



10L

OPERATING MANUAL

GUIDE D'UTILISATION



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**onsen**

Thank you for purchasing the
ONSEN 10L PORTABLE TANKLESS WATER HEATER

Before using this gas-powered water heater, it is extremely important to read all of the safety and operation instructions provided in this Operating Manual to ensure that you can enjoy the Onsen 10L safely and responsibly. If you have any questions about how to use this water heater, please contact **Onsen** at support@onsenproducts.com or **800-996-5559**.

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SAFETY INFORMATION



PLEASE MAKE SURE TO READ ALL INSTRUCTIONS BEFORE USING THIS WATER HEATER

Your safety and the safety of others is extremely important in the installation, use and servicing of this water heater. Safety-related messages, warnings and instructions have been provided in this Operating Manual and the labels affixed to the water heater to warn you and others of potential injury hazards. Read and obey all safety messages and instructions throughout this Operating Manual.



THIS IS THE SAFETY ALERT SYMBOL. IT IS USED TO ALERT YOU TO POTENTIAL PERSONAL INJURY HAZARDS. OBEY ALL SAFETY MESSAGES THAT FOLLOW THIS SYMBOL TO AVOID POSSIBLE INJURY OR DEATH.



DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or injury.



WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or injury.



CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

GENERAL GAS APPLIANCE WARNINGS AND BEST PRACTICES



WARNING

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

Keep the area around the water heater clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

Before operating any gas appliance, smell all around the appliance area for gas. Be sure to smell next to the floor because Liquid Propane Gas is heavier than air and will settle on the floor.

Liquid Propane Gas is heavier than air and will accumulate at the lowest points in the event of a leak which sometimes makes it difficult to detect at nose level. It is highly recommended to install a gas detector near ground level to detect gas leaks.

This water heater is capable of producing scalding water temperatures. Always check the outgoing water temperature before use.

Hot exhaust and casing may cause serious burns. Keep away from the water heater. Keep small children away from the water heater.

If any of the instructions contained in this Operating Manual are unclear to you, contact a trained and qualified professional to perform the installation.

SAFETY PRECAUTIONS

- ✓ **THIS WATER HEATER IS FOR OUTDOOR USE ONLY.**
- ✓ **THIS WATER HEATER IS NOT INTENDED FOR PERMANENT INSTALLATION AND CANNOT BE PERMANENTLY PLUMBED IN ANY WAY.**
- ✓ **WHEN NOT IN USE, THE WATER HEATER MUST BE DISCONNECTED AND STORED IN A WARM AND DRY PLACE.**
- ✓ Always use a soapy solution on the gas fittings and connections to detect gas leaks.
- ✓ Do not operate the water heater with Natural Gas. Use only Liquid Propane Gas. Do not try to convert this water heater to Natural Gas.
- ✓ If a gas odour is detected, turn off the gas valve on the gas tank immediately.
- ✓ Do not operate the water heater in strong wind conditions.
- ✓ Do not leave the water heater unattended when turned on.
- ✓ Never mount the water heater onto a combustible surface or wall.
- ✓ Any alteration to the water heater or its controls can be dangerous and will void the warranty.
- ✓ Always check the outgoing water temperature before showering or bathing.

HOW IT WORKS

The Onsen 10L Portable Tankless Water Heater uses Liquid Propane Gas to heat water by burning a flame on the copper heat exchanger. The incoming water is heated when it circulates through the heat exchanger before being directed to the water outlet (showerhead). The temperature of the exiting water can be increased by turning the gas knob on the water heater, which increases the flame output, or by turning the water knob to decrease water flow.

The water heater is equipped with an electronic ignition system that uses 2 “D” type batteries or 12 volt for ignition. The ignition system is pressure controlled, which means the flame will only ignite if the water circulating inside has a sustained pressure of 10 to 80 PSI. When the water flow is cut off (by shutting off the water source or turning the showerhead to the OFF position), the flame shuts off automatically.



GETTING STARTED

- ① Check the box for any damage sustained during shipment.
- ② Check that all components and accessories are included in the box:
 - ✓ Water heater
 - ✓ Gas regulator
 - ✓ Shower set
 - ✓ Garden hose adapter
 - ✓ Hardware pack
 - ✓ 12 volt battery alligator clips
- ③ Connect the water inlet:
 - ✓ If connecting a standard garden hose to the water inlet of the water heater, apply Teflon to the threads of the water inlet to ensure a sealed connection and to prevent leaking.
 - ✓ Attach the 1/2" to 3/4" brass garden hose adapter (included in the box) to the Teflon coated threads of the water inlet.
 - ✓ Connect the garden hose to the garden hose adapter.
- ④ Connect the water outlet:
 - ✓ Connect the shower set hose to the water outlet of the water heater.

⑤ Connect the gas inlet:

- ✓ Connect the gas regulator hose to the 3/8" gas compression fitting of the gas inlet of the water heater. You may use a wrench to ensure a secure connection. DO NOT OVERTIGHTEN AS THIS MAY CAUSE A CRACK IN THE GAS CONNECTION AND RESULT IN A GAS LEAK.

(WARNING: Do not apply gas tape, compound or other sealant to the threads of the 3/8" gas compression fitting. The fitting is flared and does not require sealant. Applying sealant to the threads of the fitting may prevent a secure connection, resulting in a gas leak).

⑥ Install batteries / connect 12 volt ignition:

- ✓ If using 2 "D" type batteries for ignition, install the batteries in the battery box located on the bottom right of the water heater. Alternatively, if using 12 volt for ignition, connect the circular connector of the included 12 volt alligator clip to the 12 volt input connection at the bottom of the water heater. Next, connect the alligator clips to a 12 volt battery.

When using both batteries and 12 volt for ignition, the 12 volt takes priority.

⑦ Hang the water heater:

- ✓ Hang the water heater using the bottom and top brackets onto the included mounting screws.

⑧ Connect 20 lb propane tank:

- ✓ Connect the gas regulator hose to a 20 lb propane tank. DO NOT OPEN THE TANK'S GAS VALVE YET.

USE AND OPERATION

DANGER

Always check for gas leaks before using this water heater. To do so, spray a mixed solution of water and soap on the gas inlet connection. If bubbles start to form, close the gas valve and seal the gas connection properly before repeating the gas leak test.

- ① Set the water regulator knob to maximum setting (turn to the left).
- ② Set the gas regulator knob to minimum setting (turn to the left).
- ③ Ensure the showerhead button is in the OFF position.
- ④ Turn on the incoming water supply and wait for the water lines to completely fill with water (water pressure must be between 10 – 80 PSI for ignition to occur).
- ⑤ Open the gas valve on the propane tank.
- ⑥ **IMPORTANT:** Check for gas leaks by spraying a mixed solution of water and soap on the gas inlet connection. If bubbles start to form, close the gas valve and seal the gas connection properly before repeating the gas leak test.

DANGER

This water heater comes with a ½" – ¾" gas compression fitting already connected to the ½" gas inlet during the assembly portion of the manufacturing process. In the event that the gas compression fitting has been removed, make sure to connect it by applying gas tape or compound to the ½" gas inlet threads to ensure the connection is sealed and to prevent a gas leak. ALWAYS CHECK FOR GAS LEAKS AFTER APPLYING GAS TAPE / COMPOUND.

- ⑦ Push button located at the bottom of the water heater to the ON position.
- ⑧ Push the showerhead button to the ON position (this will allow for water to circulate inside the water heater and kick start the ignition sequence).
- ⑨ You will hear a series of clicks followed by the sound of the flame igniting, similar to an outdoor grill. If the flame does not ignite after 5 seconds, shut off the water supply and close the gas valve. Go to Troubleshooting on page 15 of this Operating Manual for advice.

IMPORTANT TO KNOW

- ▶ This water heater is equipped with a water temperature sensor that will turn off the flame when 60 °C is reached.
- ▶ This water heater is equipped with a 20 minute safety shut-off timer that will automatically turn off the flame when this timeframe is reached. To start the water heater again, push the showerhead button OFF and ON to reignite the flame.

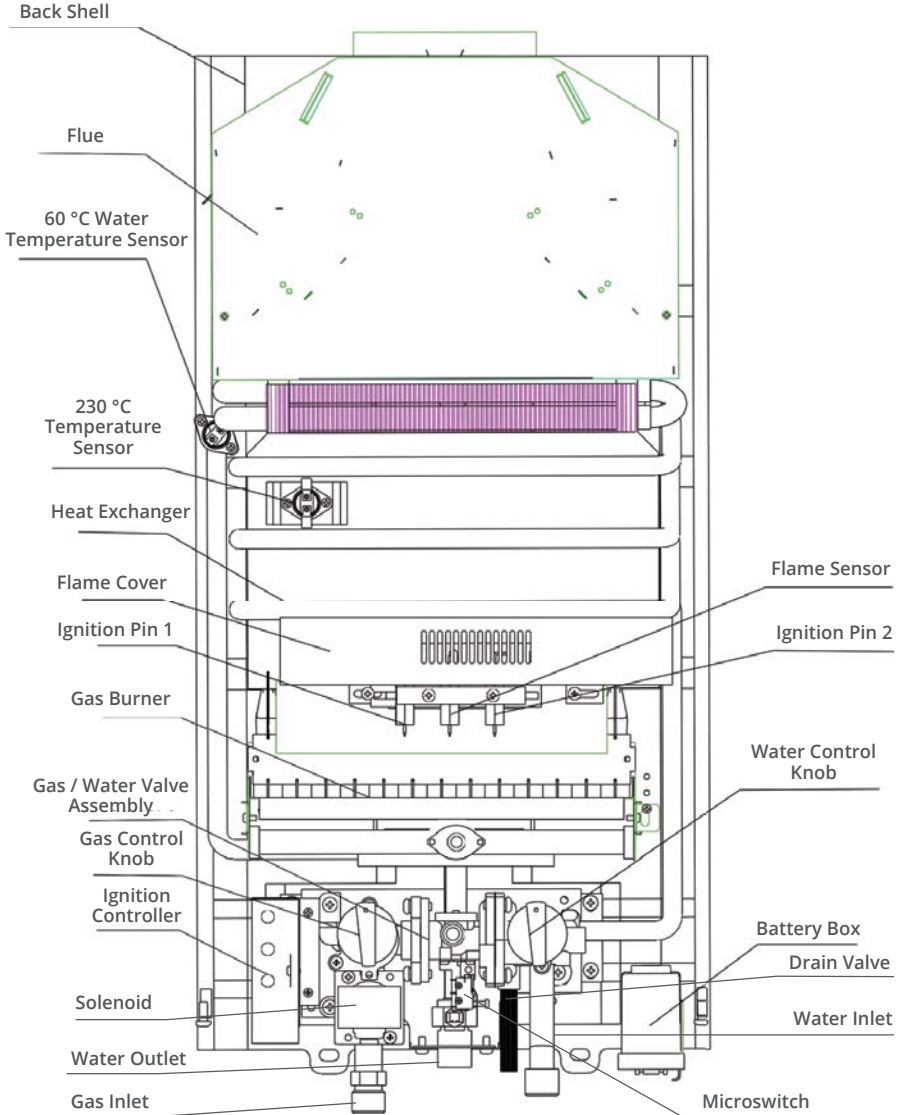
ADJUSTING THE WATER TEMPERATURE

WARNING: THIS WATER HEATER MAY PRODUCE SCALDING WATER TEMPERATURES. USE EXTREME CAUTION WHEN OPERATING THIS WATER HEATER.

Follow these steps to adjust the outgoing water temperature:

- ① Set the water heater to the lowest setting available by turning the water regulator knob to maximum and the gas regulator knob to minimum. Carefully check the water temperature.
- ② To raise the water temperature, turn the gas knob slowly towards maximum, checking the water temperature often. Wait several seconds after turning the gas knob before checking the temperature.
- ③ To further raise the water temperature once the gas knob is at maximum, turn the water knob slowly towards minimum, checking the water temperature often until the desired temperature is achieved.
- ④ The digital screen between the gas and water knobs displays the temperature of the outgoing water. Adjust the gas and water knobs to achieve the desired temperature.

TECHNICAL SPECIFICATIONS

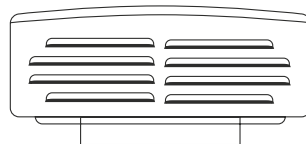
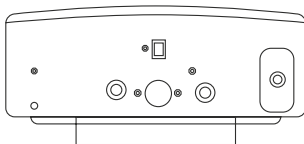


ONSEN 10L PORTABLE TANKLESS WATER HEATER

Fuel Type	LPG (Liquid Propane Gas)
Model	10L
Activation Flow Rate	10 – 80 PSI
BTU/h	75 000
Gas Pressure Rating	11.24" WC
Ignition	2 "D" batteries / 12 volt
Protections	Anti-dry combustion protection, over-pressure, overheating and flame-out protection
Weight	19 lbs
Dimensions	22.5 × 13.5 × 7 in.
Pipe Fittings	1/2" incoming / outgoing water & gas

TEMPERATURE INCREASE BASED ON FLOW RATE:

Model	Gas Setting	3.0 LPM / 0.8 GPM	3.8 LPM / 1.0 GPM	6.0 LPM / 1.6 GPM	7.6 LPM / 2.0 GPM	10.0 LPM / 2.6 GPM
Onsen 10L	Highest	70 °C / 125 °F	56 °C / 101 °F	32 °C / 58 °F	26 °C / 47 °F	14 °C / 25 °F
	Lowest	25 °C / 45 °F	21 °C / 38 °F	18 °C / 32.5 °F	15 °C / 27 °F	9 °C / 16 °F



DRAINING THE WATER HEATER

Freeze damage is the most common defect affecting portable water heaters and is not covered by the warranty. Freeze damage can easily be prevented by manually draining the water heater and storing it in a warm place when not in use.

During freezing temperatures, ensure the water heater is properly drained by following these steps:

- ① Shut off the incoming water supply and the gas supply.
- ② Use a flat-head screwdriver to turn the drain valve stem (located at the bottom of the water heater) counter-clockwise until water starts to drain.
- ③ Disconnect the water inlet and outlet lines.
- ④ Using an air compressor, blow compressed air into the water inlet to drain any excess water remaining in the heat exchanger piping. This ensures the water heater is completely drained of water and will prevent the internal piping from freezing and possibly bursting in cold temperatures.
- ⑤ Store in a warm area.

TROUBLESHOOTING

WATER HEATER DOES NOT TURN ON AND NO AUDIBLE CLICKS

- ▶ Ensure the ON/OFF switch at the bottom of the water heater is in the ON position.
- ▶ Ensure the 2 “D” batteries are in working condition and inserted properly in the correct position. If using the 12 volt feature for ignition, ensure the 12 volt accessory is connected properly on both ends (water heater and 12 volt power source). Ensure the 12 volt power source (ex: 12 volt battery) is not depleted and working properly.
- ▶ Ensure the incoming water hose is connected to the water inlet of the water heater and the outgoing water hose (shower set) is connected to the water outlet. The water heater will not ignite if the connections are reversed.
- ▶ Check for debris in the water heater’s water inlet. The presence of debris in the water inlet screen may affect the incoming water pressure, which could prevent the flame from igniting.
- ▶ Verify the water pressure. The primary cause of non-ignition is insufficient water pressure. The water heater requires a minimum 10 PSI of sustained water pressure to ignite the burner. Municipal water pressure is commonly rated at 60 PSI while most water pumps are rated at 40 – 60 PSI.
- ▶ If using a water pump for water pressure, try connecting the water heater to municipal water pressure instead. Water pumps can sometimes provide mixed results based on the specifications and the connection

configuration between the pump and water heater. Connecting the water heater to a different water pressure source is the best way to determine if the problem is due to a configuration issue or a defective water heater.

- ▶ Check for any possible disconnected wires inside the water heater, which can sometimes occur during shipping. If a wire is disconnected, there will be no audible clicking sound from the ignition pins. To check the wires, ensure the gas supply is turned off, pull off the gas and water regulator knobs, and remove the screws holding the front panel in place. Remove the front panel and locate the disconnected wires toward the bottom of the water heater.
- ▶ The ignition controller may be defective. Please contact **Onsen** at: support@onsenproducts.com or **800-996-5559**.

WATER HEATER DOES NOT TURN ON BUT CLICKS ARE AUDIBLE

- ▶ Ensure the propane tank is not depleted.
- ▶ Check for debris in the water heater's gas inlet and the opening of the gas regulator hose connected to the inlet. The presence of debris may prevent gas from flowing normally into the water heater.
- ▶ The solenoid may be defective. Please contact **Onsen** at: support@onsenproducts.com or **800-996-5559**.

WATER HEATER TURNS OFF AFTER APPROXIMATELY 10 SECONDS

- ▶ The water temperature sensor may be defective. Please contact **Onsen** at support@onsenproducts.com or **800-996-5559**.

WATER HEATER TURNS OFF AT VARIOUS TIME INTERVALS

- ▶ The water heater is equipped with a water temperature sensor that, for safety purposes, will turn off the flame when 60 °C is reached. To restart the water heater, turn the showerhead to the OFF position to stop the water from flowing and then turn the shower head to the ON position to re-activate water flow and the unit will restart normally.
- ▶ The water heater is equipped with a 20 minute safety shut-off timer that will automatically extinguish the flame when this timeframe is reached. To start the water heater again, push the showerhead button OFF and ON to reignite the flame.
- ▶ In high wind environments, the flame may be extinguished by wind entering the casing. Test the water heater in an area with little to no wind.
- ▶ Verify the water heater is connected to a sustained 10 – 80 PSI water pressure source. Sudden drops in water pressure by a water pump or municipal water source may cause the flame to be extinguished. Test the water heater by connecting to an alternate water pressure source. If the water heater operates normally then, it means that the irregular water pressure in the previous setup is at fault.
- ▶ Sustained water pressure may be affected when a water pump is used for two applications simultaneously (ex: cold water line and hot water line via the water heater), splitting the pressure output in half. In that case, the water pressure may not be sufficient for ignition to occur. Test by connecting the pump to the water heater ONLY. If the water heater operates normally then, it means that the insufficient water pressure in the previous setup is at fault.

SUPPORT

For support in French or English contact **Onsen** at :

support@onsenproducts.com or 800-996-5559.

ADDITIONAL ACCESSORIES

- ▶ Hand Cart (hard rubber or pneumatic wheels)



▶ Cigarette Lighter Converter 110V to 12V



▶ Male Cigarette Plug 12V



▶ Garden Hose Brass Quick Connectors (4 pack)



▶ Gas Quick Connector



▶ Pipette Pipe Joint Compound Stick



▶ Gas Regulator & Hose for 16oz Propane Canisters



▶ Gas Regulator & Hose for 100/400 lb Propane Tanks



WARRANTY

ONSEN LIMITED WARRANTY

Limited Warranty Coverage

This Limited Warranty covers any product defects in material or workmanship under normal use and maintenance when installed and operated according to the Operating Manual.

During the Warranty Period, Onsen will repair or replace, at no charge, products or parts of a product that proves defective because of improper material or workmanship, under normal use and maintenance when installed and operated according to the Operating Manual..

Except as expressly set forth herein, there are no representations or warranties, express or implied, including, without limitation, as to merchantability or fitness for a particular purpose with respect to any goods sold hereunder. Buyer's exclusive remedy is limited to repair or replacement of the goods sold, at Onsen's discretion. Onsen shall not be liable for incidental or consequential damages.

Limited Warranty Period

The Warranty Period is as follows:

- **2 YEARS** from date of purchase on Parts
- **30 DAYS** from date of purchase on Accessories

Limited Warranty Exclusions

This Limited Warranty becomes null and void if product failure is determined to be the result of any of the following :

- ① Careless operation or handling, misuse, abuse and/or lack of maintenance or use not in accordance with the Onsen Operating Manual.
- ② Freeze damage.
- ③ Installation in a corrosive or otherwise destructive environment.
- ④ Inadequate water quality.
- ⑤ Incorrect gas or water pressure.
- ⑥ Scale buildup.
- ⑦ When used as a pool heater.
- ⑧ Product is used in a hot water circulation loop (ex: in-floor heating).
- ⑨ Acts of Force Majeure.

Limited Warranty Claims and Shipping Costs

All warranty claims must be pre-approved by Onsen before shipment of products and/or parts.

Any warranty related shipments to Onsen that have not been pre-approved by Onsen will be the responsibility of the shipper.

For pre-approved warranty claims, responsibility for shipping costs will be allocated as follows:

- ▶ Within **60 DAYS** of the date of purchase: ground shipping within Canada only (territories excluded) will be covered by Onsen with the carrier of Onsen's choosing.
- ▶ After **60 DAYS** of the date of purchase: customer is responsible for shipping costs.