

**WARNING: Electrocution**

Before beginning any work on the electric installation, be sure that main breaker panel switches are "Off" to avoid any danger of electric shock. All mounting and plumbing must be completed before proceeding with electrical hook-up. Where required by local, state or national electrical codes the circuits should be equipped with a "ground fault interrupter".

The unit must be properly grounded in accordance with state and local codes, or in absence of such codes, in accordance with national electric code or the Canadian electric code. Failure to electrically ground the product could result in serious personal injury or death.

- The unit should be connected to properly grounded dedicated branch circuits of proper voltage rating. Ground must be brought to the "Ground" at the circuit breaker panel.

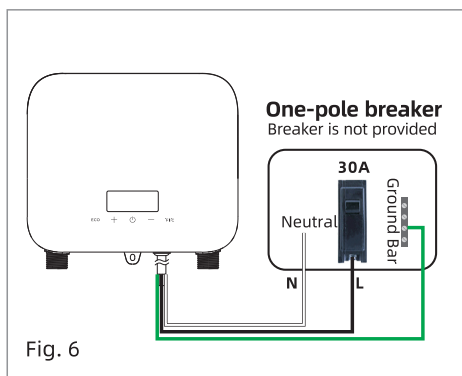


Fig. 6

**WARNING**

When connecting the power cord, the power must be turned off.

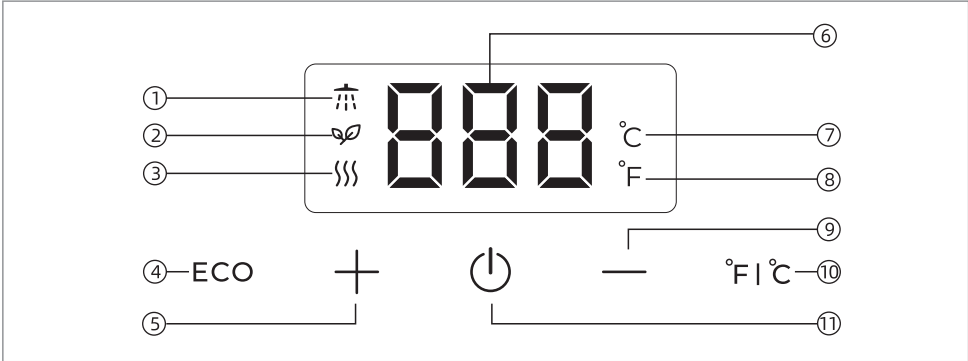
4 Operation

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 Water flow signal | ⑦ Celsius |
| ② ECO icon | ⑧ Fahrenheit |
| ③ Water is heating up | ⑨ Heat down button |
| ④ ECO button | ⑩ Fahrenheit/Celsius Conversion |
| ⑤ Heat up button | ⑪ Power button |
| ⑥ Outlet water temp | |

1. Turn on the water faucet for a few minutes until the water flow is constant and all the air is out of the hose.
2. Turn on the circuit breaker to supply power to the appliance.
3. When the appliance is powered on, it will beep and the appliance will remain in standby mode.
4. Press the power button to start.
5. Press " + " or " - " to adjust the water temperature, the temperature setting range is 80-130 °F (26-55 °C).

Function Description:

1. Screen protection:

No water flow or no key operation in standby state, 30 seconds to enter the screen saver to turn off the screen, with flow or operation key to light up the screen.

2. °F | °C Conversion

Press °F | °C button, and the display will change from Fahrenheit to Celsius or vice versa.

3. ECO

Press ECO button, enter the energy saving mode, the system adjusts the temperature to 108 °F (42 °C), adjust the set temperature or press the ECO button to exit the ECO.

4. Power failure memory function

After power failure, the machine has a power failure memory, after restoring the incoming call, keep the last set temperature.

- 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.
- 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 periodically in order to keep a proper water flow.
- 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.
- 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.

**WARNING**

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

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.

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:

- The tankless water heaters are designed for a very long service life. Actual life expectancy will vary with water quality and use. To ensure consistent water flow, it is recommended to periodically remove scale and dirt that may build up at the aerator of the faucet(s), the filter screen in the unit, or the heating canisters of the water heater.
- Periodically check the water quality supplied to the water heater. Water quality can have an impact on appliance longevity and may not be covered under the manufacturer's warranty.
- Periodically remove scales and dirt that may build up at the aerator of the faucet or in the shower head.

6 Troubleshooting

6.1 Fault Assessment and Troubleshooting

Problems	Possible Causes	Corrective Actions
Digital display is not activated	No power or incorrect wiring	Check breakers at main electrical panel to ensure it is not tripped. If tripped, reset breaker. Check that water heater is wired correctly.
	Not enough flow	Turn on hot water at fixture.
No hot water	No power or incorrect wiring	Check breakers at main electrical panel to ensure it is not tripped. If tripped, reset breaker. Check that water heater is wired correctly.
	Overtemperature protection has been triggered	The water heater is equipped with software that turns off the heating elements when water temperatures reach a dangerous level. Turn off hot water, wait several minutes for water to cool.
	Flow rate is too low	Each model water heater has an activation flow rate. If the water flow is less than this flow level, unit will not heat water. Increase the flow rate.
Hot water supply is warm, but it does not get hot	Temperature set point is too low	Increase the temperature set point, Be cautious of scald risk.
	Flow rate is too high	Reduce flow rate.
	Voltage less than 120 VAC	The heating elements on your water heater are designed for 120 VAC applications. When used a lower voltage, the water heater will produce less hot water.
	No power or incorrect wiring	Check breakers at main electrical panel to ensure it is not tripped. If tripped, reset broker. Check that water heater is wired correctly.
	Mixing too much cold water	Tankless water heaters do not require mixing as much cold water as a conventional storage water heater. Adjust handle of fixture or mixing valve on faucet to reduce the amount of cold water mixed.
	Cold inlet temperature may be lower during winter months	This is normal. The colder inlet water requires more heat to reach the temperature set point. Increase the temperature set point.
Water is too hot	Temperature set point too high	Reduce temperature set point.

6.2 Diagnostic Codes

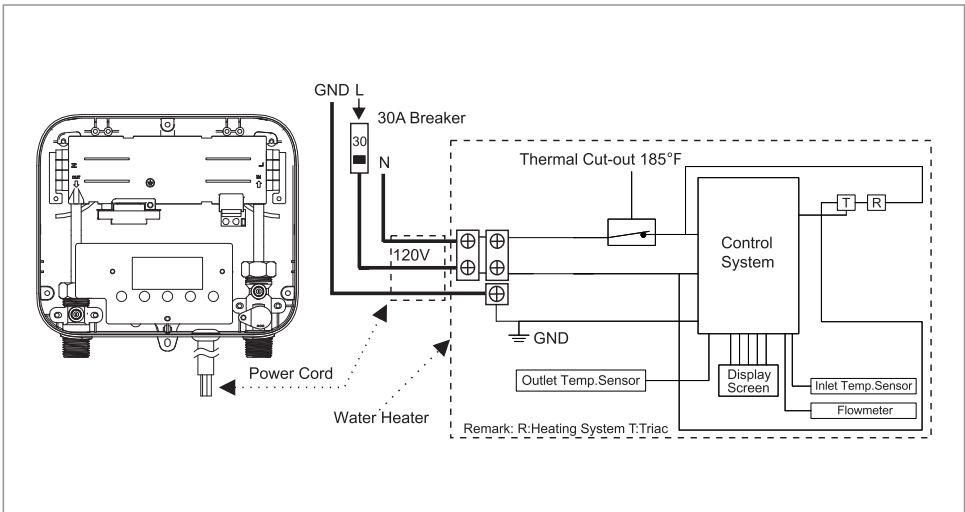
Error Code	Fault description and troubleshooting step
E0	Voltage Mismatch Warning: If the input voltage does not match the required voltage, the system will display a fault code and the buzzer will sound continuously for 10 seconds. To resolve this issue, please ensure the correct voltage is supplied.
E1	Over temperature protection: If the outlet water temperature >149 °F (65 °C), stop working and display E1.
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).
E6	In and out of the water temperature sensor connected to the reverse alarm, troubleshooting, that is, restored.



NOTICE

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

7 Circuit Diagram



8 Packing List

Order	Design	Quantity
1	The water heater	1 piece
2	Installation and operation manual	1 piece
3	Installation guide	1 piece
4	Screw M4 × 20	4 pieces
5	Rubber plug	4 pieces
6	Inlet fliter	1 piece
7	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		

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