

ALVA

**14L CONSTANT TEMP - LOW PRESSURE
GAS WATER HEATER W/ DIGITAL DISPLAY**

GWH3014L



Your world is better with Alva

- FOR YOUR OWN SAFETY, PLEASE READ THIS MANUAL CAREFULLY AND ALWAYS OPERATE THIS PRODUCT ACCORDING TO THE INSTRUCTIONS
- IT IS ILLEGAL AND DANGEROUS TO CHANGE OR MODIFY ANY PART OF THIS APPLIANCE
- THIS PRODUCT REQUIRES PROFESSIONAL INSTALLATION BY AN LPGSA APPROVED INSTALLER
- RETAIN THIS MANUAL FOR FUTURE REFERENCE



*APPROVED FOR USE IN
SOUTH AFRICA*

Manufactured for
and distributed by:



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TOLL FREE NUMBER: 086 100 ALVA (2582)

f /AlvaGas  /alvagas

IMPORTANT SAFETY INFORMATION

As with all gas appliances, misuse of this appliance or failure to fully follow these instructions may cause fire, injury or death. Please read all the instructions before using your gas heater.

- Never use this appliance in an enclosed area such as a camper, tent or car.
- THIS UNIT MUST BE THOROUGHLY CHECKED BEFORE USE.
- Ensure that all the gas fittings are correctly and firmly fitted before every use.
- DO NOT use this appliance if you do not clearly understand the instructions and/or how to operate the controls.
- Phone the customer care line at 086 100 ALVA (2582) or email info@stingray.co.za for assistance.
- DO NOT leave the appliance unattended while in use.
- Ensure that the gas supply is turned OFF after use and while the appliance is unattended.
- DO NOT move the appliance while in use.
- DO NOT place objects on or against the appliance.
- DO NOT use a naked flame to test for leaks. Follow the Leak Testing procedure outlined under 'LEAK TEST'.
- NEVER use this appliance with a cylinder other than the size recommended
- DO NOT unscrew the regulator while the appliance is on or if the cylinder valve is open.
- DO NOT use an appliance you suspect is faulty.
- When turning the appliance off, first turn the gas down (LO) at the control valve (on the heater) and then make sure to close the cylinder valve.
- For safety reasons, only a qualified technician may execute maintenance and repairs. The guarantee for the heater will be rendered void if the heater is serviced or repaired by any one other than an Alva appointed technician.
- The appliance should be inspected once a year by a qualified technician, to make sure the unit is safe and fault free.
- The operator is responsible for the safety of all third parties while the appliance is in use.
- DO NOT store or use gasoline or other liquids with flammable vapours in the vicinity of this or any other appliance.
- If used on boats, use only above deck.
- Always use the appliance in an upright position.
- Keep children and pets away from the burner at all times.
- DO NOT operate the appliance under any overhead construction.
- Use only on a level, stable, non-combustible surface like bricks or concrete
- Keep the fuel supply hose away from any heated surfaces.
- Should overheating occur or the gas supply fail to shut off, turn off the gas supply at the cylinder.
- DO NOT obstruct flow of combustion and ventilation to or from the appliance.
- This appliance will be hot during and after use. Use insulated oven gloves or mitts for protection from hot surfaces.
- Always allow the appliance to cool before covering.
- Always cover the appliance when not in use.
- Keep the power cord away from sharp edges and heated surfaces.
- Always unplug the product from the electrical outlet when cleaning it.
- Do not operate product if the power cord is cut, damaged, or if the wires are exposed. Contact 086 100 ALVA (2582) or an Authorised Service agent to replace the power cord.



Please read the instructions carefully before use.

Retain this manual for future reference.



WARNING:
TO AVOID THE RISK OF ELECTRICAL SHOCK, ALWAYS MAKE SURE THE PRODUCT IS UNPLUGGED FROM THE ELECTRICAL OUTLET BEFORE ASSEMBLING, DISASSEMBLING, RELOCATING, SERVICING, OR CLEANING.

IMPORTANT INFORMATION FOR THE USER

This appliance may only be installed by a registered and certified LP Gas installer. All registered installers are issued with a card carrying their registration number. Ask to be shown the card before allowing the installation work to commence and make a note of the Installer registration number. Upon completion of the installation, the installer is required to explain the operational details of the appliance together with the safety instructions. You will be asked to sign acceptance of the installation and be provided with a compliance certificate. You should only sign for acceptance of the installation when the installation is completed to your satisfaction.

Note that your proof of purchase is required in the event that you wish make a warranty claim.

IMPORTANT INFORMATION FOR THE INSTALLER.

This appliance may only be installed by a gas installer registered with the South African qualification and certification committee (LPGSA). The appliance must be installed in accordance with the requirements of SANS 10087-1 for use with LPG, and any fire department regulations and/or local bylaws applicable to the area. If in doubt, check with the relevant authority before undertaking the installation. Upon completion of the installation you are required to fully explain and demonstrate to the user the operational details and safety practices applicable to the appliance and the installation.

CAUTIONS

- (a) Don't use the water heater in a sealed room or poorly ventilated place.
- (b) The exhaust pipe must be installed to discharge exhaust gas outside.
- (c) During operation, if you find out there is a gas leakage, you should close the gas valve immediately. The cause of the gas leakage should be tested and the service center or gas company must be contacted.
- (d) Before leaving the house or going to sleep, please be sure to shut off the gas supply.
- (e) Do not place any objects at the exhaust port or air inlet to avoid poisoning caused by incomplete combustion.
- (f) During operation, please pay attention to combustion situation. If there is an abnormal combustion, you should close the gas valve immediately and then contact the service center or gas company for maintenance.
- (g) When the outdoor temperature drops below zero and freezing may occur, the remaining water should be discharged out of heater after using it. Water should be discharged in the following steps: turn off the gas supply valve – turn off the tap water supply valve - remove the water discharge valve to discharge remaining water entirely - re-install the water discharge valve.
- (h) The body of the water heater can get very hot during operation, so please don't touch any part of the water heater except for the switches.
- (i) While using the water heater constantly, please pay attention to the temperature of the water flowing out initially to prevent scalding.
- (j) Check the gas pipe and rubber hose regularly. If you find joints are not tight or there are cracks in the hose, you should stop using and make timely maintenance or replace with a new one.

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KEY



Important information



Cautions and warnings.



Danger



Contact an approved ALVA technician.



Do It Yourself

WARRANTY

PLEASE RETAIN YOUR PROOF OF PURCHASE FOR WARRANTY CLAIMS.

ALVA warrants this appliance to be free of defects in material and quality for a period of 12 months from date of original purchase. This warranty covers the intended use of this appliance – within a domestic setting and not for commercial or industrial purposes. Any damage caused by wilful abuse, tampering, modification or unauthorized repair will not be warranted.

Please retain all packaging material, as items returned without original packaging material may be subject to a withholding fee. Where this appliance is found to be defective, damaged, broken, or does not work correctly for the intended purpose, you must return the appliance to the retailer where it was purchased. The warranty will only be effected with valid proof of purchase and an install action certificate by an LPGSA approved installer. Failure to provide the proof of purchase and installation certificate will most likely result in the repair or service required being chargeable.

If you have any questions while setting up or using this heater, please visit www.alva.co.za or call 086 100 ALVA (2582) or e-mail info@stingray.co.za

GENERAL INFORMATION

Before using this appliance, please read through this manual and make sure you understand everything. If you are not sure, please call 086 100 2582 or visit www.alva.co.za for help.

This appliance is a safe and efficient form of heating water when used according to these instructions.

Keep this manual for future reference. This manual should be read in conjunction with labeling on the product.

If this product is not what you want or need, please help Alva and the environment by not damaging or destroying any part of the packaging, the manual or the Styrofoam inserts. Always keep your proof of purchase.

Keep these instructions for future use. If you lose this copy, you can obtain a new copy from your dealer or online at www.alva.co.za



Thank you for your purchase of this water heater. Please read these instructions carefully before use and keep them in a safe place, for future reference.



Not using gas and/or gas appliances according to the instructions is extremely dangerous and can lead to property damage, injury or death.

FLASHBACK

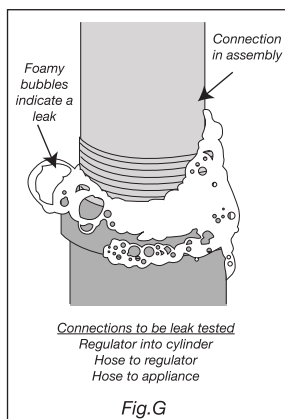
In the event of flash back whilst the Water Heater is in use, turn **all** the controls to the 'OFF' position. Wait 5 minutes before attempting to relight the Water Heater. If the problem persists, check for blocked venturi ports by removing the burner and cleaning with compressed air or with a pipe cleaner. Check under burner cap or aeration adjustment - Restart Water Heater.

If problem persists do not try to rectify the problem yourself as this could result in serious injury and/or property damage.

LEAK TEST

The leak test must be carried out in a well-ventilated area, free from any flames or other sources of ignition.

- With the cylinder connected to the water heater, open the cylinder valve.
- Brush the connections (water heater to cylinder) with a solution of equal parts soap and water (make sure it's foamy).
- A stream of bubbles forming indicates a gas leak. (See Fig.G)
- If bubbles appear, turn the cylinder valve OFF (clockwise) and disconnect the water heater from the gas cylinder.
- Tighten the connection and retry the leak test.



- If you are unsure or if you cannot tighten the connection, place the cylinder outside in a cool, well-ventilated area and contact **Alva on 086 100 ALVA (2582)**.
- A leak between the water heater and cylinder can lead to a high pressure fire, which is very dangerous and can result in extensive injury or even death.



*DO NOT insert any foreign objects into the valve outlet. You may damage the valve and cause a leak.
A leak may result in a property damage, injury or even death.*

NEVER attempt to attach this appliance to the self contained gas system of a camper, trailer or motor home.



How to do a leak test



<http://www.youtube.com/watch?v=8LpZ1B0m23Y&feature=plcp>

FUNCTIONS & FEATURES

Water controlled automatic ignition:

If the hot water tap is switched on, the unit will automatically ignite and deliver hot water to the tap.

Auto cut-off protection:

The auto cut-off protection will extinguish the gas supply immediately.

Low water pressure startup function:

When water supply pressure is lower than 0.015MPa, the water heater cannot be ignited, Fit water pressure pump to boost pressure.

Anti-freeze protection:

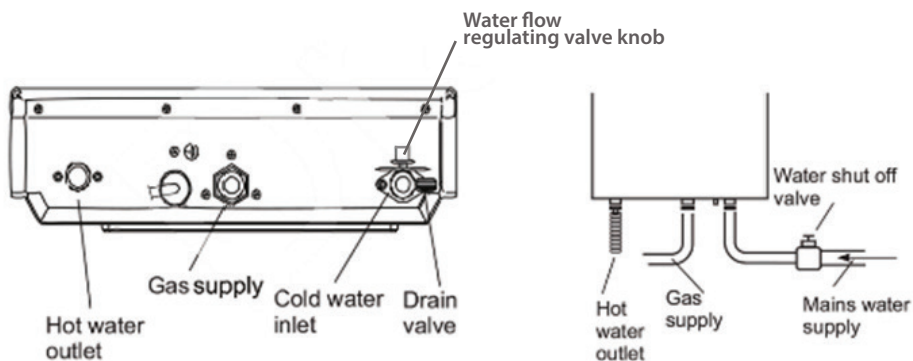
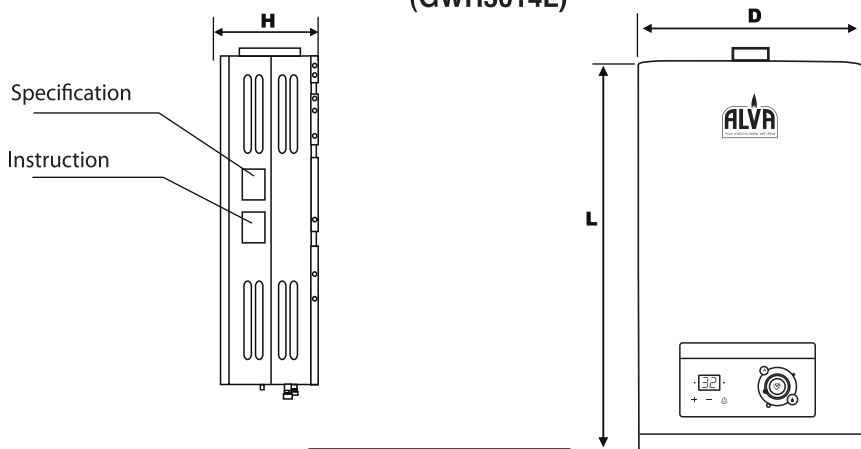
When ambient temperature is very low, remove the water discharge valve to discharge accumulated water inside the water pipe to avoid damage caused by freezing.

High-pressure protection:

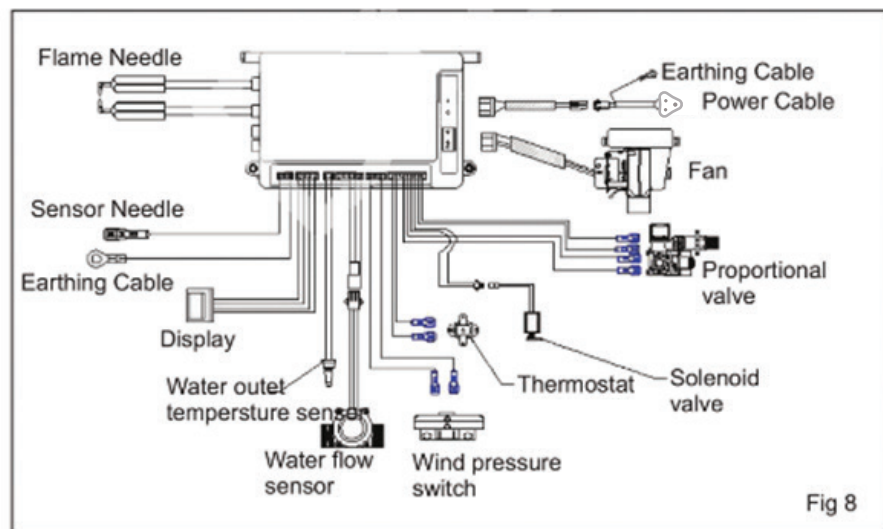
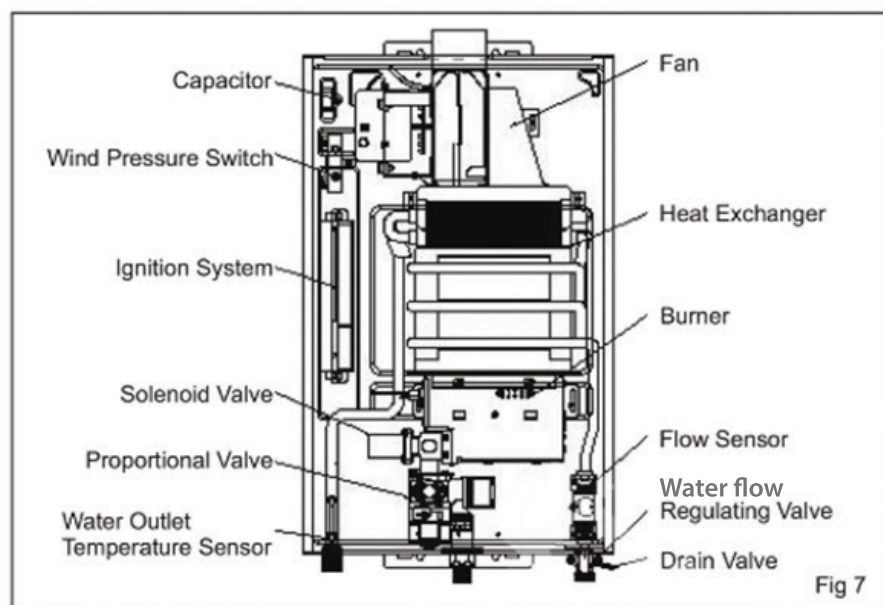
Once water pressure is greater than 0.8MPa, the water-out valve will release water and lower the pressure. This will happen automatically to avoid damage.

OVERVIEW AND WATER AND GAS CONNECTION DETAILS

ALVA Water Heater (GWH3014L)



**INSTRUCTION & NAME OF EACH PART
(PARTS LIST)**



TECHNICAL PARAMETERS

Model Number	GWH304L
Gas Type	LPG ONLY
Operating Pressure(gas)	2800Pa
Heat Load	28kW
Max.Gas consumption	2.12 kg/h
Jet Size	1.30mm
Water Heater Type	Type B
Operating Water Pressure	0.015MPa - 0.8MPa
Rated Hot Water Capacity	14 litres/min
Rated Voltage	220-240V ~ 50Hz
Wattage	35W

INSTALLATION INSTRUCTIONS

CAUTION:

The water heater must be installed in a well-ventilated area with an the exhaust flue to discharge exhaust gas. During operation the water heater consumes oxygen, so an air inlet hole must be made in any room where installed.

- This appliance is designed as a type B appliance and may be installed indoors or outdoors.
- A suitable LPG regulator that complies with the requirements of SANS1237 must be installed outside. Ensure that the flow capacity of the installed regulator is sufficient to drive the appliance.
- Mount the appliance against a non-flammable wall.
- Position the appliance so that the height of the observation window is at eye level (approximately 1.55 to 1.65 Meters above ground level).
- Mark out the wall to ensure correct mounting height before drilling the mounting holes.
- This appliance may only be installed in a room if the room complies with the appropriate ventilation requirements (refer to SANS10087-1).
- This appliance must be connected to a flue exhaust to the outside.

- Not installing an exhaust pipe as well as poor circulation could lead to a lack of oxygen and result in CO (Carbon monoxide) & CO₂ (Carbon dioxide) poisoning.
- Do not expose the water heater to strong wind or rain.
- Use only LPG, failure to do so could lead to fire, CO & CO₂ poisoning and possible injury or death
- Never use an aged or cracked gas pipe/hose.
- Do not install any water heater near combustible or volatile substances.
- Ensure adequate water pressure of at least 0.015MPa is achieved in order for the unit to operate.
- Do not install your water heater near any other appliance that generates heat.
- Your water heater shouldn't be installed within 5m of a stairwell or an emergency exit.
- For electrical power, plug into a wall socket corresponding to the rated voltage of the appliance, 220-240V ~ 50Hz.

Pipe Installation

NOTE:

If a flexible hose is being used, it must be SANS 1156 approved. The hose **MUST NOT** be longer than 2 meters. The hose should **NOT** be fed directly through a wall, cupboard or behind/above the gas water heater.

We **DO NOT** recommend using hose for the gas connection. This will restrict the gas flow volume and will result in under performance. We recommend the use of 15mm copper or stainless steel pipe.

(a) Connecting of cold water supply pipe:

- The cold water inlet fitting is a G1/2 pipe thread.
- The water inlet pipe must be connected using a metal tube, or by a rigid water pipe.
- The inner diameter of the inlet pipe (including the valve) should not be less than 8mm.
- A cold water valve should be installed with the water inlet pipe.
- Please ensure that the filter in the cold water inlet is mounted correctly.
- Clean new pipes by flushing with water. Make sure there are no blockages, only then insert the rubber gasket and fix the water inlet joint tightly.

(b) Connecting of the hot water supply pipe:

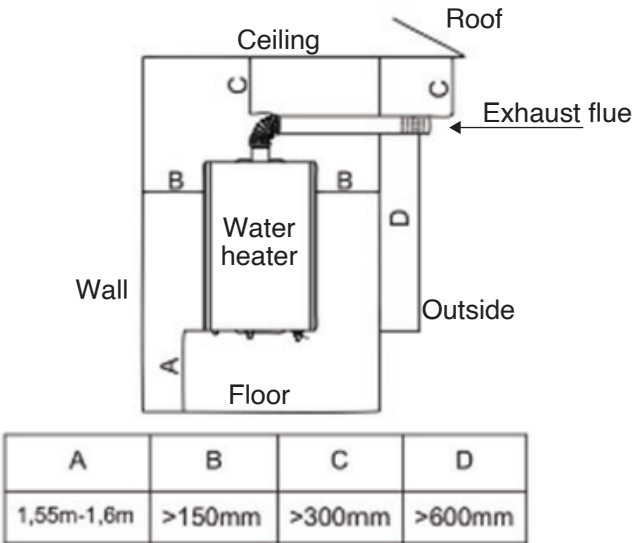
- The hot water outlet fitting is a G1/2 pipe thread.
- The hot water outlet pipe must be connected using a metal tube or a rigid water pipe or a rubber pipe with a hand held shower fitting.
- The inner diameter of the hot water pipe outlet pipe (including the valve) should not be smaller than 8mm.

- (c) Once installed, open cold water valve to its maximum in order to test the full flow of water and ensure that there is no water leakage.
- (d) Installation of gas supply pipe:
 - The gas inlet fitting has a G1/2 pipe thread. Make sure that the gas inlet pipe fitting and rubber gasket are connected. Secure the pipe with the clip.
 - After the gas inlet fitting is connected, open the gas supply valve, and pressurise your water heater to check whether there is a gas leak at the joint using soapy water.

Installation of exhaust device:

Note: Your water heater must have a flue. Flue pipe including 90° bend is supplied in the packaging with this gas water heater.

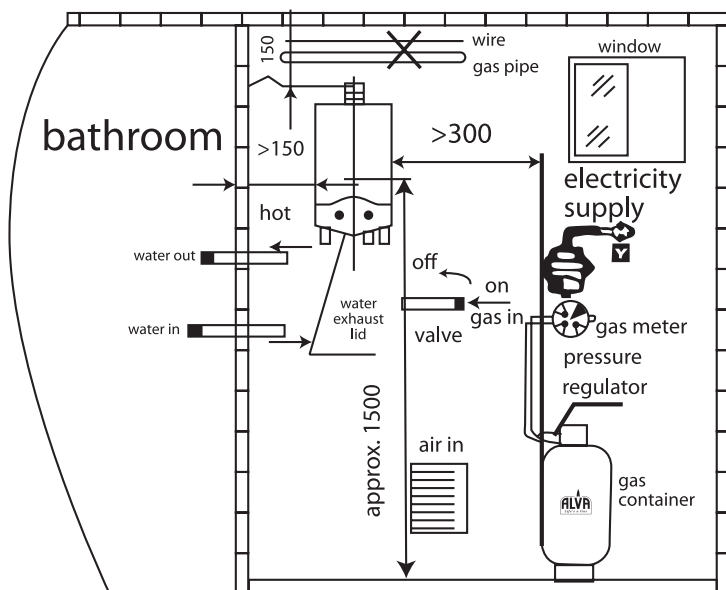
- (a) Make a cutout in your wall that is wide enough in diameter to accomadate the flue pipe.
- (b) The installation of the flue is shown in Drawing 1. The height of the exhaust flue must be at least 2.3 meters and must not exceed 3 meters.



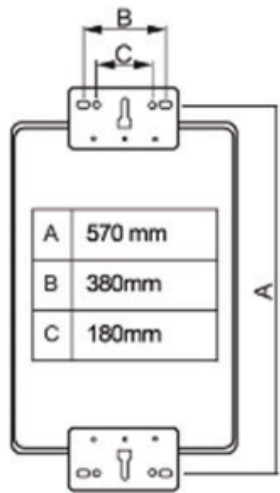
Drawing 1

- (c) Make an air inlet at least 0.06m^2 on the lower part of your wall.
- (d) When a wall is constructed of inflammable material, the fireproof board must be installed between the flue pipe of the water heater and the wall (the thickness is about 20mm). (Refer to page 11.)
- (e) All joints of the flue pipe assembly must be sealed and leak free to ensure that no exhaust fumes leak into the house/ bathroom. Use self tapping screws or pop rivets to secure flue sections.
- (f) Flue pipe assembly to be securely fastened to the wall.
- (g) Exit vent at end of flue pipe must face downwards.
- (h) Horizontal flue pipe section should have slight downwards angle so condensation and rain does not flow down flue and into the gas water heater.

CORRECT POSITIONING OF THE WATER HEATER

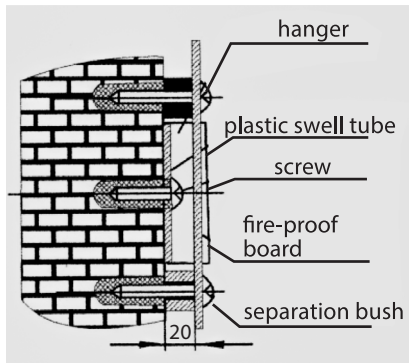


MOUNTING ON WALL

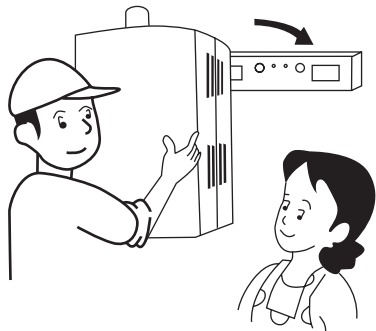


Where the wall is not fire proof, please underlay a fire-proof board at least 100mm wider all round than the actual water heater, from side-to-side and top-to-bottom.

- Add a 20mm spacer between the board and the wall - See image.



Mount the heater onto the wall hanger vertically.
See image.



AIR VENT SET UP

- A.) The air vent should be as near to the floor as possible.
(But less than half of the distance from floor to ceiling.)
- B.) The exhaust flue should exhaust the gasses outside, this should be properly sealed to prevent exhaust fumes entering the room.
- C.) Air Vent Size Chart:

THERMAL BURDEN (kW)	MIN. AREA OF THE AIR-IN HOLE AND VENT HOLE (CM ²)
<12	100
12~16	130
16~20	160
20~26	200

PRECAUTIONS

As a precaution, if you are away from home and the water heater will not be in use for a period of time, always **CLOSE THE CYLINDER VALVE**.

Additionally always close the cylinder valve first, before changing the empty cylinder with a new cylinder.

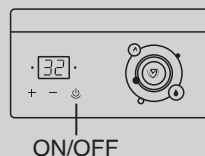
INITIAL START-UP:

- Ensure unit is unplugged and all electric power to the appliance is off.
- Locate the manual gas valve to the water heater. Open the manual gas valve for 15-30 seconds.
- Carefully check for any sign or smell of gas. If gas is detected, wait for 5 minutes for it to clear. STOP and go no further until gas leak point is detected. See leak test section on page 3, find leak and fix it. If no gas is detected, open the manual gas valve for 5 minutes and again check area for signs of gas. At any sign of gas, STOP and go no further. Follow the safety precautions.
- If no gas is detected open the water supply valve to the unit. Inspect for any water leaks.
- Visually inspect air intake inlet and exhaust piping to ensure they are not obstructed.
- Press the "ON/OFF" button on the front panel to turn the unit on.
- Adjust the temperature set point using the "+" & "-" buttons on the front panel.

- This appliance is equipped with an ignition device that will automatically light the burner. Do not try to light the burner by hand.
- Open a hot water tap to a flow above the minimum flow point (3l/min).
- The burner control system will activate the ignitor, the burner will light and hot water will be produced. If the burner does not light, follow the shut down instructions. Wait 5 minutes and repeat the start up procedure.
- If again the burner does not ignite, begin troubleshooting per "Troubleshooting" section of this manual. Also see the table of diagnostic error codes. Contact Alva on 086 100 2582 if in any doubt.

Lighting and using of the appliance

- This appliance is fitted with a mains powered auto ignition device. Ensure the plug is connected and the wall switch is on. Also, switch the gas water heater on with the ON/OFF switch located on the front panel.
- Check that the gas is turned on at the cylinder valve. Open the water valve and check that the water is flowing from the outlet pipe or nozzle. This will automatically ignite the burners.
- Changing the position of the water flow valve knob will reduce or increase the water flow and the water temperature. The slower the water runs the hotter it will be. Conversely the faster the water runs the colder the water temperature will be. (see page 5)
- To increase the water flow, turn the knob in an anticlockwise direction and clockwise to reduce the flow.
- After setting the water flow to the required level, use the touch display buttons "+" or "-" to increase or reduce the water temperature.
- When in use or immediately after use do not touch the water heater, apart from the display buttons or water control knobs. Be aware that the area around the observation window becomes extremely hot.



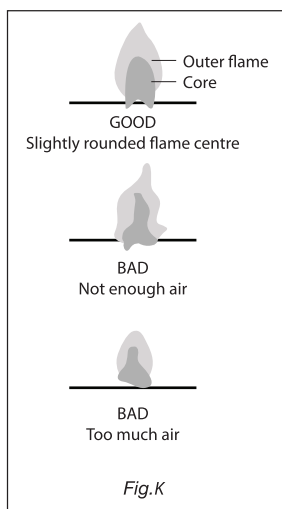
Switching the appliance off

To shut down the appliance, simply turn the water control down to the off position. This will automatically shut down the gas supply to the burner and the flames will go out. Always check that the burner flames have extinguished after turning off the water supply. Shut off the gas supply and the mains electrical supply when the water heater is not in use.

DAILY MAINTENANCE

1. Check the gas supply pipe (rubber hose) regularly to see if it is in good condition; there should be no aging, cracking, leakage or bends.
2. Inspect regularly that there is no water or gas leakage.
3. Regularly clean surface of water heater body to remove dirt or dust with a wet cloth, and then use the dry cloth to wipe off the moisture. If not easy to remove, please use a natural detergent to wipe off.
4. Do not use strong detergents or benzene to clean plastic parts or printed surfaces.
5. Use a dry cloth to clean dirt on the ignition.
6. Remove and wash the stainless steel filter in the cold water inlet regularly.
7. During operation, please pay attention to the height of the flame to see if it is good condition. Check the heat exchanger and combustor, searching for dust or dirt every 6 months.
All servicing must be done by a registered technician.

MAINTENANCE



- Always remove the electric plug from the wall socket before conducting any maintenance.
- Always make sure the heater is OFF and cool, with the cylinder valve closed, before conducting any maintenance.
- Your heater should be checked once a year by a qualified technician.
- If faults are suspected or detected, stop using the heater and contact ALVA.
- Clean the exterior and storage area of your heater when required to remove dust and prevent lint build up.
- DO NOT use abrasive products to clean the heater; these may damage the paint work.
- Clean the exterior body with a damp cloth.
- Clean the water filter annually or more frequent in areas where the water supply contains any free sediment.



IF YOU SMELL GAS

1. Do not attempt to light appliance
2. Extinguish any open flame
3. Disconnect from fuel supply

Clean the entire appliance annually and tighten all hardware on a regular basis (1-2 times a year or more depending on usage).

If any part of the heater is in need of replacing, use only original Alva parts. Using any other spare parts is dangerous and will void the warranty.

FREQUENTLY ASKED QUESTIONS

Q: Why is there an odour when I use a gas water heater?

A: All gas appliances give off an odour. This could be harmful if inhaled for extended periods of time. This “smell” is normal, and it does not mean that you have a gas leak. The smell of raw gas (just before you ignite the appliance) differs to the smell coming from the appliance when it is in use. The odour is added to allow easy gas detection.

Q: Why must there be ventilation when using a gas appliance?

A: Whenever fuel (LP Gas in this case) is burned, ventilation is needed. Any fire needs oxygen to burn. Think of a fireplace, you require a chimney or flue for the smoke to exit the house. Even though a gas appliance does not generate smoke, it still generates carbon monoxide and carbon dioxide, which can be dangerous if not diluted by fresh air ventilation by leaving a door or window open in the same room.

Q: How long will the gas in my cylinder last?

A: This depends on how you use your appliance. It is easy to calculate your gas consumption. Take the capacity of the gas cylinder in grams (i.e. 9000g for a 9kg cylinder) and divide it by the gas consumption of the water heater, on your desired setting (*refer to the Specifications section in this manual (page 8)*). The answer to the calculation is the approximate number of hours that your water heater will burn for.

Q: What do I do if I have an over-filled cylinder?

A: The best method to determine if your cylinder is overfilled is to weigh it. Subtract the ‘tare’ mass from the cylinder weight – this gives you the weight of your gas. If this gas weight exceeds your cylinder design weight (9kg) then return the cylinder to your gas supplier.



*How to test if
your cylinder
is overfilled*



<http://www.youtube.com/watch?v=YavsYE8nzCw&feature=plcp>

TROUBLE SHOOTING GUIDE

TROUBLE	CAUSE	REMEDY
Odour	Combustion	N/A - The combustion process will always cause an odour
Strong odour	Incorrect gas mixture	Obtain LPG only from reputable LPG dealers
	Unburned gas leak	Perform a leak test Always ensure there is proper ventilation
Burns then dies	Over-filled cylinder	Return to gas supplier
	Ventilation	Make sure the room has adequate ventilation
	Empty cylinder	Replace with a full cylinder
Unit will not ignite (No audible clicks at start up)	Power supply	Make sure plug inserted in wall socket, wall socket is switched on. Make sure distribution board has not tripped.
	Not enough water	Make sure there is an adequate supply of water Make sure the water inlet is connected to the correct fitting.
	Debris	Reverse the water flow. Connect water source to the heater outlet.



If you are still unable to correct the problem with the information in this guide, then you need to contact your nearest dealer or manufacturer.

TROUBLE	CAUSE	REMEDY
Unit will not ignite (Audible clicks at start up)	Empty cylinder	Make sure the LPG cylinder is full and cylinder valve is open Replace with a full cylinder
	Not enough water	Make sure there is an adequate supply of water, at least 3L/min. Make sure the water inlet is connected to the correct fitting.
	No gas flow	Perform leak test Remove regulator hose from appliance fitting and ensure there are no obstructions
Unit ignites and then shuts off	Not enough water	Make sure there is an adequate supply of water Make sure the water inlet is connected to the correct fitting.
	Wind	Excessive winds may extinguish the flame
	Empty cylinder	Make sure LPG cylinder is full and cylinder valve open Replace with a full cylinder
	Ignition sensor adjusted incorrectly	Wires located directly above the burner should be bent at 90 degrees and approximately ¼" above the burner. Use a pair of pliers to bend the wires as needed.
	Thermocouple	Adjust thermocouple so that it is centred in the hole on the heat exchanger
	Thermostat	Call 086 100 ALVA (2582)

TROUBLE	CAUSE	REMEDY
There is no hot water when the hot water tap is opened	No gas-cylinder is empty Cylinder valve is closed Water valve is closed Power outage Water flow is too low Freezing temperatures The distance from the water heater to the outlet is too long	Refill the cylinder Open the cylinder valve Open the water valve The unit requires mains power to operate. Unit requires at least 3L/min to operate. Thaw unit or water pipes before trying to operate. Allow sufficient time for the hot water to travel from the water heater to the outlet.
Hot water is not the right temperature (too hot or too cold)	Temperature set point was reset due to power outage Flow is beyond the capacity	Power outage restores default settings and custom set points must be re-entered If incoming water to the unit is very warm and the flow is just above minimum requirements, the heat generated by the burner whilst operating at minimum capacity can make the water hotter than desired. Increase the hot water flow so that the burner system can control the temperature.
Hot water flow produced is lower than expected	Water source is restricted Heat exchanger in unit is scaled Incoming water temperature is colder than expected	Check and fully open water inlet valve(s) Check and clean inlet water filter. Clean heat exchanger by following maintenance procedure Colder than normal incoming supply water will reduce the amount of hot water that can be produced. Although the amount of heat output from the unit is still at full capacity, you must reduce the water flow

TROUBLE	CAUSE	REMEDY
Vent system trouble	Vent system is restricted in some manner	Check air intake and exhaust ducts to ensure they are not damaged, corroded, blocked etc.
“smoke” observed coming from exhaust system during cold temperatures	Water vapour produced during combustion is condensed in the exhaust as the hot gas is cooled by the outside air	None. Normal operation
Water leaking from safety valve outlet	Water system is operating above design pressure. Safety valve is damaged	Contact support for system review Replace safety valve. Contact support if required
Blower fan noise can be heard for some time after operation stops	The blower is designed to run for 30 seconds after burner shuts off	None. Normal operation
Unresolved problems	Other assistance required	Contact an authorized service professional

TROUBLE SHOOTING GUIDE

PROTECTIVE FUNCTION	REACTION	REMARKS
Water pressure too high	If the water pressure is over 0.8Mpa, the water-out valve will release and lower the pressure	Increase the valve pressure limit according to local water supply pressure
20-30 minutes automatically shut off	After 20 minutes of using the water heater it will shut off automatically	Restart the water heater
Water pressure too low fit water pressure pump to boost pressure	If water pressure is below 0.015 Mpa the water heater cannot be ignited	Use the water heater later when pressure becomes higher
Over heat protection	Water heater automatically shuts off when water temperature is above 77°C	Re-start the water heater later when it becomes cooler

Diagnostic codes

Whenever a failure occurs, an alert sounds and a diagnostic code is displayed to indicate the failure mode at the time of occurrence. The following table includes a list of diagnostic codes that can be displayed as well as recommended remedies to address the problem.

Error Code	Indication	Causes	Remedy
E0	Sensor error	Temperature sensor or water flow sensor not connected with electric to the controller properly Temperature sensor or water flow sensor error	Connect temperature sensor and water sensor properly Replace temperature or water sensor
E1	Ignition failure	No/empty fuel source Gas pressure is too low The electric controller is not properly connected with proportional valve	Fuel gas valve needs to be open. Refill source tanks (If applicable) Adjust the gas pressure to the applied range The red wire on the controller is the positive pole "+", the black wire is the negative pole "-"
E2	Flame detection error	The detection circuitry for ignition and flame detection has come loose or failed to connect Ignition sequence was unsuccessful An accidental flameout occurred The ignition and flame detection circuitry malfunctioned or broke down. Ignitor is not activating	Connect the relevant circuit properly and eliminate the bad connection. Replace any failed circuit elements Check the fuel gas supply (especially when first installed as air pockets might exist in the gas line. Retry the ignition process several times) Check if the fuel gas pressure is too high or too low Replace or repair igniter flame detection system

E3	Thermosensor	Thermosensor is broken, ignition and shut down automatically	Replace the thermosensor
E5	Exhaust system/wind pressure switch error	Exhaust duct is jammed Wiring harness or wiring connections somewhere in the air pressure switch connection has come loose The wind pressure switch is damaged	Replace and or clean the exhaust ducts Plug the "plug-in" element in place or replace the bad element Replace the wind pressure switch
E6	High temperature automatic shutdown	Temperature above 75°C was detected. The controller has automatically closed the electromagnetic valve and unit shut down	Restart the heater
E7	Proportional valve error	Flame still burning after shut-off, solenoid valve still in state of supplying gas	Replace proportional valve
CE	Accidental power-off	Power accidentally shut-off during use	Shut-off and restart the heater
EN	Time restart the heater	The timer finished	Restart the heater

SPECIFICATIONS

MODEL GWH3014L

Model Number	GWH3014L
Gas Type	LPG ONLY
Operating Pressure(gas)	2800Pa
Heat Load	28kW
Max.Gas consumption	2.12 kg/h
Jet Size	1.30mm
Water Heater Type	Type B
Operating Water Pressure	0.015MPa -0.8MPa
Rated Hot Water Capacity	14 litres/min
Rated Voltage	220-240V ~ 50Hz
Wattage	35W

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TOLL FREE NUMBER
086 100 ALVA (2582)



Should you experience problems with this gas heater, carry out the necessary checks as per the Trouble Shooting Guide .
If you are still unable to correct the problem with the information in this guide, then you need to contact your nearest dealer or manufacturer.