Clarke®

PROPANE GAS HEATER

MODEL NO: DEVIL 3000

PART NO: 6920027

OPERATION & MAINTENANCE INSTRUCTIONS

ORIGINAL INSTRUCTIONS

DL0425 Rev 3

INTRODUCTION

Thank you for purchasing this CLARKE product. Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully.

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.

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

Contact Details: Clarke International Ltd, Hemnall St, Epping, Essex, CM16 4LG Tel: 0208 988 7400			
Model Number	**DEVIL 3000**		
Indirect Heating Functionality	No		
Direct Heat Output	73kW		
Indirect Heat Output	N/A		
Minimum permissible total flue length (vertical + horizontal)	N/A		
Fuel	Nitrogen oxides (NO_x) Emissions		
	Value	**Unit**	
Select Fuel Type: Gaseous	108	mg/kWh_{input} (GCV)	
Item	**Symbol**	**Value**	**Unit**
Heat output			
Nominal heat output	P_{nom}	73	kW
Minimum heat output	P_{min}	50	kW
Auxiliary electricity consumption			
At nominal heat output	el_{max}	0.2	kW
At minimum heat output	el_{min}	n/a	kW
Power consumption			
In off mode	P_0	0.00	W
In standby mode	P_{sm}	0.00	W
In idle mode	P_{idle}	N/A	W
In networked standby mode	P_{nsm}	N/A	W
Standby mode with display of information or status			No
Permanent pilot flame power requirement			
Pilot flame power requirement (if applicable)	P_{pilot}	N/A	kW
Efficiency (NCV)			
Useful efficiency at nominal heat output	$n_{th, nom}$	100.0	%
Useful efficiency at minimum heat output	$n_{th, min}$	100.0	%
Seasonal space heating energy efficiency	n_s	80.0	%

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	No
With mechanical thermostat temp control	Yes
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
Room temperature control with self-learning functionality	No
Room temperature control with control accuracy	No

FUNCTION AND OPERATING PARAMETERS

This is a forced air heater meaning that a blower or fan pushes the air through the heater. Proper combustion depends upon the air flow.

Therefore, the heater must not be modified or operated with parts removed or missing. Likewise, safety systems must not be circumvented or modified in order to operate the heater.

This heater is intended for drying and the warming of commercial/industrial buildings where adequate ventilation is provided.

This heater is not intended;

- It must be operated as prescribed in the operating manual.
- It is not intended to be used for domestic use or for the heating of habitable areas.
- It is not intended to be used to reach and maintain a certain level of human thermal comfort within an enclosed space in which the heater is situated.
- It is not intended to be used in enclosed areas with restricted ventilation.
- It is not for use in areas with high levels of fluctuating drafts.
- **DO NOT** use for warming animals or live stock.

SAFETY INFORMATION

Read, and make sure you fully understand the following precautions and the hazards associated with this type of equipment.

1. **ONLY** use with the voltage specified and ensure the heater is properly earthed.
2. Use only the hose and factory preset regulator provided with the heater.
3. **ONLY** use propane gas, set up for vapour withdrawal.
4. Use only in well ventilated areas. Provide ventilation of at least $3ft^2$ ($2800cm^2$) of fresh air for every 100,000 BTU/hr (30kW) of rating.
5. **DO NOT** use this heater in small rooms when they are occupied by persons not capable of leaving the room on their own unless constant supervision is provided.
6. For indoor use only. **DO NOT** use heater outdoors.
7. **DO NOT** use this heater in the immediate surrounds of a bath, a shower or a swimming pool
8. **DO NOT** use for the heating of habitable areas of domestic premises; for use in public buildings, refer to national regulations.
9. **DO NOT** use the heater in a basement or below ground level. Propane gas is heavier than air. If a leak occurs. propane gas will sink to the lowest possible level.
10. Keep the heater area clear and free from combustible materials, gasoline, paint thinner and other flammable vapours and liquids. For minimum safe clearance limits, see page 8.
11. **DO NOT** use heater in areas with high dust content. Dust is combustible.
12. **DO NOT** point the heater at the propane tank.
13. Keep propane tank(s) below 100^oF (37.8^oC).
14. Check the heater for damage before each use. **DO NOT** use if dropped. **DO NOT** use a damaged heater.
15. Check the hose before each use of the heater. If highly worn or cut, replace with hose specified by the manufacturer before using the heater.
16. Locate the heater on a stable and level surface if the heater is hot or operating.
17. Not intended for use on finished floors.
18. **NEVER** block the air inlet (rear) or air outlet (front) of the heater.
19. **DO NOT** cover the heater while in use.
20. Keep the heater away from strong drafts, water spray, rain or dripping water.
21. **DO NOT** leave the heater unattended.
22. **NEVER** move, handle or service a hot, operating or plugged-in heater.
23. To prevent injury wear gloves when handling the heater.

24. **NEVER** attach duct work to front or rear of the heater.
25. **DO NOT** alter the heater. Keep the heater in its original state. If the heater has been altered in any way, **DO NOT** use.
26. Turn off the propane supply and unplug the heater when not in use.
27. Use only original replacement parts. This heater must use design-specific parts. Improper replacement parts could be highly dangerous.
28. **DO NOT** place torsional stress on any hoses or cables.
29. **DO NOT** use this heater with a programmer, timer, separate remote control system or any other device that switches the heater on automatically, since a fire risk exists if the heater is covered or positioned incorrectly.
30. This heater is only intended for use in industrial, commercial and building industries, it is **NOT** to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.
31. Keep all children and animals away from the heater.
32. **DO NOT** use for warming animals or live stock.
33. Children should **NOT** play with the appliance.
34. Turn off the gas supply and unplug the heater when not in use.
35. **BYSTANDERS:** When the heater is to be operated in the presence of other people the user is responsible for informing those present of the safety precautions and of the hazards involved.

SAFETY SYMBOLS

Please read all of the safety and operating instructions carefully before using this product. The following safety symbols may be found on the product.

	**GENERAL HAZARD WARNING**		**HOT SURFACE, DO NOT TOUCH**
	**ALWAYS READ THIS MANUAL BEFORE USE**		**DO NOT COVER**

GENERAL PRECAUTIONS

Even though this heater operates very close to 100 percent combustion efficiency, it still produces small amounts of carbon monoxide.

- Carbon Monoxide (CO) is toxic.
- Pregnant women, persons with a heart or lung condition, anemia or under the influence of alcohol, or those at high altitude, are more likely to be effected by Carbon Monoxide.
- CO can build up in a confined space and failure to provide adequate ventilation can be fatal.

The early symptoms of asphyxiation caused by inadequate ventilation are:

- headache
- dizziness
- nausea
- dry mouth or sore throat

Should anyone show these symptoms, they must **GET FRESH AIR IMMEDIATELY.** Turn off the heater and have it serviced before using again.

Be sure to follow all warnings in this manual.

WE RECOMMEND THE USE OF A CARBON MONOXIDE DETECTOR

OPERATING SPACE

Do not obstruct the air intake to the heater and allow the following clearances from combustible surfaces.

Outlet: 8 feet (2.4 m)

Sides: 6 feet (1.8 m)

Top: 6 feet (1.8 m)

Rear: 2 feet (0.6 m)

Keep the heater as far as practical from propane tanks and never point the heater directly at any propane tank.

ELECTRICAL CONNECTIONS

⚠	**WARNING: READ THESE ELECTRICAL SAFETY INSTRUCTIONS THOROUGHLY BEFORE CONNECTING THE PRODUCT TO THE MAINS SUPPLY.**

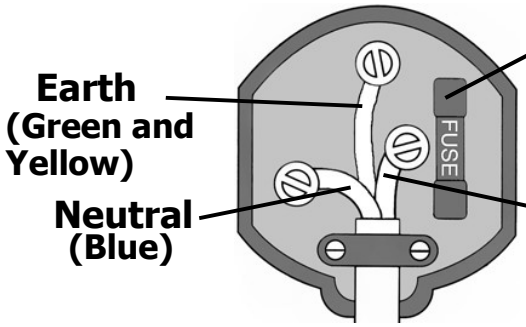
Connect the mains lead to a standard, 230 Volt (50Hz) electrical supply through an approved BS1363 plug fitted with a BS1362 7 amp fuse.

If the plug has to be changed because of damage, it must be removed and a replacement fitted, following the wiring instructions shown below. The old plug must be discarded safely, as insertion into a power socket could cause an electrical hazard.

⚠	**WARNING: WIRES IN THE MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE: GREEN/YELLOW = EARTH, BLUE = NEUTRAL, BROWN = LIVE.**

- The BLUE wire must be connected to the terminal marked N or coloured black.
- The BROWN wire must be connected to the terminal marked L or coloured red.
- The YELLOW AND GREEN wire must be connected to the terminal marked E or ⏚ or coloured green.

Plug must be BS1363/A approved.



Ensure that the outer sheath of the cable is firmly held by the clamp

We strongly recommend that this machine is connected to the mains supply through a Residual Current Device (RCD)

If you are not sure, consult a qualified electrician. DO NOT try to do any repairs.

PROPANE GAS SUPPLY

WARNING: THE FITTING AND CHANGING OF THE GAS CYLINDERS MUST BE CARRIED OUT IN A FLAME FREE ATMOSPHERE.

WARNING: YOU SHOULD ONLY USE PROPANE GAS CYLINDERS AVAILABLE FROM BUILDERS MERCHANTS OR GAS SUPPLIERS.

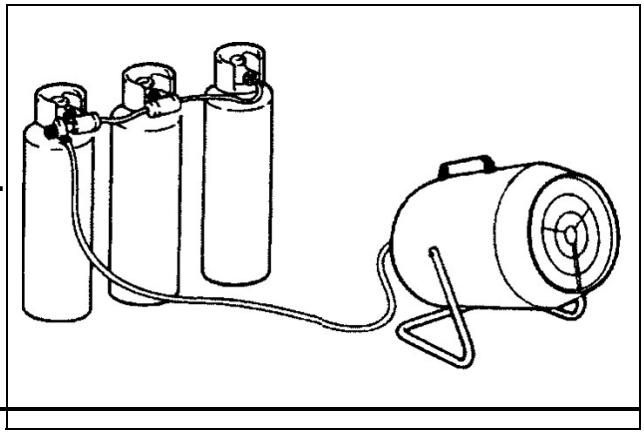
This portable, direct-fired gas heater is designed to give safe, efficient and reliable operation, and is for use with propane gas only.

As with all mechanical equipment, optimum performance will only be achieved if the correct operation and servicing procedures are followed.

WARNING: PROPANE GAS CYLINDERS MUST BE USED AND STORED IN ACCORDANCE WITH THE 'HIGHLY FLAMMABLE LIQUIDS AND LIQUEFIED PETROLEUM GASES REGULATIONS 1972'

In order to reduce the risk of icing up when operating for long periods at maximum capacity, you should use a larger capacity gas bottle, or two/three bottles in parallel as shown in the diagram.

Ensure the Propane gas bottle, gas hose and electric cable, are positioned behind the unit, away from the heat.



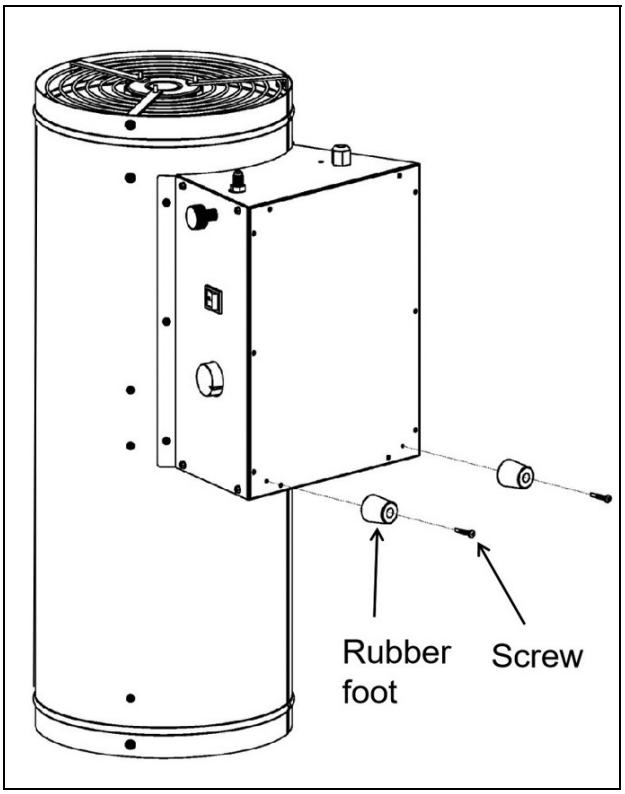
IN THE EVENT OF A GAS LEAK

1. Extinguish all smoking materials and other open flames.
2. **DO NOT** operate electric switches or light matches.
3. Close all supply valves on gas tank or cylinder.
4. **DO NOT** use your phone. USE a neighbour's phone or your mobile phone from outside the building or wherever you detected the gas leak to call the fire service.
5. Immediately get everyone out of the building or area.
6. **DO NOT** re-enter the building, or area until a trained service person or the fire service advises it is safe to return.

PREPARATION

ASSEMBLY

1. Check the heater for possible shipping damage. If any is found do not use the heater.
2. Stand the heater on end as shown, on a soft surface to avoid scratches. We recommend the help of an assistant to lift and steady the heater during assembly.
3. Attach the rubber feet onto the bottom panel.



LOCATION

Position the heater at a safe distance from combustible materials. (see page 7 for distances)

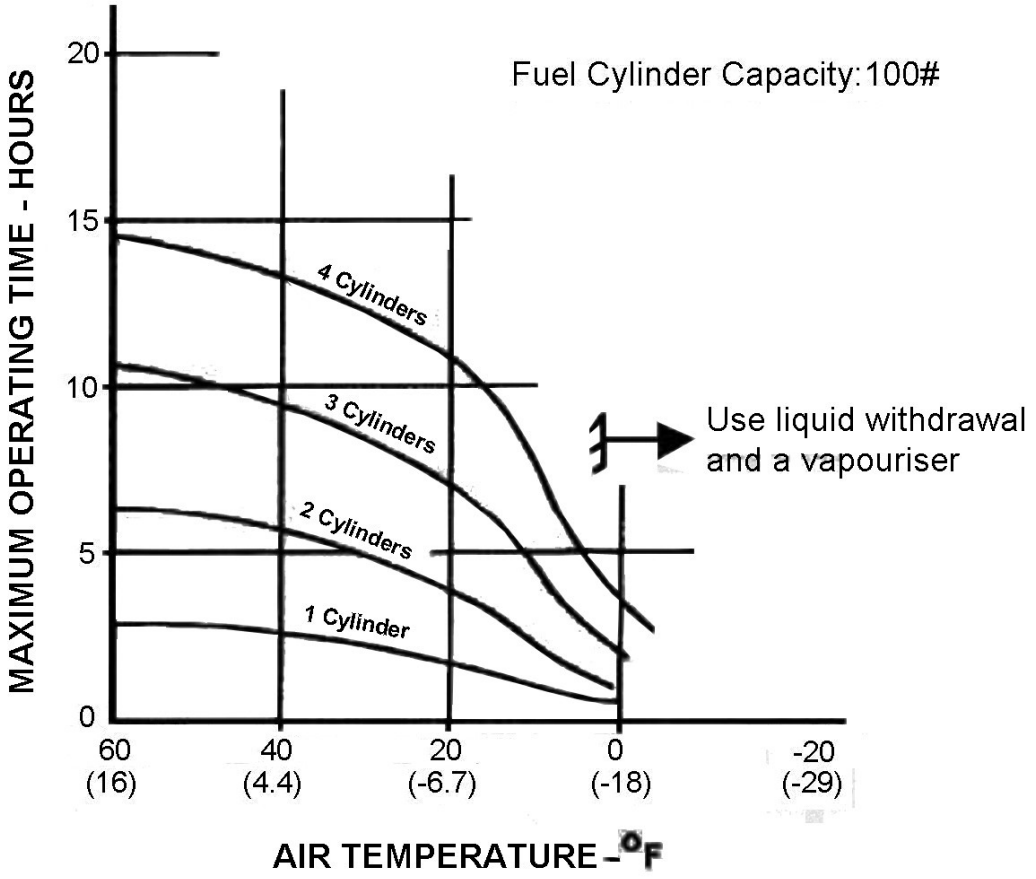
This heater must not be placed on wooden floors or other combustible materials.

When used, the heater should rest on suitable insulating material at least 1 inch thick and extending 1M (3 ft) or more beyond the heater in all directions.

SIZE AND CAPACITY OF PROPANE CYLINDERS

The chart shows the approximate size of the bottle required for these heaters. To use the chart:

1. Select the lowest air temperature expected (at the bottom of the chart).
2. Move straight up to time of operation desired (left side).
3. Read the bottle size required
4. Always use full bottles with good air circulation and no frost on the cylinders.



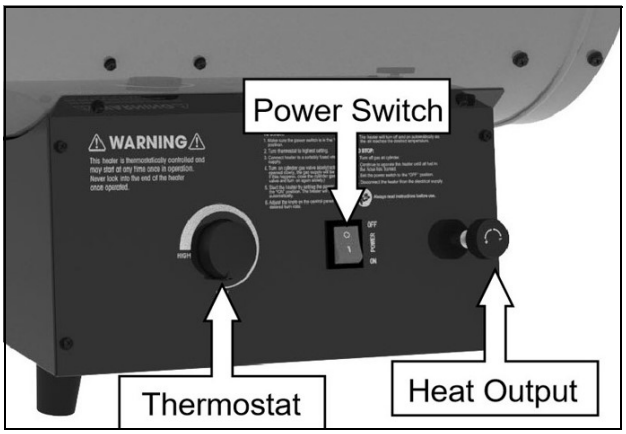
CONNECTING THE GAS BOTTLE

1. Follow all of the "General Safety" precautions on pages 5 -7.
2. Connect a POL (Prest-o-Lite) fitting on hose/regulator assembly to the propane bottle(s).
   - Turn the POL fitting anti-clockwise into the threads on the bottle Tighten firmly using a wrench.
3. Connect the hose to the heater by rotating the hose fitting clockwise.
   - Make sure that all gas connections are secure.
4. Open the gas valve and check all gas connections with a soap and water solution. **DO NOT USE A FLAME**.
5. Connect the power cable to a 230V, 50Hz, mains socket.

OPERATING INSTRUCTIONS

WARNING: BEFORE STARTING THE HEATER, YOU MUST ENSURE THAT THE MINIMUM VENTILATION REQUIREMENTS ARE OBSERVED TO AVOID THE RISK OF CARBON MONOXIDE POISONING.

HEATER START UP



1. Make sure the power switch is in the OFF (O) position.
2. Turn the thermostat to the highest setting.
3. Connect the heater to a suitably fused power supply.
4. Slowly turn on the cylinder gas valve.
   - If not opened slowly, the excess-flow check valve on the propane tank will stop the gas flow. If this happens close the propane supply valve and open again slowly.
5. Start the heater by setting the power switch to the "ON(I)" position. The heater will ignite automatically.
6. Adjust the knob on the control panel to the desired burn rate.
7. Set the thermostat to the desired temperature. The heater will turn off and on automatically as the air reaches the desired temperature.

HEATER SHUT DOWN

1. Securely close the valve on the propane cylinder.
2. Continue to operate the heater until all fuel in the hose has burned.
3. Set the power switch to the OFF (O) position.
4. Unplug the heater.

RESTART AFTER SAFETY SHUTDOWN

1. Securely close the valve on the propane cylinder.
2. Unplug heater.
3. Wait 5 minutes.
4. Restart, following the Heater Start Up procedure above.

MAINTENANCE, STORAGE AND SERVICING

WARNING: TO PREVENT PERSONAL INJURY, UNPLUG THE HEATER FROM THE MAINS SUPPLY BEFORE SERVICING.

MAINTENANCE AND STORAGE

1. The heater should be inspected at least annually by a qualified person.
2. Before each use, check the soft "0" ring seat at the bullnose of the POL fitting. If the "0" ring is cut, scuffed, or otherwise damaged, replace it.
3. Turn off the gas at the LP-gas supply cylinder(s) when the heater is not in use.
4. When the heater is to be stored indoors, the connection between the LP-gas supply cylinder(s) and the heater must be disconnected and the cylinder(s) removed from the heater and stored outdoors in accordance with local regulations.

SERVICING

A hazardous condition may result if a heater is used that has been modified or is not functioning properly. When the heater is working properly:

- The flame is contained within the heater.
- The flame is essentially blue with perhaps some yellow tipping.
- There is no strong disagreeable odour, eye burning or other physical discomfort.
- There is no smoke or soot internal or external to the heater.
- There are no unplanned or unexplained shut downs of the heater.

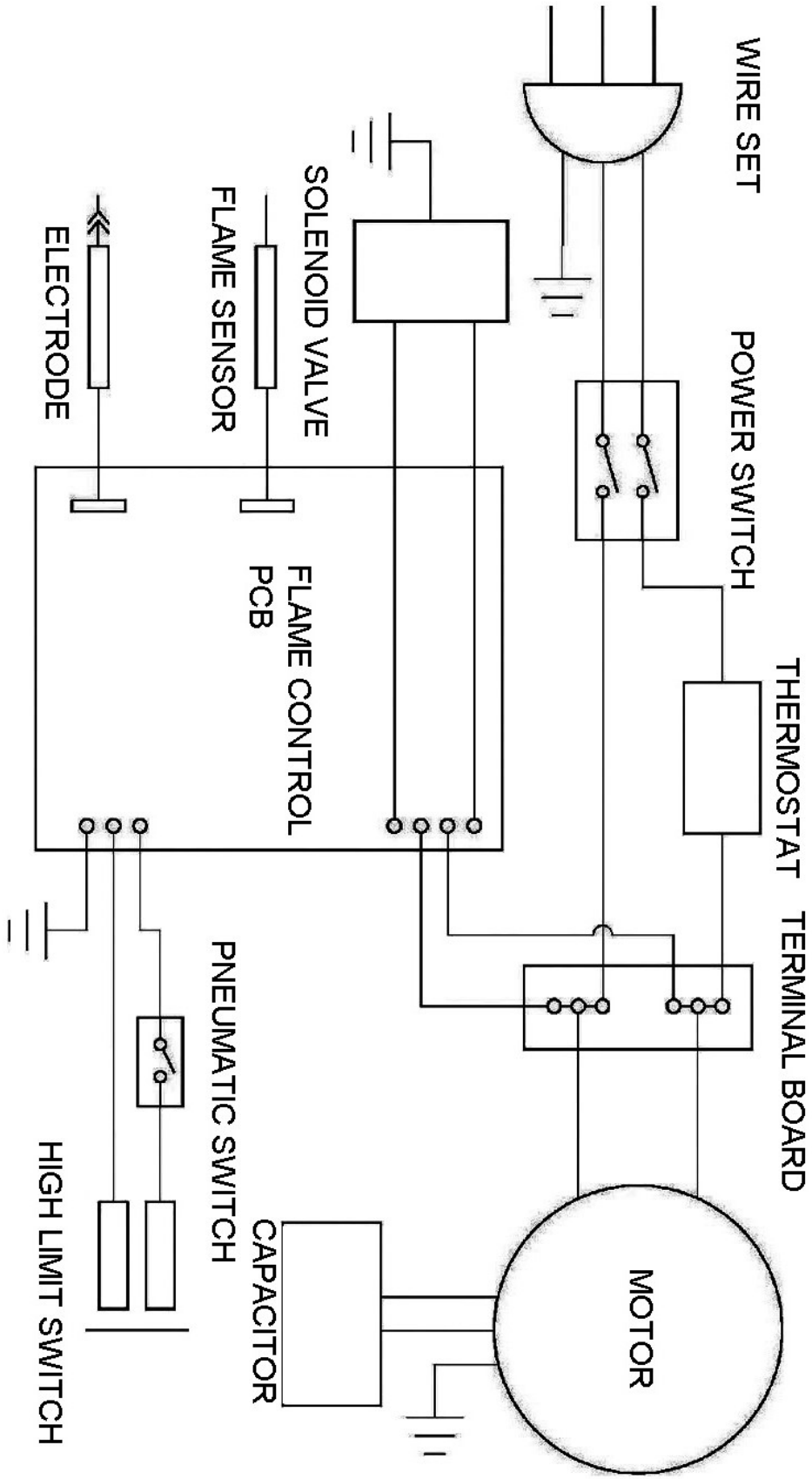
The parts lists and wiring diagram show the heater as it was constructed. DO NOT use a heater which is different from that shown. In this regard, use only the hose, regulator and cylinder connection fitting (POL fitting) supplied with the heater.

A heater which is not working correctly must be repaired, but only by a trained, experienced service person.

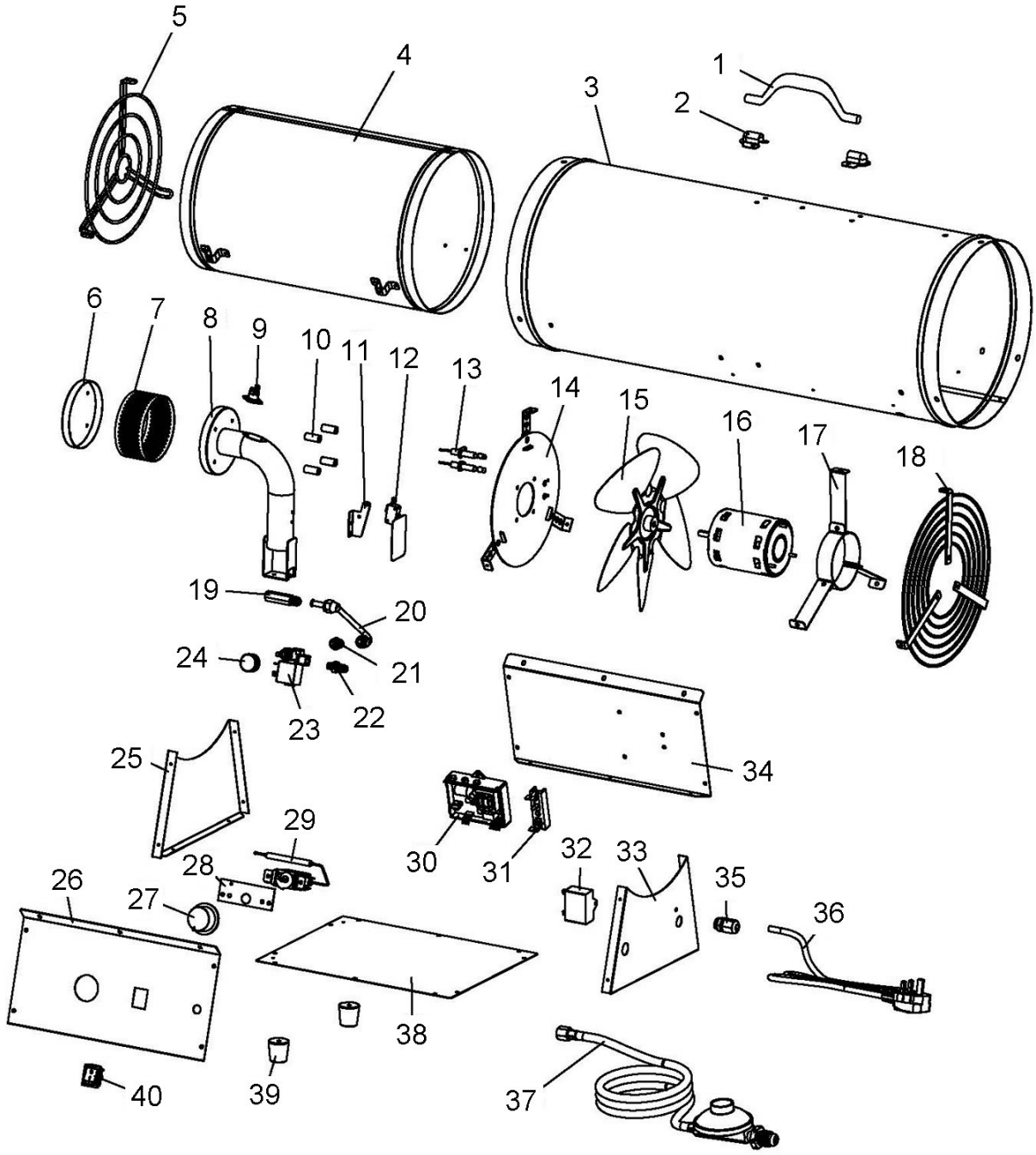
SPECIFICATIONS

Gas Type	Propane
Regulator	H30-1.5
Hose Length	3.6m
Rated Heat Output	50-82kW(170,000-279,700 BTU/HR)
Maximum Pressure	Bottle Pressure
Minimum Pressure	1.5 Bar
Regulator Output	1.5 Bar
Operating Voltage/Frequency	220-240V/50Hz
Plug Fuse Rating	7A
Output	85W
Rated Input Power	170W
Rated Input Current	0.75A
RPM@230V, No Load	2600
Electrical Insulation Class	I
Duty Cycle	S1 Continuous
Ingress protection rating	IPX0
Ignition	Direct Spark
Primary Flame Control	Solid State 10-15 Sec timing
Thermostat Setting Temperature Range	15 ^{o}C - 35 ^{o}C
Fuel Consumption	3.6-5.2 kg/hr
Fuel Orifice Port Size	1.85 mm
Heated Air Output	1800 m^3/hr
Weight	12.7 kg
Dimensions (L x W x H)	750 x 285 x 485 mm

WIRING DIAGRAM



COMPONENT PARTS



PARTS LIST

1	Handle
2	Handle mounting clips
3	Outer shell
4	Middle cylinder
5	Front guard
6	Burner outer plate
7	Burner grid
8	Burner mixing tube
9	High limit switch
10	Burner - SS spacer
11	Mounting bracket
12	Pneumatic switch
13	Electrode /flame sensor
14	Flame holder assembly
15	Fan
16	Motor assembly
17	Motor mounting bracket
18	Inlet grille
19	Orifice plate
20	Fuel tube assembly

21	Extension fitting
22	Inlet connector
23	Solenoid valve assembly
24	Solenoid valve knob
25	Control box front panel
26	Control box left panel
27	Thermostat knob
28	Thermostat mounting bracket
29	Thermostat assembly
30	Flame control PCB
31	Terminal board
32	Capacitor
33	Control box back panel
34	Control box right panel
35	Strain relief bush
36	Power cable assembly
37	Hose/regulator assembly
38	Control box bottom panel
39	Rubber foot
40	Power switch

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DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following legislation:		**The following standards have been applied to the product(s):**
2016/426	*Gas Appliance Regulation*	*EN 61000-3-3:2013+A1:2019+A2:2021, EN IEC 60335-2-102:2024+A11:2024, EN 62233:2008,*
2009/125/EC	*Ecodesign Directive*	*IEC 62321-4:2013, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-8:2017, EN 16129:2013,*
2014/30/EU	*Electromagnetic Compatibility Directive*	*EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A2:2019+A14:2019+A15:2021+A16:2023,*
2014/35/EU	*Low Voltage Directive*	*EN IEC 61000-3-2:2019+A1:2021+A2:2024, EN IEC 55014-1:2021, EN IEC 55014-2:2021,*
2011/65/EU	*Restriction of Hazardous Substances (RoHS) Directive*	*EN 1596:1998/A1:2004, IEC 62321-3-1:2013, IEC 62321-7-1:2015, IEC 62321-7-2:2017*

This declaration is issued, in accordance with legislation (EU) 2016/426, under the sole responsibility of the manufacturer.

The UKCA mark was first applied in: 2023

Manufacturer:	Clarke International Ltd, Hemnall Street, Epping, Essex, CM16 4LG, United Kingdom	**Notified Body:**	DBI Certification A/S (ID Number: 2531), Jernholmen 12, DK-2650 Hvidovre, Denmark
Product Description:	Gas Space Heater	**GAR Certificate Number:**	2531-GAR-CGC10360, 2531CS-0083
Model Number(s):	DEVIL 3000	**GAR Certificate Issue:**	07/12/2022, 21/04/2018
Serial/Batch Number:	Refer to product/packaging label	**GAR Certificate Expiry:**	13/06/2028, 21/04/2028
Date of Issue:	21/03/2025	**Signed:**	**J.A Clarke** **Director**

Parts & Service: 020 8988 7400 / E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

CE

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DECLARATION OF CONFORMITY

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2009/125/EC	*Ecodesign Directive*	*IEC 62321-4:2013, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-8:2017, EN 16129:2013,*
2014/30/EU	*Electromagnetic Compatibility Directive*	*EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A2:2019+A14:2019+A15:2021+A16:2023,*
2014/35/EU	*Low Voltage Directive*	*EN IEC 61000-3-2:2019+A1:2021+A2:2024, EN IEC 55014-1:2021, EN IEC 55014-2:2021,*
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This declaration is issued, in accordance with legislation (EU) 2016/426, under the sole responsibility of the manufacturer.

The CE mark was first applied in: 2023

Manufacturer:	Clarke International Ltd, Fitzwilliam Hall, Fitzwilliam Place, Dublin 2, Republic of Ireland	**Notified Body:**	DBI Certification A/S (ID Number: 2531), Jernholmen 12, DK-2650 Hvidovre, Denmark
Product Description:	Gas Space Heater	**GAR Certificate Number:**	2531-GAR-CGC10360, 2531CS-0083
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Serial/Batch Number:	Refer to product/packaging label	**GAR Certificate Expiry:**	13/06/2028, 21/04/2028
Date of Issue:	21/03/2025	**Signed:**	**J.A Clarke** **Director**

Parts & Service: 020 8988 7400 / E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

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