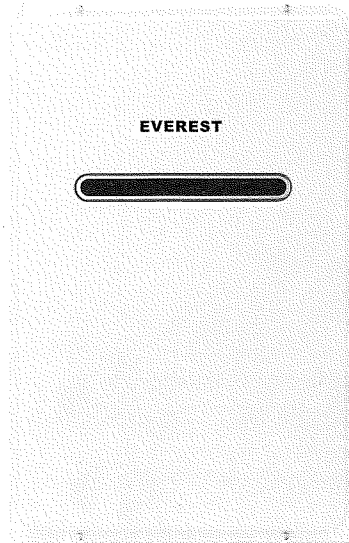


EVEREST

USER GUIDE AND INSTALLATION INSTRUCTION

FOR OUTDOOR USE ONLY



Model: JSW16-20E5
Gas type: LPG

Thanks for using our product. This manual is supposed to show you the brief introduction and usage method of this gas water heater.

And some precaution items included as well, before using our product, please read them carefully to make sure your safety.

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IMPORTANT INFORMATION FOR THE INSTALLER

- The pipe size for the LPG feed must not be less than 15 mm copper pipe or 16 mm ID of pex pipe. The volume supply is very important for the successful operation of the unit. When high pressure design is used the LPG feeding pipe to the unit will still be no less than 15 mm copper or 16 mm pex ID. When single stage design is used the regulator flow rate will be minimum a 5 Kg/h model.
- Volume drops dramatically in winter, so please be vigilant when designing the supply network.
- When connecting the water supply it is recommended that you connect the unit to the main supply and not use a 15 mm ID copper pipe for supply of the water. Please keep water supply no less than 22mm ID pipe. Water pressure and supply is extremely important for the unit to work successfully.
- On the inlet of the water there is a valve that can be used to adjust the water flow entering the unit. Lower water flow will achieve gas saving and water saving, how faster the water flows how more water you will waist and the more gas will be burned to reach the set temperature.
- Turning the valve clockwise will restrict the water flow and anti-clockwise will increase water flow.

If the design of the Gas and Water network is NOT according to the named specifications the supplier will NOT take any responsibility or any means of an on site visit what so ever.

- The product is designed to operate at a 2.8kPa pressure, any change to regulator pressure will cause lock-up of the regulator and over gas pressure and malfunction of the product.
- This appliance may only be installed by a gas installer registered with the South African qualification and certification committee (SAQCC). 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 the installer is required to fully explain and demonstrate to the user the operational details and safety practices applicable to the appliance and the installation.

FIRST IGNITION:

INSTALLATION, FIRST IGNITION AND MAINTENANCE WORK MUST BE PERFORMED BY QUALIFIED PERSONNEL ONLY, IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED. INCORRECT INSTALLATION MAY HARM INDIVIDUALS, ANIMALS OR PROPERTY; THE MANUFACTURER WILL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED AS A RESULT.

THE APPLIANCE MUST BE INSTALLED OUTDOORS, IN THE OPEN AIR, WITH NATURAL VENTILATION. COMBUSTION PRODUCTS MUST BE DISPERSED BY MEANS OF NATURAL CONVECTION OR BY THE WIND.

The first start-up must be carried out by a qualified technician.

- Before any maintenance or repair work is performed on the appliance, make sure you have disconnected it from the electricity supply by switching the external bipolar switch to the "OFF" position and removing the fuse.
- All repairs, which should only be performed using professional. Failure to comply with the above instructions could compromise the safety of the appliance and invalidate all liability on the part of the manufacturer.
- In the event of any maintenance or other structural work devices and their accessories, switch the appliance off by switching the external bipolar switch to the "OFF" position and shutting off the gas control valve.
- Clean using a cloth dampened with soapy water. Do not use aggressive detergents, insecticides or toxic products. If the appliance is used in full compliance with current legislation, it will operate in a safe, environmentally- If using kits or optional extras, make sure they are authentic.
- This appliance is designed to produce hot water for domestic use. It should be connected to a distribution network for domestic hot water that must be compatible with its performance and power levels.
- The use of the appliance for purposes other than those be held responsible for any damage caused by improper, incorrect and unreasonable use of the appliance or by the failure to comply with the instructions given in this manual.
- Installation, maintenance and all other interventions must be carried out in full conformity with the governing legal regulations and the instructions provided by the manufacturer.
- Incorrect installation can harm persons, animals and possessions; the manufacturing company shall not be held responsible for any damage caused as a result.
- The appliance is delivered in a carton. Once you have removed all the packaging, make sure the appliance is intact and that no parts are missing. If this is not the case, please contact your supplier.
- Keep all packaging material (clips, plastic bags, polystyrene foam, etc.) out of reach of children as it may present a potential hazard.
- In the event of a fault and/or malfunction, turn the appliance off, turn off the gas cock and do not attempt to Before any maintenance or repair work is performed on the appliance, make sure you have disconnected it from the electricity supply by switching the external bipolar switch to the "OFF" position and removing the fuse.
- All repairs, which should only be performed using professional. Failure to comply with the above instructions could compromise the safety of the appliance and invalidate all liability on the part of the manufacturer.
- In the event of any maintenance or other structural work devices and their accessories, switch the appliance off by switching the external bipolar switch to the "OFF" position and shutting off the gas control valve.

◆ FOR YOUR SAFETY

“Important: Read these instructions for use carefully so as to familiarize yourself with the appliance before connecting it to its gas container. Keep these instructions for future reference”.

This appliance is adjusted to operate on LPG only.

IF YOU SMELL GAS:

- Turn off gas supply at bottle
- Extinguish all naked flames
- Do not operate any electrical appliances
- Ventilate the area
- Check for leaks as detailed in this manual

If odour persists, contact your dealer or gas supplier immediately.

Do not tamper or modify the appliance.

BURN-BACK (FIRE IN BURNER TUBE OR CHAMBER)

In the event of a burn-back, where the flame burns back to the jet, immediately turn the gas supply off at the control valve on the panel. After ensuring the flame is extinguished, wait for 1 minute and re-light the appliance in the normal manner. Should the appliance again burn back, close the control valve and call 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.

IMPORTANT INFORMATION FOR THE USER

This appliance may only be installed by a registered SAQCC 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 guarantee claim.

◆ In order to avoid any potential physical harm to human and property, be sure to follow the below instructions. They are classified into a few types marked with different warning signs.



DANGER: means possibility of physical harms to human.



WARNING: means possibility of body and poverty damage.



ATTENTION: means possibility of poverty damage.

◆ Different signs means:



Forbidden



Forbidden



Forbidden



Forbidden



DANGER

◆ **Safety protections when gas leaks:**

When smelling the odor of gas, don't operate any electricity equipment or light any fire. Switch off gas valve immediately, open the doors and windows, let the gas being discharged out of the room. Check out the cause and contact the local service agency and gas supplier.

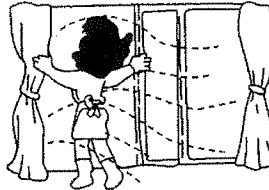
Switch off gas valve



Gas valve



Open doors and windows



Contact the local customer service center





WARNING

- ◆ **Be sure of using the specified type of gas on the nameplate, power supply and voltage:**

If using different type of gas, it may result in abnormal combustion, CO poisoning, fire and make the electrical components spoiled.

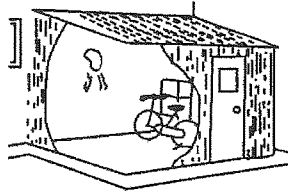
EVEREST	
Optimizing Systems CC	
Outdoor Type Gas Water Heater	
Model:	FW16-J055
Type of Appliance:	Type D
Gas Type:	LPG
Gas Pressure:	2,0kPa to 2,5kPa
Gas Consumption:	3.3kg/h
Hot Water Capacity:	25L/min (6.1L/30S)
Nominal Water Pressure:	0.2bar to 0.4bar
Power Supply:	C 230V, 50V

APPROVED FOR OUTDOOR USE ONLY



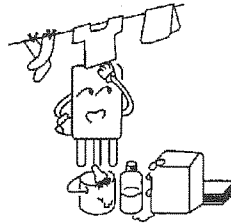
← Gas Type

- ◆ **No coving near to the venting pipe, as it may affect the performance of the waste gas ejection. Do not install the vent inside of house, or it may cause fire or abnormal combustion etc.**

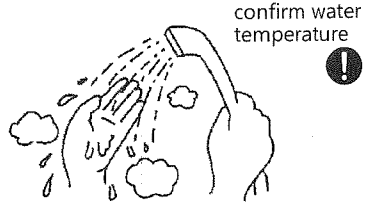


- ◆ **Keep away from fire.**

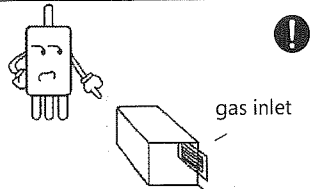
Don't leave anything flammable materials near to water heater, such as paper, clothes, gasoline, light oil etc., so as to avoid to cause fire.



- ◆ When starting the appliance every time, try to feel the temperature of the hot water with hand slightly before taking shower, then use it.
When using the passage of mixing the cold and hot water, open others valves, it may change the output water temperature. Feel the temperature with hands first, avoid raising water temperature suddenly to cause possibility of scalding.

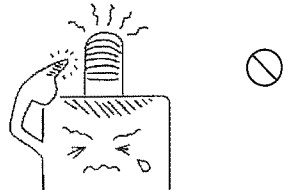


- ◆ **Ventilation**
Make sure the ventilation is in good condition, keep the water outlet clear and no-jammed. Or it may cause abnormal combustion or CO poisoning.

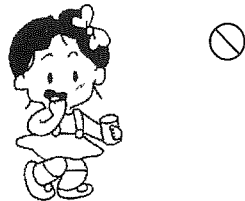


ATTENTION

- ◆ Don't touch the venting pipe when using or switching off the water heater immediately, it may cause scalding.



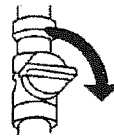
- ◆ The heater water is not suitable for drinking, cooking or any other use just for providing hot water and shower. Otherwise it may damage health or cause technical problem.



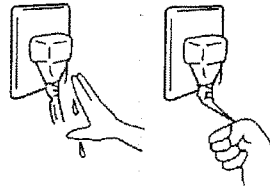
◆ Don't install the water heater over any heater appliance like cookers, and it's not suitable to install on vehicle or boat. Otherwise it may cause technical problem.



◆ When the water heater won't be used for a long time, close the gas valve, switch off the power supply, and empty the water inside of the water heater, which to avoid the leakage of gas and breakage of the water heater.



◆ Plugs and sockets should be placed in a moisture proof surrounding. Don't conduct any operation related to electricity with wet hand. Make sure the sockets and the shell of the water heater is correctly earthed. Otherwise it may cause electrical shock.

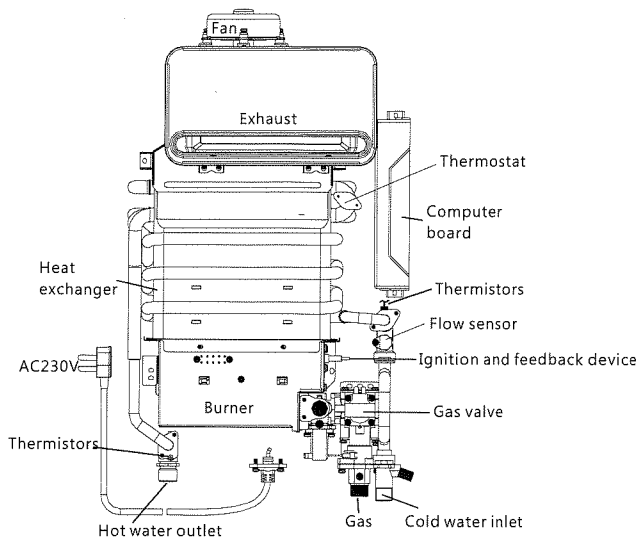
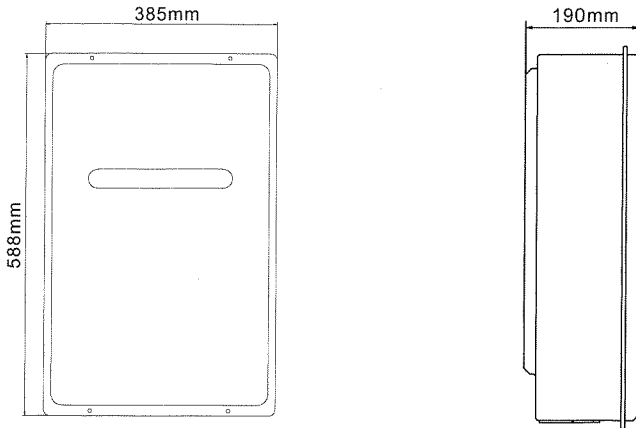


◆ Plug should be pulled out from socket when there is a thunder. Don't use the water heater when the water or power supply failure. Switch off the inlet water valve. Otherwise it may cause technical problem.

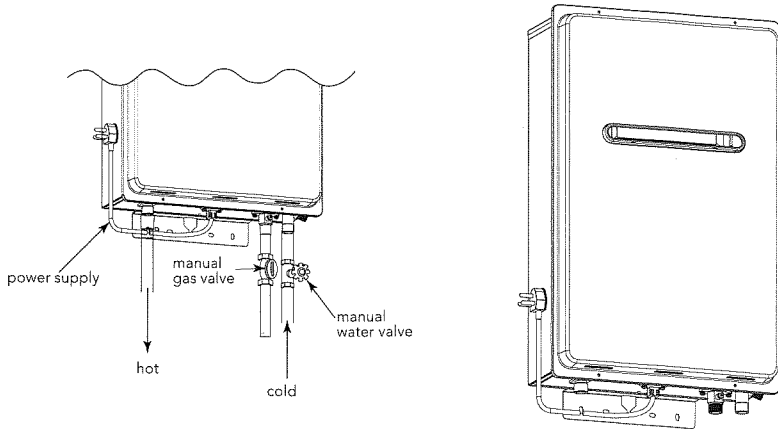


◆ Structure illustration

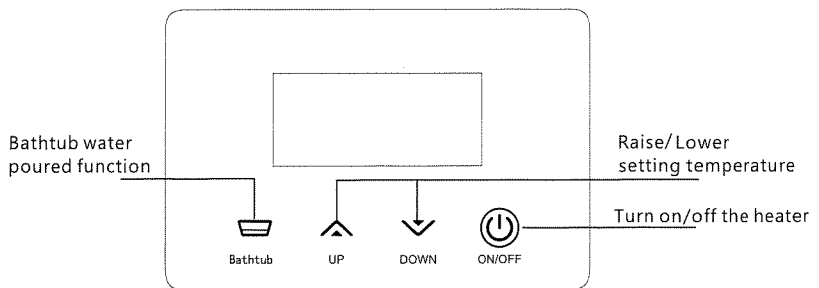
JSW16-20E5



◆ Structure illustration-General Character



◆ Wire controller



◆Technical parameter

Name		Outdoor Type Gas Water Heater	
Model		JSW16-20E5	
Rated Gas Pressure		LPG/2800Pa	
Rated Heat load		32kW	40kW
Rated Hot Water Input		16L/min	20L/min
Applicable Water Pressure		0.2bar-8bar	
Joint	Water Inlet	NPT1/2"	
	Gas Inlet	G3/4"	
	Water Output	NPT1/2"	
Rated Voltage		230V 50Hz	
External Dimension		723*438*296mm	
Gross weight		15.4KG	15.8KG

Installation

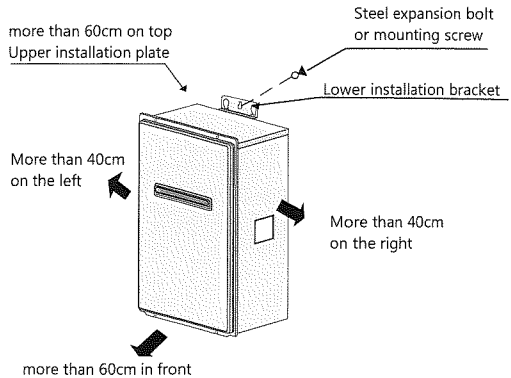
◆ Installation of the water heater body

● The Height

Standard for the height of the heater is that the height of the flame inspection hole (flame peep window) should be horizontally at the level of your eyes.

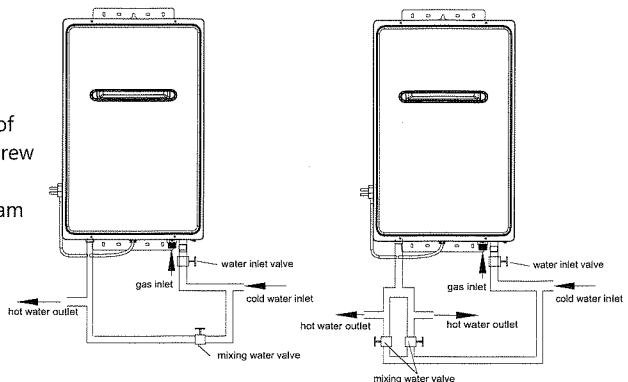
● Mount the Heater Body

1. Fix the upper part of the heater with a steel expansion bolt or mounting screw, then fix the heater with two mounting screws at the holes of the lower bracket.
2. If the wall for the mounting is of combustible material, insulation of fire resistance is needed between the wall and the heater. The thickness of the insulation should be not less than 10mm.
3. Spaces should be left between the roof/wall and the heater.
(Refer to the diagram).



◆ Connect Water Pipes

The joints for connecting of water inlet and outlet is screw thread with diameter of NPT1/2 refer to the diagram for the connecting.



◆ **Installation of the water inlet pipe**

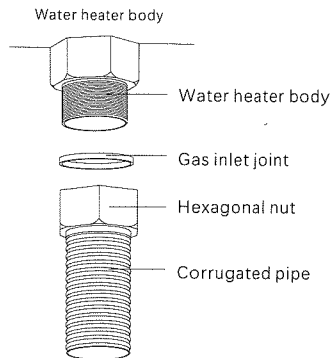
- Connect the metallic hose and seal washer enclosed with the heater and water supply pipe.
- A water inlet control valve is required to be connected with the water inlet pipe (the hose).
- To keep normal operation of the heater, it is required that the input water pressure is higher than rated input water pressure.

◆ **Connection of the hot water supply pipe**

- Hot water supply pipe can use the flexible metal tube (as short as possible) for connection, or the rigid water pipe for direct connection. As shown in the drawing, if rigid water pipe is used as the hot water supply pipe, it had better be deoxidized copper pipe or stainless steel pipe.
- If hot water supply is needed over a long distance, then a control valve had better be installed on the hot water supply pipe.
- If the height for hot water valve is higher than that of the heater, another hot water valve has to be installed at a place lower than the heater to drain water remained in the pipe and to prevent freezing.
- Material of the hot water pipe should be high temperature resistant.
- The hot water pipe should be not too long to reduce heat loss and it is recommended that the sprayer with less pressure loss be used.

◆ **Installation of the gas supply pipe**

- The size of the joint connecting gas inlet of the heater and the hose is G3/4 (screw thread).
- Please follow these guidelines when connecting the gas supply pipe joint to your water heater:
 1. Users who use liquefied petroleum gas should use special gas pipes for connection, remember to install the sealing ring (see Figure on the right).
 2. Users who use liquefied petroleum gas are prohibited from using medium and high pressure gas pressure regulators, use a pressure regulator capable of regulating the specified gas pressure.
 3. For the needs of maintenance, please set the gas valve near the gas inlet joint, the diameter of the gas valve is above 9.5mm.



◆ Error Code

Error Code	Fault problem	Initial solution
E0	After fire	Cut off the power supply, turn it on again, and restart the equipment.
E1	Fail to ignite	Ensure the gas valve turned on. Check if gas remaining in the tank. turn off the water tap and then restart the equipment
E2	Fan motor fault	Turn off the water tap and restart the equipment. If fault still occurs, call the service center.
E3	Dry burning or overheating in the heat exchanger	Turn off the tap and restart the equipment.
E4	Temperature sensor fault	Call the service center.
E5	Temperature of hot water flowout is too high	Turn off the water tap and restart the equipment.
E6	Improper combustion	Turn off the water tap and restart the equipment.
E8	Abnormal air pressure	Turn off the water tap and turn on again.

◆ Trouble Possible Cause & Remedy

1. 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 3 L/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.

2. Hot water is not the right temperature (too hot or too cold):

- Flow is beyond the capacity
- 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.

3. 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.
- 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

4. 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.

5. "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

6. 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

7. Unresolved problems:

- Other assistance required
- Contact an authorized service professional

◆ Parts excluded from warranty

- The heat exchanger due to lime scale build up.
- The water flow sensor and temperature sensor due to the inlet strainer being removed.
- PC board and fan due to electrical surge, load shedding and lightning.

Additional Remarks of Safety Guidelines

- For LPG models the gas supply will require at least one 48 kg LPG cylinder for efficient performance.
- Keep young children away from the appliance when in use.
- In the event of a burn back, where the flame burns back to the jets, immediately turn off the gas supply at the control valve on the front panel. After ensuring the flames are extinguished, re-light the appliance in the normal manner. Should the appliance again burn back, close the control valve and call a service technician to examine the appliance. Do not use the appliance again until the service technician has declared it is safe to do so.
- Do not use this appliance if it is leaking gas (see notes below on how to check for a gas leak).
- If there is an apparent gas leak, (smell of gas) close the control valve on the appliance. Make sure that there no naked flames within 5 meters of the appliance and check for leaks as described below.
- Never check for leaks with a naked flame as this is extremely dangerous.
- To check for a gas leak, use a brush dipped in a soapy water solution (e.g. water with dishwashing liquid added) and apply the solution to all joints in the system. If there is a leak, turn off the gas supply at the isolation valve which the installer will provide as part of the installation. Call a service technician to examine the appliance and do not use the appliance until the service technician has declared it s safe to do so. Should you suspect a leak at the cylinder connections (outside the house) apply the soapy water solution to the visible joints such as where the regulator fits into. If there is a leak a bubble or bubbles will form. If you are unable to stop the leak at this point, turn off the cylinder valve or valves and call a service technician to correct the fault. As with leaks inside the premises do not use the appliance until the service technician has declared that it is safe to do so.
- Ensure that the appliance is used away from flammable materials. Ensure that the surrounding area is clear of flammable materials for a minimum of 1 meter all round the appliance.
- Do not remove the model rating plate that is attached to your appliance. This contains important information in addition to the serial number of the unit which the manufacturer will require should you need to make a service call. Do not modify this appliance as to do so may make it unsafe.
- In the event that there is an unexpected shutdown of the appliance and you are sure that the gas cylinder is not empty, call a service technician to examine the appliance for any faults. Do not use the appliance again until the technician has declared it is safe to do so and had demonstrated the safe working of the appliance.