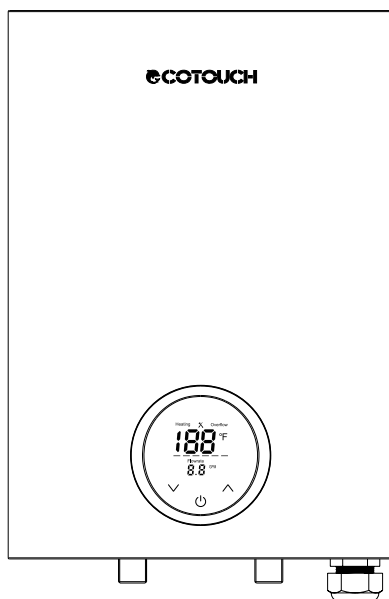




Electric Tankless Water Heater Instruction Manual



Model: ECO140B ECO180B ECO270B

To enjoy the best performance of this unit, please read these instructions thoroughly and completely prior to installation and use. Failure to do so may cause property damage, serious injury or death.

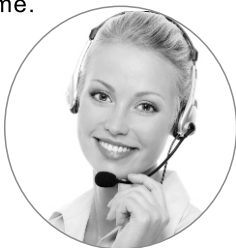
Please keep this manual with you after installation, you may need it for future reference and technical information.

If you need any assistance during installation or use, please feel free to contact us via ecotouching@outlook.com, we will do best to serve.

Customer Service

At GREATBEAR, we think highly of product quality, excellent performance, pleasant experience of valued customers, if you get any question the unit or anything unexpected occurs, please feel free to contact us at **ecotouching@outlook.com**, we will try best to serve and help.

We also strive for continuous improvement, so your comments, feedback and suggestions are highly welcome.



customer service
ecotouching@outlook.com

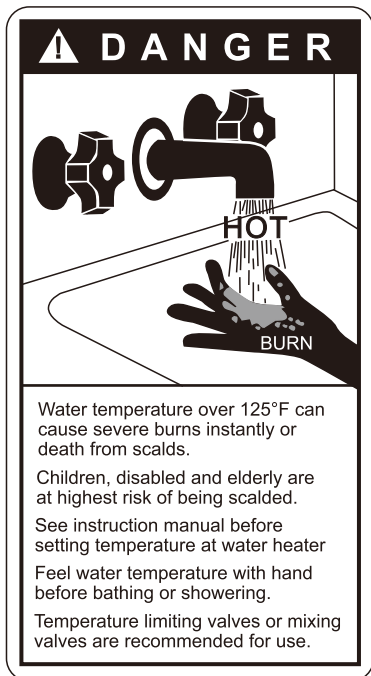
Important Safety Information

READ ALL INSTRUCTIONS BEFORE USING



DANGER! **WATER TEMPERATURE SAFETY SETTING**

Safety and energy conservation are factors to be considered when selecting the water temperature setting of water heater's thermostat. Water temperatures above the 125°F can cause severe burns or death from scalding. Be sure to read and follow the warnings outlined on the label pictured below.



Notice: Mixing valves are recommended for reducing point of use water temperature by mixing hot and cold water in branch water lines. It is recommended that a mixing valve complying with the Standard for Temperature Actuated Mixing Valves for Hot Water Distribution Systems be installed.

Time/Temperature Relationship in Scalds

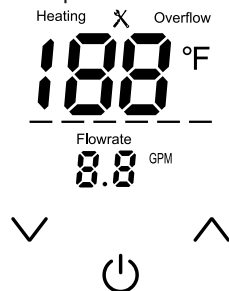
Temperature	Time To Produce a Serious Burn
120°F	More than 5 minutes
125°F	1½ to 2 minutes
130°F	About 30 seconds
135°F	About 10 seconds
140°F	Less than 5 seconds
145°F	Less than 3 seconds
150°F	About 1½ seconds
155°F	About 1 second

The chart shown above may be used as a guide in determining the proper water temperature for your home.



DANGER: Households with small children, disabled, or elderly persons may require a 120°F or lower thermostat setting to prevent contact with "HOT" water. The temperature of the water in the heater is regulated by the electronic control on the front of the water heater. To comply with safety regulations, the thermostat was set at 104°F before the water heater was shipped from the factory.

Please consult Operating Instructions to learn more about setting your heaters temperature.



Setting: 86-131°F

**Important Safety Information**

1. The installation must be installed professionally ,in compliance with the National Electrical Code, your local electrical and plumbing codes.
2. All wiring and installation must be supervised by a qualified electrician.
3. **CAUTION:** This product has more than one power-supply connection point. Under no circumstances should you attempt to install, inspect, clean, repair, disassemble, or other service this water heater, without first shutting off all power to the unit directly at the circuit breaker box. **SERIOUS INJURY OR DEATH COULD OCCUR IF YOU IGNORE THIS WARNING.**
4. This appliance **MUST** be permanently connected to the fixed double pole circuit breaker and it must be installed vertically. **DO NOT** install this appliance near tinder or a strong magnetic field place.
5. This appliance must be **EARTHED**.
6. This appliance is forbidden to be switched on if you think it might 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.
7. Please feel the outgoing hot water temperature with your hands to make sure it is suitable for shower. As a result, you will avoid getting scalded.
8. **DO NOT** install this hot water unit in a location where it may be subjected to freezing temperatures.**IF YOU IGNORE THIS WARNING, THE UNIT MAY GET PERMANENT DAMAGE DUE TO IT FREEZES INSIDE.**
9. If there is damage to the wire, you must contact a qualified electrician to replace it with specific wire.
10. **CAUTION: FOR HOUSEHOLD AND INDOOR USE ONLY**
11. **CAUTION: Risk of electric shock, CONNECT ONLY TO A CIRCUIT THAT IS PROTECTED BY A GROUND-FAULT CIRCUIT INTERRUPTER (GFCI).**
12. If the hot water unit has been paused during use, you may initially get a short burst of very hot water when you turn it on again. Please run water through for a few seconds to settle down water temperature. Check water temp with hand before shower again with it.

Quick Start Guide

1) Mounting

Plot the holes for the mounting screws onto the wall. Mount vertically on a flat surface (i.e. board or wall) larger than the unit itself. Make sure heater is secure by utilizing a stud or the provided wall anchors. Keep away from any potential slashing or leaking water and strong magnetic fields.

2) Water Connections

Plumbing connections are 1/2"NPT for ECO140B, 3/4"NPT for ECO180B, ECO270B, and both the inlet and outlet can be found at the bottom of the unit. When installing your water connections make sure to use right fittings. Please use the provided gaskets to prevent leaks. If it had leaking issue. The cold water inlet is on the right side it should be preceded by a high pressure discharge valve and a shut off valve (ball valve) in that order.

For the best service and lifespan of the hot water unit, it is advised that a descaler device should be installed inline to the supply line (cold) to avoid any potential damage due to scale build-up.

The hot water outlet is on the left side and runs to your hot water source.

NEVER USE PVC ON HOT WATER OUTLET. Use instead CPVC or other high temperature rated materials. Run water through the heater for a few minutes to purge all air from the system. Shut off flow at faucet to pressurize system. At this point check for and fix any leaks. If no leaks are present move to next step.

3) Electrical Connections

For the model ECO140B, Power wires and Grounding wire come into the unit from the bottom right hand side of the unit. Use 6 AWG/2 wires with grounding wire, running from the terminal block markin"E" in the unit all the way to the Grounding bar in the circuit breaker panel. Run one 6 AWG wire from each of the "L1" and "L2" terminal block of the unit to the double pole 60amp breaker at your circuit breaker panel. And you will need 2 set of 8AWG/2 wires to run separately for model ECO180B, please check the diagram for detail information.

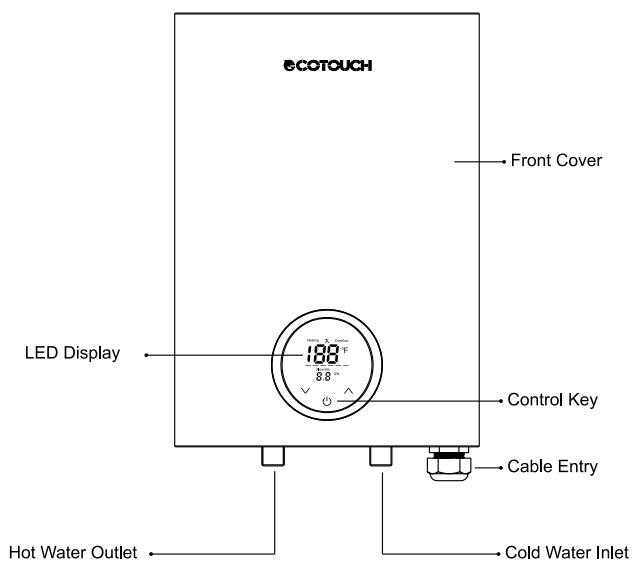
4) Operation

When installtion is done, prior to switching on power supply, open the water facuet or shower head to run water through the hot water heater system to purge all the aire out of the unit. When power is supplied, a beep sound can be heard and display lights up, press power button on the panel of the unit to start up set temp between 86 to 131 degrees with the UP and DOWN buttons. Please test water temp with hand before shower or other use, this could avoid scald risk.

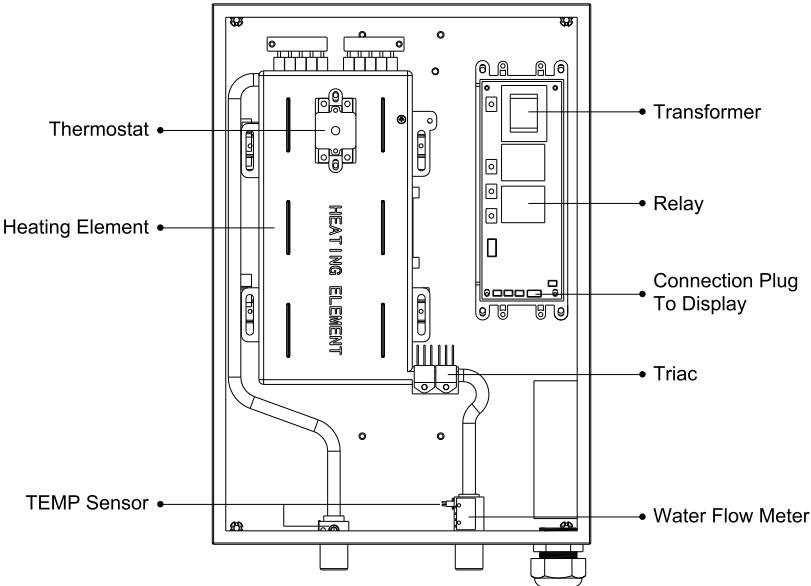
Attention: ECO140B requires a 60A double pole breaker and ECO180B needs 2 double pole breakers of 40A and the ECO270B needs 3 double pole breakers of 40A. please consult a certified electrician in your area.

Product Inner Structure

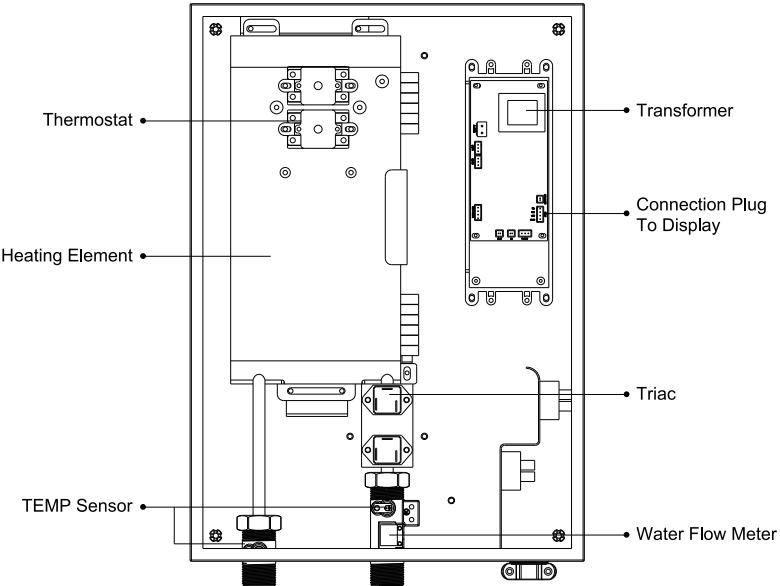
Fig.1



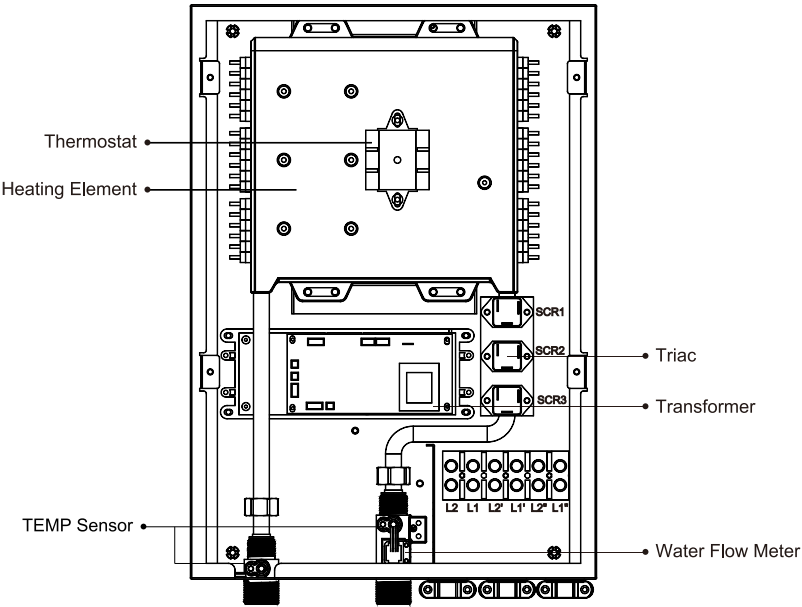
PRODUCT INNER STRUCTURE



ECO140B



ECO180B



ECO270B

Technical Specifications

Model		ECO140B	ECO180B	ECO270B
Voltage		240V~		
Power		14kW	18kW	27kW
Min.Pequired Circuit Beraker Size		60APM	2X40APM	3X40APM
Max. Amperage		58A	75A	113A
Recommended Wire Size		6AWG	2X(8AWG/2)	3X(8AWG/2)
Min.Water Flow to Activate the Unit		0.475GPM/1.8L/min		
Safe Operating Pressure		2.9PSI-87.02PSI		
Water Connections		1/2"NPT		3/4"NPT
Installation		Wall mounted		
Temperature Setting		Digital Panel		
Flowrate Suggested Based on inlet temp	37°F	1.3 GPM	1.6 GPM	2.4 GPM
	42°F	1.4 GPM	1.7 GPM	2.6 GPM
	47°F	1.5 GPM	1.9 GPM	2.8 GPM
	52°F	1.7 GPM	2.0 GPM	3.1 GPM
	57°F	1.8 GPM	2.2 GPM	3.4 GPM
	62°F	2.0 GPM	2.5 GPM	3.8 GPM
	67°F	2.3 GPM	2.8 GPM	4.2 GPM
	72°F	2.8 GPM	3.2 GPM	4.8 GPM
	77°F	3.2 GPM	3.7 GPM	5.6 GPM
Dimensions		15.87" x 11.14" x 3.46"	17.25" x 12.22" x 4.02"	17.25" x 12.22" x 4.02"
Weight		14.11 lbs	18.3 lbs	19.18 Lbs

Remarks:

1. The above wire size and circuit breaker size are for this ECO140B, ECO180B and ECO270B unit only, if you need other high-power appliances, please do further research for that.
2. For the best user experience, the ECO140B unit is recommended for faucets and booster for tank heater Works for shower in Middle Southern US only.

Installation Instructions

Installation Guideline:

- 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.

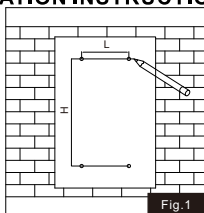
The installation must be in compliance with the National Electrical Code, your local electrical and plumbing codes.

1. Make sure the appliance is intact, and the fittings are complete.
2. 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 bar" at the circuit breaker.
4. This appliance **MUST** be permanently connected to the fixed circuit breaker. If you do not use the heater, please switch off the circuit breaker.
5. DO NOT install this appliance near tinder or a strong magnetic field place. The unit must only be assembled in a VERTICAL position near by the water fittings.
Please test the unit after getting the water flow.

1. Fix the mounting bracket on the back of machine with locking screws 1 2 3 4.
2. Mark mounting holes on the wall, then drill holes of 6.0mm diameter. Put expansion bolts into holes, and then screw the self tapping screws into the expansion bolts. Fix the mounting brackets on the wall with those self tapping screws and then put the water heater unit on the mounting brackets, bring down to ensure it sits tight.
3. If you get 14kW unit, a set of 6AWG/2 wires with grounding should be run to get 240V power supply and a 60A double pole breaker is needed.
If you get 18kW unit, 2 set of 8AWG/2 wires with grounding should be run to get enough AMPs and two breakers of 40A double pole are needed.
If you get 27kW unit, 3 set of 8AWG/2 wires with grounding should be run to get enough AMPs and three breakers of 40A double pole are needed.
4. Connect the water pipe to the water inlet and water outlet connections, please remember to use the rubber seal ring.
5. Descaler device and manual shut-off valve(ball valve) are recommended to install in cold water line in so as to get best performance and convenient future maintenance.

Installation Diagram

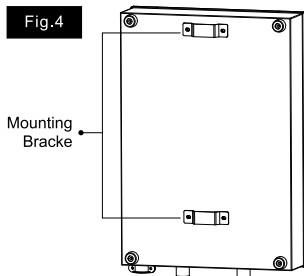
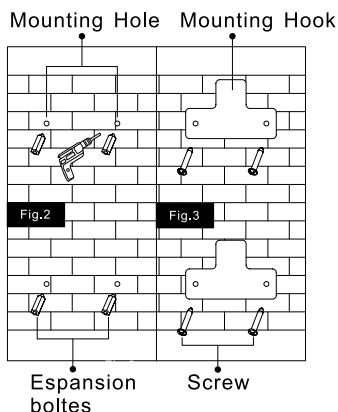
INSTALLATION INSTRUCTIONS



1. Figure out where to mount the water heater unit, mark 4 mounting holes on the wall according to the installation template(Fig.1).

	LxH
ECO140B	1.57"(40mm)x11.69"(297mm)
ECO180B	1.57"(40mm)x11.69"(297mm)
ECO270B	2.28"(58mm)x12.09"(307mm)

2. Drill holes($\varnothing 6 \times 32 \text{mm}$) into the wall on those 4 marked position, put expansion bolt into the mounting hole and then fix the 2 mounting brackets with screws and Phillips screw driver (Fig.2 and Fig.3).



3. The water heater gets 2 mounting brackets on the back side, so all you need to do is hang the water heater on those fixed brackets on wall, pull the water heater unit down to sit it tight(Fig.4).

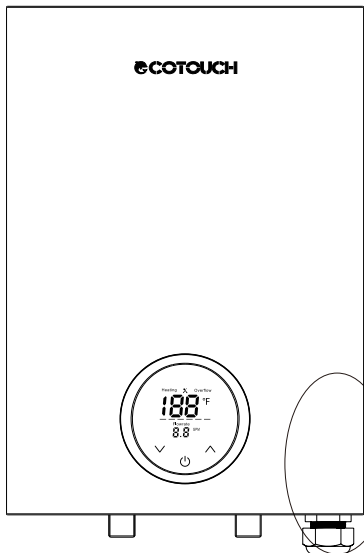
Water Connections

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. It is required to use 1/2" NPT pipe fittings to fit the model ECO140B.And the ECO180B, ECO270B models requires 3/4" NPT pipe fittings.
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 place rubber seal rings at the connections. When all water connections are completed, check for leaks and take the necessary actions before proceeding.
- 5.Install a shut off valve(Not Supplied) and descaler device(Not Supplied) to prevent any particles entering the unit that may clog or damage the internal parts.
- 6.When you do pipe connection to the unit, use a wrench to hold connection of the unit and use another wrench to tighten flexible water hose to the hot water unit. Over tighten must be avoided.

Electrical Connections

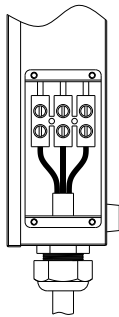
1. All electrical work must comply with national and applicable state and local electrical codes.
2. This water heater must be permanently connected to the direct main breaker panel. The use of a plug and socket is forbidden.
- 3.The unit must be connected to a properly grounded dedicated branch circuit of proper voltage rating.
4. 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.
- 5.All mounting and plumbing must be completed before proceeding with electrical hook-up.
6. While connecting the wires to the terminal blocks, please make sure the metal wire ends and the terminal blocks touch completely. Then tighten the screws to make sure the full current can go through.
7. Connect the wires to Terminal Block and fully tighten them as follow(fig.3b)

Connect live wire(Black) L1 to the terminal block L1 on the water heater
Connect live wire(Red) L2 to the terminal block L2 on the water heater
Connect copper Grounding wire to the Grounding terminal block on the water heater

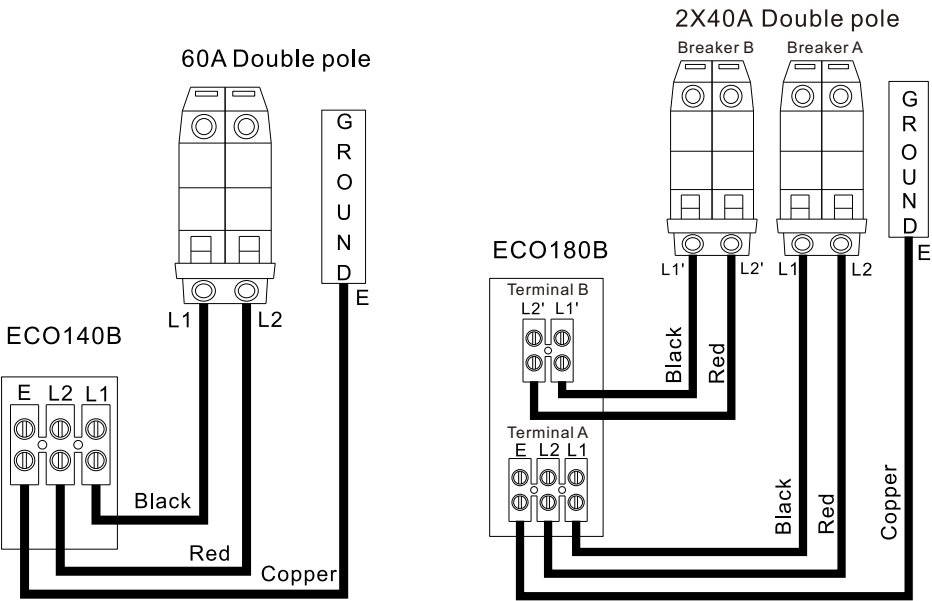
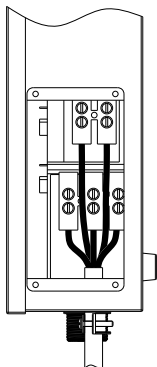


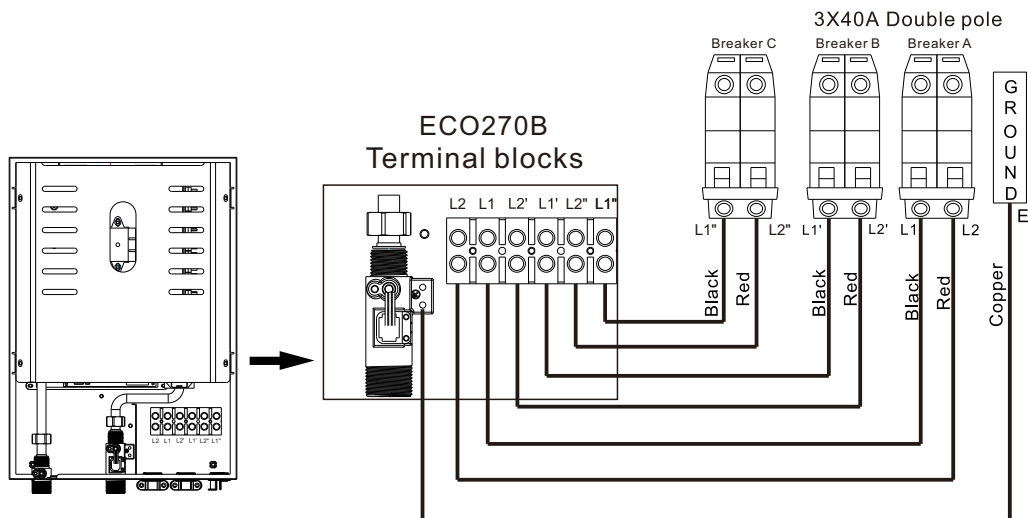
Terminal blocks

ECO140B



ECO180B








Cautions: for ECO180B,ECO270B: each set of wires(L1 L2) must be connected to its own individual 40A double pole breaker. If you mix them up, the unit will not work proper as it should or serious damage to property may be caused!

Operating Instructions

IMPORTANT WARNING:

Open water source and allow water to run through the water heater for at least 2 to 3 minutes. This will purge the air out of the unit and must be performed prior to turning on the power at the unit. Failure to Do So will Cause Serious Damage to Heating Elements.

1. Open the water faucet for 3 minutes until the water flow is continuous and all the air has been purged from the water pipes.
2. Turn on the circuit breaker to supply electrical power to the unit.
3. After the unit is supplied with power, a beep sound can be heard and LED lights up and stays; if there is no other command, the appliance keeps standby.
4. Press Power button  on the unit to turn ON/OFF the appliance. When the unit is working, LED display show "Actual Temp".
5. Press  and  to adjust the outlet water temperature, Temperature setting range is 86-131°F / 30-55°C.

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.

Normal Maintenance

Note: 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. And you can reverse inlet and outlet pipe connections,open faucet to Max.to flush the filter.Remember to reverse back after you get it done.
- 3.If the water heater gets EF code or it doesn't heat up water, you could try easy cleaning up the water flow sensor with instruction from ECOTOUCH Appliances. And we could suggest a pre-filter be installed if you don't get a whole house water filter.

Important Note

- 1.Any maintenance performed on the water heater unit may introduce air into pumbing pipes, it is important to purge all the air out before power on again.Failure to do so could cause serious damage to the heating element.
- 2.If you have a water supply with high level of mineralization(hard water),you should increase the frequency of your maintenance.Check the declear 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.

Trouble-shooting / Diagnostic Chart

Failure Phenomeno	Possible Reason	Treatment
Leakage in the joint of Inlet and outlet pipe.	A.Poor connection of inlet and outlet pipe. B.The rubber washer is damaged.	A.Reconnect the pipe fittings again with taflon tap. B. Re lace the washer.
The water temperature is too high.	A. Water flow is too small. B. Pipeline jam. C. The power or temperature is set too high.	A.Adjust the valve to increase the water flow. B.Clear the inlet filter and shower head. C.Select lower power level or turn down the temperature.
The water is too cold.	A.The flowrate is too high. B.The voltage is less than 240V. C.The Temp set is too low. D.Mixing too much cold water.	A.Adjust the valve to decrease the water flow. B. Check if the voltage is too low or not. C.Select higher Tempt set. D.Mix less cold water.
Water temperature is unstable.	The voltage or water pressure is unstable.	Voltage and water pressure back to normal condition.
The water is smaller and smaller.	The inlet filter or shower is blocked by water impurities.	Remove the inlet pipe, clean the inlet filter/shower.
Circuit breaker switch off the power.	A.Leakage of electricity. B.The circuit breaker aging. C.The AMPS load is not enough.	A.Don's use it,send it back to after-sales service to repair. B.Change the circuit breaker. C.Using circuit breaker with high current.
The screen has no display.	A.Power is not connected. B.The screen is damaged. C.Not 240V power.	A.Close the switch to connect the power. B.Replace the screen. C. Chang to 240V power supply.

Malfunction Code		
Show	Failure analysis	Solution
E1	Leakage of electricity.	Send to after-sales service.
E2	Temperature exceed 149°F/65°C.	A.Select lower power level or turn down the temperature. B.Increase water flow.
E3	Temperature sensor failure.	Send back to after-sales service.
E4	Temperature sensor failure.	Send back to after-sales service.
EF	Water flow sensor got stuck.	Contact ECOTOUCH for assistance.

After Sales Service

1. One year warranty for the main unit. and we get professional after sale service cover for its whole lifespan
2. If there is something wrong with your machine, please feel free to contact us don't repair it by yourself.
3. Please contact us via e-mail: ecotouching@outlook.com with following information included:
 - 1) The product's name, model, the purchase date.
 - 2) The detailed problem of the unit.

We will do our best to serve and help, please be rest assured that you will not suffer any loss from this.
4. Please read the warranty card for more details.
5. To protect your right of after-sale service, please fill in the warranty card carefully.

Product packing list

Number	Product Name	Unit	Quantity
1	The water heater	pc	1
2	Mounting brackets and screws	set	1
3	Manual and warranty card	pc	1

Product warranty

Warranty Card

Name				Telephone		
E-mail						
Product Model		Purchase Date		Installation Date		
Serial NO.		Installation Location				
Charhe or not	<input type="checkbox"/> Yes <input type="checkbox"/> No Reason:					
Check power or not		Water leaking or not		Follow steps use or not		
Instllation Personnal (signature)			Customer (signature)			

Maintenance Date		Maintenance Personnel (signature)	
Situation			
Replacement Of Parts			

Customer Need To Know

When installation is finished,please check and make sure it is in good condition and then fill in the warranty card.When you need assistance, please send picture of the warranty card to our customer service:ecotouching@outlook.com with description of the issue you meet. We will do our best to serve and help,ensure you will suffer any loss from this, even though it may exceed return window or warranty period.

ECOTOUCH Customer Service



This product must not be disposed together with the domestic waste. This product has to be disposed at authorized place for recycling of electrical and electronic appliances.

By collecting and recycling waste, you help save natural resources, and make sure the product is disposed in an environmental friendly and healthy way.

Remarks: The specifications may change without prior notice. All features and specifications are all given by manufacturer.