



1.5 GL MINI TANK
2.5 GL MINI TANK
4 GL MINI TANK
6 GL MINI TANK

ELECTRIC 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





Congratulations!

You've just purchased a new Marey Mini Tank water heater.

Take the time to thoroughly read and understand this safety and installation manual in its entirety before you attempt to install your new Mini Tank 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 for installation videos and FAQ.

Please keep this manual for future reference and technical information.



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MINI TANK

- 1) Locate a proper place to install the heater. If you choose to mount your Mini Tank to the wall than locate a stud or use wall anchors to support the weight of the heater when filled with water. Consider the water and electrical supply before finalizing on a location.
- 2) Connect the water lines the cold goes to the fitting with the blue ring and the hot water line goes to the fitting with the red ring. Both fittings are ½ inch NPT. Then connect the high pressure discharge valve to a drain hose then to a waste water drain it will require a ¾ inch NPT male fitting. Please see Pg. 9 of the manual for complete list of requirements.
- 3) The electrical connect is a simple three pronged 110V plug. The outlet **MUST** be properly grounded. The power cord is 4 feet so be sure that the heater is located near an outlet
- 4) Turn on the heater by twisting the knob clockwise. The more you twist the knob to the right the hotter your requested temperature will be. Please use caution when testing the water for the first time as to not cause scalds due to excessive heat.



WARNING: When using electrical appliances, safety precautions to reduce the risk of fire, electric shock or injury to persons should be followed including

1. READ ALL INSTRUCTIONS BEFORE USING THIS WATER HEATER.

2. This water heater must be grounded. Connect only to properly grounded power supply. See "GROUNDING INSTRUCTIONS"
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 described in this manual.
5. Do not use an extension cord set with this water heater. If no receptacle is available adjacent to the water heater, contact a qualified electrician to have one properly installed.
6. As with any appliance, close supervision is necessary when used by children.
7. Do not operate this water heater if it has damaged electrical connections, if it is not working properly, or if it has been damaged or dropped.
8. This water heater should be serviced only by qualified service personnel. Contact nearest authorized service facility for examination repair or adjustment.

SAVE THESE INSTRUCTIONS!

The manufacturer and/or distributor is not responsible for damages caused by improper installation, or by non-observance of the instruction in this manual.

AQUALIFIED LICENSED TECHNICAL MUST ALWAYS INSTALL THE WATER HEATER AND CONDUCT ALL SUBSEQUENT SERVICE WORK AND/OR MAINTENANCE.

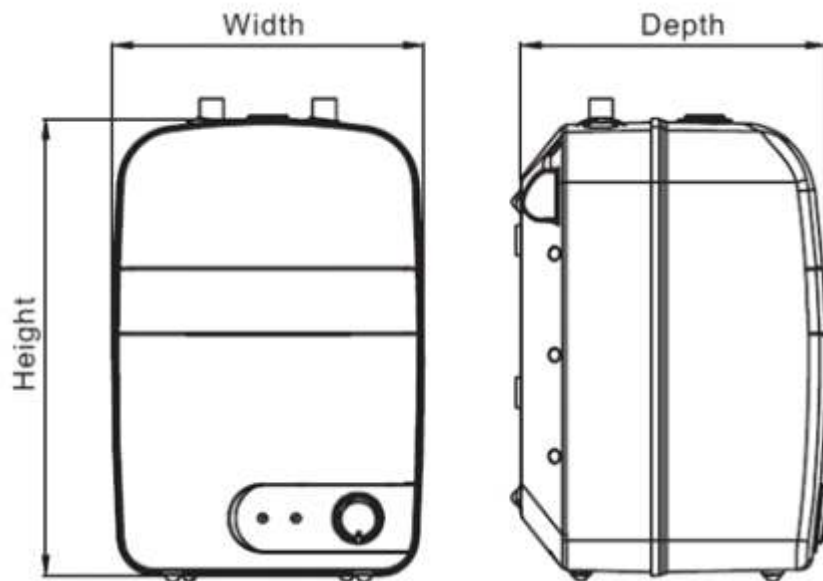
IMPORTANT: NEVER TURN THE WATER HEATER POWER ON UNTIL THE TANK IS COMPLETELY FULL AND WATER IS FLOWING OUT OF THE HOT WATER FAUCET.



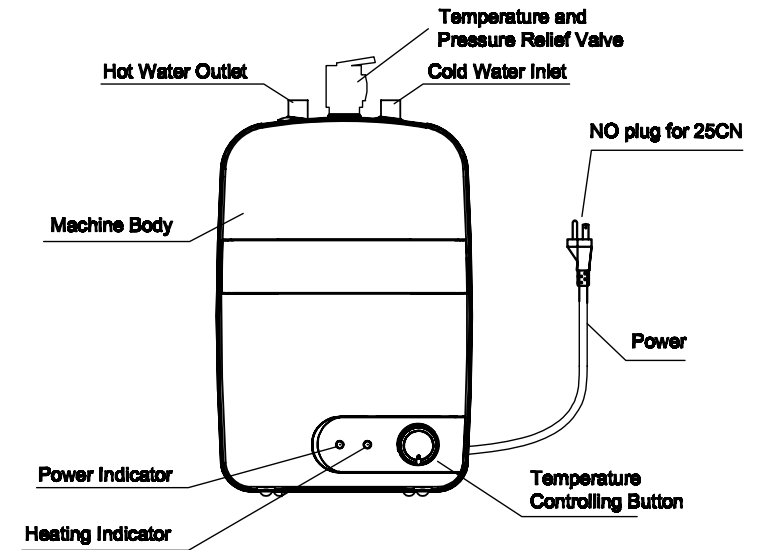
TECHNICAL INFORMATION

WARNING: The installer should review the contents of this manual with the owner upon completion of installation, and the manual should be left with the owner and placed in a location close to the installation.

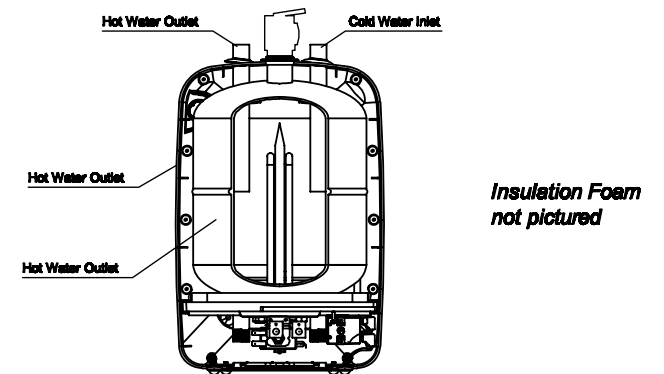
TECHNICAL SPECIFICATIONS	1.5 GL MINI TANK	2.5 GL MINI TANK	4 GL MINI TANK	5 GL MINI TANK
Power	1.44kW	1.44kW	1.44kW	1.44kW
Min. Required Circuit Breaker Size	20A	20A	20A	20A
Max. Operating Pressure	150PSI	150PSI	150PSI	150PSI
Temp. Setting	Knob Control	Knob Control	Knob Control	Knob Control
Voltage	120V	120V	120V	120V
Installation	Mounted Vertically	Mounted Vertically	Mounted Vertically	Mounted Vertically
Volume of Water	1.5 Gallons 6 liters	2.5 Gallons 10 liters	4 Gallons 15 liters	6 Gallons 25 liters
Water Connections	1/2" NPT	1/2" NPT	1/2" NPT	3/4" NPT
Dimensions	9.71" x 14.19" x 8.8"	10.9" x 15.9" x 10.7"	12.27" x 17.4" x 11"	13.85" x 19.8" x 12.5"
Weight	12 lbs	17.1 lbs	20 lbs	25.2 lbs



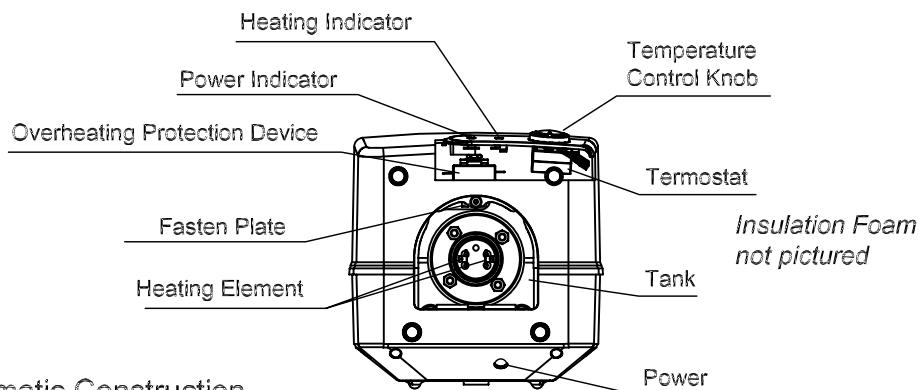
Assembly Figure



Water Flow Figure



Schematic Construction



GENERAL REMARKS

CAUTION: Prior to connecting the power supply, ensure tank is full of water and system is purged of air.

CAUTION: The manufacturer cannot be responsible for the damages caused by improper installation or by failure to follow instructions in this pamphlet. Comply with the installation instructions before completing electric connection.

CAUTION: The thermostat has been pre-set at the factory between 10°C (50° F) and 60° C (140° F).

CAUTION: Hydrogen gas can be produced in a hot water system served by this heater that has not been used for a long period of time (generally 2 weeks or more). Hydrogen gas is extremely flammable. To reduce the risk of injury under these conditions, it is recommended that the hot water faucet be opened for several minutes at the kitchen sink before using any electrical appliance connected to the hot water system. If hydrogen gas is present, there will probably be an unusual sound such as air escaping through the pipe as the water begins to flow. There should be no smoking or open flame near the faucet at this time.

WARNING: installer should be review the contents of this manual with the owner upon completion of the installation, and the manual should remain with the owner and placed in a location close to the water heater.



INSTALLATION INSTRUCTION

The installation for electrical and plumbing work must be carried by qualified personnel according to the installation instruction and compliance to the local authority regulations. The manufacturer will not be liable for any damages because of failure to comply with these installation instructions or because of improper installation performed by an unqualified installer.

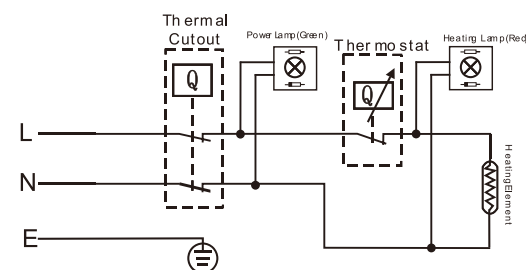
Wall-mounting

Fasten the supplied mounted bracket to the wall. Use screws that are suitable for the wall materials and the weight of the heater, Hang the water heater on the bracket. Pull downwards on the heater to ensure that both "fingers" of the bracket are seated in the mounting slots.

Heater can sit on the floor. Confirm water piping orientation before finalizing on floor. **ONLY INSTALL IN VERTICAL POSITION!** The water heater can be installed under the sink.

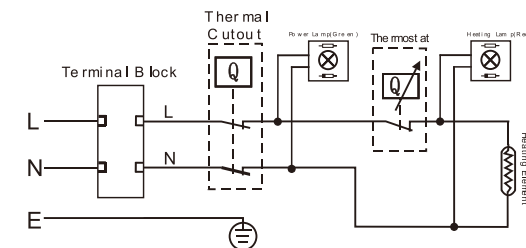
Wiring Diagram

10CN



Wiring Diagram

25CN



Pipe Connections

Connect the cold water inlet pipe to the inlet nipple (marked with a blue ring) and the hot water outlet pipe to the outlet nipple (marked with a red ring).



TEMPERATURE AND PRESSURE RELIEF VALVE

CAUTION: To reduce the risk of excessive pressures and temperatures in this water heater, install the supplied temperature and pressure protective equipment required by local codes but not less than a combination temperature and pressure relief valve certified by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment or materials, as meeting the requirements for Relief Valves and Automatic Gas Shut-off Devices for Hot Water Supply Systems, ANSI Z21.22. The supplied temperature and pressure relief valve is marked with a maximum set pressure (150 psi) that does not exceed the marked maximum working pressure of the water heater. The valve must be oriented, provided with tubing, or otherwise installed so that the discharge can exit only within 6 inches above, or at any distance below, the structural floor and cannot contact any live electrical part. The discharge opening must not be blocked or reduced in size under any circumstances.

Install the T&P valve into the threaded opening at the top of the water heater and orient the discharge tubing so that any discharge from the valve will exit within 6 inches above, or at any distance below, the structural floor, and cannot contact any live electrical part.

T&P valve discharge pipe:

1. Must not be smaller in diameter than the outlet diameter of the valve, or have any reducing couplings.
2. Must not be plugged or blocked.
3. Must be made of suitable materials for hot water..
4. Must not be over 15' in length..
5. Must not have more than two elbows..
6. Must terminate at an adequate drain..
7. Must not have a shut off valve between relief and tank or relief valve and termination of discharge.

Closed System thermal expansion: Periodic discharge of the temperature and pressure relief valve or failure of the element gasket may be due to thermal expansion in a closed water supply system. The water utility supply meter may contain a check valve, backflow preventer or water pressure reducing valve which will create a closed water system. During the heating cycle of the water heater, the water expands causing pressure inside the water heater to increase. The temperature and pressure relief valve may discharge hot water under these conditions which results in a loss of energy and a build-up of lime on the relief valve seat. To prevent this from happening, there are two recommendations:

1. Install a diaphragm-type expansion tank that is suitable for potable water on the cold water supply line. The expansion tank must have a minimum capacity of 1.5 U.S. gallons for every 50 gallons of stored water.
2. Install a 125 PSI pressure relief valve in the cold water supply line. Make sure the discharge of this valve is directed to an open drain and protected from freezing. Contact the local water supplier or plumbing inspector for information on how to control this situation. Do not plug the temperature and pressure relief valve.



ELECTRICAL CONNECTION

CAUTION: To be certain that all of the air is out of the water heater, otherwise, the element will be damaged when connected to power!!! Open the hot water faucet on your fixtures until constant water flow from them.

Connect the water heater to a GROUND POWER SUPPLY

The water heater is fitted with an electrical connection that is intended to connect to a grounded 110-120V/AC supply. Adhere to all pertinent State and local codes. Install the correct size circuit breaker into the master panel. The mini tank water heater was manufactured and wired in accordance with UL requirements.

The water heater is equipped with an overheat-limiting device with a manual reset. Also known as the temperature high limit, this device has been factory installed to interrupt the power supply in the event of a thermostat failure.

This water heater is designed for **ONLY 110V-120V electrical service! Don't connect to higher or lower voltage!!**

Failure to use proper voltage may result in personal injury and/or property damage. If the supplied electrical connection is either damaged or not long enough, do NOT use the extension cord. Have a licensed electrician replace the power cord.



Starting and testing

Before connecting the power, fill the tank and system with water and check for leaks. To be certain that all air is out of the water system, open the hot water faucets on your fixtures until constant water flows from them otherwise damage to the element may occur.

To start the heating cycle:

A) first make sure tank is full. Otherwise the heating element may be damaged.

B) the red light will come on and remain on until that temperature has been reached, at which point the light will go off, but will automatically come back on when the water temperature drops below the setting chosen.

Temperature Setting

The water temperature of the hot water is adjusted by rotating the knob Turn the knob clockwise to increase the temperature .Turn the knob anticlockwise to decrease it. Below is an image of the knob.



Temperature adjusting Knob

Setting the freeze protection: When the water heater is not being used for an extended period of time and there is a risk of freezing, disconnect power and drain the water heater



NOTE: Do not attempt to repair this water heater yourself. Call a service person for assistance. Always turn off the power supply to the heater prior to servicing or draining the heater.

WARNING: Before servicing or cleaning the water heater, turn off the POWER switch and disconnect power.

NOTE: For most of these operations, the water will have to be drained from the heater. In cases before draining first turn off the POWER switch and then disconnect power.

Draining the water

- 1) If the heater has been installed with flexible hoses, shut off the power supply and turn the heater upside down over a sink to drain the water out of it.
- 2) If the heater has been installed with rigid piping, siphon the water out through the inlet side. Keep a hot water faucet open while siphoning the water out.
- 3) If the heater has been installed with flexible hoses, it can also be emptied by Siphoning through the inlet side hose. Keep a hot water faucet open while siphoning.

Removing the heating element

- 1) Turn off power supply and drain the heater.
- 2) Remove cover.
- 3) Unscrew the heating element retaining nuts.
- 4) Remove the element.

Descaling the heating element

Scale deposits can affect the heating capability of the element. Heavy scale can even cause the element to burn out. The element can be descaled either chemically or manually:

- A)** Soak the element in white vinegar or other descaling solution once descaled rinse well with fresh water, to which you should add some baking soda.
- B)** Once the element has dried up, use a soft brush (non metallic to prevent damaging the stainless steel sheath) on element. Brush the dried mineral off. Reinstall the element with gasket and make the wire connections.

WARNING: make sure the tank has been refilled with water before restoring power.

REPLACEMENT OF PARTS

Changing the anode rod

The anode rod helps protect the tank against corrosion. Depending on the water condition, the magnesium anode rod may need to be changed every year or so. Galvanic and electrolytic corrosion can destroy a tank if the anode rod is “spent” Rusty water is usually an indication of a “spent” anode rod. If rusty water is present, examine anode rod immediately. Rapid degradation of the anode rod (less than 1 year) may indicate the presence of galvanic corrosion due to “stray” direct current. In this case, it may be necessary to add a “grounding strap” from the tank to the copper plumbing.

1. Turn off the power supply and drain the heater
2. Remove heating element
3. Remove and replace the anode rod
4. Refill tank with water before restoring power.

Changing the heating element

1. Turn off power switch , turn off the power supply and drain the heater.
2. Remove the cover and remove the heating element (see section on Removing the Heating Element).
3. Install new element with gasket, making sure the gasket and element are positioned correctly. Tighten the retaining nuts and make the wire connections.
4. Refill tank with water before restoring power.

Changing The thermostat

1. Turn off power switch and turn off power supply.
2. Drain and remove the water heater.
3. Remove the bottom panel of the water heater.
4. Loosen the two brass screws and pull wires out.
5. Unscrew and remove the two screws holding the thermostat down.
6. Install new thermostat and re-attach wiring and screws.

Resetting High Limit Switch:

Occasionally, the high temperature limit shut off device may trigger and shut the system down. This occurs when water temperature exceeds 190° F and shuts off power to the heating element. The shut off device may also trigger from a power outage or electrical storm.

- 1) Turn off the power switch and disconnect heater from the power. supply
- 2) Drain and remove the water heater
- 3) Remove the bottom panel of water heater
- 4) locate the high limit reset button.
- 5) Depress the small red button in the center of the junction box, reduce the bottom panel and place the water heater back into service.

NOTE: A lower setting is more economical, and reduces the risk of scalding.

CAUTION: Call a technician if the high limit needs to be reset frequently.



TROUBLE-SHOOTING GUIDE

Water does not get hot

1. Make sure the power supply is on and working.
2. If light does not come on, check that the reset button is pushed in; follow steps from previous section.
3. If the indicator light works properly but temperature does not get hot a tap, test for a plumbing crossover; shut off cold supply to heater and open hot water tap. There should be no water flowing. Any continued flow indicates a crossover which will effect the temperature and will need to be corrected.
4. Replace heating element

Light not on

1. If the light does not come on, but water gets hot, check for faulty bulb.
2. Check reset button; follow steps from previous section.

Odor in water

1. Smelly water could be due to an unusual reaction between local water and the heater's anode rod. Check anode rod.

Water is too hot

1. Remove cover plate and turn the temperature selector dial counter clockwise to lower temperature. If temperature never lowers then replace thermostat.

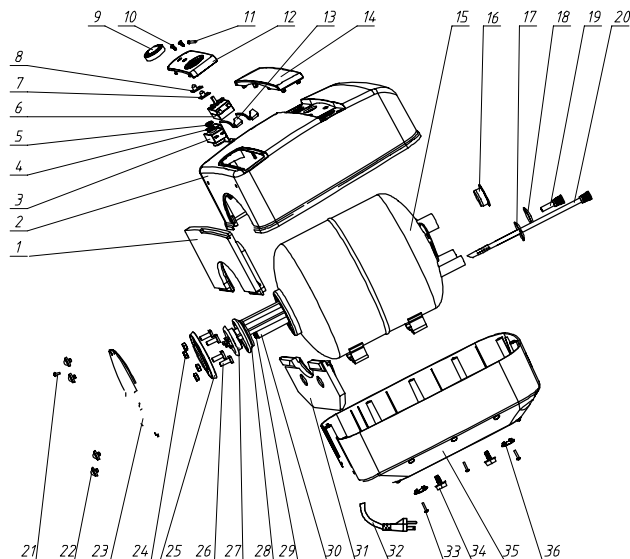
Water not hot enough

1. Under Instructions for Use see Temperature Setting instruction.

Leaking

1. Check water fittings and T & P fitting on top of tank.
2. Remove front cover and inspect heating element gasket.

Schematic Disassembly



No.	Name of part	QTY
1	inner foam (bottom A)	1
2	top cover	1
3	temperature limiter	1
4	bracket of temperature limiter	1
5	bolt of temperature limiter	1
6	thermostat	1
7	red lamp with PCB	1
8	green lamp with PCB	1
9	knob of temperature	1
10	Cross Countersunk nut	2
11	cross pan nut	1
12	control panel	1
13	internal wire components	1
14	decoration panel	1
15	inner tank components	1
16	yellow liner bushing of pipe	1
17	blue liner bushing of pipe	1
18	red liner bushing of pipe	1

No.	Name of part	QTY
19	outlet pipe components	1
20	inlet pipe components	1
21	cross countersunk bolt	1
22	foot pads of water heater	4
23	maintenance cover	1
24	bolt MB	4
25	flange cover	1
26	square head bolt	1
27	heating element	1
28	sealing ring of heating element	1
29	bolt M6	1
30	magnesium	1
31	inner foam (bottom B)	1
32	power cover	1
33	angle bolt	11
34	external 6 angles bolt	2
35	bottom cover	1
36	foaming plug	2



WARRANTY

You have just acquired a water heater with Marey quality. Our water heaters are extremely energy efficient. Our water heaters are designed for customers like you, who care for our environment and want to preserve it for future generations.

You have 30 days from purchase date to register your water heater in the Marey Heater Warranty Program at our website, www.marey.com. Please note that if you attempt to register your unit after 30 days from purchase, your warranty will not be valid.

Marey's water heaters 5-years warranty is comprehensive and covers all manufacturer's defects. Physical damage or damage caused during installation, exposure to extreme climate conditions, or dismantled interiors cannot be covered under warranty. You must follow the installation instructions exactly, and it is our strong recommendation that you employ the services of a licensed plumber or electrician to assist you with the installation.

Warranty coverage is for replacement parts and labor for the first year. After the first year, only replacement parts are covered. Refunds are not available under the warranty. Warranty repairs must be done at a certified Marey Service Center (customer is responsible for return shipment). In case warranty repairs are needed, please contact Marey directly at the number listed above for instructions. Please do not return the unit to your retailer or to the warehouse.

Product Suitability: Many jurisdictions have codes and regulations governing sales, construction, installation, and/or use of products for certain purposes, which may vary from those in neighboring areas. While Marey attempts to assure that its products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a product, review the product applications, and all applicable national and local codes and be sure that the product, installation and use will comply with them.



PACKING LIST

No.	Name	Unit (piece)
1	Storage Electric Water heater	1
2	User Manual	1
3	Inflation Bolt	2
4	Wall hanger	1
5	T&P Value	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.



ECO180



GAS PORTABLE



POWER GAS

Marey:
1924 HWY 95 North
Bastrop, TX 78602
Toll Free: 1-855-627-3955
1-855-MAREY-55

www.marey.com