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Orbek HS120

ORBEK 120,000 BTU Outdoor Propane Tankless Water Heater User Manual

Model: HS120

Brand: Orbek

1. PRODUCT OVERVIEW

The ORBEK 120,000 BTU Outdoor Propane Tankless Water Heater provides on-demand hot water for your home. Designed for outdoor installation, this unit offers high efficiency and reliable performance across various weather conditions. It is CSA certified and incorporates multiple safety features to ensure secure operation.



Image: Front view of the ORBEK tankless water heater with its remote control unit.

Key Features:

- **Endless On-Demand Hot Water:** Delivers up to 5.1 GPM and 120,000 BTU, capable of serving 2-4 fixtures simultaneously.
- **Designed for Outdoor Use:** Withstands force 9 winds, features IPX4 waterproof protection, and operates effectively in low temperatures.
- **Safety & Reliability:** CSA certified with advanced safety features including dry combustion protection, overheat protection, water leakage prevention, anti-freeze protection, flame failure protection, and high water pressure protection.
- **Energy Efficient:** Features a high-quality oxygen-free copper heat exchanger for superior heat transfer and corrosion resistance. Adjusts between four heating modes for seasonal needs.
- **Stable Temperature Control:** A built-in chip adjusts heating power 20,000 times per second, maintaining water temperature within 1°F.
- **Remote Control & LED Digital Display:** Clear screen and flexible temperature adjustment from 95°F to 149°F via remote controller. Includes a power-off memory function.
- **Wide Water Pressure Range:** Operates at water pressures from 15 to 150 PSI, suitable for various home setups. Low operational noise.
- **Compact Design:** Dimensions of 15.5"L x 7.3"W x 24.0"H save space.

Your browser does not support the video tag.

Video: General overview of the Orbek Tankless Water Heater Gas, highlighting its features and benefits.

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Video: Orbek 120,000BTU Outdoor Basic Video, demonstrating core functionalities and design.

2. INSTALLATION GUIDE

Professional installation is recommended for optimal performance and safety. This section provides a general overview of the installation process. Refer to the included Quick Installation Poster and User's Manual for detailed instructions.

Pre-Installation Steps:

- Ensure the installation location is outdoors and protected from direct heavy rain or snow, but with adequate ventilation.
- Verify that the gas supply is Propane and the electrical supply is 120V AC.
- Confirm water pressure is within the 15-150 PSI range.
- Gather all necessary tools and components, including the water heater service valve kit (purchase required).

Mounting the Unit:

1. Determine the installation location and height. Use the provided hole puncher paper to mark the positions for drilling.
2. Drill holes at the marked locations.

3. Insert the expansion screws for the upper mounting holes and plastic plugs for the lower mounting holes.
4. Hang the water heater in the corresponding position on the wall.
5. Secure the water heater by placing washers and nuts on the mounting screws and tightening them.

120,000BTU

Size

23.9"H x 15.5"L x 7.28"W

Weight

29.32 pounds

Voltage

AC 120V/60HZ

Installation

outdoor only

Water Pressure

15~150PSI

Gas Type

propane

Water & Gas Connector size

3/4"NPT

Temp. Rise Range

95°F~149°F



Image: Detailed dimensions and key specifications for installation planning.

Connecting Water and Gas Lines:

6. Remove protective covers from the water and gas inlets/outlets.
7. Wrap PTFE tape around all pipe openings to ensure a watertight and gas-tight seal.
8. Install the water heater service valve kit (if not already installed).
9. Connect the hot water outlet pipe, gas supply pipe, and cold water inlet pipe in sequence. Ensure all connections are secure and leak-free.

Remote Control Installation:

10. Open the cover of the remote control connection port on the unit and plug in the connection cable.

11. Remove the back cover of the remote control unit.
12. Secure the back cover of the remote control to the wall using screws.
13. Apply insulating tape to the back cover for added protection.
14. Attach the remote control panel to its secured back cover.

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Video: Orbek 120,000BTU Tankless Water Heater Installation Video, providing a visual guide to the setup process.

3. OPERATING INSTRUCTIONS

Once installed and all connections are verified, you can begin using your ORBEK tankless water heater.

Initial Startup:

- Ensure all water and gas valves are open.
- Turn on the electrical power to the unit.
- The LED digital display on the remote control will illuminate.

Temperature Control:

- Use the remote controller to adjust the desired water temperature. The temperature range is 95°F to 149°F.
- The unit features a power-off memory function, retaining your last temperature setting.
- The built-in chip ensures stable temperature control, maintaining the set temperature within 1°F.

Precise Temperature Control Intelligently Adjusts Heat Output



Image: Illustrates the precise temperature control and four seasonal heating modes (Summer, Spring, Autumn, Winter) for optimized energy use.

Usage Scenarios:

- The unit can provide hot water for multiple points of use simultaneously, such as showers, kitchen sinks, and laundry.
- Recommended settings for common uses:
 - Quick shower in summer: Recommended setting is 104°F.
 - Warm bath in winter: Recommended setting is 122°F.
 - Fruit and vegetable washing: Recommended setting is 95°F.

Diverse Usage Scenarios

Competent for Different Usage Needs



Quick shower in summer

Recommended setting is 104°F
Start an energetic morning

Warm bath in winter

Recommended setting is 122°F
Release the stress throughout the day

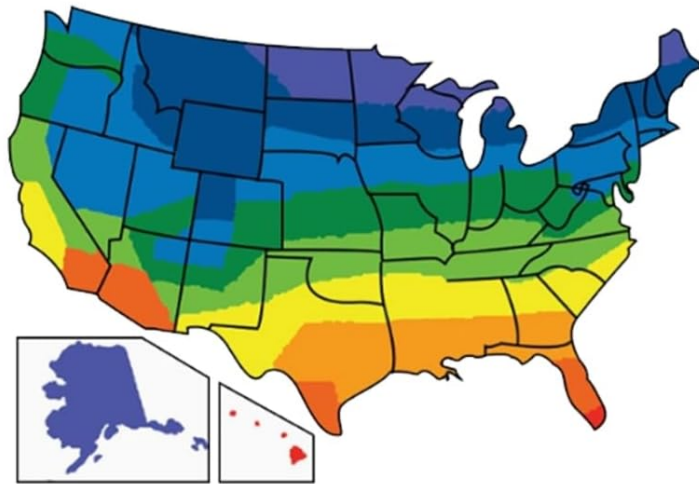


Fruit and vegetable washing

Recommended setting is 95°F
Keep fruits and vegetables clean

Image: Examples of diverse usage scenarios including showering, bathing, and washing fruits and vegetables.

Tankless Water Heater Selection Guide



1 Confirming your local water temp





















Use your location on the map to correlate with legend for average ground water temperature in the US

2 Knowing the water consumption of water outlets



3 Add up all the appliances that might use hot water at the same time

ORBEK 120,000BTU	Inlet Water Temperature	Outlet Water Temperature	Max Flow Rate (GPM)	Simultaneous Shower Use
	37 °F	110 °F	2.1	 
	47 °F		3.1	 
	57 °F		3.7	  
	67 °F		4.5	  
	72 °F		5.1	  
	77 °F		5.9	   

Average inlet water temperature:

These are general temperature zones. Actual inlet temperature may be affected by local variations and seasonal changes

Image: Tankless Water Heater Selection Guide, showing GPM output based on inlet water temperature and simultaneous fixture use.

4. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your ORBEK tankless water heater. Always turn off the gas and water supply, and disconnect electrical power before performing any maintenance.

- **Annual Flushing:** It is recommended to flush the heat exchanger annually to remove mineral buildup, especially in areas with hard water. This helps maintain efficiency and prevents scaling.
- **Exterior Cleaning:** Periodically clean the exterior of the unit with a soft, damp cloth. Do not use abrasive cleaners or solvents.

- **Ventilation Check:** Ensure that the ventilation openings are clear of obstructions to allow proper airflow.
- **Inspect Connections:** Regularly check all water and gas connections for any signs of leaks or corrosion.
- **Freeze Protection:** For installations in environments below 18°F, an automatic drainage accessory is recommended to provide freeze protection by draining water during power outages.

5. TROUBLESHOOTING

This section provides basic troubleshooting steps for common issues. For more complex problems or if issues persist, contact customer support.

Problem	Possible Cause	Solution
No hot water / Unit not igniting	No gas supply, low water flow, power issue, flame sensor error.	Check gas valve, ensure adequate water flow (min 0.5 GPM), verify power connection, consult manual for error codes.
Inconsistent water temperature	Fluctuating water pressure, mineral buildup in heat exchanger, incorrect temperature setting.	Check water pressure, consider annual flushing, adjust temperature setting on remote control.
Low hot water flow	Clogged inlet filter, restricted plumbing, multiple fixtures running simultaneously.	Clean inlet filter, check plumbing for kinks/restrictions, reduce simultaneous hot water usage.
Unit displays error code	Internal fault or specific operational issue.	Refer to the detailed User's Manual for specific error code meanings and solutions. If unresolved, contact customer support.

6. TECHNICAL SPECIFICATIONS

Attribute	Detail
Brand	Orbek
Model Number	HS120
Product Dimensions (W x H)	15.51"W x 23.94"H
Item Depth	7.3 inches (from feature bullets, not spec list)
Item Weight	37.5 pounds
Color	White
Installation Method	Outdoor

Attribute	Detail
Fuel Type	Propane Gas
Heat Output	120,000 BTU
Maximum Flow Rate	5.1 Gallons Per Minute (GPM)
Maximum Temperature	149 Degrees Fahrenheit
Voltage	120 Volts (AC)
Wattage	42 watts
Efficiency	High
Water Connector Size	3/4" NPT
Water Pressure Range	15-150 PSI
Mounting Type	Wall
Certifications	CSA Certified
Included Components	Tankless water heater x 1, User's manual x 1 (English and French Version), Quick installation poster x 1, Assembly kit x 1
Country of Origin	China

7. WARRANTY AND SUPPORT

ORBEK is committed to providing reliable products and excellent customer service.

Warranty Information:

- **2 Years Coverage:** For the whole machine.
- **5 Years Coverage:** For the heat exchanger.
- Please refer to the full warranty policy in the User's Manual for detailed terms and conditions.

Customer Support:

For any questions, technical assistance, or warranty claims, please contact ORBEK customer service. The product includes 24/7 customer service as per specifications.

- **Contact Information:** Refer to your User's Manual or the official ORBEK website for the most current contact details.
- **Online Resources:** Additional support and FAQs may be available on the ORBEK brand website.

