

L-7 Liter Outdoor Tankless Water Heater



EccoTemp Systems, LLC

Volume 1, Issue 1

THE FUTURE OF EFFICIENCY

7 LITER OUTDOOR MOUNT LIQUID PROPANE WATER HEATER



- Visit us on the web www.eccotemp.com
- Call us (866) 356.1992
- Fax us at (843) 875.4230
- Email us at info@eccotemp.com

**EccoTemp
Systems, LLC**

315-A Industrial Road
Summerville, SC 29483

Phone (866) 356.1992
www.eccotemp.com
info@eccotemp.com

Table of Contents

Use and Care Introduction	3
WARNINGS	4
The Purpose and Benefits of the L7.....	7
Functions and Features	8
Getting Started.....	10
Installation/Use	12
Adjustment.....	14
Troubleshooting.....	16
Additional Products.....	20

You will find answers to the most frequently

asked questions on our website:

www.eccotemp.com

The purpose of this manual is twofold; one, to provide the installer with the basic directions and recommendations for the proper installation and adjustment of the water heater, and two, to the owner operator, to explain the features, operation, safety precautions, maintenance and troubleshooting of the water heater. This manual also includes a parts list.

It is imperative that all persons who are expected to install, operate, or adjust this water heater read the instructions carefully so they may understand how to perform these functions. If you do not understand these instructions or any terms within, seek professional advice from a licensed contractor, gas company, or plumber.

Any questions regarding the operation, maintenance service or warranty of this water heater should be directed to Eccotemp Systems, LLC directly by calling toll free at 866.356.1992 or via email at support@eccotemp.com.

Do not destroy this manual. Please read carefully and keep in a safe place for future reference.



California Proposition 65 Warning: This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproduction harm.

WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

Other Products:

L5: The L5 is the smaller sister unit of the L10. This top vented outdoor unit delivers up to 1.4 GPM and temperatures up to 150 degrees F. An ideal choice for portable hot water applications.



40-H: Outdoor mount LP or NG whole house water heater. GAMA rated at 6.3 GPM, it is the ideal choice for a standard 3 bedroom, 2-2.5 bath home. Outdoor mount means no additional vent piping to purchase.



40-HI: Indoor mount LP or NG whole house water heater. The indoor version of the 40-H, it is an ideal choice for a standard 3 bedroom, 2-2.5 bath home. Indoor installation makes it a convenient choice for a retrofit on your old, inefficient storage tank heater.



Water is flowing, but there is no hot water coming out:

- a. Ensure that you have the incoming water supply and the outgoing water supply hooked up properly. Your water supply should be attached to your incoming connection (located on the far right) and the output should be attached to the outgoing water (located as the center connection)
- b. Ensure that you have adequate water pressure of at least 20 PSI, sustained.
- c. Ensure that you have adequate gas in your propane bottle and that the LP regulator is threaded all of the way on to the unit.
- d. Fresh batteries are required for operation. Make sure batteries are aligned in the proper polarity (+/-)

If you are still having troubles or are on a modified water system, please call technical support at **866.356.1992**

The unit does nothing:

- a. Ensure that you have the incoming water supply and the outgoing water supply are hooked up properly. Your water supply should be attached to your incoming connection (located on the far right) and the output hose should be attached to the outgoing connection (located as the center connection).
- b. Ensure that you have an adequate supply of propane
- c. Ensure that you have fresh batteries

If you are still having troubles or are on a modified water system, please call technical support at 866.356.1992

IMPORTANT SAFETY INFORMATION.
READ ALL INSTRUCTIONS BEFORE USING.

Be sure to read and understand the entire Use and Care Manual before attempting to install or operate this water heater. It may save you time and money. Pay particular attention to the Safety Instructions. Failure to follow these warnings could result in serious bodily injury or death. Should you have problems understanding the instructions in this manual, or have any questions, STOP, and get help from a qualified service technician, or the local gas utility.



▲ DANGER!

INSTALL AND PROPERLY VENT THE WATER HEATER...

Failure to properly install the water heater outdoors as outlined in the Installation Instructions in this manual can result in unsafe operation of the water heater. To avoid the risk of fire, explosion, or asphyxiation from carbon monoxide, never operate this water heater unless it is installed properly and has an adequate air supply for proper operation. Be sure to inspect the flue terminal for proper installation at initial start-up; and at least annually thereafter. Refer to the Care and Cleaning section of this manual for more information regarding flue terminal inspection.



▲ WARNING!

Gasoline, as well as other flammable materials and liquids (adhesives, solvents, paint thinners etc.), and the vapors they produce are extremely dangerous. DO NOT handle, use or store gasoline or other flammable or combustible materials any where near or in the vicinity of a water heater or any other appliance. Be sure to read and follow the labels on the water heater, as well as the warnings printed in this manual. Failure to do so can result in property damage, bodily injury or death.

▲ DANGER	
	
<p>▲ Vapors from flammable liquids will explode and catch fire causing death or severe burns.</p> <p>Do not use or store flammable products such as gasoline, solvents or adhesives in the same room or area near the water heater.</p> <p>Keep flammable products:</p> <ol style="list-style-type: none">1. far away from heater,2. in approved containers,3. tightly closed and4. out of children's reach.	<p>Water heater has a main burner flame. The main burner flame:</p> <ol style="list-style-type: none">1. which can come on at any time and2. will ignite flammable vapors. <p>Vapors:</p> <ol style="list-style-type: none">1. cannot be seen,2. are heavier than air,3. go a long way on the floor and4. can be carried from other rooms to the main burner flame by air currents.
<p>Installation:</p> <p>Do not install water heater where flammable products will be stored or used unless the main burner flame is at least</p>	<p>10' above the floor. This will reduce, but not eliminate, the risk of vapors being ignited by the main burner flame.</p>
<p>Read and follow water heater warnings and instructions. If owners manual is missing, contact the retailer or manufacturer.</p>	

DANGER!

NATURAL GAS AND LIQUIFIED PETROLEUM MODELS

Both LP and natural gas have an odorant added to aid in the detecting a gas leak. Some people may not physically be able to smell or recognize this odorant. If you are unsure or unfamiliar with the smell of LP or NG, ask the gas supplier. Other conditions such as "odorant fade", which causes the odorant to diminish in intensity, can also hide or camouflage a gas leak.

- Water heaters utilizing LP gas are different from natural gas models. A natural gas water heater will not function safely on LP gas and vice versa.
- No attempt should ever be made to convert the water heater from NG to LP gas. To avoid possible equipment damage, personal injury, or fire, do not connect the water heater to a fuel type not in accordance with the data plate.
- LP gas must be used with great caution. It is heavier than air and will collect first in lower areas making it hard to detect at nose level.
- Before attempting to ignite the water heater, make sure to look and smell for gas leaks. Use a soapy solution to check all gas fittings and connections. Bubbling at a connection indicates a leak that must be corrected. When smelling to detect a gas leak, be sure to sniff near the floor also.
- Gas detectors are recommended in LP and NG applications and their installation should be in accordance with the detector manufacturer's recommendations and/or local laws, rules, regulations or customs.

d. The valve on the propane tank should be all the way "Open".

e. Fresh batteries are required for ignition spark. Make sure batteries are aligned in the proper polarity (+/-).

The water does not get hot enough:

a. You are operating the unit above 6,000 feet. While it has been field tested up to 7,200 feet, we only recommend using it below elevations of 5,500-6,000 feet.

b. Look into the viewer panes (middle horizontal windows on the front cover) to see if there is a blue flame. If the flame is yellow there could be a cracked gas regulator. Do Not Attempt to use the unit and call Eccotemp directly.

c. You are running more water through it than the water heater can heat, section 'd': Check for gas leaks with soapy water and check to ensure that your hose and regulator are properly connected to your propane tank.

d. A wire has become disconnected inside the unit during shipping. Make sure the gas is OFF. The front cover is held by six screws, four on top, two on bottom. The knobs pull off. All the wiring is done with push together plastic connectors. They are all visible without further dismantling of the unit. It should be obvious when a wire has become disconnected.

e. It is possible that some debris or epoxy might have entered the water regulator. Check to see if the filter screen on the water inlet is clear of debris. You can also reverse the hookup by taking your water source and hooking it up to the water **outlet** side and back flushing the system.

f. Propane gas cylinders sometimes are contaminated with air, especially new tanks upon their first filling. Cycle the unit on and off several times (5) to purge the air from the gas.

Should a unit fail to light or stay lit after 10 cycles, Call technical support at 866.356.1992.

Units starts, then shuts off:

a. The unit requires a minimum of about 0.5 gallons per minute (2 liters) and a minimum of about 25 PSI* Note, water pressure is at the lower end of operating parameters. You will need a sustained water pressure of approximately 40-60 PSI for adequate use if you are using a 12/14/120 volt pump.

b. High wind of more than 10 MPH.

c. Out of, or low on gas. Propane gas cylinders sometimes are contaminated with air, especially new tanks upon their first filling. Cycle the unit on and off several times (5) to purge the air from the gas. If this doesn't clear the air then the tank must be purged.

ADDITIONAL WARNINGS

1. **Do not leave unattended**
2. **The exhaust gas and top of the unit is HOT! Do not place hands or any foreign object near the top of the heater.**
3. **Do not use in high wind conditions. Rated for up to 10 MPH.**
4. **If the smell of gas is detected, turn off the gas valve at the tank immediately! Do not use flame for leak detection.**
5. **Use only Liquid Propane**
6. **Use only outdoors**
7. **Do not over tighten the gas regulator connection to the unit with a wrench. This may cause a crack in the gas regulator. Gently tighten with Teflon tape, then spray with window cleaning solution or soapy water as a leak detector.**
8. **Unit should be placed 2" off of wall, 1' clearance side to side, 18" from ground, and 3' from any overhang or windows.**

The Purpose and Benefits the L-7

The EccoTemp L-7 is a liquid propane fired water heater capable of delivering 1.1-1.6 gallons of hot water almost anywhere. The unit has standard 1/2"NPT pipe fittings and an adapter for using a standard garden hose for inlet water supply.

The L-7 is not a toy. People around the world use similar units to heat the water in their homes, safely, and reliably.

Gas is supplied from a standard 20 pound propane cylinder (not included) such as used with outdoor grills. A regulator with hose is furnished with the heater.

You may also plumb it in to existing water lines and using a low pressure LP gas regulator. Check local codes for proper installation.

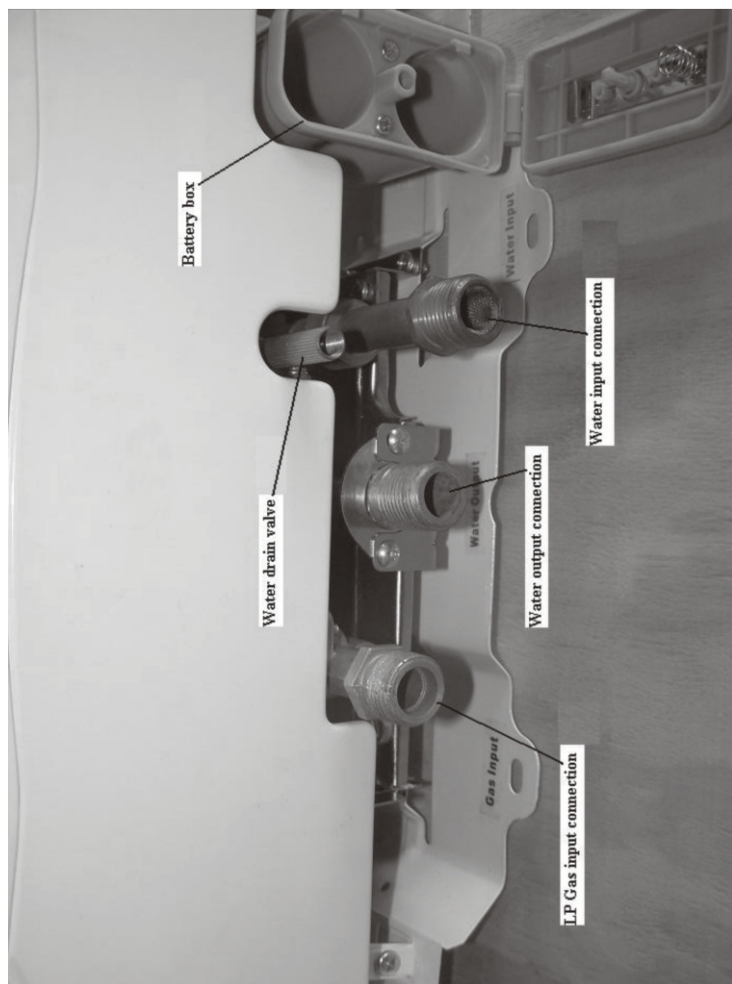
Ignition is automatic and powered by 2 "D" cell batteries (not included). Burners come on when water flows, and off when the water is shut off. No pilot light!

DO NOT RETURN TO STORE:
Eccotemp toll free at 866.356.1992 or via email at support@eccotemp.com if you encounter a problem!

TROUBLESHOOTING

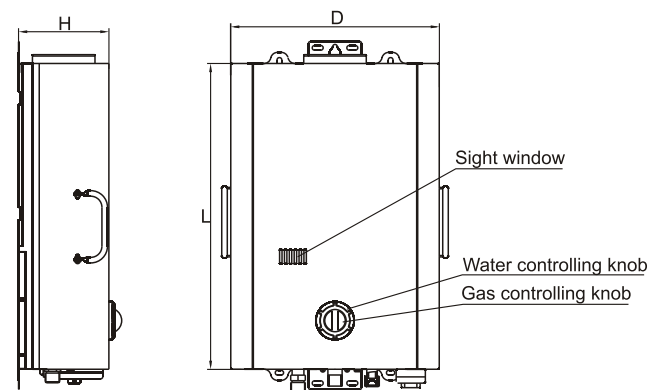
Unit will not start – there are no audible clicks at startup:

- a. The first thing to check is to ensure that the incoming water on the "right" side of the unit. If the incoming and outgoing are reversed, the unit will not work. The incoming is on the far right and the outgoing is in the middle.
- b. Check to make sure you have fresh batteries and they are installed in the correct position with the flat side of the batteries touching the spring.
- c. Number one reason that the unit does not ignite is that there is not enough water pressure. You need a minimum of 20 PSI sustained. Municipal water should supply enough water pressure. Most 12/24/120 volt pumps will suffice as long as they are capable of delivering a pressure of at least 35 PSI and 1.6 GPM.



Functions and Features

- Water controlled automatic ignition: Water pressure between 20-80 PSI opens the ignition circuit for easy and convenient operation
- Auto-cut-off protection: The auto-cut-off protection will shut the gas supply off immediately in the event of flameout to reduce the risk of gas leakage.
- Removable drain valve to avoid water pipe and regulator damage caused by freezing water. Please do not adjust the screw inside of the drain plug; remove the plug as a whole unit.



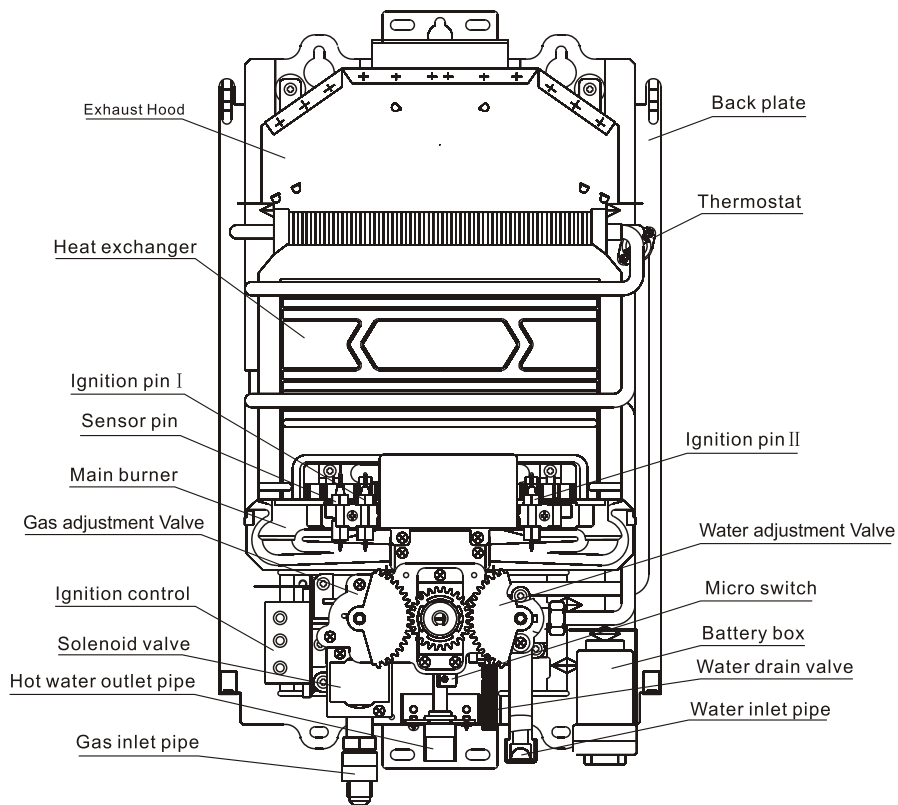
***Read the maintenance section on draining the unit entirely to avoid freeze issues.**

You will find answers to the most frequently

asked questions on our website:

www.eccotemp.com

Construction and Names of Parts for the L7 Flue Duct System



ADJUSTMENT

The temperature of the outgoing water is dependent on the temperature of the incoming water balanced with the amount of heat applied. Use extreme caution in setting the outlet water temperature.

1. With the water regulator set to high (+), and the gas regulator set to low (-), feel the outgoing water. This is the lowest setting available.
2. To initially raise the outgoing temperature, slowly turn the gas valve towards maximum (+). Adjust slowly and check the temperature often. There will be a slight delay between increasing the gas supply and the increase in water temperature.
3. Should the outlet water temperature need to be higher, slowly reduce the water flow regulator until desired temperature is reached.

WARNING:

**THE UNIT WILL PRODUCE
TEMPERATURES CAPABLE OF SCALDING!**

the unit after each use to avoid internal damage to the water regulator, Do not adjust the screw inside of the drain plug. You will also need to unhook the outgoing water line to ensure that any water in the heat exchanger is drained. Failure to properly drain your unit will cause water damage which may or may not be reparable. Please check the warranty information found on our website at www.eccotemp.com/freeze.htm for more information on freezing issues.

IN ADDITION: There is slightly less than one half of a PSI going to the gas line. By using Teflon tape when applying the flair fitting, only hand tightening the hose will properly seal the connection. Always check for leaks **BEFORE** attempting to use heater.

You will find answers to the most frequently

asked questions on our website:

www.eccotemp.com

Getting Started

1. Check box for damage. Damages caused in shipment must be reported immediately.
2. Make sure you have all the parts:
 - a. Water heater
 - b. LP gas regulator and hose
 - c. Shower head and shower hose
 - d. ½” NPT to garden hose adapter
 - e. Hardware pack
3. If using a standard garden hose, attach the ½” NPT to garden hose adapter to the fitting marked “Water Input”. Use “Teflon” tape or other approved sealing method on the threads for a secure, water tight fit. Also, check to make sure the screen inside the water inlet is in place and clean. Then attach your water input/garden hose.
4. Install gas supply line and regulator to the unit. **DO NOT OVER TIGHTEN. OVER TIGHTING MAY CRACK THE GAS REGULATOR CAUSING A GAS LEAK!** Ensure that you use Teflon tape on all fittings and check for any gas smell before ignition! Make sure the gas fitting is screwed all the way on. **HAND-TIGHTEN ONLY.**
5. Attach your water output apparatus to the fitting marked “Water Outlet”. **Do not over tighten!** If installing in an existing water system, connect the hot water line directly to the ½” NPT fitting.

6. Install two "D" cell batteries in the compartment on the bottom left of the heater. Check that batteries are facing the correct direction.
7. Use the top tab on the unit to suspend from a screw adequate to holding 30 pounds. Place at a comfortable height without putting stress on the gas hose. If the unit is to be permanently mounted, use screws to attach the bottom tab firmly.

Before going to the USE section:

Check around area for flammables, especially gasoline or other vapors which may ignite. The exhaust and top of the unit will get HOT! Make sure there are no foreign objects around the unit or have fallen into the top.

Clearances:

Unit should be placed 2" off of wall, 1' clearance side to side, 18" from ground, and 3' from any overhang or windows.

Use and Starting

1. Turn the gas valve on your propane cylinder all the way open.
2. IF THE SMELL OF GAS IS DETECTED, TURN OFF THE GAS VALVE IMMEDIATELY. DO NOT ATTEMPT TO OPERATE THE WATER HEATER AND CALL TECHNICAL SUPPORT AT 866-356-1992
3. Spray soapy water on the gas connection to see if bubbles form. The formation of bubbles indicate a gas leak. If there is a gas leak present, IMMEDIATELY SHUT OFF THE PROPANE CYLINDER AND DO NOT TRY TO OPERATE THE WATER HEATER. CALL TECHNICAL SUPPORT AT 866-356-1992.
4. Turn on the incoming water supply. Ensure that you have adequate water pressure between 20-80 PSI.
5. Set the water regulator dial on the face of the unit to halfway between (-) and (+)
6. Turn the gas regulator dial on the face of the unit to the lowest setting (-)
7. Set your shower head to the 'on' position
8. There will be a series of audible clicks. The burners will ignited the gas. Should the burner not ignite after 5 seconds, turn the shower head to the 'off' position and go to the 'Troubleshooting' section on page 16 of this manual or you can find more information on our website at www.eccotemp.com
9. Upon completion of use, unscrew the drain stem (ribbed cylindrical brass piece next to the water input) by turning counter-clockwise to remove water in the water regulator. For complete draining, unhook the outgoing water line.

WARNING: If the outside temperature is around or below freezing (32 degrees F, 0 degrees C), you must ensure that the entire drain valve is removed and all of the water is drained from the water heater after each use to avoid internal damage. Do not adjust the screw inside the drain plug. You will also need to unhook the outgoing water line to ensure that any water in the heat exchanger is drained and not reconnect. Failure to properly drain your water heater will cause water damage which may not be repairable. Freeze damage is not covered under warranty. Please check the warranty information found on our website at www.eccotemp.com/freeze.htm for more information on freezing issues.