

# Charmfire®



WARNING: Do not install the stove without reading this manual

## INSERT STOVE MODEL NO: BEAULIEU

PART NO: 6909915

## INSTALLATION & MAINTENANCE INSTRUCTIONS

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ORIGINAL INSTRUCTIONS

GC0917

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## INTRODUCTION

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Thank you for purchasing this CLARKE Stove.

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.

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## GUARANTEE

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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.

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## TECHNICAL SPECIFICATIONS

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Weight	77.8 kg
Dimensions Front Surround	625 x 488 x 90 mm (H x W x D)
Dimensions of Rear Casing	513 x 397 x 267 mm (H x W x D)
Door Opening	287 x 318 mm
Fuel	Wood or solid fuel (Ancit)
Nominal Heat Output	4.7 kw (16000 BTU) wood/5.0 (17000 ancit)
Space Heating Output	4.7 kw (16000 BTU) wood/5.0 (17000 ancit)
Energy Efficiency	78.5% (wood) 75.7%% (ancit)
Measured CO@13% Oxygen	0.28% (wood) / 0.18% (ancit)
Flue Diameter	125 mm
Flue Mass Flow	3.6 g/sec (wood) / 4.0 g/sec (ancit)
Recommended chimney draft	12 Pa

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# INSTALLATION OF THIS PRODUCT

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## READ ALL THE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION

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**WARNING: AN ACCREDITED HEATING ENGINEER MUST CARRY OUT THE INSTALLATION OF THIS STOVE. ALTERNATIVELY, SHOULD A NON-ACCREDITED ENGINEER UNDERTAKE THE INSTALLATION, YOUR LOCAL BUILDING CONTROL OFFICER WILL BE REQUIRED TO APPROVE THE COMPLETED INSTALLATION UNDER BUILDING REGULATION "J". IT IS AN OFFENCE UNDER UK LAW, NOT TO COMPLY WITH THIS MANDATORY REQUIREMENT. IF THE STOVE IS NOT FITTED CORRECTLY BY AN APPROVED PERSON, IT COULD RESULT IN A HOUSE FIRE OR CARBON MONOXIDE POISONING.**

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CAUTION: The instructions cover the basic principles to ensure satisfactory installation of the stove, although detail may need slight modification to suit particular site conditions. In all cases the installation must comply with current Building Regulation 'J', Local Authority By-laws, European and National standards and any other specifications or regulations as they affect the installation of the stove.

CAUTION: The information contained in this manual includes extracts from the Building Regulations 2000 "Approved Document J" (Combustion Appliances and Fuel Storage Systems), updated October 2010. This guidance information in no way replaces your responsibility as an installer or end user to comply with the appropriate standards.

CAUTION: THIS STOVE MUST BE CONNECTED TO A SUITABLE FLUE OUTLET. Due to high temperature this stove should be located well away from furniture and curtains. Children and adults should be alerted to the hazards of hot surfaces. Young children should be carefully supervised when they are in the same room as the stove. Do not place clothing or other flammable material on or near the stove. Keep the stove area clear of combustible materials, flammable liquids or vapours.

CAUTION: DO NOT OVERFIRE - it is possible to fire the stove beyond its design capacity. This could damage the stove, so watch for signs of overfiring - if any part of the stove starts to glow red, the stove is in an overfire situation and the controls should be adjusted accordingly. Never leave the stove unattended for long periods without first adjusting the controls to a safe setting. Careful air supply control should be exercised at all times.

CAUTION: FIRES CAN BE DANGEROUS - Always use a fireguard in the presence of children, the elderly or the infirm. The fireguard should be manufactured in accordance with B.S. 6539 - Fireguards for use with solid fuel appliances.

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**WARNING: THIS STOVE WILL BE HOT WHEN IN OPERATION AND DUE CARE SHOULD BE TAKEN. THICK GLOVES SHOULD BE USED TO OPERATE THE PRIMARY/SECONDARY CONTROLS OR REACHING INSIDE THE STOVE TO POSITION FUEL OR REMOVE ASH.**



CAUTION: CARBON MONOXIDE POISONING CAN BE FATAL. CARBON MONOXIDE DETECTORS TO BS EN 50291 ARE AVAILABLE FOR USE IN DOMESTIC PREMISES AND DETAILS ARE AVAILABLE IN THE OFFICIAL HETAS GUIDE THAT CAN BE VIEWED ON THEIR WEBSITE AT [WWW.HETAS.CO.UK](http://WWW.HETAS.CO.UK). DUE CONSIDERATION SHOULD BE GIVEN TO THE DANGERS OF CARBON MONOXIDE POISONING FOLLOWING INCOMPLETE COMBUSTION OF SOLID FUELS IN AN ENCLOSED SPACE. SEE PAGE 17 OF THIS BOOKLET.

## GENERAL SAFETY RULES

1. Always read and understand the manual before installing and commissioning the stove.
2. Always ensure the stove is installed in accordance with local regulations.
3. Always ensure that the stove is correctly installed and positioned as described under POSITIONING AND INSTALLATION on page 6, and that the immediate area is kept clear.
4. Always check for damage before using the stove. Check for breakage of parts and any other condition that may affect the stoves performance. Any damage should be properly repaired or the part replaced. If in doubt, **DO NOT** use the stove. Consult your local dealer.
5. Always keep children and visitors at a safe distance from the stove.
6. Never direct any kind of liquid on to the stove, particularly when it is hot.
7. Never use petrol or other flammable liquids for fire starting.
8. Never use the stove to incinerate materials other than recommended fuels.
9. Never carry out any modifications to this product. If experiencing difficulty of any kind consult your local dealer.
10. The installation of the stove and chimney **MUST** comply with all National, European and local building regulations. It is the responsibility of the owner and the installer to ensure that the installation complies.
11. All rooms where a stove is situated must have a non-motorised air vent. Refer to details contained in the Building Regulations.

## DETERMINING A SUITABLE CHIMNEY

**NOTE: THE STOVE IS DESIGNED TO BE INSTALLED IN A SUITABLY PREPARED FIREPLACE RECESS AND CONNECTED TO A SIMILARLY PREPARED CHIMNEY. SEE INSTALLATION AND POSITIONING.**

This stove is a radiant room heater and must be connected to a chimney of the proper size and type. The chimney must have a cross sectional area of at least 124 cm<sup>2</sup> or a diameter of at least 150mm.

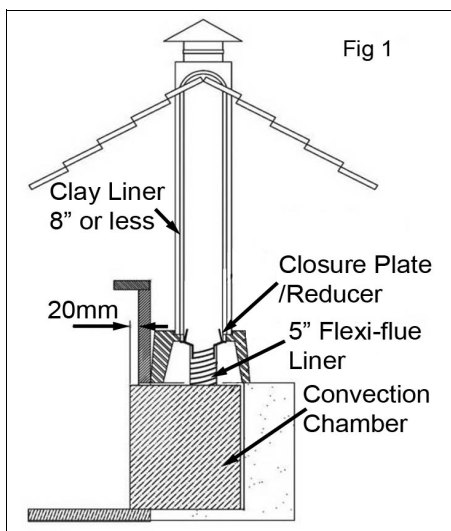
Never connect to a smaller size chimney. Do not connect to a chimney serving another appliance. Minimum chimney height 4.5 meters from floor on which stove is installed.

It is recommended that a flue liner of diameter 150mm be used to line the chimney and the liner should be approved for use with solid fuel. See Fig. 1.

It is permitted to connect using a closure plate and a connection piece from the stove to the closure plate (see Fig 1), provided that the chimney is of sound construction with no leaks or cracks, a clay flue liner has been used that can withstand up to 1000°C, the clay liner has a diameter no greater than 200mm.

**IMPORTANT: ALL FLUE INSTALLATIONS ARE THE RESPONSIBILITY OF THE CUSTOMER.**

The stove must be connected to a chimney with a minimum continuous draught of 12 Pascal's (.05" WG). Poor draught conditions will result in poor performance.



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## POSITIONING AND INSTALLATION

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***IMPORTANT: Building Regulation "J" is the Government approved document covering the installation of solid fuel stoves.***

In England and Wales there are only two routes to legally install a domestic solid fuel or wood burning appliance. In other parts of the UK there are variations in legislation and processes.

You can either:

- Use a registered installer who can self certify that the work he does complies with the relevant Building Regulations; or
- The consumer applies to their local authority building control department for a building notice, and pays the appropriate fee.

It is generally worthwhile to use a HETAS registered installer who will supply a Certificate of Compliance as a record of the job and that it complies with Building Regulations. A copy of the certificate is forwarded to HETAS who notify the local authority on your behalf.

Failure to notify the work through the registration scheme (in this case HETAS) or directly to the local authority can lead to enforcement. It can also cause problems for future house sales if there is no official record of a compliant installation. All local regulations, including those referring to National and European Standards need to be complied with when installing this appliance.

For specific guidance when stoves are being installed in homes with thatched roofs, please refer to the SOLIFTEC website at:

**[www.soliftec.com/installation.htm](http://www.soliftec.com/installation.htm)**

### SUPPORTING HEARTH

The hearth should be able to accommodate the weight of the stove and flue components. The stove should stand on a hearth made of non-combustible board/sheet material or tiles at least 12mm thick, if the stove has been tested to an applicable standard to verify that it cannot cause the temperature of the upper surface of the hearth to exceed 100°C.

Constructional hearths should be made of solid, non-combustible material such as concrete or masonry, at least 125mm thick, including the thickness of any non-combustible floor and/or decorative surface.

Specific guidance for surfaces on which the stove may be allowed to stand is given in Approved Document 'J' and must be followed.

## MATERIAL CLEARANCES

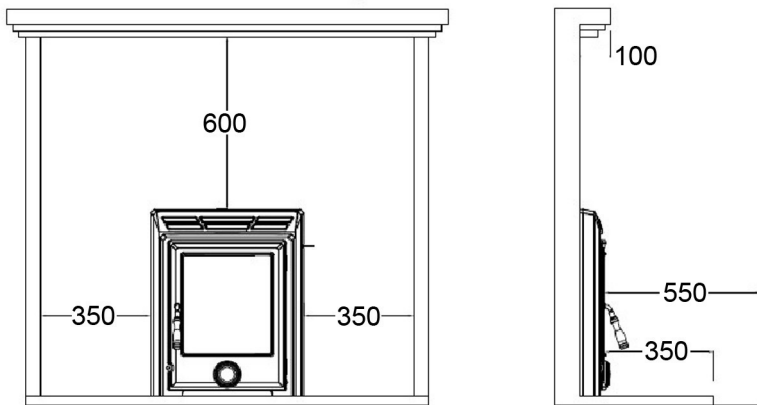
This stove must be installed in a recess which should not contain any combustible materials. Wooden battens and plaster board should not be used within the clearance given for combustibles. The minimum clearance to combustibles required is 600mm to the top, 350mm to the sides, 550mm directly to the front and 350mm to any combustible flooring.

If the mantelpiece protrudes further than 100mm from the fireplace, then it will be necessary to have further clearance to the top of the stove. The distance the mantle protrudes past the 100mm should be added to the clearance.

For example, if the mantle protrudes 200mm, the clearance to the mantle should be 650mm. (See Fig 2).

If there is a studed wall surrounding the fireplace as in Fig 2, ensure the clearances in this Fig are adhered to.

Fig 2



## MINIMUM DISTANCE TO COMBUSTIBLE MATERIALS

**NOTE:** Combustible material refers to any material that will degrade when subjected to heat e.g. plaster.

Due to the heat of a hot stove, a suitable fire guard should always be used to provide additional protection. Never allow young children to be left unsupervised in a room containing a hot stove.

Note; If in doubt, refer to the Building Regulations 2000 Approved Document "J".

## THE CHIMNEY

The stove is supplied with a flue pipe connector complete with fixing screws. The stove should never be connected to a shared chimney/flue system.

Flue pipes with a smaller cross-sectional area than that of the stove outlet should never be used. Flue pipes must not project into the chimney connector, such as to cause a restriction to the gas flow.

Sizes of flues in chimneys are stipulated in Table 2 of the Building Regulations 2000 Approved Document "J" as follows:

- Stoves under 20kW rated output which burn smokeless or low volatile fuel require a minimum flue size of 125mm diameter (or rectangular flues having the same cross-sectional area and a minimum dimension not less than 100mm for straight flues or 125mm for flues with bends or offsets.

Liners should be installed in accordance with their manufacturer's instructions. Appropriate components should be selected to form the flue without cutting and to keep joints to a minimum. Bends and offsets should be formed only with the matching factory-made components. Liners need to be placed with the sockets or rebate ends uppermost to contain moisture and other condensates in the flue. Joints should be sealed with fire cement, refractory mortar or installed in accordance with their manufacturers instructions. Ensure the joints are completely sealed as air leakage will lead to poor performance. Avoid having more than two bends in the flue system. Any offset between bends should be minimised and the flue should be equipped with suitable access doors for inspection & cleaning. For further detail refer to Building Regulations document "J".

**A range of suitable flue pipes, cowls and fire cement are available from your Clarke dealer.**

Special methods are required when passing through a wall or ceiling. Please refer to your local building regulations and/or fire department. Refer to Building Regulations Document "J".



CAUTION: THIS STOVE MUST NOT BE INSTALLED INTO A CHIMNEY THAT SERVES ANY OTHER HEATING APPLIANCE. THERE MUST NOT BE AN EXTRACTOR FAN FITTED IN THE SAME ROOM AS THE STOVE, AS THIS CAN CAUSE THE STOVE TO EMIT FUMES INTO THE ROOM.

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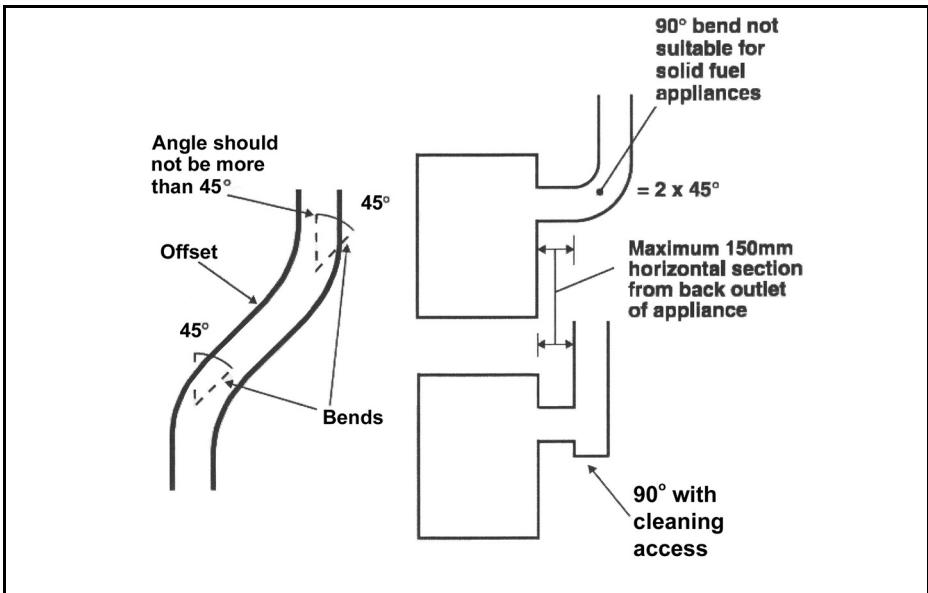
## FLUE HEIGHT

The chimney height and the position of the chimney should conform to the Building Regulations document "J". Flues should be high enough to clear the products of combustion. The height necessary for this will depend on the type of the appliance, the height of the building, the type of flue and the number of bends in it, and an assessment of local wind patterns. However, a minimum



flue height of 4.5m could be satisfactory if the guidance in paragraphs 2.10 to 2.12 of the Approved Document "J" is adopted.

**FIG 3**



As an alternative approach, the calculation procedure within BS EN 13384-1 (2005) can be used as the basis for deciding whether a chimney design will provide sufficient draught. If in doubt, consult the Building Regulations.

The outlet from a flue should be above the roof of the building in a position where the products of combustion can discharge freely and will not present a fire hazard, whatever the wind conditions.

## **BENDS IN FLUES**

Openings for inspection & cleaning should be formed using purpose factory-made components compatible with the flue system, having an access cover that has the same level of gas-tightness as the flue system and an equal level of thermal insulation.

Offsets in flues are only acceptable if the following rules are respected:

- The chimney system shall have no more than 4 bends in total; - 2 bends in the chimney and 2 bends in the flue pipe connection.
- The offset shall provide a change of direction no more than 45 degrees from the vertical.
- The run of the chimney between bends shall not exceed 20% of the total chimney length.

Maximum length of horizontal flue must not exceed 150mm (6").

## **INSPECTION & CLEANING**

Check that the chimney is in good condition, dry and free from cracks and obstructions. The diameter of the chimney should not be less than 150mm and not more than 230mm. If any of these requirements are not met, the chimney should be lined by a suitable method.

The chimney must be swept before connection to the stove. Where the chimney is believed to have previously used; it is possible that the higher flue gas temperature from the stove may loosen deposits that were previously firmly adhered, with the consequent risk of flue blockage. It is therefore recommended that the chimney be swept a second time within a month of regular use after installation.

Assuming that when the stove is first installed, the chimney is clean, and sound, then the chimney flue should be inspected part way through the burning season to establish the regularity of sweeping required. If you have any doubts about the suitability of your chimney, consult your local dealer/stockist.

If there is no existing chimney, then a prefabricated block chimney in accordance with Building Regulations Approved Document J, or a twin-walled insulated stainless steel flue to B.S.4543 can be used. These chimneys must be fitted in accordance with the manufacturer's instructions and Building Regulations.

## **FLUE DRAUGHT**

A flue draught of minimum 1.2mm to a maximum 2.5mm water gauge is required for satisfactory stove performance. The flue draught should be checked under fire at high output. If it exceeds the recommended maximum, a draught stabiliser must be fitted so that the rate of burning can be controlled to prevent over-firing. If the reading is less than the recommended minimum, then the performance of the stove will be compromised.

## **AIR FOR COMBUSTION**

Any room or space containing a stove should have a permanent air vent opening of at least the sizes shown in the table below. For stoves designed to burn a range of different solid fuels, the air supply should be designed to accommodate burning the fuel that produces the highest heating output.

There must always be a permanent means of providing air for combustion into the room in which the fire is installed. A permanent vent with a total free area of at least 550mm<sup>2</sup> for every kW rated above 5kW should be connected directly to the outside air or an adjacent room which itself has a permanent vent of the same size direct to the outside air. The fitting of an extractor fan to either of these rooms is not permitted.

## CONNECTION TO THE CHIMNEY

Stove Air Supplies	
Stove with flue draught stabiliser	<p>Permanently open vents as below:</p> <p>If design air permeability <math>&gt;5.0\text{m}^3/(\text{h.m}^2)</math> then            300mm<sup>2</sup>/kW for first 5kW of appliance rated output            850mm<sup>2</sup>/kW for balance of appliance rated output</p> <p>If design air permeability <math>&lt;5.0\text{m}^3/(\text{h.m}^2)</math> then 850 mm<sup>2</sup>/kW for balance of appliance rated output</p>
Stove with no flue draught stabiliser	<p>Permanently open vents as below:</p> <p>If design air permeability <math>&gt;5.0\text{m}^3/(\text{h.m}^2)</math> then 550 mm<sup>2</sup>/kW of appliance rated output above 5kW</p> <p>If design air permeability <math>&lt;5.0\text{m}^3/(\text{h.m}^2)</math> then 550 mm<sup>2</sup>/kW for balance of appliance rated output</p>

**This MUST be carried out by an accredited/competent person and/or approved by your local Building Control Officer before using the stove.**

Any existing flue must be in good condition with suitable access for collection and removal of debris. Details of suitable linings for use with solid fuel are given in the official HETAS guide that can be viewed on their website at [www.hetas.co.uk](http://www.hetas.co.uk).

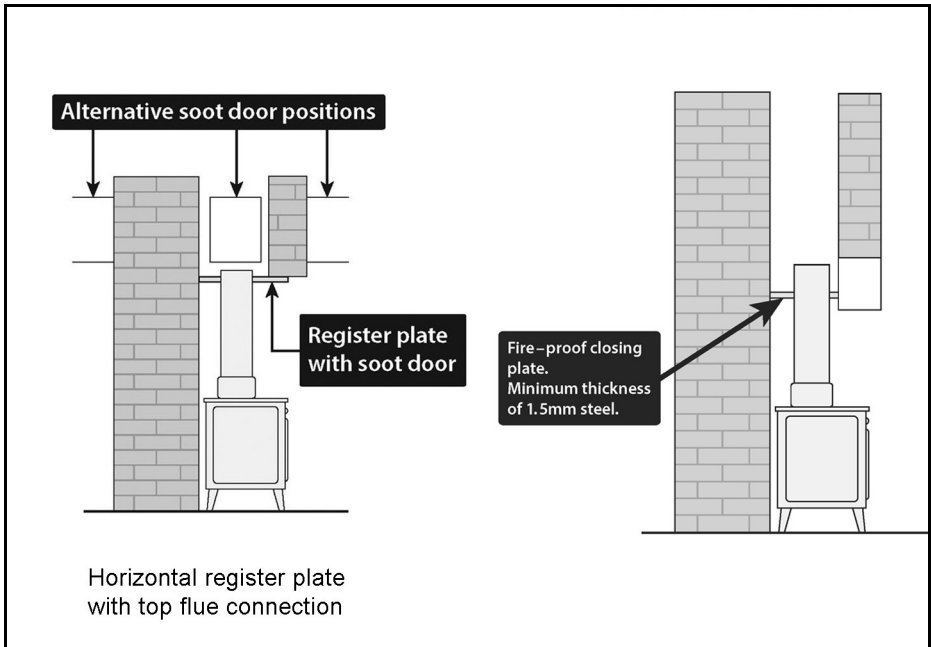
It is also important that suitable flue pipe complying with Building Regulations is used to connect the stove to the chimney flue and that suitable access is provided into the flue for regular inspection and sweeping of the flueways.

Chimneys should be as straight as possible and horizontal runs should be avoided. Refer to the typical installation diagrams. Flue connections must be well sealed.

The chimney may be swept through the door opening, but if it is not possible to pass the sweeps brush through the stove, a soot door will be necessary. This may be either in the actual brickwork of the chimney or fitted in the register plate. Suitable positions of soot doors are shown in Figure 4.

**Important! Never fit an extractor fan in the same room as this stove.**

**FIG 4**



A non-combustible register plate minimum 1.5 mm thick should be fitted to all installations between the flue and the building structure. It's suitability and fit should be checked by a qualified stove installation engineer against the current Building Regulations App"J".

## **CLEANING THE FLUE**

Access for cleaning the flue should be incorporated in the system other than through the appliance (e.g. a soot door or access through a register plate). Purpose-made soot doors and inspection lengths are available from the Clarke range. Ensure that the whole length of the flue can be reached from the soot door.

If necessary, seek professional advice.

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# UNPACKING

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**WARNING: DUE TO THE WEIGHT OF THE STOVE IT IS RECOMMENDED THAT TWO PEOPLE PERFORM THE UNPACKING.**

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Unpack the stove and remove packing materials. Open the door and remove all loose items from inside the stove.

Before assembling, please check contents against the following list and advise your dealer immediately if any parts are missing. Refer also to parts list & diagram on pages 28 & 29.

- 1 x Cast Iron Inset Stove c/w Steel Casing
- 1 x Flue Collar
- 1 x Log Retainer
- 1 x Ash Pan
- 1 x Ash Pan Handle Tool
- 5 x Parts Packs containing:

Door Handle

Shake Handle

Self-tapping screw

Allen wrench

Collar fixing screws c/w wrench

## TOOLS REQUIRED

- x-head screwdriver
- 10mm wrench

A full range of flue pipes and fire cement is available from your Clarke dealer.



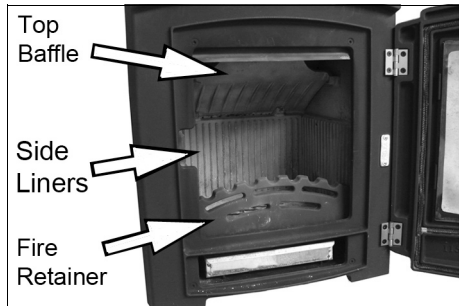
Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment.

## PREPARATION

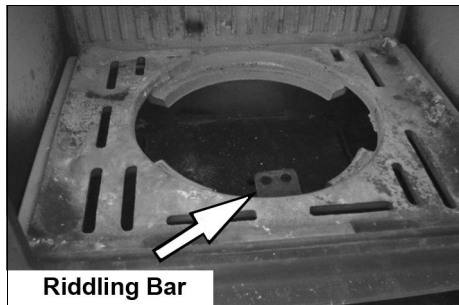
After removing the stove from the crate, open the door and remove the loose items and packing.

- Prior to installation, removal of the internal components is required in order to access the fixings connecting the base of the stove to the outer casing and to reduce the weight during installation.

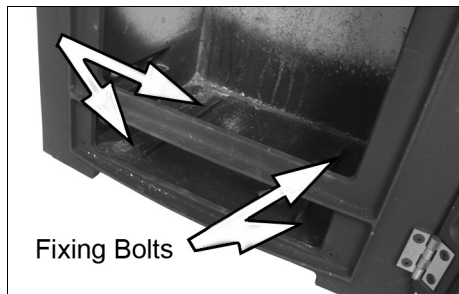
1. Remove the left/right side liners which are loose and just need to be lifted clear of the grate support plate.
2. Remove the loose baffle by lifting the front edge until it hits the top of the stove and then slide it forward. Drop the rear edge and the baffle will slide down.



3. Next, remove the riddling grate by pushing it from underneath. The riddling bar is fixed to the grate with two bolts which need to be undone.
4. Remove the flue connector with its gasket, by removing the two bolts, nuts and washers.



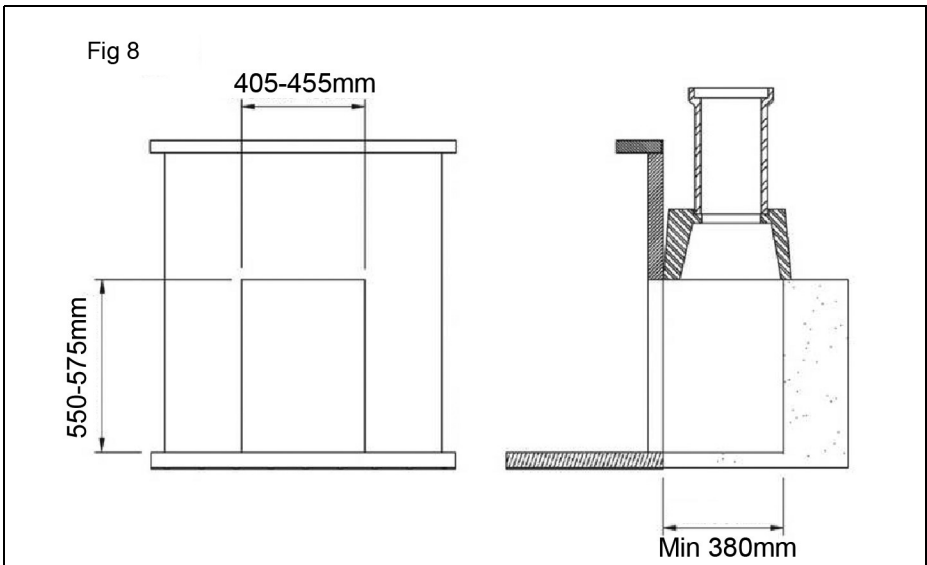
5. Remove the grate support plate by lifting it from underneath.
  - This will allow access to four fixing bolts which attach the stove to the outer steel casing.
6. Lift away the rear liner and tilt it so that it will pass through the door opening.



Finally, remove the four bolts, allowing the insert stove to be removed from the external casing.

## FITTING AND ASSEMBLY

1. Prepare the fireplace area with fireback or millner brick removal. Ensure the opening is suitable for fitting of the insert stove, i.e. remove the fire surround trim if fitted. See Fig 8.
2. Ensure the floor area is level with the hearth, this area needs to be level as the insert fire is screw fixed to the floor.
3. Lay the external casing into the opening and position it so that the front edge protrudes 20mm past the front edge of the opening.



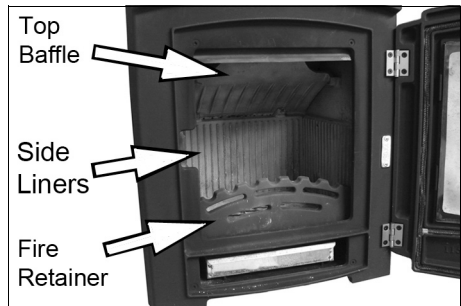
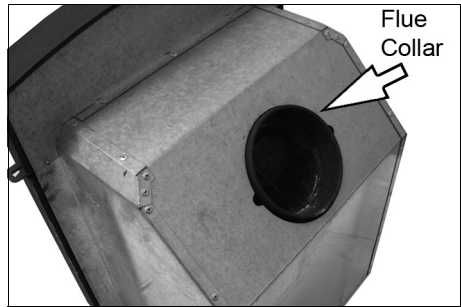
4. Mark the fixing location and drill the holes using a 5.5mm drill bit. Fix the casing to the floor using the self tapping screws provided.
5. With the flue liner installed in the chimney, line it up with the flue connector and drill appropriate holes for a self tapping screw.
6. Secure the flue to the connector using chosen fixings (not supplied).
7. Ensure a good seal is achieved with the flue connector by using fire cement.

Lift the stove into the external casing with all internal parts removed. The stove can be lifted into the casing and then pushed into the final position while taking care to lift the front edge not to damage the hearth. Fix it in position using the fixing bolts in the base of the stove.

## RE-ASSEMBLY

Fit the individual components back into the stove in the following order:

1. Fit the flue connecting collar to the stove box using the screws, washer and nuts provided.
2. Stand the rear firebrick in position.
3. Tilt the grate support up on one side and pass it through the door opening, it should then rest on the supports above the floor of the stove.
4. The grate lays into the grate support after reconnecting the riddling control tongue with the two bolts.
5. Hold the top baffle by the 'L' shaped end with the fold turned up. Manoeuvre it diagonally through the door opening and then drop the rear edge to the rear of the stove. Lift the 'L' shaped edge up over the 'L' shape on the side castings.
6. Move the baffle as far as possible to the front and top. Then lift the back edge up and allow the baffle to rest on the top rib on the back and in the 'L' shape on the side castings.
  - **Note:** The row of secondary air holes must be visible underneath the baffle.
7. Stand the side firebricks in position
8. Set the fire retainer into the slots provided.



Attach the handle to the door using the screwed centre spigot.

## COMMISSIONING THE STOVE

1. Check the soundness of seals, castings and joints.
2. Check the operation of the air controls.
3. Carry out a smoke draw test by warming the flue with a blow-lamp, or similar, for about 10 minutes. Place a smoke pellet on the centre of the firebox, with the air controls open. Smoke should now be drawn up the flue and be seen to exit from the flue terminal.
  - Complete the test with all doors and windows closed in the room where the appliance is fitted.



If there are any extractor fans in adjacent rooms, the test must be repeated with the fans running on maximum and interconnecting doors open.

4. Check the effect of any ceiling fans during the test.
5. If the test fails, re-check the suitability of the flue system and ventilation. An inadequate air supply to the room is potentially dangerous.
6. Light the stove and slowly increase the temperature to operating levels.
7. Ensure no combustion products enter the room.
8. When the appliance reaches operating condition carry out a smoke spillage test with a smoke match or pellet around the opening.
9. If excessive smoke spillage occurs allow the appliance to cool and re-check the flue system and ventilation.

## **CARBON MONOXIDE ALARMS**

Due consideration should be given to the dangers of carbon monoxide poisoning following incomplete combustion of solid fuels in an enclosed space. Carbon monoxide detectors to BS EN 50291 are available for use in domestic premises and details are available in the official HETAS guide that can be viewed on their website at [www.hetas.co.uk](http://www.hetas.co.uk).

Where a new or replacement fixed solid fuel 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 the working life of the alarm 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 stove:

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

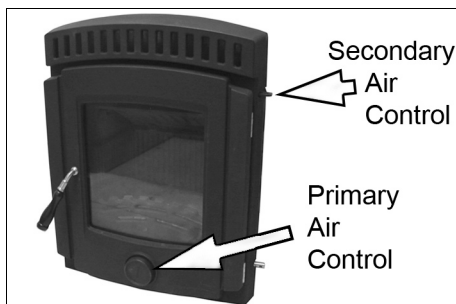
Further guidance on the installation of carbon monoxide alarms is available in BS EN 50292:2002 and from manufacturers instructions. Provision of an alarm should not be regarded as a substitute for correct installation and regular servicing.

# USING YOUR STOVE

## THE CONTROLS

The amount of heat emitted by the stove is regulated using the primary air control at the bottom of the door.

- When screwed in, this reduces the airflow through the stove and dampens the combustion.
- When screwed out the airflow is increased which increases the combustion rate.

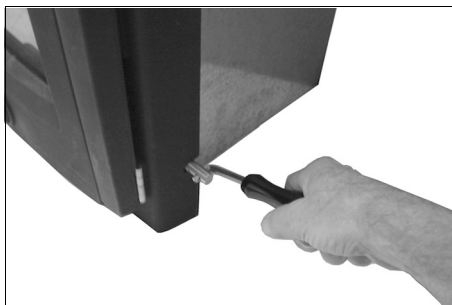


Secondary air is also inducted via an upper air control at the top of the stove. This control can also be used as an "air wash" facility and should help keep the door glass clear of combustion deposits.

- The control can be moved to the side and corresponds to a series of holes in the stove front.

A further control is provided for riddling (moving) the grate panel to dislodge any accumulation of loose ash into the ash pan. This is operated using the Shake Handle (supplied loose), which is engaged with the control rod when required.

- Moving the control rod to and fro will rotate the grate while twisting the control raises/lowers the grate.



## WOOD BURNING

When first igniting or after re-fueling, both the lower (primary) and upper (secondary) controls should be fully opened. When the fire is burning vigorously, more fuel should be added as required. When the stove body becomes hot, the **lower** control should be closed. The combustion rate can then be controlled by adjusting the position of the **upper** control.

## SOLID FUEL

When first igniting or after re-fueling, both the lower (primary) and upper (secondary) controls should be fully opened. When the fire is burning vigorously, more fuel should be added as required. When the stove body

becomes hot, the **upper** control should be closed. The combustion rate can then be controlled by adjusting the position of the **lower** control.



**Warning: THE TEMPERATURE OF THESE ITEMS DURING OPERATION COULD CAUSE AN INJURY TO THE END-USER. AS THESE ARE INTENDED TO BE ADJUSTED DURING OPERATION, IT IS RECOMMENDED THAT PROTECTIVE GLOVES ARE WORN WHEN HANDLING THESE PARTS.**

## TYPES OF FUEL

This stove will function with wood or solid fuel, but in general all fuel should be dry and timber should be well seasoned so as to have a moisture content below 20%. The use of damp wood will result in more soot and tar deposits being left in the chimney, flu and stove, and will not release heat if thermal energy is being used to drive out moisture from the fuel.

Other fuels can be used together with wood, provided the base of the fire remains as wood or compressed block fuels. Coal products can be added to this provided the volume of coal products is less than that of other fuels

With solid fuels, there is less need to burn the stove hard after refuelling. The rate of refuelling will also be less often than with wood.

Avoid using the stove to incinerate other materials including household waste. Avoid using 'green' unseasoned wood, treated wood such as telegraph poles, or plywood / chipboard containing glues and resins which pollute the environment and cause the fire to burn too quickly.

Such materials can produce excessive tar or creosote which can be damaging and in extreme cases cause a fire inside the chimney.

The dryness of wood can be assessed by looking at the end of the log. Radial cracks, deep enough to be considered as splits should be present in dry, seasoned logs.

The maximum length of fuel suitable for this stove is approx 30 cm so as to lay flat over the embers, and logs of greater than 10 cm diameter should be split.

Confirm with your fuel provider as to which type will suit best. Larger fuels will allow a greater draught in the firebox which will speed up combustion. Household coal produces more ash & chimney deposits than smokeless fuels.

For further information on type and availability of fuel, the Solid Fuel Association (<http://www.solidfuel.co.uk>) serves as an advice centre to domestic consumers including all aspects of fuel types.

The UK Smoke Control Areas website (<http://www.uksmokecontrolareas.co.uk>) defines the location of smoke controlled areas throughout England, Scotland, Wales and Northern Ireland and lists all fuels which are authorised for use in Smoke Control Areas. However, you should check with your local council to confirm that you can use a stove in a smoke controlled area.

## **INITIAL SEASONING**

Following installation, and before regular use, the stove must be seasoned to prevent cracking of the metal casting. This procedure should also be followed if the stove has not been used for prolonged periods (during the summer months for example), and is carried out as follows:

1. Light a small fire in the middle of the stove, well away from the sides.
2. Allow the stove to warm up slowly and evenly with the air controls almost closed, avoiding intense flames.
3. Keep the fire burning for three hours or so, gradually increasing the size of the fire using larger logs which will burn naturally but slowly, keeping the stove on a low setting.
4. After a couple of days burning at this level, increase the brightness & intensity of the fire gradually over the next 10 days.

Full strength fires should not be used until completion of approx 20 days of mild use. Only from this time will the stove have been properly seasoned

It should be remembered that this procedure should be carried out at the beginning of each season of use in order to remove the moisture retained by the metal during the period of non-use.

When used for the first time the fireplace may smell a little, due to gas being given off. The gas is not toxic but the room should be thoroughly ventilated. Let the fire burn with a high draught until no smells can be detected.

Take care not to open the stove door too vigorously in case of causing smoke spillage. If smoke spillage occurs after the fire door has been opened this could be due to poor chimney draft. SEE TROUBLESHOOTING.

## **FIRE-LIGHTING WITH WOOD**

1. Open the air controls.
2. Lay firelighters or rolled up newspapers on the grate with a reasonable quantity of dry kindling wood. Place 2 or 3 small logs on top.
3. Light the newspaper or firelighters using a long taper and close the door.
4. When the fire is burning strongly, add further logs up to 10mm diameter.
5. When the stove is really hot, close the air controls as required. Ensure there are lasting flames until the wood becomes charcoal.

## **FIRE-LIGHTING WITH SOLID FUEL**

1. Open the air controls.
2. Lay firelighters or rolled up newspapers in the stove with a reasonable quantity of dry kindling wood. Place a small quantity of solid fuel on top.

3. Light the newspaper or firelighters using a long taper and close the door.
4. When the fire is burning strongly add further fuel.
5. When the stove is hot, reduce the opening of the air control.
6. The burn rate can be reduced by partially closing the air control.

## **REFUELLING**

1. Always open the door slowly to avoid a sudden rush of intake air and smoke escaping into the room and add fuel.
2. Open the air controls and leave open for a few minutes to allow the gasses in the wood to burn before closing the air controls.
  - The rate of refuelling and heat available are dependant upon individual requirements based upon the user's experience. When re-loading, it is normally necessary to burn the stove fast initially, to drive off any gasses and moisture, before closing the air vents to control the burn rate.
3. Ensure the door is kept closed to contain fumes except when lighting up, re-fuelling or removing ash.
  - It is not recommended to leave the stove alight at night or to continue using the stove in mild weather which gives poor combustion leading to a greater buildup of soot.
  - If overnight burning is required, it can best be achieved by first driving off any gasses or moisture as usual, following a full charge of fuel and then closing the air vents fully. Experience will indicate the optimum setting. However, by reducing the burn rate to such a level that the fire is still burning the following day, the burning process creates heavy, tarry chemicals which will become deposited on the inside of the flue or chimney. This is an inefficient process which greatly increases the risk of a chimney fire and makes it necessary to sweep the chimney more often.

## **FUME EMISSIONS**

To avoid chimney problems, your fire should not be burnt slowly for longer than 12 hours without a period of fast burning.

Properly installed and operated, this stove will not emit fumes. Occasional fumes from de-ashing and refuelling may occur. Persistent fume emission must not be tolerated. If fume emission persists, the following immediate action should be taken:-

1. Open doors and windows to ventilate room.
  - Let the fire out, or eject and safely dispose of fuel from the stove.
2. Check for flue chimney blockage and clean if required.

- Do not attempt to re-light the fire until the cause has been identified and corrected.

## **ASH REMOVAL**

Keep the stove free from a heavy buildup of ash. The frequency of this is dependant upon the type and quality of fuel being used. Ash should be removed before it builds up to the underside of the grate, at which point, the grate would be burning hot on both sides, shortening its life expectancy.

When disposing of ashes, ensure they have cooled and always place in a metal container. Be sure to remove the ash when the fire is at its lowest point, such as first thing in the morning.

The Clarke Ash Can Filter is ideal for use in conjunction with the Clarke range of vacuum cleaners, for collecting hot ash and debris from stoves.

## TROUBLESHOOTING

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
Fire difficult to start.	Wood green, too damp or poor quality.	Use recommended fuel.
Fire goes out.	Logs are too large.	When lighting, use small, dry kindling. To maintain the fire use split logs.
	Air starvation	Open air control.
	Insufficient draught.	Check that flue is not obstructed, sweep flue if necessary.
Fire burns too quickly.	Too much draught.	Ensure the air control is closed.
		Install a draught stabiliser. Consult your dealer.
		Do not continuously burn small wood, sticks, carpentry offcuts, plywood etc
Stove smokes when lighting up.	Flue duct is cold.	Burn paper and kindling wood to increase heat.
	Room is at negative air pressure to the outside.	In houses equipped with mechanical ventilation, open a window until the fire is well established.
Low heat output.	Incorrect fuels.	Use recommended fuels.
Smokes while burning	Draught is insufficient	Consult a chimney specialist. Check that flue is not obstructed. Sweep if necessary.
	Downdraught present.	Install an anti-downdraught cowl. Consult your dealer.
	Room is at negative pressure to outside.	In houses equipped with mechanical ventilation, an outside air intake must be installed in the chimney.
Smoke spillage when opening door.	Chimney not tall enough to be clear of roof line.	Increase height of chimney.
	Poor sealing of flue-pipe joints.	Re-connect flue or replace jointing material
	Flue is partially blocked with soot.	Arrange to have chimney swept.
	House too tightly sealed.	Ensure a fresh air supply is reaching the stove.

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# MAINTENANCE

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## CLEANING

The inside of the stove may require regular cleaning, especially during periods of peak use, the frequency of this being indicated by experience. It is advisable to wear a dust mask, protective gloves and safety glasses when cleaning.

Use a stiff brush and industrial type vacuum cleaner to dislodge and remove as much material as possible, starting at the top of the stove and working down to the bottom. Particular attention should be given to the air inlet controls which can become obstructed. A CVAC Ash Can Filter and vacuum cleaner is ideal for this process.

## GENERAL MAINTENANCE

Take this opportunity to check for any damaged parts inside the stove. In the event of damage or broken components, replacements can be obtained from Clarke Parts & Service. On no account should unauthorised spare parts be used.

The stove and flueway should be inspected and maintained when in a cold condition. No unauthorised modification of this product should be carried out. This stove requires regular maintenance by a competent engineer.

## STOVE BODY

The stove is finished with a heat-resistant paint which can be cleaned with a soft brush. Wait until the stove has cooled down before doing this. This finish can be renovated with Clarke stove paint, although the paint may not be an exact match and it may be necessary to repaint the complete stove.

If the stove is purely ornamental, painting will provide a durable, attractive finish. If the stove is used for heating, a high temperature heat resistant paint (available from your Clarke dealer) must be used, in either aerosol or brush applied form. Should rust become apparent, clean thoroughly with a wire brush and apply a suitable anti-rust treatment.

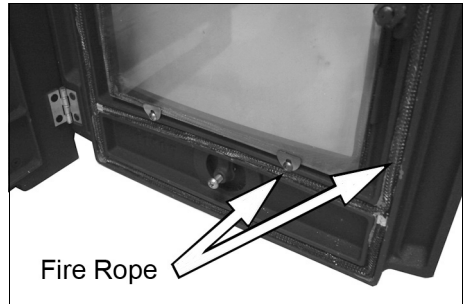
During prolonged periods out of use, the air inlet should be left open and the door left slightly ajar in order to circulate fresh air and discourage condensation from forming which could encourage corrosion.



## **FIRE ROPE**

Check the rope around the door and glass. If rope is becoming detached, replace with rope approved for this purpose.

Inspect the fireproof door seals where fitted, to ensure there is an effective seal around the door and re-fix it if loose using stove rope adhesive. If in poor condition it should be replaced.

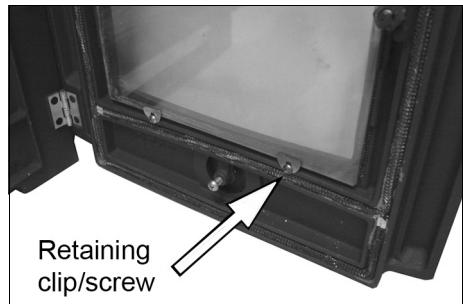


## **GLASS PANELS**

Clean any glass panels when cool, avoiding abrasive substances which could scratch the glass and make subsequent cleaning more difficult. Wet logs against a heated glass, a badly aimed poker or heavy slamming of the doors could crack the glass panels. The glass will not fracture with heat. Never replace any broken glass with glass NOT approved for use with stoves.

The window glass should remain clean during normal use but it can become blackened if the stove is being operated with either damp fuels or at a slow burn rate. The blackening may be dispersed by burning briefly at a much higher temperature, or it may be cleaned off using specialist glass cleaner.

In the event of the glass being broken, it can be removed by unscrewing the retaining clips, taking care not to damage the fireproof seal. The replacement glass should be carefully placed against the seal and the retaining clips re-tensioned. Take care to tension these evenly or there is a risk of breaking the new glass pane.



## **CHIMNEYS AND FLU-WAYS**

It is important that the chimney, flu-ways and any connecting flue pipe are swept regularly. This means at least once a year for smokeless fuels and at least twice a year for wood and other fuels.

Only wire-centred sweep's brushes fitted with a guide wheel should be used. If it is not possible to sweep all parts of the chimney through the stove, ensure there is adequate access to cleaning doors.

If the stove is fitted in place of an open fire, then the chimney should be swept one month after installation to clear any soot falls which may have occurred, due to the difference in combustion performance between the stove and the open fire.

The flue and chimney should be inspected for a buildup of deposits especially following prolonged periods without use. The entire chimney/flue should be swept frequently from top to bottom by a registered chimney sweep to remove any buildup of soot etc, the frequency being dependant upon the usage and the fuels being burnt. If the chimney is swept after a few weeks of regular use, the condition found will give an indication of the frequency of sweeping required. On an annual basis, the chimney is best swept just before the main winter burning season.

HETAS recommends that chimney sweeping is best carried out by an approved chimney sweep who will normally be a member of the National Association of Chimney Sweeps or the Guild of Master Sweeps, details of which can be found on the HETAS website, [www.hetas.co.uk](http://www.hetas.co.uk).

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## ACCESSORIES

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Refer to the Clarke website [www.clarkeinternational.com](http://www.clarkeinternational.com) for a full range of Flue Pipes & Cowls for use with this classic cast iron stove. See also the following accessories;

Fire Cement (1Kg tubs) Part No: 6910000

Ash Can Filter Part No: 6471130

Paper Briquette Maker Part No:1801617

Matt Black Stove Paint (500ml) Part No: 6910200

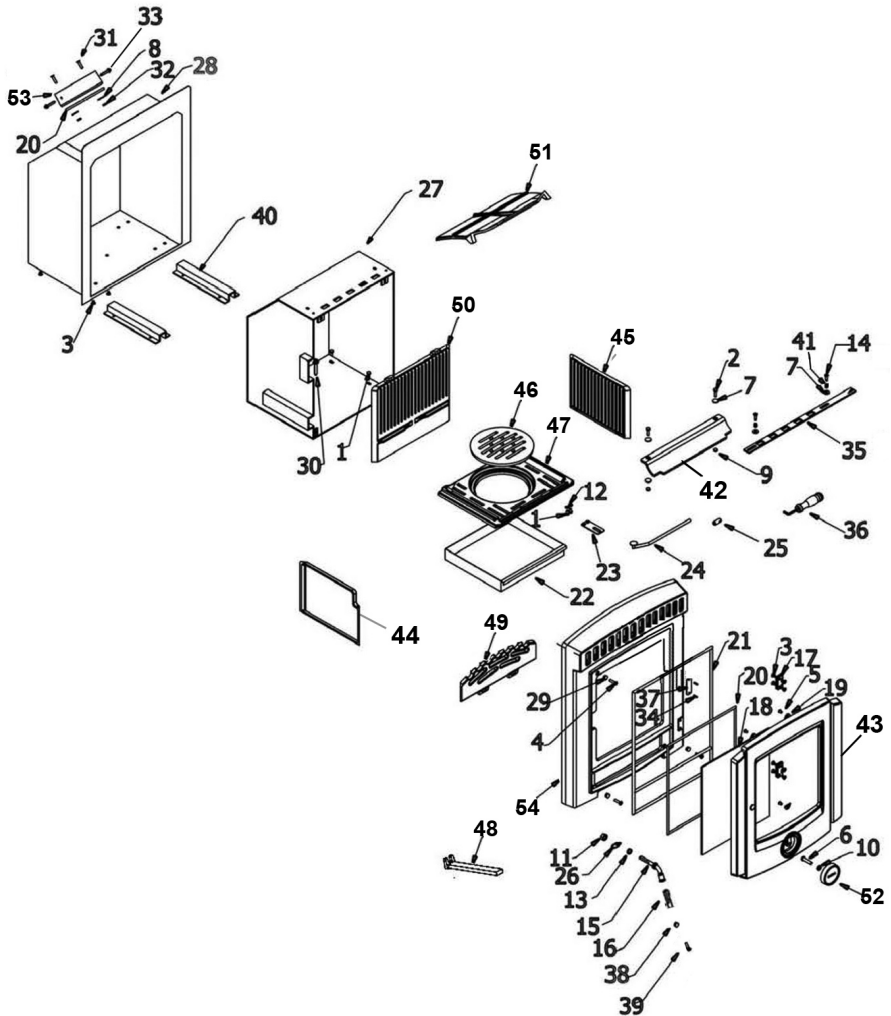
Electric Log Splitters;

Logbuster 5 Part No 3402030

Stand also available Part No 3402045

See also Logbusters 4, 6, 7 & 8

# PARTS DIAGRAM



## COMPONENT PARTS

POS	DESCRIPTION	CODE	POS	DESCRIPTION	CODE
1	Bolt M6 x 10	CA0211	28	Steel Outer Shell	CAWK02
2	Bolt M6 x 20	CA0213	29	Nut M6	CA0407
3	Hinge Screw	CA0293	30	Bolt M6 x 50	GXGZ-1
4	Bolt M6 x 25	CA0275	31	Bolt M6 X 25	CA0275-1
5	Hex m/c Screw M6x8	CA0293-1	32	Nut M6	CA402-1
6	Air Control Spigot	CA0267-02	33	ST Screw	GXGZ-2
7	Spacer 6 dia x 18	CA0301	34	Rivet 5 x 12	BXGMD-2
8	Washer 6 dia x 22	CA0302	35	Air Control bar	CA1113-11
9	Nut M6	CA0402	36	Shake Handle	CA0137
10	Locknut M8	CA0403	37	Serial Plate	CAI0101ZJ
11	Nut M10	CA0412	38	Washer 8 dia	CA0501-1
12	Bolt M6	CA0501	39	Bolt M8 x 105	CA0266
13	Spacer 10 dia	CA0502	40	Base Runner	CAWK0105
14	Screw M5	CAL0112	41	Screw	CA0707
15	Door Handle	CA101-ZH	42	Front Baffle	I1109
16	Loose Door Handle B	CAD0202	43	Door Body	I1507
17	Door Hinge	CA1602	44	Right Side Liner	I1113
18	Window Glass	CA10T11	45	Left Side Liner	I1112
19	Glass Retaining Tab	CA1112	46	Riddling Grate	I1115
20	Fire Rope	CA801	47	Grate Base	I1114
21	Door Fire Rope	CA802	48	Ashpan Handle	CA105
22	Ash pan	CA1209	49	Log Retainer	I1120
23	Grate Tab	CA1102	50	Rear Liner	I1111
24	Grate Riddling Bar	CA1401-15	51	Top Baffle Plate	I1141
25	End Knob	CA0114	52	Air Control Disc	CAF0660
26	Door Latch Tab	CA1505	53	Flue Connector	125(2)
27	Inner Shell	CANK02	54	Front Panel Casting	I1503

# DECLARATION OF CONFORMITY



## DECLARATION OF PERFORMANCE FOR SOLID FUEL HEATING APPLIANCES



PRODUCT NAME		STANDARDS & TESTING		INTENDED USE		DECLARED PERFORMANCE																							
Beaulieu		KIWA LTD T/A KIWA GASTEC NB 0558 16/07/2012		Domestic Heating		Tested By:		Notified Body No:		Date Tested:		Test Standard:		System of Assessment:		1		2		3									
4.7		Wood		Room		Nominal Heat Output kW		5.0		Ancit		Fuel Types		Efficacy (Net) %		Flue gas temp. rise °C		Gas Flow g/sec		Emissions at nominal output related to 13% O <sub>2</sub>									
n/a		n/a		Water		Wood		78.5		Wood		295		3.6		306		4.0		Smoke mg/m <sup>3</sup>									
						Ancit		75.7		Ancit		3.6		4.0		4.0		4.0		NO <sub>x</sub> mg/m <sup>3</sup>									
								295		Wood		306		3.6		4.0		4.0		CO %									
								75.7		Ancit		295		3.6		4.0		4.0		CH <sub>4</sub> mg/m <sup>3</sup>									
								35		Wood		306		3.6		4.0		4.0		Min. Safe Distance to Combustibles									
								-		Ancit		306		4.0		4.0		4.0											
								-		Wood		306		4.0		4.0		4.0											
								0.28		Wood		306		4.0		4.0		4.0											
								0.18		Ancit		306		4.0		4.0		4.0											
								-		Wood		306		4.0		4.0		4.0											
								-		Ancit		306		4.0		4.0		4.0											
								350																					

We Clarke International Ltd hereby declare that this product complies with the requirements of the Harmonised European Standards and Regulations cited on this document.  
Regulation (EU) No 305/2011 Construction Product Regulation.

Document No: 00001  
Issue Date: 13/01/2014

Signed:

  
J.A. Clarke  
Director.

Beaulieu Inset Stove D O P (RV1)

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# SERVICE HISTORY

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## 1ST SERVICE

Date of Service:.....

Next Service Due:.....

Signed:.....

Dealer's Stamp/HETAS Registration Number

## 2ND SERVICE

Date of Service:.....

Next Service Due:.....

Signed:.....

Dealer's Stamp/HETAS Registration Number

## 3RD SERVICE

Date of Service:.....

Next Service Due:.....

Signed:.....

Dealer's Stamp/HETAS Registration Number

## 4th SERVICE

Date of Service:.....

Next Service Due:.....

Signed:.....

Dealer's Stamp/HETAS Registration Number

## 5th SERVICE

Date of Service:.....

Next Service Due:.....

Signed:.....

Dealer's Stamp/HETAS Registration Number

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