



**Open Ductless Style
For Outdoor Use Only!**
Model JSD12-6J

The exterior of the gas water heater shown in this manual is for reference only. The exterior of the actual gas water heater you purchased may vary from what is shown in this manual.

AQUAH 6 Liter Outdoor Liquid Propane Gas Tankless Water Heater

Warning: If the information in this manual is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death. Do not store or use gasoline or other flammable vapor and liquids in the vicinity of this or any other appliance. Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult a qualified installer, service agency or the gas supplier. Upon completion of the installation, please keep these instructions for future reference.

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Warnings and Precautions



Warning: Gasoline, as well as other flammable materials and liquids (adhesives, solvents, paint thinners etc.),

and the vapor they produce are extremely dangerous. DO NOT handle, use or store gasoline or other flammable or combustible materials anywhere 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.



Warning: The heater must be isolated from the gas supply piping system during any pressure testing of that system at test pressure equal to or more than 0.5 psi.



Caution: If you detect a possible case of gas leak, contact your local gas supplier. There may be some conditions which can diminish the intensity of the smell, making it difficult to identify a gas leak.



Warning: This gas water heater is designed for outdoor use only! On no occasions shall this

▲ 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 and 4. out of children's reach. 	<p>Water heater has a main burner flame.</p> <p>The main burner flame:</p> <ol style="list-style-type: none"> 1. which can come on at any time and 2. 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 and 4. 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>18" 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>	



Water temperature over 125F^o (51C)^o can cause sever burns instantly or death from scalds.

Children, disabled and elderly are at highest risk of being scalded.

See instruction manual before setting temperature at water heater.

Feel water before bathing or showering.

Never feed the water heater with natural gas. Check the gas type before you connect it to the water heater, improper gas could cause serious danger. Never attempt convert this water heater from LP to NG.

Water heater be used inside any closed areas.

Additional warnings and precautions

1. You should follow these instructions when you install your heater. In the United States, the installation must comply with local codes.
2. Carefully plan where you hang the heater. Never use it on the ground. The water heater must be hung upright with the gas/water lines at the bottom.
3. Keep water heater area clear and free from combustibles and flammable liquids. Do not locate the heater over any material which might ignite.
4. Correct gas pressure is critical for the optimum operation of this heater. Gas piping must be sized to provide the required pressure at the maximum output of the heater. Check with your local gas supplier.
6. Should overheating occur or the gas supply fail to shut off, turn off the gas supply at the manual gas shut-off valve on the gas line. Note: manual gas shut-off valve is not supplied with the heater
7. Do not use this water heater if any part has been underwater. Immediately call a qualified service technician to inspect the heater and to replace any part of the control system and any gas control which has been underwater
8. Never attempt to move the heater during operation. Wait till it cools down before moving it.
9. Do not put your hands or any other foreign objects over the exhaust as the exhaust gases are very hot.
10. Do not operate the heater in high wind conditions.
11. Never leave the water heater in operation unattended.
12. Before starting the water heater, apply a soapy solution to all gas fittings and connections to check for possible gas leak. Any bubbling at a gas connection indicates gas leak and must be taken care of.

General Description

The AQUAH portable liquid propane gas water heater can supply up to 1.6 gallons (6 liters) of hot water per minute. The thermal output is 35,000 BTU/hr. The energy factor (thermal efficiency) is .56 to .85.

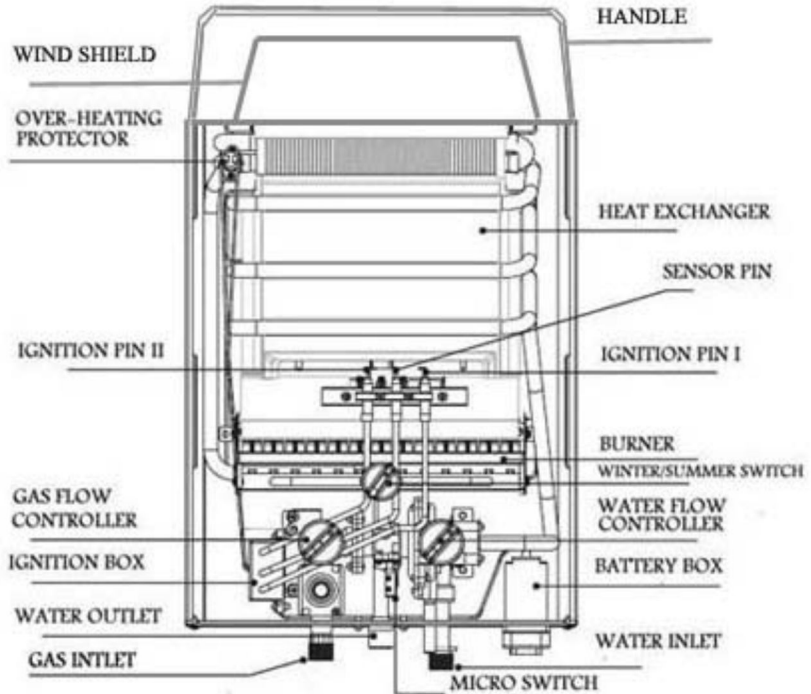
This unit is equipped with automatic pulse ignition. It is powered by 2 "D" batteries (not included) and there is no standing pilot and no electric hookup. The unit is activated when water starts flowing through the water heater and is turned off automatically when water is shut off. The minimum activation water pressure is 2.2 psi.

For gas supply, a standard 20 lb propane cylinder (not included) is required. It is the same gas tank used for outdoor grills. A low pressure gas regulator is required if the regulator is not already built in the propane cylinder.

Safety features include automatic shut-off switch which deactivates the unit when temperature reaches 176° F and an automatic 20 minutes shut-off timer that is reset each time when the unit or the shower nozzle is turned off and back on.

Major Components and Technical Specifications

Major Components



The layout of the gas water heater shown in this manual is for reference only. The layout of the actual gas water heater you purchased may vary from what is shown in this manual.

Technical Specifications

Gas Type	Liquid Propane Gas (0.4 psi)
Model	JSD12-6J (6L)
Ignition	Automatic Electric Pulse Powered by 2 D Cell Batteries
Max Water Flow Rate	6Liter/1.6 Gallons per Minute (GPM)
Operating Water Pressure	2.2 – 140 psi (ideal water pressure is 20-80 psi)
BTU/hr	35,000 BTU/hr
Thermal Efficiency	56 – 87%
Safety Features	Over Heating Automatic Cutoff, Over Pressure and Flame-Out Protection, Anti-dry Burning Protection.
Dimensions (Body)	14.6" (H) x 11.4" (W) x 4.7"
Net Weight	8 lb.

Unpacking the Water Heater

This heater is packed securely. Any damages incurred during shipping must be reported immediately. Before installing the unit, be certain you have the correct heater for liquid propane gas.

The contents in the package include:

1. Open ductless style LPG portable tankless water heater;
2. Wind shield;
3. Shower nozzle/hose set with ON/Off switch;
4. pack of hardware;
5. Owner's manual.

Installation

1. Connect the water line. Use Teflon tape or approved sealant on the thread for a water tight connection. Do not over apply sealant. Make sure the screen inside the water inlet is in place and clean before connecting the water line. If you use a standard water hose, you will need a ½" NPT to water hose adapter (not included).
2. Connect the enclosed shower nozzle to the water inlet of the heater. Hand tight only. If you install the unit with an existing water supply system, connect the hot water line to the water inlet with ½" coupling.
3. Connect the gas line to the water heater's compression fitting. A low pressure gas regulator (same as used for grills) is required if the regulator is not already built in the propane cylinder. Attach the gas regulator to the propane cylinder. Leave the gas valve on the propane cylinder closed. Make sure that there is no gas leak by applying soapy solution to the connections before operation.
4. Insert two (2) size D batteries into the battery box and make sure the batteries are installed correctly as indicated on the cover of the battery box.

Operation

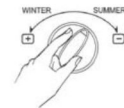
Before operating the water heater, make sure the area is clear and free of combustibles and flammable liquids or materials. Do not locate the heater over any material which might ignite.

1. Make sure the shower nozzle's "ON/OFF" switch is at the "OFF" position. Turn incoming water supply on;
2. Open the gas valve on the propane cylinder all the way;
3. If you smell gas or detect any gas leak, turn off the gas valve on the propane cylinder immediately! Do not touch the "ON/OFF" switch on the water heater!
4. Turn the water regulator knob on the front panel of the water heater to Max. Ideal water pressure for operation is between 20-80 psi;
5. Set the gas regulator knob on the front panel of the water heater to the mid point;
6. Turn the "ON/OFF" switch at the bottom of the water heater to "ON" (the switch is on when the side with a red dot is down) ;
7. Turn the switch on the shower nozzle to "ON" position;
8. When water starts flowing through the water heater, a series of rapid clicks will be heard and a louder click from the solenoid on the gas valve will also be heard after 1 or 2 seconds. If the burner does not kick on in 5 seconds, go to the trouble-shooting section;
9. After use, turn the gas supply off by closing the gas valve on the propane cylinder;
10. Turn the incoming water supply off; and
11. When finished, drain the unit by turning the drain valve counter clockwise. The drain valve is a ribbed cylindrical stem to the left of the water inlet. (The drain valve also serves as a water pressure relieving valve. When water pressure is too high, it will let out some water to relieve the water pressure.)

Adjustment

Output water temperature is determined by the incoming cold water, the water flow rate and the applied gas flow rate. Please exercise extreme caution when adjusting the output water temperature as this water heater is capable of producing scalding hot water.

1. Set the output temperature at the lowest possible level by turning the water regulator knob to the maximum and the gas regulator knob to the minimum on the front panel of the water heater.
2. If you wish to increase the output temperature, turn the gas regulator knob slowly towards the maximum to increase the gas flow and, at the same time, feel the output water temperature. There is a slight delay between the increase of gas flow and the increase of output water temperature.
3. If you wish to have an even higher output water temperature, slowly turn the water regulator knob on the front panel toward Minimum to reduce the water flow rate until the desired water temperature is reached.
4. Winter/Summer switch is an energy-saving device. When the control is at the "SUMMER" position, half of the burners in the heater will be turned off to save energy. When the switch is at the "WINTER" position, the heater will have a full flame.
5. If you wish not to have the water heated at all, you can turn off the "ON/OFF" switch at the bottom of the heater so that the burner will not be ignited.



Trouble-Shooting

Many of the questions customers ask regarding operation of this unit can be answered by following the trouble-shooting steps as outlined below. For best results, perform each step before proceeding to the next. The suggested solutions may require that the cover be taken off

No spark at ignition pin with water flow

1. Make sure that the ON/Off switch at the bottom of the water heater is turn to the ON position.
2. Verify the cold water supply is connected to the water inlet at the right side of the water heater under the water valve when you are facing the front of the heater.
3. Make sure that there is an adequate water pressure to start the water heater. The minimum startup water pressure should be over 2.2 psi.
4. Make sure the batteries are installed correctly as shown on the cover of the battery compartment. Replace the batteries if they are used more than six months.
5. Inspect the water passageway for obstructions. Make sure all outlets (i.e. showerhead, faucet, etc) and the water inlet filter screen are clear of debris.
6. Make sure that all wire connections are secure, paying close attention to the wire connection between the ignition control box and ignition pins in case that wires got loose during shipping.

Sparks are generated when hot water is turned on, but the burner will not ignite

1. Make sure to use the correct type of gas: liquid propane gas.
2. If the unit was just installed or the gas line has been worked on, there may be air in the gas line. Bleed out the air trapped in the gas line by turning the hot water faucet on and off until the burners ignite. (Please note: depending on how long the gas line is and how much air is in the line, this could take numerous cycles of turning the faucet on and off) .
3. Check to see whether the gas supply is turned on at the propane tank. Make sure all manual gas shut off valves are open.
4. If gas is not present, verify the regulator is correct and in good working condition. If the gas regulator is faulty and does not reduce the gas pressure properly, the gas valve on the water heater will not open. The arrow on the back of the regulator should point in the same direction as gas flow.
5. Check and see whether wire connections to the ignition pins are secure. See components diagram for location. Inspect terminals for corrosion, and clean them if corrosion occurs.
6. Check whether there is adequate voltage. Check the condition of battery and change to a new set if necessary.

Burner goes out immediately after being ignited or during operation

1. Output water temperature is too high and the overheating sensor tripped. Try to reduce the gas flow by turning the gas regulator knob towards the minimum or turn the "Winter/Summer" switch to "Summer".
2. Make sure to use a shower head without a water saver if you do not use the enclosed shower nozzle.
3. Sudden drop in water pressure results in inadequate water pressure to keep the water heater on.
4. The temperature on the burners reaches 400° F and the anti dry burning sensor is tripped. Make sure there is sufficient water supply to the water heater.
5. The anti-dry burning sensor gets dirty. Clean the sensor (the pin in the middle on the burner).
6. The 20-minute shut-off timer is tripped. Shut the water off and turn it back on again to reactivate the water heater.

Output water temperature fluctuates

1. Water pressure/flow fluctuates. Try to make the water pressure/flow as steady as possible. You may use a water pressure regulator or pressure tank if you use the water heater on a well.
2. Check for a clogged inlet water filter screen.

Output water is not hot enough

1. Gas supply is insufficient because the gas line is not properly sized or the gas regulator is faulty.
2. Gas/water flow is not properly adjusted. Adjust the gas/water flow in accordance to the descriptions in the Adjustment section.
3. Minerals are built up inside the heat exchanger. The heat exchanger needs descaling.

Warranty

The Heat Exchanger

If the heat exchanger fails within five (5) years after the original installation and operation, the manufacturer will furnish a replacement heat exchanger.

Exceptions

This warranty will not apply:

1. To defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with the printed instructions provided.
2. To damage or abuse, accident, neglect or freezing and other acts of nature.
3. To damage resulting from operation with either the flame sensor rod or overheat sensor removed.
4. To failure of the heat exchanger resulting from the operation of the water heater in a corrosive atmosphere or at water temperatures exceeding the maximum rating, or if the water heater is not supplied with portable water.
5. To defects or damage caused by any attachment or modification, including any energy-saving device.

All Other Parts

If any other part fails within one (1) year after original installation and operation, the manufacturer or retailer will furnish a replacement part free of charge.

Shipping Costs

Any parts or product claimed to be defective must be shipped freight prepaid to the manufacturer or retailer and the repaired or replaced product or parts will be returned to the sender freight at customer's expense.

Service Labor Costs

This warranty does not cover any labor costs associated with services, removal or re-installation of part(s). All such costs must be borne by the Purchaser. Additionally, this warranty does not cover any labor costs associated with services, removal or re-installation of the original water heater or a replaced water heater.



Note: the water heater must be free of damaging scale deposits and not subject to gas pressures greater than those shown on the rating plate, which must not be altered, defaced or removed.

How to make a claim

Any claim for warranty parts should be made to your local dealer, distributor or manufacturer. In most cases, the dealer or distributor will be able to promptly honor your claim. However, all replacements are subject to validation by dealer or distributor of in-warranty coverage. The damaged or defective item must be made available in exchange for the replacement.

Miscellaneous

No one is authorized to make any other warranties on behalf of the manufacturer. It is expressly understood that the replacement warranty of manufacturer shall be in lieu of any and all other warranties, express or implied, including warranties of merchantability or fitness for a particular use or purchase, and further that the manufacturer shall not be liable for any loss or damage directly or indirectly arising from the use of the hot water heater, or for any consequential damages arising from such use (including damages from water leakage). The manufacturer's sole liability with respect to any defect shall be for the replacement of the defective part(s).