

# OME 514-PV Instantaneous Water Heater

## Installation Manual and Owner's Guide

### **FOR YOUR SAFETY**

This product must be installed by a licensed professional technician or gas fitter qualified in water heater installation to comply with the laws of the Commonwealth of Massachusetts and/or any State. Check your local codes and regulation. This manual is correct as of the date of publication, but regulations are in continual change or update. Only your professional installer will be updated in regard to all local Codes pertaining to the installation of this water heater.

### **Warning**

If the information and instructions in this manual is not followed exactly, a fire or explosion is possible, causing property damage, personal injury or death.

### **Warning**

Any Gas appliance creates flue gasses, carbon monoxide gas, which can cause serious injury or death. Improper installation, and/or operation, or installation by unqualified person, will void warranty. Installation and service must be performed by a qualified installer, service agency or your gas supplier.



**Suitable for  
potable water heating  
or space heating**

### **Features**

- \* Energy conservation,
- \* Endless hot water on demand,
- \* Compact, wall mount, space saving,
- \* Computer controls for safety and reliability,
- \* Electronic ignition, no pilot light,
- \* The only Tank to Tankless replacement kit available in the market which do not require plumbing modification

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## Specification

<b>Natural Gas Input</b>	<b>Minimum 28,000 Btu</b>
	<b>Maximum 112,000 Btu</b>
<b>LPG Input</b>	<b>Minimum 27,000 Btu</b>
	<b>Maximum 112,000 Btu</b>
<b>Gas Connection</b>	<b>1/2" NPT</b>
<b>Water Connection</b>	<b>3/4 NPT</b>
<b>Water pipes location</b>	<b>On the top of the unit.</b>
<b>Water Pressure</b>	<b>Min 19 psi</b>
	<b>Max 150 psi</b>
	<b>Recommended 45 psi</b>
<b>Natural Gas Pressure</b>	
<b>Inlet</b>	<b>Min 0.33 psi</b>
	<b>Max 0.43 psi</b>
<b>LP Gas Pressure Inlet</b>	<b>Min 0.43 psi</b>
	<b>Max 0.47 psi</b>
<b>Weight</b>	<b>37 lbs</b>
<b>Dimensions</b>	<b>32.5" X 15.5" X 9.5"</b>
<b>Electrical power used</b>	<b>115 V /60Hz</b>
<b>Power usage</b>	<b>60W</b>
<b>Ignition</b>	<b>Electronic ignition</b>
<b>Safeties:</b>	<b>Ion flame detector</b>
	<b>Max temp sensors</b>
	<b>Water leak sensor</b>
	<b>Flame inspection window</b>
	<b>Anti freezing device</b>
	<b>Pressure sensor/device</b>

**Congratulations on your purchase of an**

**OMEGA OME 514-PV Gas Tankless Water Heater.**

**You're about to discover that not all water heaters are created equal. The Omega Comfort has made possible the design and production of this efficient and incredibly affordable Tankless water heater that will provide you with many years of uninterrupted service. It is the mission and goal of the Omega Comfort to continue to combine innovation, quality, affordability and reliability in all of its Tankless water heaters.**

**Once again, thank you and congratulations.**

Before going any further, check and make sure that the following items accompany your water heater. There are two compartments in the Styrofoam packaging that contain necessary hardware.

Before we go any further let's make a inventory:

**The first pouch** will hold the letter from the CEO, this instruction manual and the Consumer Energy Guide and bolts for mounting the brackets

**The second** will hold the direct vent hardware: They are to be used **ONLY** when vented direct thru the wall.



-They are also 2 mounting brackets taped on the back of the unit.



## Safety Talk

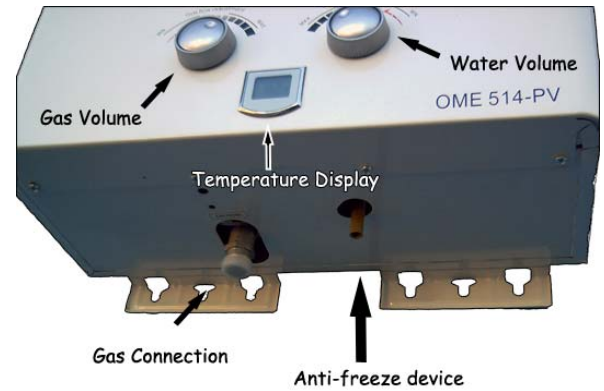
1. Always follow all local codes, or in absence of local codes, follow the actual edition of National Fuel Gas Code, ANSI Z223.1/NFPA 54 in USA or Installation Codes for Gas Burning Appliances in Canada, the CGA standard, CAN/CGA B149.1 or CAN/CGA B 149.2
2. Check the rating plate for the correct gas type, gas pressure, water pressure, and electrical rating. **DO NOT INSTALL** the unit if any of those characteristics can't be met.
3. If during unpacking, you observe any damages on the cabinet, flue parts or electrical cables of the water heater, **STOP UNPACKING!** **DO NOT INSTALL** until you notified the factory and the unit is properly inspected. Always follow the factory technician suggestions.
4. Properly ground the unit in accordance with local codes and in absence of those with the National Electrical Codes, ANSI/ NFPA 70 in the USA or Canada Electrical Code Part 1 in Canada.
5. If any problem arrives turn of the gas first from the valve and then the cold water supply. Call a trained technician, the Gas Company or our telephone hotline at (888)866-2118 for instructions.
6. Use caution in planning you installation. For maximum efficiency it should be installed at equal distance from all consumers, easy to access, shortest distance from the venting exit. For best safety, always install gas appliances out of the reach of the children's.



- 7 **WARNING:** Do not use this unit if **ANY** part was under water. Immediately call a certified or trained technician to

inspect and service the unit as necessary.

- 8 **Do not open the unit** if gas, water and electrical is not disconnected. Severe burns, scalding or even death can occur if the unit is not cold to touch before opening.
- 9 **If any repairs** where attempted by an untrained personal, the warranty is void.
- 10 **Do not reverse** gas with water pipes. Severe damages to the unit, other appliances on the house and your Gas line system will occur.
- 11 **Do not reverse** cold and hot water pipes. Severe damages to the unit will occur and warranty will be void
- 12 **Follow the diagrams bellow** when you install your OME 514-PV water heater.



When you open the hot water faucet, the computer sensors detect the depressurization of the line and command the gas valve and the ignition relay control the commencing of the burning cycle.

A minimum of 0.5 Gallons per minute is required to ignite, but only 0.4 gallons per minute to maintain the burners on.

During the operation, the computer monitors and adjusts the temperature and flow of the water and gas, to insure the total burning of your fuel.

As long as your gas, water and unit is on, just by opening of your faucet you will have an endless supply of hot water.

**-To turn your water heater on**, just open your faucet.

**-To turn your water heater off**, just close your faucet.

### Temperature

The output temperature of the **OME 514-PV** is been preset by the factory

**NOT TO EXCEED 120 F**

This is controlled by the computer and Temperature limiters sensors and can not be adjusted higher by any technician.



### WARNING

*Temperature over 120 F (50 C) can cause severe burns or even death. The Disabled, elderly and children's are at a high risk of being injured by high temperature of water.*

## Operation

**OME 514-PV** is a instantaneous, tankless water heater designed to efficiently supply domestic hot water.

We combine the principle, which is been around from the beginning of the 1900' with today technical know how, and we ad every safety we could think about to give you the ultimate in domestic water heating.

*Always feel the temperature of the water before you enter in to the shower.  
Do not leave disabled, elderly and children's unsupervised.*

## **SAFETY SYSTEMS**

OME 514-PV is equipped with the following safety systems:

- **Electronic Ignition**- Your unit will never have a pilot light burning gas day and night and wasting your gas and presenting a fire danger

- **ION technologies** – This system read the flame 20 times a minute, and detects temperature of the flame. If the temperature does not denote a fire, the unit will attempt reigniting the flames. After the second unsuccessfully attempt the system will shut down your gas flow, therefore eliminating discharging of unburned gas and the danger of explosion.

-**Pre-evacuation of existing gases**  
The unit will first start the interior air pump and after the existing gases in the unit are evacuated the unit will attempt ignition. This process eliminates detonations in case of any small leaks which can accumulate in time.

The interior air pump will stringently measure permanently the amount of air necessary to burn the gas released on the burning chamber, therefore the burning is complete and efficient.

***-This unit passes the most stringent emission tests in the industry.***

After you close your hot water faucet the air pump will continue to work for up to 30 seconds to cool down the unit to eliminate any possibility of overheating or heat dissipation on the surrounding of the unit therefore eliminating one more fire danger.

***-Space age insulation:***

-The entire unit is "Cold to touch" The radiant temperature on any place on the unit is under 100 F so the possibility of "Fire by contact" is eliminated.

- **Freeze Prevention**- We see no reason to install your water heater outside. OME 514-PV is been design for inside installation so therefore you do not need expensive and energy consuming heat resistors to keep the unit from freezing.

- **Over pressure valve**- to eliminate any possibility of water overpressure due to a malfunction.

- **Alloy coating**

Heater Exchanger is not exposed cooper like on most of the units on the market, but is coated with a special alloy which is able to sustain, with out damage, temperatures in excess of 1500 F. ALL of those safeties are incorporated in the unit with only one reason in mind:

***You, the customer!***

## **INSTALLATION**

### **Location**

This instantaneous water heater is a complete, perfect replacement kit system to replace your old tank unit with out any plumbing modification.

The recommended distances from immediate walls or other object is as follow:

-4 inch from the sides,

-8 inches from the top, (ceiling or roof)

-3 inches from the front, (if enclosed in any cabinet or wooden enclosure)

-24 inches from the floor, minimum, is required by the fire codes but we recommend to have it installed eyed site level for easy control, supervision or maintenance.

- Use the 2 brackets provide for installation.

Find the studs and connect the 2 closest studs together with the bracket. The water heater ***does not need to be in the center of the bracket.*** Hang the water heater as needed on any treaded hole in the bracket with the bolts provided, one bolt on the top and 2 on the bottom.

### **Water connections**

-Use the same flex pipes you had on your old tank water heater or replace them with new ones if the old ones are rusted or damaged.

NOTE: *Pressure/ Temperature relief valve is not necessary or required because the unit has a integrated, redundant over temperature protection system.*

### **Gas Installation**

The gas line is from the bottom of the unit: Connect the gas unit thru hard line or a approved flex hose not less then ½ "diameter. You can use your old flex hose if is sufficient long and at of list ½" diameter.

### **Warning:**

Your line has to have a minimum pressure of 0.33 PSI and the capacity to move a sufficient quantity of gas to produce 112,000 Btu.

Lengthy gas pipe with out step-downs will not be able to supply the necessary gas volume for the unit.



**Warning:** The unit will not work if not plugged on a electrical receptacle with a working ground connection.

The freezing device is not adjustable, do not turn or disassemble. Only a authorized technician can perform maintenance on the anti-freezing device

### **Maintenance**

The unit is virtual maintenance free with the exception of the de-scaling every 1 to 3 years based of the PH of the local water supply. The harder is the water, more often the de-scaling has to be done. Ask a local professional for advice in regard to the composition of the water. Your local Water Company or your local Gas Company can help you with the necessary data.

De-scaling involve harsh chemicals and specialized tools and can only be done by a professional.



### **Warning!**

**-Do not attempt to do it yourself.**  
**-Severe burns can occur if no specialize equipment are used**  
**-Improper chemicals can harm the water heater and/or the plastic and rubber parts rendering the warranty void.**

### **Operation**

- Plug the electrical cord on the electrical receptacle.
- Open the water valve
- Check for leaks
- Open the gas valve
- Check for leaks



### **Warning:**

**Do not check for gas leaks with an open flame. Severe burns and/or fire can be produced in case of gas leaks.**

- Adjust the gas knob to maximum
- Adjust the water knob to maximum volume of water
- Open a water faucet as close as possible to the unit.

If the unit do not light up then shut up and start again



**Warning:**

***In order to evacuate the air from the gas line it may be necessary to repeat the operation 3 to 5 times based on the length of the gas line.***

- As soon as you see the unit light up leave it to run for at list 5 minute.
- With the hot water on, go to the unit and see the temperature of the water on the electronic display.
- If the water is too cold (below 110F) your water volume is too big. Need to reduce the overall water flow thru the unit to 14 liters per minute or until the temperature of the resulting water reach 110F .
- If the water is too hot (over 120F), reduce the gas flow from the Gas Knob
- Repeat the procedure with at list 30 second to a minute time in between to leave time for the "new" water to reach the sensors



**Warning:**

**-Use only small increments by dividing the scale on at list 6 segments. Small increments make big differences.**

Once you achieve the desired temperature you do not need to thatch again the dials. The fine tune adjustments are made by mixing your hot water with cold water at the faucet



**Warning:**

If after 5-10 minutes the unit suddenly shuts-up a overheating problem exist:  
If the unit go over 140F and the unit shuts off,

***The unit will not start before you close the faucet and reopen again.***

Fix: Dial back the gas knob to reduce the temperature, 1/6 of the dial.

It can also be problem of interaction between the instantaneous water heaters and "water savers"

Water savers are small devices inserted on the back of the shower heads or faucets  
The problem is even more frequent on faucets with only one handle and anti- scalding devices.  
If your problem persisted, contact the installer or the technical support line for up to date and details instructions of how to proceed to eliminate the problem..

The toll free number is located on the back of this manual or the retail box of the unit.

### **For new installations**

-It is not recommended hot water lines longer then 20 feet's. When you locate the unit, find a central location, with the shorter possible distance to all the consumers.

Keep in mind that you need between 5 to 7 times the water existing in the pipes ***ONLY TO BRING THE PIPES TO THE TEMPERATUR OF THE WATER.***

-Exterior walls are recommended for installation but NOT absolute necessary for installation. This unit can share any existing chimney or exhaust vent.

Exhaust gases temperature do not exceed 200F therefore it is not necessary to have special insulation and any aluminum flex exhaust is ok to use to connect to the exhaust stack.

We recommend the elimination of the water savers on the back of the shower heads if a repeat interruption of the hot water occurs.

Any problem of the installation and maintenances can be asked at:

**888-866-2118**  
**Monday to Friday 9.00 Am to 5.00 PM**

**Other factors to be taken in consideration**

OME 514-PV Outlet Temperature Chart						
Flow Rate GPM	45 F Inlet Temp.	50 F Inlet Temp.	55 F Inlet Temp.	60 F Inlet Temp.	65 F Inlet Temp.	70 F Inlet Temp
2.75	130*	130*	130*	130*	130*	130*
3.00	124	129	130*	130*	130*	130*
3.25	116	121	126	130*	130*	130*
3.50	109	114	119	124	129	130*
3.75	104	109	114	119	124	130
4.00	101	104	109	114	119	125
4.25	95	101	105	110	115	120
4.50	92	97	102	107	112	117
4.75	89	94	99	104	109	114
5.00	86	91	96	101	106	111
5.25	84	89	94	99	104	109

■ The result for Output temperature was reduced to 130 Degrees, by the temperature safety devices (anti-scalding device) included in the design of the unit.  
■ The normal shower temperature  
Warning : Exposure to water at 125°F can produce first degree burns in 15 seconds

Typical Flows and Temp for Household Fixtures							
Fixture Type  ---->	Lavatory	Shower Low flow	Shower High flow	Kitchen Sink	Bathtub Jacuzzi	Dish Washer	Washing Machine
Flow Rates	0.8 - 1.5	1.0 -1.7	1.7- 3.0*	1.0 -1.5	2.0-4.0	1.0-1.5	1.5-2.0
Prevailing Temp. Use	80° to 105°	100° to 110°		105° to 115°	90° to 110°	105° to 115°**	80° to 95 °

**Flow Rates in Gals/ Minute**  
**Temperature in degrees °F**

\* Energy Department website defines a "Legal" shower as a shower which use no more then 1.76 gallons/minute.

\*\* All 10 years old or newer Dishwashers have their own heater element so incoming water temperature is somehow irrelevant.