



HOUSEHOLD INSTANT GAS WATER HEATER

(Flue Exhaust Type)

INSTRUCTION MANUAL

8l, 12l, 16l, 20l



Certified to ISO9001

LPGSASA Permit No 1008-26/1-RSA-12-A

Indoor & Outdoor Use

Please read the manual carefully and understand the operation prior to installation and use.

The registered LPGSASA gas practitioner must commission the gas water heater before you sign the certificate of compliance.

Retain this manual for future reference.

Technical Data

Name	8lt	12lt	16lt	20lt
Model No	JSD 16-LN1	JSD 24-LN1	JSD 32-LN1	JSD 40-LN1
Type of Gas	LPG	LPG	LPG	LPG
Consumption at MAX	1.50 kg/h	2.25 kg/h	3.0 kg/h	3.75 kg/h
Operating Pressure	2.8 kPa	2.8 kPa	2.8 kPa	2.8 kPa
Permit No	1008-26/1-RSA-12-A	1008-26/1-RSA-12-A	1008-26/1-RSA-12-A	1008-26/1-RSA-12-A
Product Type	CLASS 'B' FOR INDOOR INSTALLATION. CAN BE INSTALLED OUTDOORS BUT MUST BE FLUED			
	FLUE AVAILABLE FROM GEYSER INSTALLER			

Gas Consumption as per Technical data sheet above

The unit is to be installed by a certified LPGSASA gas practitioner

If the unit is installed outside the gas water heater **MUST** be flued

This gas water heater will switch off within 4 minutes if no flue is fitted

NB - Only a SANS 1237 Approved 2.8kPa regulator must be fitted

NB - This appliance must be installed in accordance with SANS 10087 part 1

NB - This appliance must **ONLY** be installed by a LPGSASA installer

For Your Safety

This appliance is set to operate on LPG only

If you smell gas;

- Turn off the gas supply at the cylinder / bottle
- Extinguish ALL naked flames
- Do NOT operate any electrical appliances
- Ventilate the area

NB - Should the odour persist, contact your local dealer or gas suppliers immediately

Burn - Back (Fire in the tube or chamber)

In the event of a burn-back, immediately turn off the gas supply at the cylinder valve. After ensuring that the naked flame is extinguished, re-open and re-light the appliance in the normal manner. Should the appliance burn-back again, close the control valve and phone a service technician.

Do NOT use the appliance again until the service technician has declared that it is safe to do so.

Gas Pressure Regulator

This appliance requires an operating pressure of 2.8 kPa at the appliance. A suitable LPG regulator that complies with the requirements of SANS 1237 must be installed / used.

Important Information to the User

This appliance may ONLY be installed by a certified LP gas installer. All registered installers are issued with a card showing their registration number. Ask to be shown the card before allowing any installation to commence and make note of the installer QCC number.

Upon completion of the installation, the installer is required to explain the operation 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.

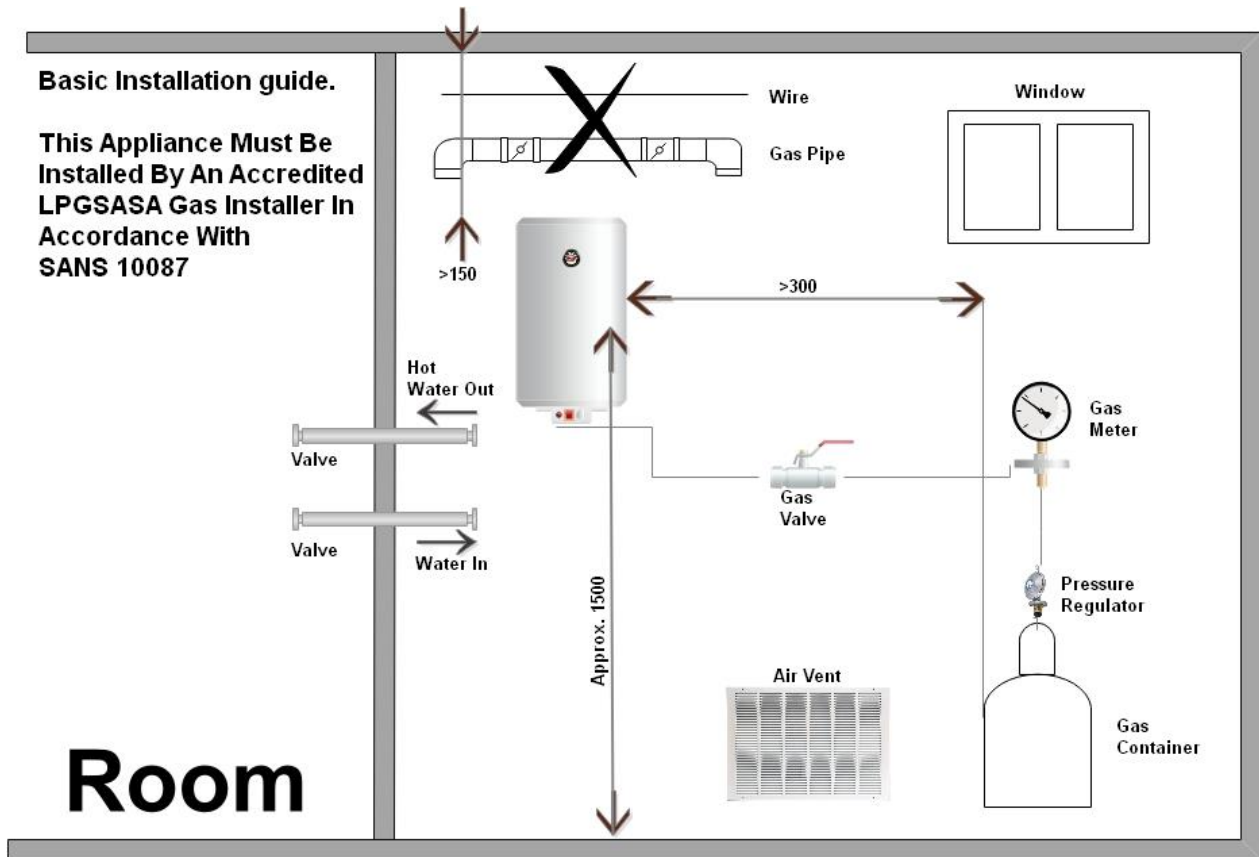
You should only sign for acceptance of the installation when the installation is completed to your satisfaction. Note that your invoice is required in the event that you wish to make a guarantee claim.

Important Information to the Installer

This appliance may only be installed by an LP gas installer, registered to the Liquefied Petroleum Gas Association of Southern Africa. The appliance must be installed in accordance with the requirements of SANS 10087-1 and any fire department regulation 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 installation.

Correct Indoor Installation



If flexible hose is being used, it **MUST** be BS3212 of SANS1156 approved hose. The hose **MUST NOT** be longer than 2 meters. The hose should **NOT** be fed directly through a wall or cupboard, neither should it be behind or above the gas water heater.

We **DO NOT** recommend using hose for the gas connection. This will restrict the gas flow and volume and will underperform, as a result. We recommend to use copper, composite stainless-steel flex pipe.

Air Entry and Vent Area Requirements

Thermal Burner (KW)	Min area of the Air-In Hole and Vent Hole (Cm ²)
<12	100
12 - 16	130
16 - 20	160
20 - 26	200

Installation

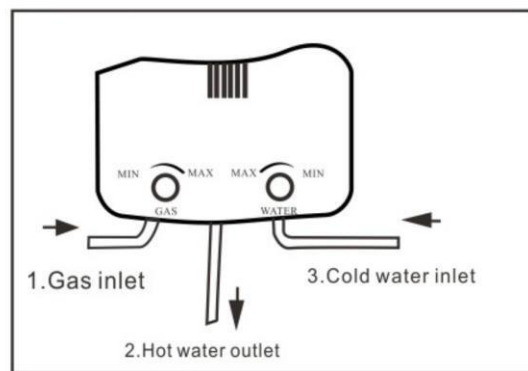
Gas inlet – **Use two wrenches** (It will break if held with one wrench at the gas water heater outlet)

Use a swivel fitting as supplied

NB - Hot water outlet – It is recommended to fit a FULL-BORE water valve. Do NOT use flex type toilet connectors. The flow will be restricted and will result in gas water heater failure

Cold water inlet – Flush the cold-water pipe before connecting to free the pipe of dirt. When using water from a storage tank, it is recommended to fit an inline water filter.

Do NOT use flex type toilet connectors.



Preparation

The gas water heater ignition function is powered by two large 1.5V. DC (Type D) torch batteries. Please insert the correct way as indicated on the battery housing.

Batteries are NOT included.

Ignition

Open the gas at the cylinder valve and the gas valve after the regulator.

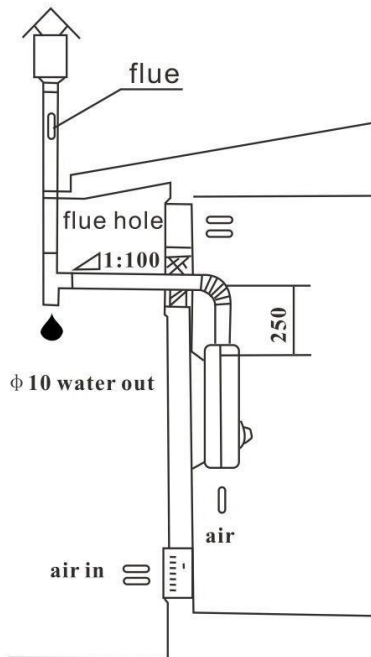
Open the warm water tap. The electronic ignitors will light up the main burners after 6 to 10 seconds.

First time ignition after installation, or when changing the cylinder, might take longer as there will be air inside the gas pipe. Repeat if ignition is not obtained within the 10 seconds.

NB - Remember that the installer must by law commission your newly installed water heater in your, or your representative's presence, before you sign off the installation.

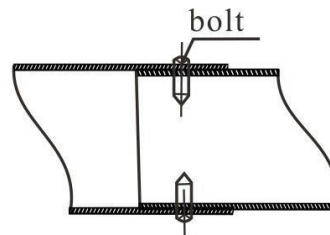
Installation of Flue

● INSTALLATION OF FLUE



The water heater must have a flue. Flue installation should be as following:

- A. The flue should be properly sealed to ensure that NO exhaust fumes leak to the inside of the house.
- B. The horizontal part of the flue should be less than 3m, and the vent should be inclined down a little so that the condensated water or rain could not flow backwards.
- C. Elbow of the flue should be 90° and not more than 3pcs.
- D. The distance of the section above the flue diverter of the geyser, before venting to the outside, should not be less than 250mm.
- E. The top of the flue must have a top cover to deflect the wind and prevent rain, snow and other debris entering the flue, blocking the geyser inside passage way.
- F. Secure the flue when it is exposed in windy areas or extreme draught conditions.
- G. Make sure that there is no air/fume leakage at the flue joints. Use self tapping screws or pop rivets secure the sections.
- H. If the outside upright flue is 2 metres then the horizontal distance should be no more than 50% of that distance, i.e if the flue is 2 metres, then the horizontal at the bend SHALL not be over 1 metre)



Setting up the Air Vent

The air vent should be as near to the floor as possible, but below the halfway distance of the total distance to the ceiling.

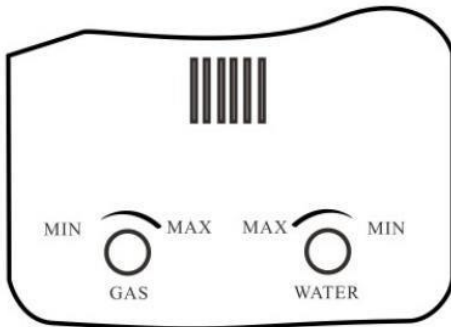
The exhaust flue should be to the outside of the room and properly sealed to prevent exhaust fumes entering to the inside.

The bend to the outside will not be less than 250mm from the centre of the flue to the gas water heater connection.

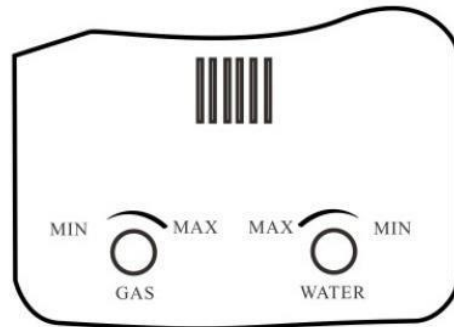
Precautions

As a precaution, if you are away from home and the gas water heater will not be used for some time, CLOSE THE CYLINDER VALVE. Always close the cylinder valve first before changing the empty cylinder with a full cylinder.

For higher temperature, turn more gas and less water



For lower temperature, turn less gas and more water

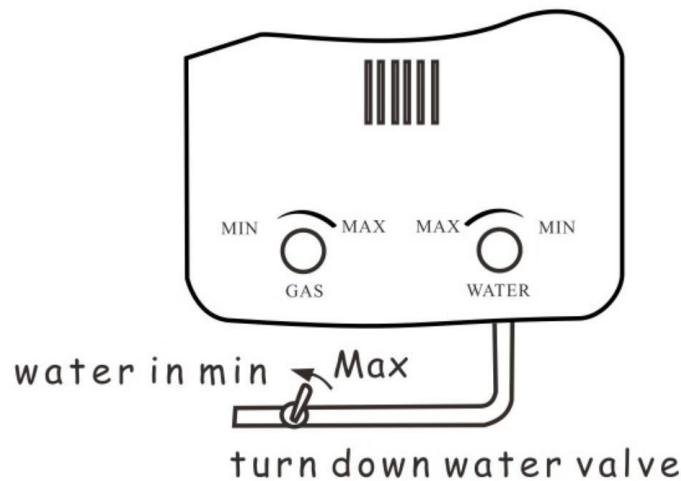


Temperature Control

To adjust;

Use clearly marked controls on the gas water heater control panel. You can adjust the flame from low to high as well as the required water flow.

Should the water flow be too high, close the valve at the cold-water inlet slightly.



Shut-Off

The gas water heater will shut off automatically when you close the warm water supply. It will also shut off if you close the cold water supply to the gas water heater, or if you close the cylinder valve.

This gas water heater **MUST NOT** be used for anything other than the heating of water.

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

Trouble Shooting

Protective Function	Reaction	Solution / Remarks
Water Pressure Too High	If Water Pressure is Over 0.8Mpa, the Water-Out Valve will Release Water and Lower the Pressure	Increase Valve Pressure Limit According to Local Water Supply Pressure
Water Pressure Too Low	If Water Pressure is Below 0.025Mpa the Water Heater Cannot be Ignited	Water Pressure Pump to be Fitted or Use Water Heater when Pressure is Higher
20 Minute Auto Shut Off	Shuts Off Automatically After 20 Minutes of Use	Restart Water Heater
Low Battery	Although a Spark Sound can be heard the Battery Power is too Low to Open the Solenoid Valve	Change to New Quality Batteries
Over Heat Protection	Water Heater Automatically Shuts Off when Water Temperature is Above 77°C	Restart Water Heater When Water has Cooled

Repair and Maintenance – by Professional Person

Gas water heaters MUST be checked by a professional person annually. The following points MUST be checked;

Leaks on the gas connections.

Leaks on water in and outlets.

Water inlet sieve – free from dirt and clogging – clean if necessary.

All parts functioning 100%

Flame quality and combustion (Soot)

Carbon accumulation on heat exchanger – clean if necessary.

No combustion leaks to the inside of the room.

Gas regulator – checked.

Clean carbon accumulation and oxidation on ceramic ignitors – if necessary.

Repair and Maintenance – by Owner

Clean the outside cover with warm water and a mild detergent using a soft cloth.

Do **NOT** use any abrasive cleaners or scourers.

Clean the cover vents with a soft brush.

Check the flue, make sure there are no obstructions. After cleaning, make sure that the flue is properly fitted so that NO combustion will be released to the inside of the room.

Make sure that NO dirt is dropped to the inside of the gas water heater.

Check fittings and connections regularly with a 50/50% soap and water solution for gas leaks.

If there is a leak, stop using the gas water heater and close the valve on the cylinder.

Remove the batteries from the gas water heater.

Contact your installer or your local qualified gas dealer.

Do NOT use the gas water heater for any other purpose except for producing hot water i.e. drying clothes – this will block the air vents

Always drain the water at the water exhaust if the gas water heater is not to be used for some time, or if the temperatures drop below 0°C ambient temperature.

Tampering

Under NO circumstance may an unauthorized person tamper with the unit. ONLY authorized LPGSASA certified persons may carry out repairs to the unit. For anyone else to do so is not only extremely dangerous, but AGAINST THE LAW – SANS 347

◆Department of Labour, Pressure Equipment Regulations, South African National Standard (DOL / PER)

Maintenance and Repair Guide to Common Malfunctions

Cause / Malfunction		Solutions
Improper Operation	Gas Valve not Open	Open Gas Valve
	Water Supply not Open	Open Water Valve
	Improper Regulation Method of Water temp	Increase Gas Volume, Reduce Water Volume
		Reduce Gas Volume, Increase Water Volume
	Improper Position of Water Switch	Turn Water Switch to Hot Water Position
	Air in Gas Feed Line	Open and Close Hot Water Supply Several Times
	Inadequate Fresh Water Supply	Improve Ventilation and Ensure Air Supply
Gas Pressure	Gas Pressure too High	Regulate Pressure Relief Valve - Reduce Overall Gas Supply
	Gas Pressure too Low	Check for any Twists in Gas Supply Hose
Water Pressure	Water Pressure too High	Reduce Water Supply
	Water Pressure too Low	Utilize when Water Pressure is back to Normal
Surroundings &	Gas Valve is Half Opened	Open Gas Valve Completely
Inadequate Supply of Gas	Gas Feed Hose is too Long	Check for Correct Hose Size and Length
	Diameter of Joints too Small	Check for Restrictions in Gas hose. Use Full Bore Valves & Fittings
	Improper Pressure Relief Valve	Water Heater of a Content Over 8lt - Pressure Relief Valve (LPG) 1.2m 3kg/h
	Simultaneous Consumption of Gas by Several Users	Stop Other Users from Using the Gas
	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 with Quality Batteries
	Low Water Temperature	Reduce Water Volume
Safety Protection	Exorbitant Air Pressure Protective Device	Utilize when Air Pressure Recovers to Normal
	Electrical Leakage Protective Device	Professional Repair Only
	Heat Protective Switch	Professional Repair Only
	20 Minute Protective Device	Re-open Hot Water Valve
Other Causes		Professional Repair Only

The installer MUST use two wrenches

One to hold the gas inlet on the gas water heater and one to tighten the ½” swivel to 15mm copper solder – supplied.

This is the correct way to install the gas inlet, without breaking the pipes.

If using a ½” female to hose tail connection with an 8mm hose, the gas flow volume will be inhibited and this will decrease the gas pressure.

This gas water heater operates on gas pressure 2.8 kPa ONLY. Do not increase pressure.

If Installed Inside, ensure that;

The installer abides by SANS 10087-1 specifications of cross ventilation.

NB - If installed outside, a flue must be fitted as this unit is fitted with a flue sensor.

NB – If installed inside, a flue must be flued to the outside of the building.

NB - By Law, it must cut out within 4 minutes if no flue is fitted.

NB - Bridging out of the flue sensor is not permitted.

NB – A valid COC Certificate must accompany any warranty claim.