

Charlbe®



**Only suitable for well insulated areas and not designed
to be the primary heat source**

MOBILE GAS HEATER

MODEL NO: MGH1

PART NO: 6920021

USER INSTRUCTIONS



ORIGINAL INSTRUCTIONS

GC0820 ISS 7

INTRODUCTION

Thank you for purchasing this CLARKE Mobile Gas Heater. This portable gas heater is designed to give safe, efficient and reliable operation, and is for use with LPG/Butane gas only. Gas bottles are not supplied with the unit, but are readily available from builders merchants or gas suppliers.

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

Read these instructions carefully. Do not allow anyone who has not read these instructions to light, adjust or operate this heater.

GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission. This guarantee does not effect your statutory rights.

ENVIRONMENTAL RECYCLING POLICY



Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.

In effect, this means that this product must not be disposed of with general household waste. It must be disposed of according to the laws governing Waste Electrical and Electronic Equipment (WEEE) at a recognised disposal facility.

If disposing of this product or any damaged components, do not dispose of with general waste. This product contains valuable raw materials. Metal products should be taken to your local civic amenity site for recycling of metal products.

THE FOLLOWING TABLE ADDRESSES THE INFORMATION REQUIREMENTS OF REG.2015/1188

Item	Symbol	Value	Unit
Fuel			
LPG butane Gaseous	28	(mg/kWh _{input}) (GCV)	
Space Heating Emission(*)			No _X
Indirect heating functionality: (yes/no)			No
Heat Output			
At nominal heat output	P _{nom}	4.2	kW
At minimum heat output (indicative)	P _{nom}	1.55	kW
Auxiliary electricity consumption			
At nominal heat output	e _{l,max}	N/A	kW
At minimum heat output	e _{l,min}	N/A	kW
In standby mode	e _{l,SB}	0	kW
Useful Efficiency (NCV)			
At nominal heat output	n _{th, nom}	91	%
At minimum heat output	n _{th, nom}	N/A	%
Type of heat output/room temperature control (select one)			
Single stage heat output, no temperature control			No
Two or more manual stages, no temperature control			Yes
With mechanical thermostat temp control			No
With electronic temperature control			No
Electronic temperature control with day timer			No
Electronic temperature control with week timer			No
Other control options (multiple selections possible)			
Room temperature control with presence detection			No
Room temperature control with open window detection			No
Room temperature control with distance control option			No
Room temperature control with adaptive start control			No
Room temperature control with working time limitation			No
Room temperature control with black bulb sensor			No

GENERAL SAFETY PRECAUTIONS

1. ALWAYS read and ensure you fully understand the following precautions and the hazards associated with this type of heater.
2. ALWAYS check for damage before using the heater. Check for broken parts or anything that may affect its function. Any damage should be properly repaired or the part replaced. If in doubt, DO NOT use. Consult your local dealer.
3. ALWAYS keep children and animals well away from heater at all times.
4. NEVER carry out any modifications to this product. If experiencing difficulty of any kind consult your local dealer.
5. NEVER move the heater when it is lit.
6. Use ONLY LPG/Butane gas. Ensure the gas bottle is correctly installed and check for leaks following replacement, using soapy water. NEVER use a naked flame to test for leaks.
7. ALWAYS ensure all gas hose and regulator connections are GAS TIGHT, and the hose is not kinked.
8. NEVER use the heater where gasoline, paint thinner or other highly flammable vapour or high dust content is present.
9. ONLY use in well ventilated areas. Provide a ventilation opening to fresh, outside air.
10. ALWAYS locate the heater on a stable, firm level surface.
11. ALWAYS ensure that ample ventilation is present if the heater is being lit following a long period without use.
12. Use heater in accordance with any applicable fire regulations.
13. NEVER use the heater in high-rise flats, in basements living or sleeping areas, in vehicles or caravans.
14. NEVER leave a heater unsupervised when lit - someone should always be responsible for monitoring it. Never leave the heater alight while sleeping.
15. NEVER move, handle, replenish gas supply or service the heater when it is hot, or operating. Turn it off and wait for it to cool down first.
16. Use ONLY the regulator supplied with the heater.
17. ALWAYS ensure that the heater is positioned as described on page 7.
18. Never store gas cylinders any closer than 2 m from open drains, gullies or openings to cellars. LPG is heavier than air and can collect at low levels.
19. This heater will be hot when in operation and due care should be taken.

CARBON MONOXIDE WARNING



WARNING: LACK OF VENTILATION CAN CAUSE CARBON MONOXIDE POISONING WHICH CAN BE FATAL.

Carbon Monoxide is a highly toxic, odourless, colourless and tasteless gas, created by the incomplete combustion of carbon compounds due to a lack of available oxygen in an enclosed space.

The signs of carbon monoxide poisoning are, headaches, dizziness and/or nausea. Should anyone show these signs, they must GET FRESH AIR IMMEDIATELY. Turn off the heater and have it serviced before using again.

Pregnant women, persons with a heart or lung condition, anaemia or under the influence of alcohol, or those living at high altitudes, are more likely to be effected by carbon monoxide than others.

CARBON MONOXIDE ALARMS

Due consideration should be given to the dangers of carbon monoxide poisoning following incomplete combustion in an enclosed space. Carbon monoxide detectors to BS EN 50291 are available for use in domestic premises.

Where a new appliance is installed in a dwelling, a carbon monoxide alarm should be provided in the room where the appliance is located.

Carbon monoxide alarms should comply with BS EN 50291:2001 and be powered by a battery, designed to operate for the working life of the alarm. The alarm should incorporate a warning device to alert users when its working life is due to pass. Mains-powered BS EN 50291 Type A carbon monoxide alarms with fixed wiring (not plug-in types) may be used as alternative applications, provided they are fitted with a sensor failure warning device.

The carbon monoxide alarm should be located in the same room as the appliance:

- On the ceiling at least 300 mm from any wall or, if located on a wall, as high up as possible (above any doors and windows) but not within 150 mm of the ceiling; and
- Between 1 m and 3 m horizontally from the appliance.

NOTE: Further guidance on the installation of carbon monoxide alarms is available in BS EN 50292:2002 and from manufacturers instructions. Provision of an alarm should not be regarded as a substitute for correct use and regular servicing.

FEATURES OF THE MGH1 HEATER

The MGH1 gas heater comprises three groups of components:

GAS SUPPLY COMPONENTS

The gas supply to the machine is by means of a high pressure hose, connected to a gas cylinder, via a pressure regulator.

When the gas valve is opened, gas will flow to the control valve and finally the burner. The heater can be operated at one of 3 settings using 1,2 or all 3 burner plates.

This heater is designed only to be used with a 15 kg LPG/Butane gas bottle. Gas bottles are not supplied, but are readily available from builders merchants or gas suppliers etc.

The minimum surrounding air temperature rating for the heater is min 5°C - maximum +40°C.

IGNITION COMPONENTS

An igniter is positioned beside the Pilot Light. When the ignition button is pressed, a spark is generated which ignites the gas. Heat from the flame is sensed by a thermocouple which is connected to the Flame Failure Valve. As the thermocouple heats up, a low voltage is fed to the Safety Cut-Off Valve, causing the valve to open, so that after a short period, the Control Valve (see 'Lighting the Heater' on page 9) may be released, and the pilot flame is established.

SAFETY COMPONENTS

The heater incorporates the following safety devices that will cause it to shut down in unsafe conditions.

The Flame Failure Valve will shut off the gas if the flame extinguishes for any reason. When the thermocouple quickly cools down, the gas supply is shut off so that the heater will shut down automatically.

The Oxygen Depletion Sensor will shut off the gas if the CO₂ concentration in the air supply to the heater exceeds a pre-set value. The room should therefore be well ventilated at all times.

NOTE: The Anti-Tilt Switch will turn off the heater if it is tipped over. If this activates, set the heater upright, check for obvious damage and wait 5-10 minutes before attempting to re-light the heater. This device may also operate if the heater is knocked against or bumped.

INSTALLATION

When unpacking, check the heater for any damage that may have occurred in transit and notify your Clarke dealer immediately should any be apparent.

The only assembly required is to connect the gas supply. Do not attempt to operate the heater with any gas other than LPG/Butane. You should have purchased a suitable 15 kg gas bottle for use with this heater.

This heater, including the hose and regulator assembly, must be inspected before each use and at least annually by a qualified service person. If the hose shows evidence of excessive wear or if the hose is cut, it must be replaced prior to the heater being put into operation. The replacement hose shall be that specified by Clarke International in the parts list on page 14.

POSITIONING THE HEATER

The heater must be located on a hard, flat, level surface to minimise the risk of accidental tipping and the gas bottle should be held by the bottle retainer. DO NOT operate this heater with the supply bottle in any other than the upright position.

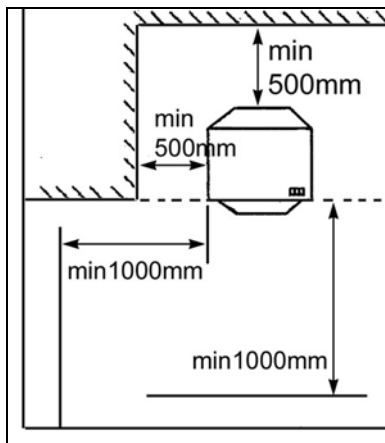
The heater must be located such that it will not be exposed directly to sources of water. Use of this heater in a drafty area decreases its efficiency. If possible, operate the unit in a draft free area.

MATERIAL CLEARANCES

It is recommended that the heater be positioned with at least 500 mm clearance to the sides and rear.

However, any household furnishings should be a safe distance away as they could be adversely affected by heat.

Always position the heater facing the centre of the room and positioned as shown in the diagram. Never place objects on, or against the heater.



VENTILATION

This heater must only be installed in a room which is well ventilated. Do not operate in a caravan, boat, or any room of less than 40 cu/m in volume. Ventilation is essential to reduce the dangers of carbon monoxide poisoning, and from oxygen depletion.



WARNING: IF FRESH, OUTSIDE AIR VENTILATION IS NOT PROVIDED, CARBON MONOXIDE POISONING COULD OCCUR.

Adequate ventilation should also considerably reduce the possibility of condensation occurring and lessen the dangers from the presence of any undetected gas leakage. The following table shows the smallest sizes of room suitable for each heat setting and the ventilation which should be provided.

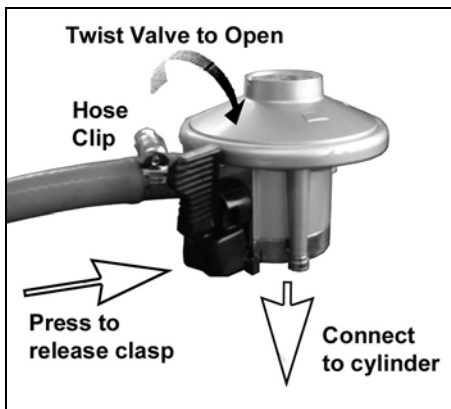
Number of ceramic burners in use	Room size	Ventilation	
		Low Level	High Level
1	40 m ³	40 m ²	40 m ²
2	70 m ³	70 m ²	70 m ²
3	105 m ³	105 m ²	105 m ²

PREPARATION

INSTALLING THE BOTTLE

The connection to the gas bottle must be carried out in a well ventilated area, using the regulator and hose assembly supplied with the heater. DO NOT attempt to adjust this regulator. It has been preset at the factory to provide safe and correct operation.

1. Remove the bottle retainer from the back of the heater.
2. Fix the gas regulator to the gas hose, securing it with the screwed hose clip supplied.
3. Place the filled gas bottle into the back of the heater with the valve outlet facing outwards.
4. Connect the gas regulator onto the outlet of the gas bottle using the integral clasp.
5. When attaching the regulator to the gas cylinder ensure the bottle outlet is perfectly clean.



- Use compressed air if necessary to blow away any dust or dirt. When connected, check for leaks using soapy water or liquid soap as described below.
6. Secure the bottle with the bottle retainer.

TESTING FOR LEAKS

This must be carried out in a well ventilated area, free from any open flame or other sources of ignition. With the regulator connected to the cylinder, slowly turn on the regulator and proceed as follows:

1. Brush all hose connections including pipe connections to the gas valve, regulator connection to the bottle and gas bottle valve with a 50:50 solution of soap and water.
2. A stream of bubbles forming is an indication of a leak. If a leak is found, turn off the valve on the regulator, disconnect the regulator from the gas bottle

and remove the gas bottle to a cool, outdoor well-ventilated area. Contact your Clarke dealer or gas supplier for assistance.



CAUTION: DO NOT USE IF A LEAK IS FOUND. DO NOT USE A NAKED FLAME FOR TESTING. DO NOT OPERATE ANY ELECTRICAL EQUIPMENT IN THE PRESENCE OF A GAS LEAK.

3. After leak-testing is satisfactorily carried out and no leaks found, it may be necessary to twist the cylinder slightly to allow the regulator and hose to fit inside the heater casing without kinking the hose.

FITTING THE BATTERY

The ignitor battery and ignition button are supplied loose and require fitting.

1. Insert the battery into the socket and screw the ignition button into place in the top of the heater.

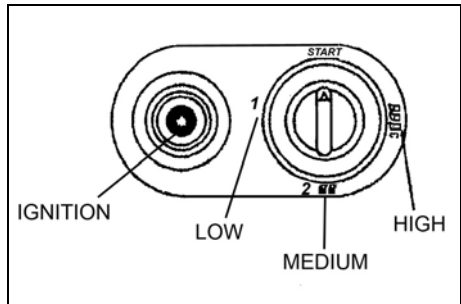
LIGHTING THE HEATER

The heater can be regulated to one of three different heat settings: LOW, MEDIUM and HIGH. To light the heater:

1. Open the valve on the gas regulator.
2. Press down and turn the control knob to LOW position.
 - Do not release the control knob.
3. After 10 seconds press the ignition button until the pilot light (at the bottom of the burner) ignites.
4. Continue to hold the control knob down for 10-15 seconds after ignition. If the pilot flame goes out when releasing the button, repeat the above operation.

NOTE: The first time you use a new heater, it may be necessary to hold the control knob down for a longer time in order to purge air from the system.

Once the heater is alight, turning the control knob to MEDIUM or HIGH will light the second and third panel automatically.



5. When the heater is in operation, watch the pilot light and check that it is burning steadily. If it flickers or has a yellow flame, the heater should be checked by your dealer.
6. Leave the heater burning at the LOW setting for approx 5 minutes before turning to a higher setting.

The heater can also be started at any of the 1 (LOW), 2 (MEDIUM) or 3 (HIGH) positions but this is not recommended.

CHANGING THE SETTING

1. To select the desired heating level, press the control knob down slightly and rotate until the knob locks at the desired position. Do not operate between the locked positions.

TURNING THE HEATER OFF

1. Turn and press the control knob to the START position.
2. Turn off the regulator valve on the gas bottle, and if placing the heater into storage, disconnect the bottle.

CHANGING THE BOTTLE

Always allow the heater to cool down before removing and replacing the bottle. Never attempt to remove the regulator while the heater is operating.

Disconnect the gas regulator from the cylinder and remove the bottle after releasing the bottle retainer from the back of the heater.

POSSIBLE FAULTS ON STARTUP

THE HEATER DOESN'T LIGHT

- Defective ignitor battery failing to produce a spark. Replace battery.
- Check the gas bottle is full. Removing and tilting the bottle should reveal the presence of LPG.
- Check the regulator is properly attached to the bottle and the valve on the regulator is turned on.

If this happens after the bottle has been changed, it could be:

- The bottle may have been excessively cold. Allow the bottle to reach room temperature before attempting to start the heater.
- Air in the bottle. Hold the control knob down for a longer period of time until the pilot and main burner light.

THE HEATER TURNS OFF BY ITSELF

- If the heater turns off by itself after continuous working, repeat the lighting operation, following the instructions faithfully.
- If it goes out soon after lighting, check for drafts or for the gas bottle running out of gas.
- If it goes out after about 30 minutes, it is an indication that ventilation in the room is inadequate. If so, the heater may have been shut off by the Oxygen Depletion Sensor. Open a window or door to ventilate the room and re-ignite.

CLEANING AND MAINTENANCE



WARNING: NEVER ATTEMPT TO SERVICE THE HEATER WHILE IT IS CONNECTED TO THE GAS SUPPLY. ALLOW TO COOL BEFORE SERVICING.

CLEANING (annually or as required)

1. Turn heater off and let cool down before cleaning.
2. Use a damp cloth wrung out in a solution of soapy water to clean the exterior and bottle storage area of the heater. Use household cleaners on difficult spots.
3. Clean inside heater using compressed air where possible. Blow air back and forth along the entire burner face and ceramic plates until all dust has been dislodged from surface. Take care not to knock the ceramic plates which can become fragile in use. Use compressed air to clean the pilot light opening and the gas outlets.
4. Wipe the heater completely dry before use, ensuring that no water gets into the burners or pilot light area.
5. Never use abrasive cleaners as they may damage the paint finish.

GENERAL MAINTENANCE

1. Inspect heater before bringing back into use. Check connections for leaks by applying a mixture of liquid soap and water to hose connections. Any bubbles forming show a leak, which must be corrected before use.
2. Regularly check the flexible tubing between the regulator and heater and replace if cracked. In the event of damage or broken components, replacements should only be obtained from Clarke Parts & Service.
3. Have the heater inspected yearly by a qualified service agent.

STORAGE

1. For long term storage, always disconnect the bottle and store the heater in a well ventilated area away from combustible materials. The bottle is best kept in an outbuilding and preferably not in a basement or indoors. Cover the heater in its original packing and keep the unit dry and dust free.

TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
Pilot light will not light automatically.	Battery is flat. No spark across electrode gap.	Replace battery. Request service technician to check the piezo-electric switch is functioning correctly. Check the electrical lead to the pilot light is not damaged.
Pilot light will not light automatically but switch & lead are OK and the pilot will light using a match.	Incorrect position of spark in relation to gas flow.	Request service technician to re-position spark plug electrode so that spark jumps across gas flow.
Heater will not remain alight when pressure is released from the control knob.	Electro-magnetic contact close while heater is alight.	Request service technician to: a) ensure that the thermocouple probe is located in the pilot flame. b) ensure good connection between thermocouple and valve. c) check thermocouple d) check electromagnetic valve
After changing to maximum position with all 3 flames alight, one or more flames appears below normal intensity.	a) blocked jets b) partially blocked supply tube c) gas running out.	Request service technician to: a) remove and clean blocked jet b) remove the supply tube and jets and blow through tube.
Difficulty in changing from LOW/Medium/High	Air draught directed away from first nozzle. Position of the pilot flame incorrect.	a) Relocate the heater so that it is not affected by draughts. b) Request service technician to adjust pilot so that flame is closer to bottom corner of the second nozzle as well as first nozzle.
Smell of gas	Gas leakage from hose or tube connection	Carry out leak test to determine source

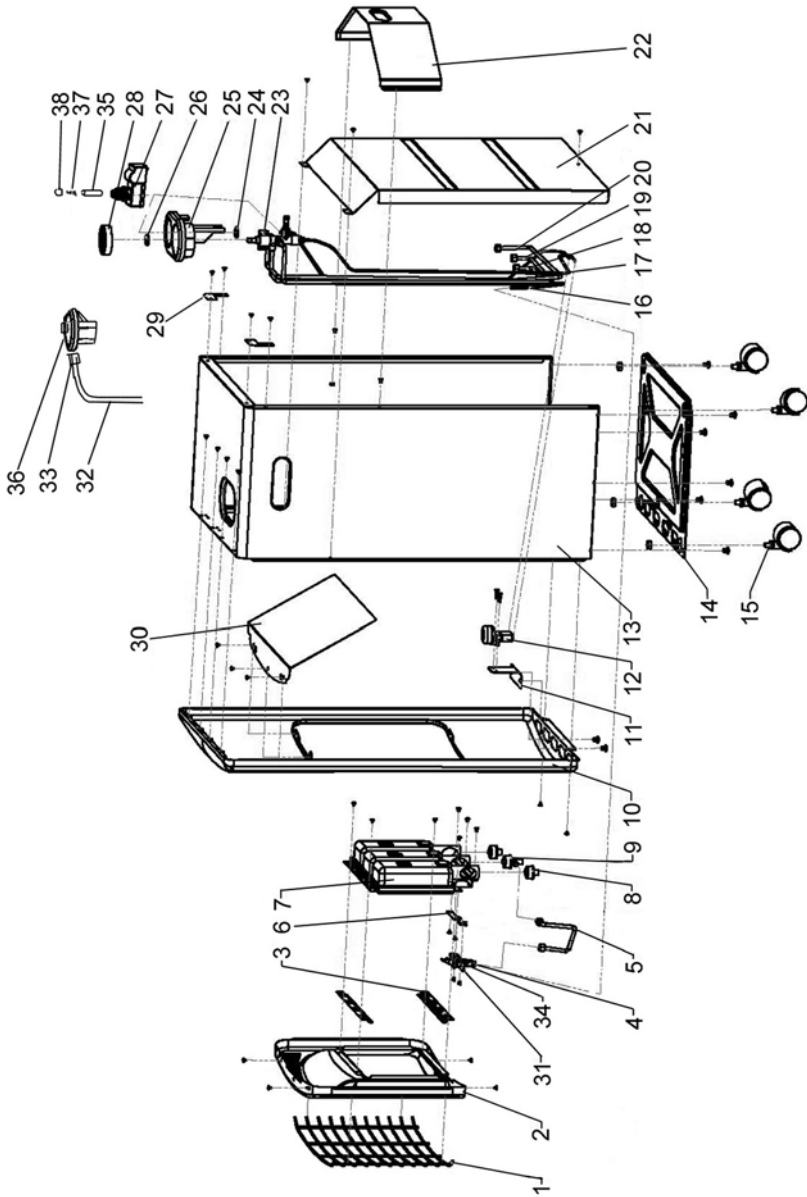
PROBLEM	CAUSE	REMEDY
Smell of burning	Missing piece of ceramic plate.	Inspect perimeter of each ceramic plate and locate position of missing material. Repair with fire cement and leave to set for 24 hours.
Pilot flame appears red.	Dirt in gas nozzle	Clean out any dust with compressed air
Patchy combustion on ceramic plates	Dirty gas outlets. Grime on ceramic plates	Clean out any dust with compressed air

SPECIFICATIONS

Model Number	MGH1
Dimensions (LxWxH) mm	420 x 350 x 735
Weight	8.8 kg
Fuel	LPG/Butane Gas (15kg bottle)
Max Gas Consumption (kg/hr)	305 g/H
Max Rated Input	4.2 kW (14350 Btu/hr)
Heat settings	High - 4.2 kW (14350 Btu/hr) Med - 2.9 kW (9908 Btu/hr) Low - 1.55 kW (5296 Btu/hr)
Operating temperature	Min 5°C / Max 40°C
Supply pressure	28 mbar

Please note that the details and specifications contained herein are correct at the time of going to print. However CLARKE International reserve the right to change specifications at any time without prior notice. Always consult the heater's data plate.

PARTS DIAGRAM



PARTS LIST

No	Description
1	Grille
2	Reflector panel
3	Burner holder
4	Oxygen depletion sensor
5	Connecting pipe
6	Holder
7	Ceramic burner assembly
8	Injection connector (short)
9	Injection connector (long)
10	Cabinet front panel
11	Anti-tilt support
12	Anti-tilt switch
13	Cabinet body
14	Cabinet base
15	Castor wheel
16	Ignition cable
17	Valve control cable
18	Gas pipe 1
19	Gas pipe 2

No	Description
20	Gas pipe 3
21	Thermal baffle
22	Bottle retainer
23	Gas control valve
24	Igniter retaining nut
25	Valve control
26	Valve retaining nut
27	Push button igniter
28	Control knob
29	Angle gusset
30	Burner back board
31	Pilot light assembly
32	Flexible hose
33	Jubilee clip
34	Thermocouple
35	AAA battery
36	Gas regulator
37	Spring
38	Ignitor cap

DECLARATION OF CONFORMITY



Clarke[®]
INTERNATIONAL

Hemnall Street, Epping, Essex CM16 4LG

EU DECLARATION OF CONFORMITY No.: 20-0062

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s):

2016/426 *Regulation (EU) Appliances Burning Gaseous Fuels.*
2009/125/EC *Eco-Design Directive Annex I (EU 2015/1188, 2015/1186).*

The following standards have been applied to the product(s):

EN 449:2002+A1:2007, EN 16129:2013, EN 16436-1:2014+A2:2018, EN 126:2012.

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities. Notified Body: CerTrust Kft, Madach Imre utca 33, H-2120 Dunakeszi, Hungary. EC Type-Examination Surveillance Certificate No.: GC 001460 001, Date of Issue: 02/12/2019. Notified Body No.: 2806.

The CE mark was first applied in: 2009

Product Description: Mobile Gas Heater
Model number(s): MGH1
Serial / batch Number: N/A
Date of Issue: 07/08/2020

Signed:

J.A. Clarke
Director

OTHER PRODUCTS FROM THE CLARKE HEATING RANGE INCLUDE

CAM250 10" VENTILATOR



250w, 230v/1 phase motor
Flow rate@full speed 1284cfm

Part No. 3220450

JERRY CANS & SPOUTS



5, 10 & 20 LITRE SIZES

Part Nos. 765000-995

Spouts (fixed/flexible)

IRD40 Infrared Diesel Heater



38kw (130000btu)
Can be tilted 20deg
Approx 14 hrs operating time

Part No. 6920415

18" Box Fan



Ideal for creating a high
velocity air flow in domestic
& commercial locations
3-speed airflow control
vertical tilting
Tough moulded construction

Part No. 3230465

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STARTERS/CHARGERS

All sizes for car and commercial use.



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