



## ECO35

### ELECTRIC TANKLESS WATER HEATER INSTRUCTION MANUAL

Keep this manual with you after your unit has been installed, you may need it for further technical information.



[WWW.MAREY.COM](http://WWW.MAREY.COM)





### Congratulations!

You've just purchased a new Marey ECO35 tankless water heater and will soon begin to enjoy the benefits of "going tankless."

Please take the time to thoroughly read and understand this safety and installation manual in its entirety before you attempt to install your new tankless water heater, as it contains important safety tips and instructions.

Please carefully read all instructions and warnings. Should you have any questions, please visit [www.marey.com](http://www.marey.com) for installation videos and FAQ.

Please keep this manual for future reference and technical information.



### INDEX

QUICK START GUIDE.....	04
IMPORTANT SAFETY INSTRUCTIONS.....	05
PRODUCT FEATURES.....	06
ELECTRICAL DIAGRAM.....	07
TECHNICAL SPECIFICATIONS.....	07
PRODUCT INNER STRUCTURE.....	08
INSTALLATION GUIDELINE.....	08
INSTALLATION METHOD.....	09
OPERATION INSTRUCTIONS.....	13
TROUBLE-SHOOTING.....	14
NORMAL MAINTENANCE.....	14
PACKING LIST.....	14
CUSTOMER SERVICE.....	15
OTHER PRODUCTS.....	15

**ECO35**

**1) Installation**

Drill two holes of 6.00mm diameter: if you install the heater upright above the sink, the distance between the two holes is 156mm; if you install the heater downward under the sink, the distance between the two holes is 139mm. Put plastic anchors in the holes if unit is not secured by utilizing a stud. Keep away from any potential splashing or leaking water and strong magnetic fields.

**2) Water Connections**

No matter if the heater is installed right-side up or upside down, please connect the inlet connection to the cold water inlet pipe; connect the outlet connection to the hot water outlet pipe. The unit should be connected directly to the main water supply. Flush pipe with water to remove any debris or loose particles. It is required that this heater use 1/2”NPT water connections to fit the appliance. 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.

**3) Electrical Connections**

Before beginning any work on the electric installation, be sure that the breaker switch is OFF to avoid any danger of electric shock, 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 heater must be connected to a properly grounded dedicated branch circuit of proper voltage rating. Please make sure the metal wire ends and the terminal blocks touch completely, and tighten the screws to be sure the connection is secure.

**4) Operation**

Turn on the water faucet for a few minutes until water flow is continuous and all air is purged from water pipes. Next, turn on the circuit breaker to bring electrical power to the unit. The unit will operate after the breakers are turned on. The minimum water flow to activate the unit is 1.8L/min. Press the right side button once to change to display from Celsius to Fahrenheit or continuously for 3 seconds to flip the temperature display between right side up mounting and upside down mounting.



**To prevent heat loss from long plumbing please insulate the pipes or mount heater as close to outlet as possible (shorter than 8 feet) while avoiding any possible leaking or splashing water.**

1. The installation must be in compliance with the National Electrical Code, your local electrical and plumbing codes.
2. This appliance must be GROUNDED.
3. Install or locate this water heater only in accordance with the provided installation instructions.
4. Use this water heater only for its intended use as described in this manual.
5. Contact a qualified electrician to have unit properly installed for the models which are not equipped with plug.
6. 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.
7. 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.
8. Do **NOT** switch the unit 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.
9. Please feel the outlet hot water temperature with hand to make sure it is suitable for showering before taking shower to avoid getting scalded.
10. 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.
11. If there is damage to the wiring, you must contact qualified electrician to replace it with new, dedicated wire.
12. A check valve is required to be installed on the water inlet side.
13. You should connect a drain line to the relief valve on the rear panel of the unit. The drain-line which is connected to the water relief valve should be installed facing downward in an environment that does not freeze.

14. The unit and fixture must be descaled regularly.

**WARNING:** Do not switch on if there is a possibility that the water in the heater is frozen.

## PRODUCT FEATURES

This Mini tankless electric water heater differs from a conventional storage type mini water heaters. It doesn't store hot water. Instead, water is heated instantaneously as it flows through the unit. The powerful heating elements are activated by a flow sensor as water is drawn from a hot water faucet connected to the appliance. Due to the absence of stand-by hot water, the mini has greater energy efficiency than storage type water heaters. The units are built with multi-safety devices and will continuously supply hot water as long as the faucet is open.

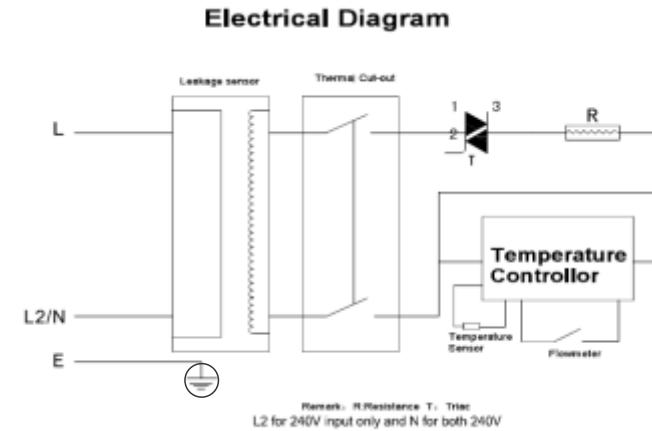
Also, the unit has the following features:

1. Tankless, instantaneous heating for on demand hot water, No pre-heating. No stand-by heat loss, which means it is energy-saving.
2. High strength ABS splash proof casing, stainless steel heating element.
3. Compact appearance and unlimited supply of hot water.
4. Easy installation, heater can be installed above or under sink.
5. Easy operation, the heater provides hot water with constant temperature.
6. Micro-computer control, Adaptive patent heating technology. Water is completely separated from electricity by multi-layers of composite nano insulation material.
7. Over-heat protection: when the outlet water temp. reaches or over 63°C/145°F, the appliance will avoid scalding and will start to work automatically after temperature drops to a lower, acceptable temperature.
8. There is a built-in pressure relief valve at the water outlet to prevent explosion due to overpressurizing.

These units use **SMART technology**, which means that the units read the incoming water temperature and the flow rate of the fixture being used, and applies only the power necessary to heat the water to your desired set point. This allows the unit to be very efficient, and not waste power by only heating the water that is being used.



## ELECTRICAL DIAGRAM



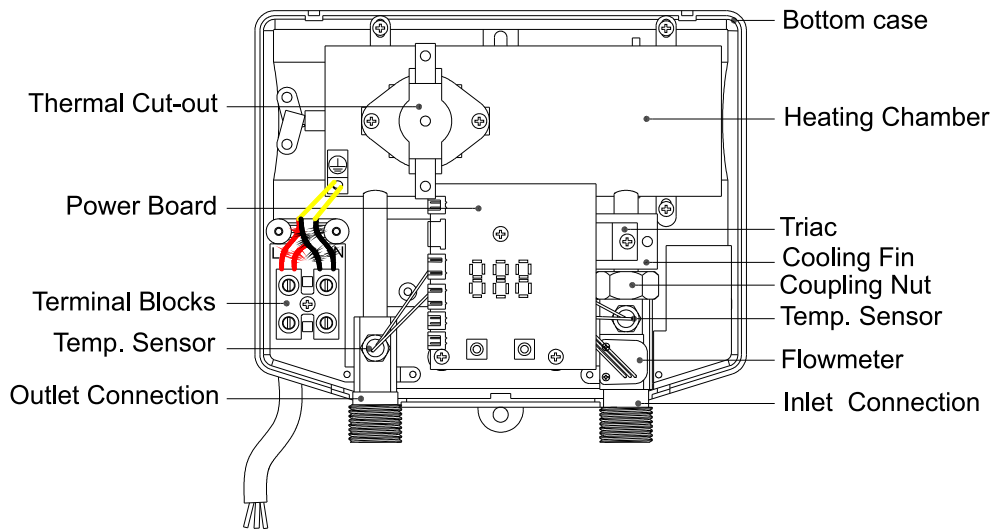
## TECHNICAL SPECIFICATIONS

Product Code	ECO35
<b>Voltage</b>	120V
<b>Power</b>	3.5kW
<b>Min. Required Circuit Breaker Size</b>	40A
<b>Max. Amperage</b>	29.2A
<b>Recommended Wire Size</b>	10 AWG
<b>Min. Water Flow to Activate the Unit</b>	0.48 GPM - 1.8 L/min
<b>Max. Water Flow Rate</b>	2.5 GPM - 9.5 L/min
<b>Safe Operating Pressure</b>	5 PSI - 100 PSI
<b>Water Connections</b>	½" NPT Brass Bronze
<b>Dimensions</b>	6.3" x 7.8" x 3.8"
<b>Weight</b>	3.31 lbs

GPM	Temp. Increase per GPM	
	0.25	53°F
	0.5	45°F
	0.75	33°F
	1.0	25°F
	1.25	21°F
	1.5	18°F
	1.75	15°F
	2.0	13°F
	2.25	12°F
2.5	11°F	

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

## PRODUCT INNER STRUCTURE



## 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 secure.
2. Please make sure the main power supply, water pressure, grounding condition, breaker and wiring are within the standard of installation requirement.
3. The appliance must be connected to the proper grounded dedicated circuit breaker of proper voltage rating. Ground must be brought to the "grounding bar" 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 tinder or strong magnetic field place. The appliance can be installed above or under the sink, and unit must only be mounted in a **VERTICAL** position near the water fittings. Please switch on your electrical to the unit after supplying water through the unit and correcting any leaks found.

## INSTALLATION METHOD

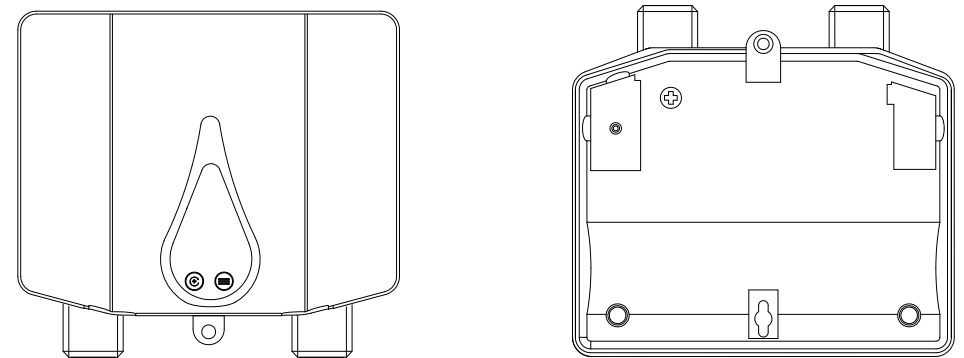
### ●General

The Mini tankless electric water heater can be used for hand washing, low demand, or kitchen applications and it can be installed above or under the sink.

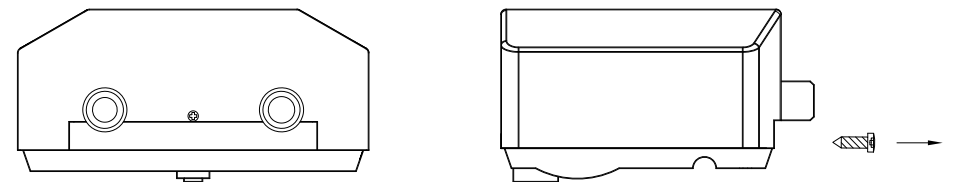
### ●Mounting the unit

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

**Fig 1: Front and back of the appliance**

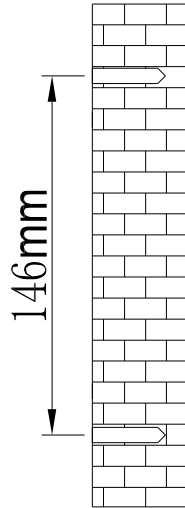


**Fig 2: Remove the screw which secures the case and remove the front case from the appliance, please use hand to gently remove the front cover.**



**Fig 4:** Drill two holes: if you install the heater upright above the sink, the distance between the two holes is 146mm/5.75 inches. Put plastic anchor in the holes in mounting unit to masonry or drywall without a stud.

Fig4-A: Upward Installation



**Fig 5:** For Upright Installation, see diagram (Fig5-A), fix the appliance on the wall. For Downward Installation, see diagram (Fig5-B), fix the appliance on the wall.

Fig5-A: Upward Installation

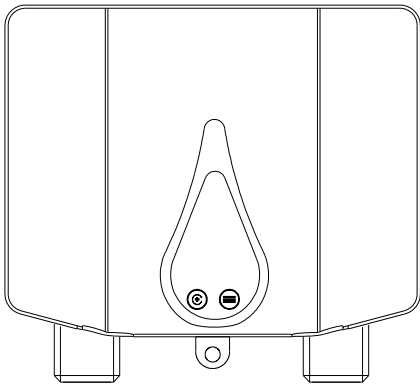
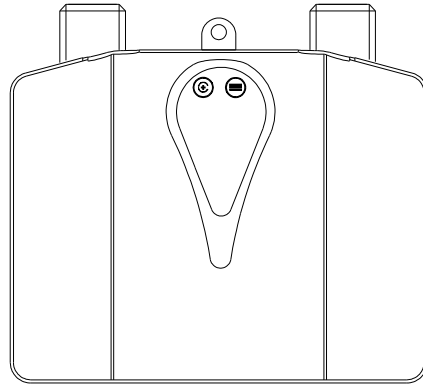
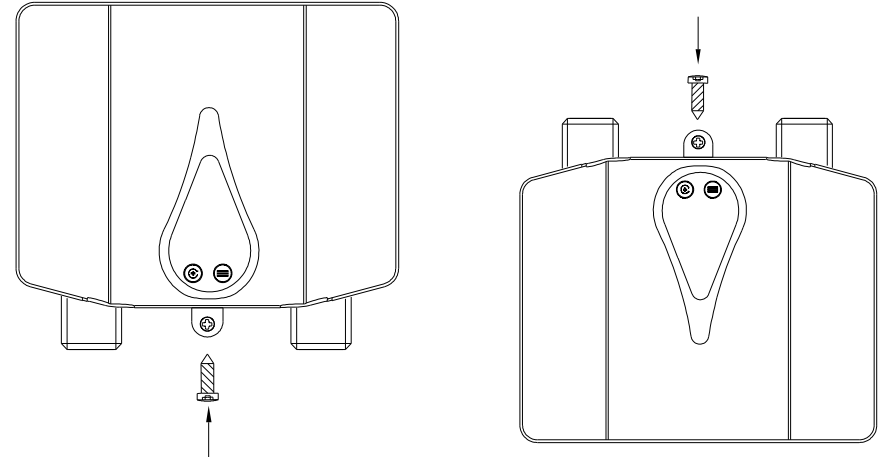


Fig5-B: Downward Installation



**Fig 6:** Attach the front cover to unit. Then insert the screw to secure the front cover.

Fig 6-A: Upward Installation FIG 6-B: Downward Installation



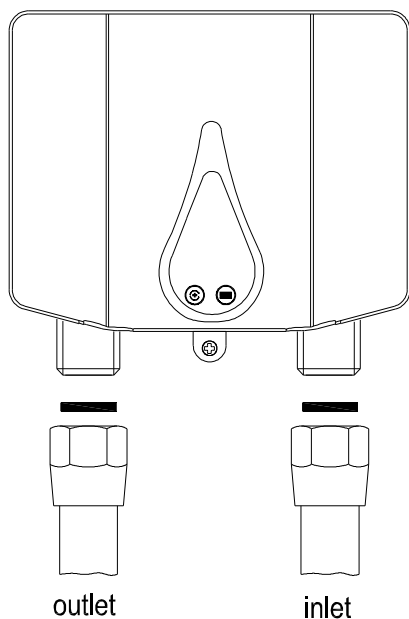
**If the appliance is equipped with a cable or plug, there is no need to uninstall the case during the installation.**

●Water Connections

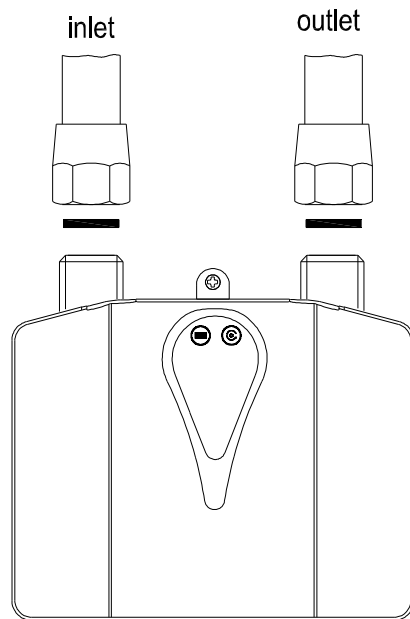
1. All water pipe must comply with national and applicable state and local water pipe codes.
2. No matter which direction you install the appliance, please connect the inlet connection (blue arrow points to) to the cold water inlet pipe; connect the outlet connection (red arrow points to) to the hot water outlet pipe .
3. The unit should be connected directly to the main water supply. Before attaching water pipes, please flush pipe with water to remove any debris or loose particles. The following pics are for your reference.
4. It is required that you use 1/2"NPT water connections to fit the appliance. Please connect the inlet and outlet pipe in sequence. Following pics is for your reference.
5. 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.



**Fig 7-A: Upward Installation**







**FIG 7-B: Downward Installation**



### • 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 circuit breaker of proper voltage rating.
3. When connecting the cable to terminal blocks/circuit breaker, please make sure the wire ends and the terminal blocks connect completely. Please tighten the screws completely to make sure the full current can be transferred.
4. Before beginning any work on the electric installation, be sure that the main breaker switch is OFF to avoid any danger of electric shock, all mounting and plumbing must be completed before proceeding with electrical hook-up.

1. Turn on the circuit breaker to bring electrical power to the unit.
  2. Turn on the water faucet for a few minutes until water flow is continuous and all air is purged from water pipes. The unit must be operated after the breakers are turned on.
  3. After the unit is supplied with power, please turn on the water and then the appliance will start work. The min water flow to activate the unit is 1.8L(.5Gal)/min.
  4. Turn off the water flow, and the appliance will stop working. It is not necessary to turn off the heater every time.
  5. Press  to adjust the setting temperature, every time you press the key, the setting temperature will go up 1°C/1°F. When you reach 55°C/131°F, it will begin again from 30°C/86°F after the next press. The default temperature is 55°C/131°F.  
Press  continuous for 3 seconds, and the setting temperature will be go up from 100°F(38°C), 107°F (42°C), 131°F (55°C), and then restart with 30°C/86°F.
  6. Press  to convert the temperature display between fahrenheit and celsius.  
Press  continuous for 3 seconds to convert the temperature display (numerals) between upside mounting and upside down mounting.
  7. There is an overheat protection function for the appliance, when the outlet temperature reaches 63°C, the appliance will decrease the power level automatically, and after the hot water temperature drops to 50°C, it will start to work again. If this happens, you should reduce the setting temperature.
  8. There is a built-in pressure relief valve at the water outlet. While the pressure in the heating element is over 1.2Mpa, the pressure relief valve will open and relief pressure.
  9. 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.

## 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 not coming on	A. Power not connected. B. LED damaged.	A. Connect power to the unit. B. Change LED.
3. Functional keys not working	A. No water flow from fixture. B. Water flow too low. C. Key or PCB damaged.	A. Open valve to get water. B. Open valve to get higher flow. C. Change key or PCB.
4. Water too hot	A. Too high temperature set point. B. Water flow too low.	A. Set a lower temperature. B. Increase inlet water flow.
5. Water too cold	A. Low temperature set point. B. Water flow too high.	A. Set a higher temperature. B. Reduce water flow.
6. Outlet water flow diminishes	Inlet strainer or shower clogged.	Clean strainer and shower.

## NORMAL MAINTENANCE

**Note:** Do not attempt to repair this water heater yourself, call a service person for assistance. Always turn off the power supply before working on the unit.

To ensure consistent water flow, the following maintenance is recommended.

- Periodically, remove scale and dirt that may build up at the aerator of the faucet or the shower head.
- 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
Mounting bracket/case	Piece	1
Rubber gasket and screw	Piece	1
Operation and Installation instructions	Copy	1
Cable and Screw Sets	Set	1

## CUSTOMER SERVICE



At Marey, we pride ourselves on the excellence of our customer service and support team.

Please feel free to contact us if you have any questions about our products, warranty service, or if you need assistance installing a unit. We also strive for continuous improvement, so we welcome your comments, feedback and suggestions.

**1-855-MAREY-55**  
**customerservice@marey.com**

## OTHER PRODUCTS

Please visit our website to get to know more about other Marey products.



ECO110



POWER PAK



ECO126



GAS PORTABLE



POWER GAS



POWER GAS 16L ETL

**Toll Free:**  
**1-855-627-3955**  
**1-855-MAREY-55**

**www.marey.com**