

# ALVA

## 8L / 12L / 16L / 20L GAS WATER HEATER



### 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:

**ALVA**  
Your world is better with Alva

A division of Stingray Accessory Manufacturers (Pty) Ltd | P.O. Box 30014, Tokai, 7966  
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**TOLL-FREE NUMBER: 086 100 ALVA (2582)**

 /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](mailto: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.



*Please read the instructions carefully before use.*

*Retain this manual for future reference.*

## **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 completion certificate. You should only sign for acceptance of the installation when the installation is completed to your satisfaction.*

*Note that your invoice 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, SANS 827 for use with NG 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. Failure to provide the proof of purchase 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](http://www.alva.co.za) or call 086 100 ALVA (2582) or e-mail [info@stingray.co.za](mailto: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](http://www.alva.co.za) for help. This appliance is a safe and efficient form of heating 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](http://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.*

## WATER HEATER SET UP

### Setup using mounting brackets

This appliance may be mounted on to a non-combustible surface. The appliance is to be mounted using the supplied hardware. For a temporary mount the unit can be suspended from the top bracket. If being mounted permanently the appliance should be mounted using both the bottom and top tabs.



*Rubber Gasket*

### Outlet hose and shower head assembly

Attach the shower nozzle to the hose. Make sure to insert the supplied rubber gasket at the connection.

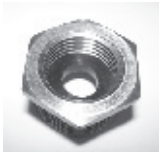


*Rubber Gasket*

Connect the opposite end of the hose to the brass fitting on the bottom of the appliance labeled "Water Output". Make sure to insert the supplied rubber gasket at this connection.

Hand tighten only.

### Optional garden hose connector to output



*Rubber Gasket*

An additional brass fitting for connecting a garden hose included. If connecting a garden hose to the output, first connect the brass fitting using the supplied gasket to the brass fitting on the bottom of the appliance labeled "Water Output". Hand tighten only. Ensure the garden hose has a rubber gasket inserted in the connector.

### Water supply input assembly



*Rubber Gasket*

Attach a standard garden hose to the fitting on the bottom of the appliance labelled "Water Input". Make sure to insert the supplied rubber gasket at the connection.

## Battery Installation

Install 2 'Type D' cell batteries in the compartment on the bottom of the appliance. Make sure the batteries are installed in the correct direction.

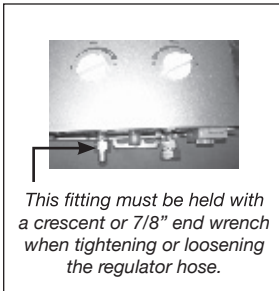
Clean the battery and device contacts prior to battery installation.

Always purchase the correct size and grade of battery.

DO NOT mix new and old batteries. Replace all batteries at the same time.

Although any "D" Batteries will work, ALVA recommends using VARTA Consumer Batteries.

## Connecting the regulator to the appliance



Attach the gas regulator to the appliance. The regulator will attach to the brass fitting on the bottom of the appliance labeled "Gas Input". Tighten the fittings using wrenches on both the brass adaptor fitting on the appliance and the brass fitting on the end of the hose

Use 2 adjustable wrenches of 19mm and 22mm wrenches for tightening the hose to the brass valve of the appliance.



### **WARNING**

*Attempting to tighten the hose fitting without using a wrench on the brass adaptor fitting on the bottom of the appliance could damage the product and cause a gas leak. Damage may occur to the unit if tightened improperly.*

## **FLASHBACK**

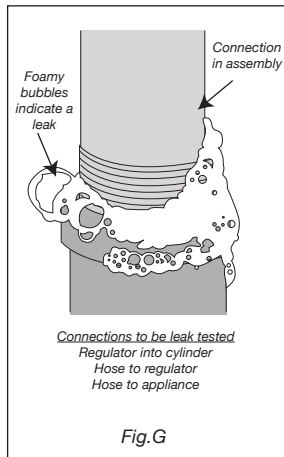
In the event of flash back whilst the Water Heater is in use, turn all the controls to the 'OFF' position. Wait 5 minutes before attempting to relight the Water Heater. If the problem persists, check for blocked venturi ports by removing the burner and cleaning with compressed air or with a pipe cleaner. 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 heater. Open the cylinder valve.
- Brush the connections (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 heater from the gas cylinder.
- Tighten the connection and retry the leak test



- If bubbles appear, turn the cylinder valve OFF (clockwise) and disconnect the 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 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:**

Numerical control automatic ignition, the auto cut-off protection will extinguish the gas supply immediately.

### **Low water pressure startup function:**

When water supply pressure is lower to 0.025Mpa, the water heater cannot be ignited, Fit water pressure pump to boost pressure.

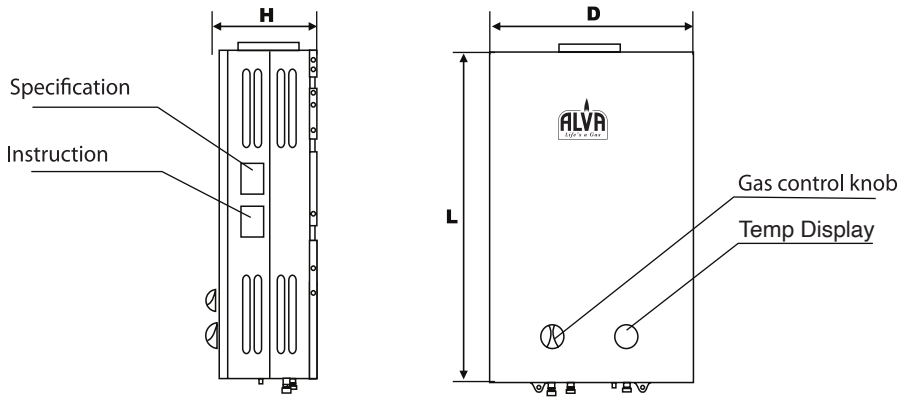
### **Anti-freeze protection:**

When 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:**

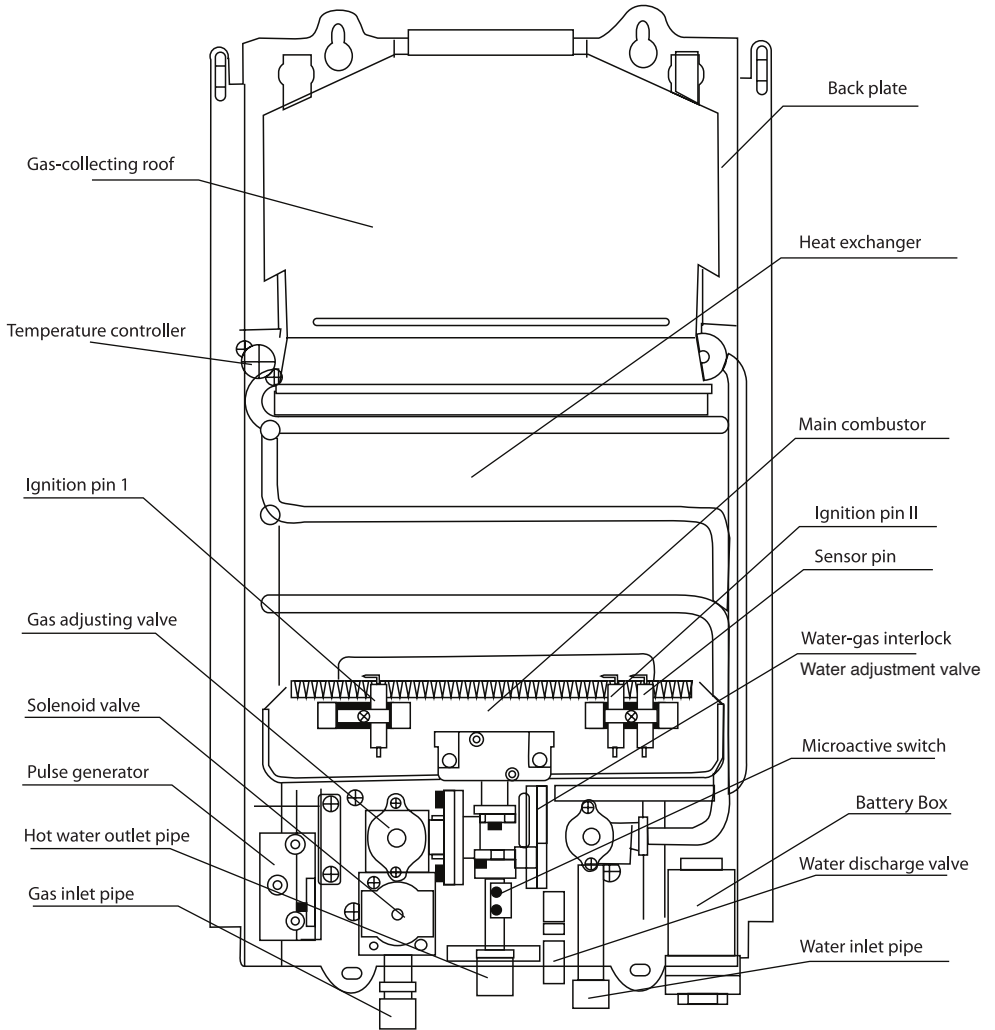
Once water pressure is over 0.8Mpa, the water-out valve will release water and lower the pressure. This will happen automatically to avoid damage.

**PLEASE SEE THE OUTLINE APPEARANCE AS FOLLOWS:**



ALVA Water Heater  
(GWH2008L, GWH2012L  
GWH2016L & GWH2020L)

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



## TECHNICAL PARAMETERS

Model	Type of Gas	Rated Gas Pressure	Heat Load	Exhaust Discharge Mode	Control Model	Ignition Model	Safety Device	Applicable Water Pressure	Hot Water Outlet Per Minute	Gas Pipe	Cold Water Pipe Hot Water Pipe
GWH2008L	LPG	2800Pa	16Kw	Flue Duct Type	Water-Pressure Controlled	Pulse Double Ignition	10 - Layer Safety Protection	0.025-1.0Mpa	8L/min	Ø9.5mm Rubber Hose	G1/2 Pipe
GWH2012L	LPG	2800Pa	24Kw						12L/min		
GWH2016L	LPG	2800Pa	32Kw						16L/min		
GWH2020L	LPG	2800Pa	40Kw						20L/min		

## INSTALLATION INSTRUCTIONS

### A. 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.

- Not installing an exhaust pipe as well as poor circulation could lead to a lack of oxygen and result in CO (Carbon monoxide) & CO<sup>2</sup> (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 & CO<sup>2</sup> 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 0.025Mpa 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.

## 2. 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 geyser.

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) shouldn't 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) shouldn't 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.

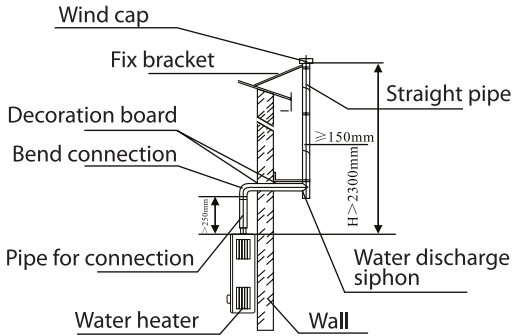
## 3. Installation of exhaust device:

(a) Make a cutout in your wall / ceiling that is wide enough in diameter to accommodate 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. There must be a vertical ascending flue pipe and the hole should not be less than 250mm above the exhaust pipe cover. The gap between the flue pipe and the hole should be kept unobstructed.

(c) Install an exhaust fan at a level higher than the water heater.

(Drawing 1)

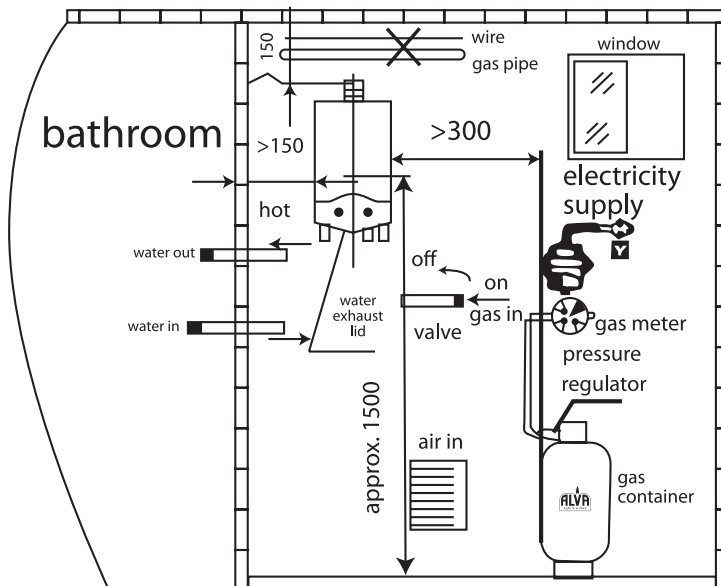


(d) Make an air inlet at least 0.06 square meters on the lower part of your wall.

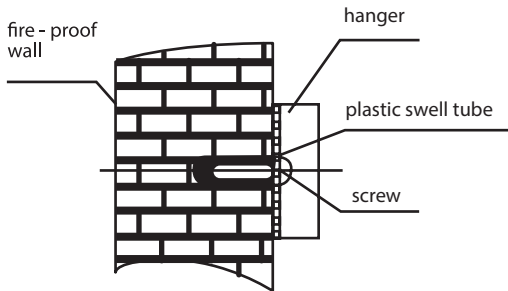
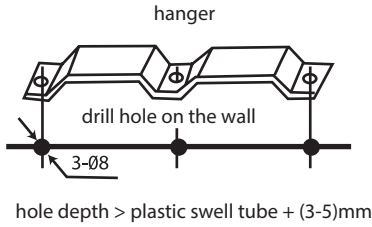
(e) When a wall is constructed of inflammable material, the cupboard must be installed between the flue pipe of the water heater and the wall ( the thickness is about 20mm). (Refer to page 12.)

(f) If the flue pipe is connected with a funnel, the entry of the flue pipe must be as short as possible and the joint with the funnel must be leak free.

### CORRECT POSITIONING OF THE WATER HEATER



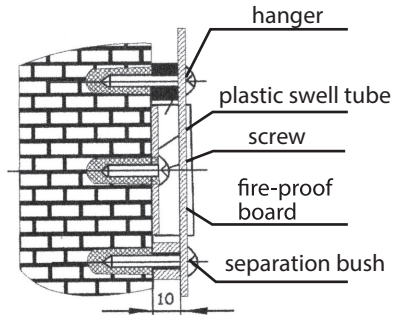
## HANGER POSITION



The installation of the hanger should be in a horizontal position.

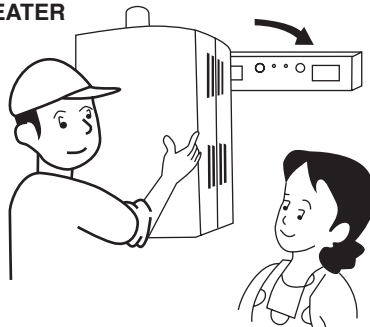
Where your wall is not fire proof, please underlay a fire-proof board at least wider than 100mm big than the actual water heater from side to side - top to bottom.

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

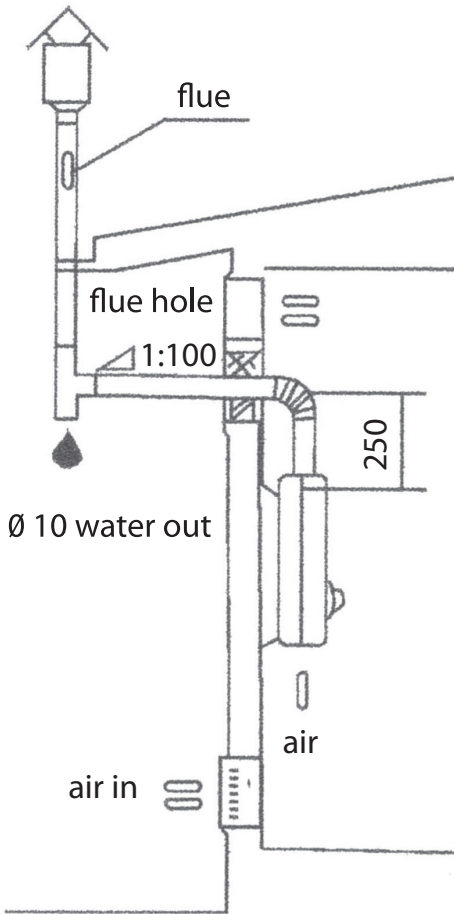


## MOUNTING YOUR WATER HEATER

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



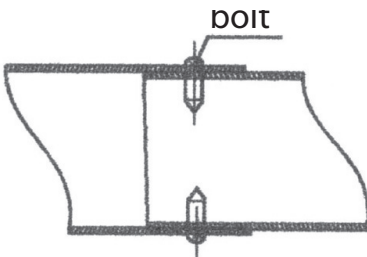
## INSTALLING THE FLUE



NOTE: Your water heater must have a flue.

1. The flue should be properly sealed to ensure that NO exhaust fumes leak into the house/bathroom.
2. The horizontal part of the flue should be less than 3m, and the vent should be face slightly down, so that condensation and rain do not flow down the flue.
3. The elbow of the flue should be 90° and no more than 3 pieces.
4. The distance between the section of the flue diverter of the geyser, before venting outside, should not be less than 250mm.
5. The top of the flue must have a top cover to deflect wind and prevent rain, snow and other debris entering the flue, blocking the passage of exhaust gasses.
6. Secure and fasten the flue correctly.
7. Make sure that there is no air / fumes leaking at the flue joints. Use self tapping screws or pop rivets to secure these sections.
8. NOTE: If the outside upright of the flue is 2m, then the horizontal distance should be no more than 50% of that distance - i.e.

i.e: If the flue is 2m, the horizontal - at the bend cannot exceed.





## 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:

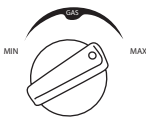
THERMAL BURDEN (Kw)	MIN. AREA OF THE AIR-IN HOLE AND VENT HOLE (CM <sup>2</sup> )
<12	100
12~16	130
16~20	160
20~26	200

## 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.

For higher temperature, turn more gas and less water

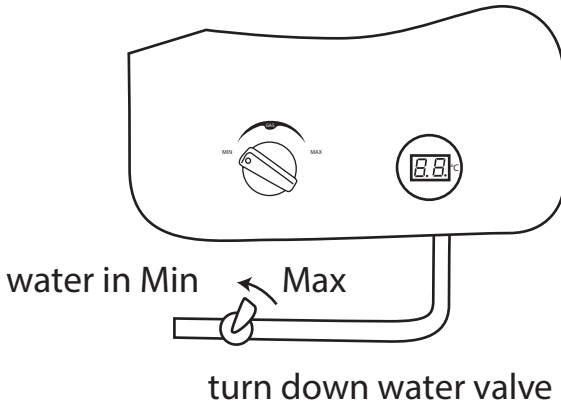


For lower temperature, turn less gas and more water



## TEMPERATURE CONTROL

Adjust output temperature using the clearly marked control on the geyser.



## SHUT-OFF

The water heater will shut-off automatically when you close the warm water tap. It will also shut-off if you close the cold water inlet tap to the geyser, or if you close the cylinder valve.

- The geyser must not be used for anything other than for heating water.

## NOTE:

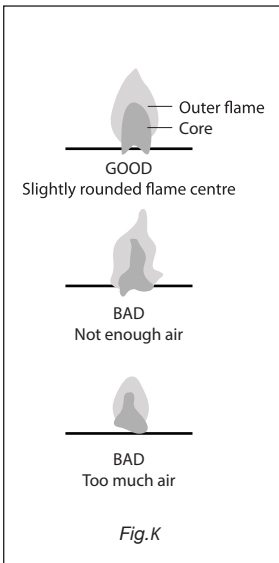
The heater should not be used continuously for periods longer than 20 minutes at a time.

## DAILY MAINTENANCE

1. Check the gas supply pipe (rubber hose) regularly to see if it is in good condition, or there should be no aging, cracking, leakage or bends.
2. Regularly check if there is water leakage 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 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.



### **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 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. 3000g for a 3 kg cylinder) and divide it by the gas consumption of the heater, on your desired setting (*refer to the Specifications section in this manual (page 9)*). The answer to the calculation is the approximate number of hours that your 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 over-filled 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 (3kg) 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)	Batteries	Make sure batteries are installed correctly  Adjust tabs in battery compartment to ensure circuit is complete
	Not enough water	Make sure there is an adequate supply of water  Make sure the water inlet is connected to the correct fitting.
	Disconnected wire	Remove 1 screw from bottom of the appliance going through the tab on the front cover. Make sure the wire terminals connected to the top of the battery are connected.
	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.*

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  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 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 0.025Mpa the water heater cannot be ignited	Use the water heater later when pressure becomes higher
Low Battery	Although a spark noise can be heard, the battery power is too low to open the solenoid valve	Change Battery
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

### TEMPERATURE CONTROL

To adjust:

- Use the clearly marked control on the heater face.
- You can adjust the flame from low to high as well as required water flow.
  - If the water flow is too high, close the valve at the cold water inlet slightly.

CAUSE	MALFUNCTION		A	B	C	D	E	F	G	H	I	J	SOLUTIONS	
Improper Operation	Gas valve not open		●										Open Gas Valve	
	Water supply valve not open		●										Open Water Valve	
	Improper regulation method of water temperature				●								Enlarge gas volume, reduce water volume	
						●							Reduce gas volume, enlarge water supply	
Improper position of water switch		●											Turn water knob to hot water point	
Surroundings	Air in gas feed line		●	●									Repeat opening and closing hot water supply several times	
	Inadequate fresh air supply				●								Improve ventilation and ensure air supply	
	Fuel gas pressure	Too high	●	●		●		●					Regulate pressure relief valve, reduce overall gas supply	
		Too low			●	●			●				Check if gas rubber pipe twist or not	
	Water pressure	Too high				●							Reduce water supply	
		Too low	●	●	●				●	●			Utilize when water pressure recovers to normal	
	Inadequate supply of fuel gas	Gas valve is half opened					●							Open gas valve completely
		Pipe feed line too long					●							Check pipe sizes
		Too small through diameter of joints					●							Check for restrictions in gas pipe line. Use FULL Bore gas valves and fittings
		Improper choice of specification of pressure relief valve						●						Water heater with a content of over 8 liters shall adopt a pressure relief valve (LPG) of 1.2m <sup>3</sup> /h
		Simultaneous consumption of fuel gas by several users					●							
	Blockage of water route		●				●							Clean filtration net on water admitting orifice
	Blockage of shower		●				●							Clean shower device
	Blockage of vent pipe								●					Clean flue pipe
	Inadequate battery voltage		●	●	●									Replace batteries
	Too low water temperature					●								Reduce water volume
Safety Protection	Exorbitant air pressure protective device		●	●									Utilize when air pressure recovers to normal	
	Electrical leakage protective device works		●	●									Ask for professional person to repair it	
	Heat protective switch works				●									
	20 minutes timing protective device works				●								Reopen hot water valve	
Other causes											●	Ask for professional person to repair it		



## SPECIFICATIONS

### MODEL GWH2008L - 8L

Model	ALVA GWH2008L
Water Heater Type	B
Type of Gas	LPG
Operating pressure	2.8kPa
Heat Load	16 kw
Exhaust Discharge Mode	Flue Duct Type
Gas Consumption	1.25 kg/h
Ignition Mode	Pulse Double Ignition
Suitable Water Pressure	0.025-0.5 Mpa
Water Output	8 Liters/min
Gas Pipe	φ 8mm Rubber Hose
Size of each Jet	0.69mm
Power Supply	3v 2x D Batteries
<p><b>FOR INDOOR AND OUTDOOR USE</b>            This heater has been tested and is LPGSASA approved under specifications SANS 1539 (appliance), SANS 1237 (regulator) and SANS 1156 (hose).</p>	

### MODEL GWH2012L - 12L

Model	ALVA GWH2012L
Water Heater Type	B
Type of Gas	LPG
Operating pressure	2.8kPa
Heat Load	24 kw
Exhaust Discharge Mode	Flue Duct Type
Gas Consumption	1.78 kg/h
Ignition Mode	Pulse Double Ignition
Suitable Water Pressure	0.025-0.5 Mpa
Water Output	12 Liters/min
Gas Pipe	φ 8mm Rubber Hose
Size of each Jet	0.71mm
Power Supply	3v 2x D Batteries
<p><b>FOR INDOOR AND OUTDOOR USE</b>            This heater has been tested and is LPGSASA approved under specifications SANS 1539 (appliance), SANS 1237 (regulator) and SANS 1156 (hose).</p>	

### MODEL GWH2016L - 16L

Model	ALVA GWH2016L
Water Heater Type	B
Type of Gas	LPG
Operating pressure	2.8kPa
Heat Load	32 kw
Exhaust Discharge Mode	Flue Duct Type
Gas Consumption	2.34 kg/h
Ignition Mode	Pulse Double Ignition
Suitable Water Pressure	0.025-0.5 Mpa
Water Output	16 Liters/min
Gas Pipe	φ 8mm Rubber Hose
Size of each Jet	0.69mm
Power Supply	3v 2x D Batteries
<b>FOR INDOOR AND OUTDOOR USE</b> This heater has been tested and is LPGSASA approved under specifications SANS 1539 (appliance), SANS 1237 (regulator) and SANS 1156 (hose).	

### MODEL GWH2020L - 20L

Model	ALVA GWH2020L
Water Heater Type	B
Type of Gas	LPG
Operating pressure	2.8kPa
Heat Load	40 kw
Exhaust Discharge Mode	Flue Duct Type
Gas Consumption	3.12 kg/h
Ignition Mode	Pulse Double Ignition
Suitable Water Pressure	0.025-0.5 Mpa
Water Output	20 Liters/min
Gas Pipe	φ 8mm Rubber Hose
Size of each Jet	0.69mm
Power Supply	3v 2x D Batteries
<b>FOR INDOOR AND OUTDOOR USE</b> This heater has been tested and is LPGSASA approved under specifications SANS 1539 (appliance), SANS 1237 (regulator) and SANS 1156 (hose).	

## AFTER SALES SERVICE

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TOLL FREE NUMBER **086 100 ALVA (2582)**



*Should you experience problems with this gas water 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.*