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

You've just purchased a new Marey Power Gas tankless water heater and will soon begin to enjoy the benefits of “going tankless.”

The availability of instant hot water, combined with the unit's outstanding energy efficiency and space saving design, will quickly convince you that you've made the best decision for meeting your home's hot water needs.

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

Please carefully read all instructions and warnings. Feel free to call us at 512-332-2229 should you have any questions. Please keep this manual for future reference.

WARNING: If you are not familiar with basic plumbing and electricity, we highly recommend that you employ the services of a professional to assist you with this installation. Under no circumstances should you attempt to install, repair, or disassemble the Marey Power Gas water heater without first shutting off any gas supplied to the unit.
PACKING LIST

1. Water heater-Qty 1
2. Gas inlet hose connector-Qty 1
3. Rubber gasket-Qty 2
4. Operating Instructions-Qty 16
5. Mounting Screws-4 Sets

IMPORTANT WARNINGS

- You MUST install this water heater according to all directions and specifications contained in this manual. Failure to properly install the heater can result in property damage or severe injury or death by burning, explosion, or asphyxiation due to carbon monoxide.

- You MUST check the exhaust flue for obstructions at the initial installation and at least annually thereafter.

- You MUST check all connections for gas leaks with soapy water before firing the unit. This must be done at the initial install and after every propane bottle change if using an LP model. If you detect a gas leak of any kind, DO NOT fire up your unit.

- You MUST check for gas leaks by smell. Understand that LP is heavier than air and may sink to ground level. If you detect a gas leak of any kind, DO NOT fire up your unit.

- You MUST observe the unit in operation for several cycles before leaving it unattended.

- Unit MUST be hung vertically, with the water and gas connections at the bottom and the exhaust at the top.

- You MUST use a carbon monoxide detector in conjunction with this, or any, gas burning appliance.

- Do NOT expose the water heater to strong wind (including that from fans) or rain.

- Do NOT install the water heater near flammable or volatile substances. Do not handle or store these substances near the heater (gasoline, acetone, motor oil, paint thinners or any other flammable or volatile substance).

- Do NOT use tubing or piping that is aging or cracked in any way.

- Do NOT use this appliance with any type of gas other than that indicated on the data plate located on the side of the unit. Death or severe injury may result.

- Do NOT attempt to modify the internal components of this appliance.

FUNCTIONS AND FEATURES

1. Water-controlled automatic ignition:
   When water flow is detected, heating is provided immediately with a double-ignition device. The flame is sensed by ions. This sensitive control makes the unit easy and convenient to operate.

2. Auto-cut off protection:
   The auto-cut-off protection will shut off the gas supply immediately if the flame goes out for any reason.

3. Energy savings:
   The advanced combustion system comes with a Winter/Summer switch. In winter, when incoming water temperatures are lower, the winter setting increases the size of the flame to compensate with extra heating. In summer, when incoming water temperatures are higher, the summer setting reduces the flame. This provides more comfort and energy savings in the form of lower gas consumption in warmer months.

4. Low water pressure start up function:
   This unit requires only 8 PSI to fire, making it suitable for users with low water pressure, or those who are using it to supply hot water to upper floors. Please note that the water flow and water pressure are not the same. Sufficient flow is always required to keep the overheat safety sensor from shutting the unit off.

5. Anti-freezing protection:
   When the temperature is below freezing, remove the water discharge valve to discharge accumulated standing water inside the internal pipes. This will keep the unit from freezing.
6. Anti-dry combustion protection:
Should dry combustion occur for any reason, the gas supply will be immediately and automatically shut off.

7. Over-pressure protection:
When water pressure is over 145 PSI, the unit will automatically relieve the excessive pressure to avoid damage to its internal components.

PRECAUTIONS:
1. The water heater must be installed in a well-ventilated area. An exhaust pipe of double walled steel for Class 3 appliances (located at most home improvement stores in the water heater section) must be installed to discharge the exhaust from the flame. During operation, the water heater consumes a lot of oxygen, so the exhaust pipe and outlet hole must be properly installed. Refer to exhaust pipe section for details.

- Failure to properly install the room intake and exhaust pipe will cause oxygen depletion in the area around the water heater, which can cause incomplete combustion. Carbon monoxide poisoning, death and serious accidents can occur due to incomplete combustion. ALL USERS OF GAS APPLIANCES OF ANY TYPE SHOULD EMPLOY THE USE OF A CARBON MONOXIDE DETECTOR.

2. Don’t expose the water heater to the strong wind or rain.
3. Use only the type of gas that is specified on the name plate.
4. All gas connections should be made by a professional.
5. Don’t use pipes, tubing or other connections that are aging or cracked.
6. Do not use with water pressures lower than 8 PSI. Do not use with lower GPM's than indicated on the flow chart for your unit.
7. The water heater shouldn’t be installed above cooking appliances, such as ovens or stoves.
8. The water heater should be installed a minimum of 15 feet from any stairs or emergency exits.
9. The water heater must be installed vertically, according to the mounting instructions.
10. The water heater must not be installed near flammable or volatile substances.

INSTALLATION

Mounting Your Water Heater

a) When possible, your water heater should be mounted directly to studs. There should be a screw in every available mounting location on the heater. If studs are not available, do NOT hang unit directly from sheetrock without utilizing expansion screws.

b) When utilizing expansion screws for sheetrock mounting, hold the unit on the wall where you want it mounted. Mark with a pencil the (4) mounting holes. Remove the unit from the wall, and drill 3/8” holes on each mark. (See drawings below).

c) Install the expansion bolt into the drilled hole. Hang the unit utilizing the screws supplied.
Water Supply

Connect the cold water inlet supply

Note: Use white Teflon tape at all threaded water connections

- The cold water inlet joint is ½" NPT threaded pipe.

- The water inlet should be connected by using flexible heavy duty tubing or rigid PVC pipe. If you choose flexible tubing, you will need a ½” threaded male to ½” hose barb adapter. Tubing should be secured with properly sized hose clamps. Rigid pipe should be ½” male threads. Teflon tape should be employed with any threaded fittings.

- The inner diameter of the water outlet pipe (including the valve) should not be less than 3/8”. Larger diameter pipe is acceptable as long as the appropriate adapters are used.

- The cold water valve must be installed inline with the water inlet pipe.

- Always flush a new unit with water to clear out any collected deposits or debris prior to installation. The supplied screen filter must be correctly installed in the cold water inlet to prevent mineral deposits from your water supply from building up in the unit’s water valve assembly. After flushing with cold water and confirming that there is no residue in the pipe, install the rubber gasket and tighten the water inlet joint.

Hot Water Outlet

- The hot water outlet joint is 1/2” NPT pipe thread.

- The hot water outlet should be connected by flexible tubing or rigid PVC of the type intended for use with hot water.

- The inner diameter of the water outlet pipe (including the valve) should not be less than 3/8”. Larger diameter pipe is acceptable as long as the appropriate adapters are used.

- After connecting, fully open the cold water supply to confirm the flow of water and to check for leaks. Correct leaks as necessary.

Installing the Gas Supply

The gas inlet joint is 1/2” NPT pipe thread. Very Important: Use Teflon tape for gas or gas pipe paste between the unit and the gas inlet pipe connector.

- For small bottle Liquid Propane installations: Connect the gas supply to your propane bottle using a standard rubber Liquid Propane hose and low pressure regulator. Optimal pressure for your unit is .41-.5 PSI, the same as a typical gas grill. Pressures set outside this range may result in inconsistent behavior from your water heater.

- For whole house Liquid Propane or Natural Gas Installations: The unit should be connected directly to the home gas supply using black iron gas pipe or the braided metal gas appliance hoses located in the water heater section of your local home improvement store. WARNING: THIS TYPE OF CONNECTION MUST BE MADE BY A PROFESSIONAL. Please note that Natural Gas units require .25-.5 PSI for your unit to operate correctly. If you are unsure of your gas pressure, contact your gas company.

After the gas inlet is connected, open the gas supply valve and check for gas leaks at all connections by spraying with soapy water and watching for bubbles. Do not skip this step! Adjust or repair leaks as needed.

- All gas connections must be made in accordance with local building codes and regulations.

Installing the Exhaust Pipe

- All venting must be done in accordance with local codes and regulations. Local building codes from city to city and state to state will vary. Some jurisdictions may allow venting material not allowed by other jurisdictions.
- Drill a hole through the roof and ceiling slightly larger than the vent pipe diameter. Attach pipe to the top of the unit and go straight up and out the roof. Install rain/wind cap on top of vent pipe. Total vertical distance must not exceed 60". Roof clearance must be at least 12".

- Fresh air intake: The room in which the heater is located must have an air inlet not less than .75 square feet (roughly 9" x 12" or larger).

- All jurisdictions in North America allow for Z-Vent material to be used for venting tankless hot water heaters. The condensation of a tankless water heater is slightly more acidic than that of a standard water heater. Z-Vent is double walled stainless steel vent pipe made specifically for venting tankless heaters. Z-Vent is intended for lifetime use and will never corrode or rust.

- Z-Vent material is available at most home improvement stores, and can be found at many online retailers as well.

- Some jurisdictions in North America allow for B-Vent to be used. B-Vent is double walled galvanized vent pipe made for standard water heaters and stove vent pipe. B-Vent is not lifetime material and will eventually corrode after extended use. Before deciding what material to use, you MUST check your local building codes to see what is allowed in your jurisdiction. If you choose to use B-Vent, you MUST check it at least monthly for corrosion and replace vent pipes immediately if corrosion is detected.

- Diameter of the vent pipe is 4" for 5L, 4" for 10L, and 5" for 16L units. Use the coupler provided with your unit for installation on the 5L and 10L units. Vent pipe attaches directly to the unit in 16L models.

- Through wall installations: Use (2) 45 degree elbows, (1) piece of straight pipe no longer than 18" in length, one piece of straight pipe no longer than 42" in length, one wind/rain cap and one condensation drain.

- From the outlet at the top of the water heater, attach the first 45 degree elbow with a vent pipe coupler to secure it to the unit. Once the elbow is attached, use it as a guide to cut a hole through the wall at a 45 degree upward angle, at a slightly larger diameter than the outlet pipe. Install the 18" piece of straight pipe to the 45 degree elbow and pass it through the hole in the wall. Note: If the overall thickness of your wall exceeds 18", the length of the first pipe can be extended up to 24". If this is the case, reduce the length of the second pipe to 36". Total venting distance should not exceed 60".

- Attach the second 45 degree elbow on the other side of the wall, turning the angle upward to run parallel with the wall. Install the second piece of flue pipe into the elbow, parallel to the outside wall. Utilize galvanized steel brackets or clamps as necessary to secure the piping. Install the rain/wind cap on top of the second piece of exhaust pipe.

- Install a condensation drain on the portion of pipe located outside the structure.

- Through the roof installations: Use one piece of straight pipe, 60" or shorter, a wind/rain cap and a condensation drain. Attach directly to the outlet of the unit (16L units), or using the coupler supplied (5L and 10L units).

**Note:** If your situation requires a vent pipe distance of longer than 60", a low CFM duct booster fan may need to be employed to ensure proper venting of the unit.

**OPERATING INSTRUCTIONS**

- After installation is complete, open the battery compartment located at the bottom of the unit and install two D Cell batteries. Check the door of the battery compartment for correct battery position.

- Open the hot water on a nearby faucet. Confirm proper water flow through the unit and out of the faucet. (You should hear a “clicking” sound from the unit-this is the ignitor activating). Turn the water back off.
- Start the gas supply. Check again for gas leaks using soapy water and correct as necessary.

- Open the hot water faucet. You should hear the ignition clicking, and hot water should begin flowing. Sometimes, if there is air in either the water or gas supply lines, you will not get immediate combustion. If this is the case, turn the water on and off several times to clear the water and gas lines of any air pockets that may be present.

- All water heaters have a seasonal summer/winter switch to meet your water temperature needs. This is because extra heating may be required when incoming water temperatures are lower (winter), and less heating is required when incoming water temperatures are higher (summer). Use the summer setting when incoming water temperatures are a little higher. Use the winter setting when incoming water temperatures are a little lower.

- When the water supply is turned off, the water heater will stop working. When you turn the water back on, the water heater will reignite. Please note that if you use the hot water multiple times in quick succession, the water may be excessively hot for one or two seconds. Please wait for the temperature to adjust before using.

- If you close the water inlet valve or the water outlet valve, the water heater will shut off immediately. Shut off the gas supply after use.

1. If a gas leak is detected at any time, close the main gas valve immediately. The Marey service center or your local gas company should be contacted for repair.

2. Before going to sleep or leaving the house, the gas supply should be shut off.

3. Do not block the exhaust pipe or the air inlet. This can cause incomplete combustion and lead to gas poisoning.

4. During operation, check the fire through the sight glass for normal combustion. Check for a compact, blue flame. Tall or excessively orange flames indicate abnormal combustion. If there is abnormal combustion, close the gas valve immediately and contact the Marey service center or your gas company for maintenance.

5. When outdoor temperatures are below 32 degrees F and pipe freezing may occur, any water remaining in the unit after use should be discharged to avoid freezing. Water should be discharged in the following manner:

   a) Turn off the gas supply valve, turn off the tap water supply valve, and turn the water temperature adjusting switch to the low temperature position. Turn on the hot water supply valve and remove the water discharge valve to discharge the water remaining in the unit. Reinstall the water discharge valve.

**INSTRUCTIONS FOR DAILY MAINTENANCE**

Check the gas pipes, hoses, and vent pipes regularly. If you find joints that are not tightly secured or if there are cracks or corrosion anywhere, you should stop using the heater and perform the necessary maintenance immediately.

Check regularly for water or gas leaks and correct immediately.

Regularly clean the surface of the water heater to remove dirt or dust with a wet cloth, and then use a dry cloth to remove moisture. For hard to remove dirt, please use a mild spray cleaner or detergent.

Do NOT use strong detergents, benzene, gasoline, or other flammable agents to clean the unit.

Regularly remove and wash the stainless steel filter in the cold water inlet.

During operation, take note of the flame and discontinue use if abnormal combustion is detected.

Avoid accidents. DO NOT modify this unit in any way.
IMPORTANT WARNING - PLEASE TAKE NOTE

If your unit is a 16L model, you MUST follow this diagram for correctly connecting water and gas to the unit.

The water and gas connection diagram contained on the previous page is accurate only for the 5L and 10L Power Gas models. If you have a 5L or 10L unit, please follow the diagram contained on the previous page.

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**5L and 10L units**

- **Gas inlet pipe**
- **Hot water outlet pipe**
- **Solenoid valve**
- **Ignition Module**
- **Water discharge valve**
- **Water adjusting valve**
- **Microactive switch**
- **Battery Box**
- **Temperature controller**
- **Heat exchanger**
- **Burner**
- **Ignition pin I**
- **Ignition pin II**
- **Water inlet pipe**

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**16L units**

- **Gas inlet pipe**
- **Hot water outlet pipe**
- **Gas -collecting roof**
- **Back plate**
- **Heat exchanger**
- **Temperature controller**
- **Burner**
- **Ignition pin II**
- **Thermocou**
- **Water adjusting Valve**
- **Gas adjusting valve**
- **Solenoid valve**
- **Ignition Module**
- **Battery Box**
- **Water inlet pipe**

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Drawing 07

Drawing 08
**Temperature Increase Chart**

<table>
<thead>
<tr>
<th>Flow (GPM) / Temp Increase (F)</th>
<th>GAS 5L</th>
<th>GAS 10L</th>
<th>GAS 16L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model*</td>
<td>GPM</td>
<td>1.0GPM</td>
<td>1.5GPM</td>
</tr>
<tr>
<td>GASL Portable</td>
<td></td>
<td>2.0GPM</td>
<td>2.5GPM</td>
</tr>
<tr>
<td>Highest</td>
<td>96</td>
<td>48</td>
<td>32</td>
</tr>
<tr>
<td>Lowest</td>
<td>34</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>GASL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest</td>
<td>129</td>
<td>64</td>
<td>43</td>
</tr>
<tr>
<td>Lowest</td>
<td>34</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>GA10L</td>
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<tr>
<td>Highest</td>
<td>-</td>
<td>100</td>
<td>67</td>
</tr>
<tr>
<td>Lowest</td>
<td>68</td>
<td>34</td>
<td>23</td>
</tr>
<tr>
<td>GA16L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest</td>
<td>-</td>
<td>143</td>
<td>95</td>
</tr>
<tr>
<td>Lowest</td>
<td>88</td>
<td>44</td>
<td>29</td>
</tr>
</tbody>
</table>

*No need for electricity, starts with pulse ignition, powered by 2 D cell batteries.

**Highest gas setting:** set for Winter/High. Lowest gas setting: set for Summer/Low.

**Note:** If your gas model features an LCD panel, the digital display will indicate the outgoing water temperature.

This information is intended as a guideline based on typical residential environments. Temperature increases will vary depending on the environment in which the heater is used. Variables such as very low incoming water temperature or higher than average gas pressure can result in higher temperature increases. Higher incoming water temperature or lower than average gas pressure can result in lower temperature increases. **ALWAYS** test the water with your hand to confirm suitable temperature before use.
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.

1-512-332-2229
customerservice@marey.com

Marey proudly manufactures water heaters and accessories for use in almost any application. Please visit our website to learn more about other Marey products.

GAS PORTABLE
POWER PAK
SANTON

AQUAMATIC
ECO180
POWER GAS

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