

# BROSELEY evolution

## Installation & Operating Instructions

### ENDURE BALANCED FLUE ROOM SEALED GAS STOVE



PLEASE LEAVE THESE INSTRUCTIONS WITH THE END USER

Please note: Gas installations **MUST** only be carried out by installers who are Gas Safe registered.

**Warning** - Appliance should not be used if the glass is cracked, damaged or broken.

## Contents

Introduction	3
Packing List	3
Specification	4
Dimensions	5
Siting the Appliance	6-7
Hearth Requirements	8
<b>Assembly</b>	
Preparation	9
Burner Bracket	10
Flue Pipe	11
Terminal Guard	12
Gas Supply Connection	12
Removing the Glass	13
Positioning the Ceramics	14-16
Attaching the Top Cover Plate	16
Fitting the Stove Body	17
Pressure Testing	18
Operating the Stove	19
Maintenance	20
Commissioning Form	21
Servicing Instructions	22-23
Guarantee	24

## Introduction

### THANK YOU FOR PURCHASING A BROSELEY GAS STOVE

Broseley Fires Ltd, was founded as an appliance and design development company in 1975.

Since then we have built up an enviable reputation for the quality, reliability and fuel efficiency of our stoves.

These instructions have been carefully prepared to guide the installer and end-user through the relevant methods and standards for installation of your new Gas Stove.

Correctly installed and operated, your stove will give you many years of warmth and reliability. Therefore, we would suggest that you read the whole instruction manual prior to handing it to your installer. That way you will have a clearer picture of what is involved.

It is required by law that the complete assembly, installation and commissioning of gas stoves is carried out by a professionally qualified and accredited gas fitter listed on the “**Gas Safe**” register.

**THE INSTALLATION MUST BE IN ACCORDANCE WITH THE ‘GAS SAFETY INSTALLATION AND USE REGULATIONS’ IN CONJUNCTION WITH THESE INSTRUCTIONS AND THE RELEVANT ‘BRITISH STANDARDS CODES OF PRACTICE’ REQUIREMENTS AND THE RELEVANT ‘LOCAL AND NATIONAL BUILDING REGULATIONS’. A COMMISSIONING CERTIFICATE MUST BE LEFT WITH THE END CUSTOMER UPON FINAL COMPLETION AND THE COMMISSIONING FORM COMPLETED IN THE BACK OF THESE INSTRUCTIONS.**

## Packing List

### Burner Box

1 x Burner Assembly  
1 x Flue Pipe (including Terminal)  
1 x Pressure Test Elbow  
1 x Wall Plate  
1 x Terminal Guard  
1 x Ceramic Set (inside the Burner Assembly)  
1 x Steel Top Cover  
1 x Steel Fret  
2 x Magnets (small)  
1 x Cardboard Flue Template  
6 x Self tapping screws

### Stove Box

1 x Steel Stove Body  
1 x Burner Bracket  
1 x Banking Disc  
1 x Transit Bracket

Please note the burner box will also contain additional magnets, dowels, fixings, tape and wire which are not required for the Endure (these items are used when fitting the product as its Inset variant the “Invictor”). These items may be discarded.

**Chimney closure plates are not supplied**

## Specification

Gas Type	Natural Gas
Inlet Pressure	20 Mbar +/- 1 mbar
Gas Connection	8mm Pipe
Injector	162
Pilot	PXX1313
Input High Rate (Gross)	4.2 kW (0.4m <sup>3</sup> /hr)
Input Low Rate (Gross)	2.9 kW (0.27m <sup>3</sup> /hr)
Battery Type (electronic Igniter)	AA
Wall Depth (Max)	350mm
Minimum Flue Length (Excluding Terminal)	105mm
NOx Class	Class 3
Efficiency Class	Class 1

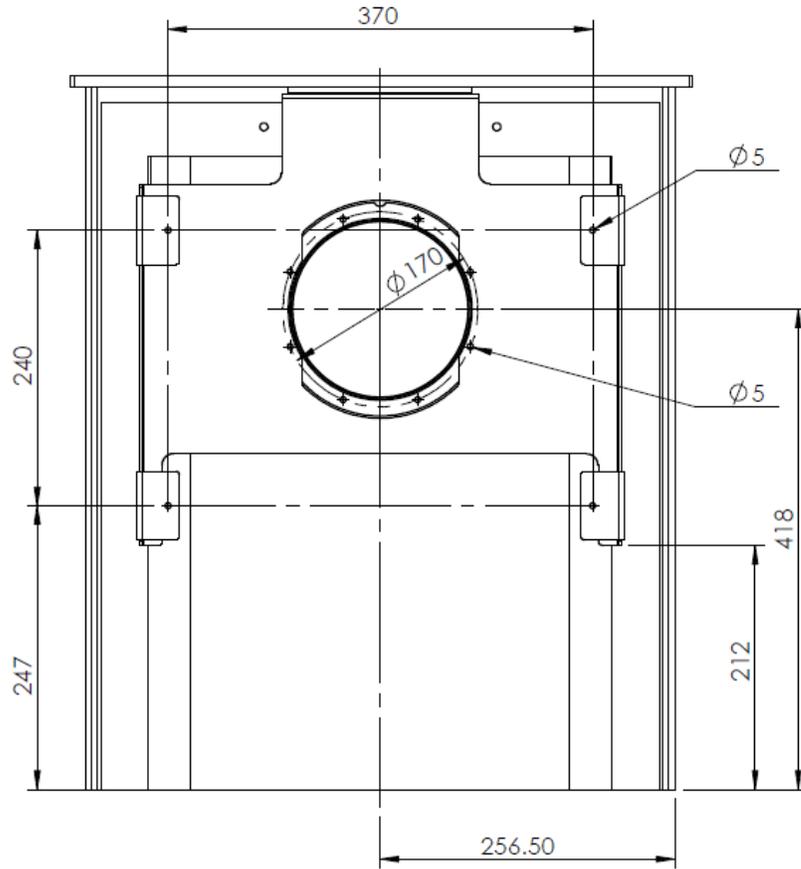
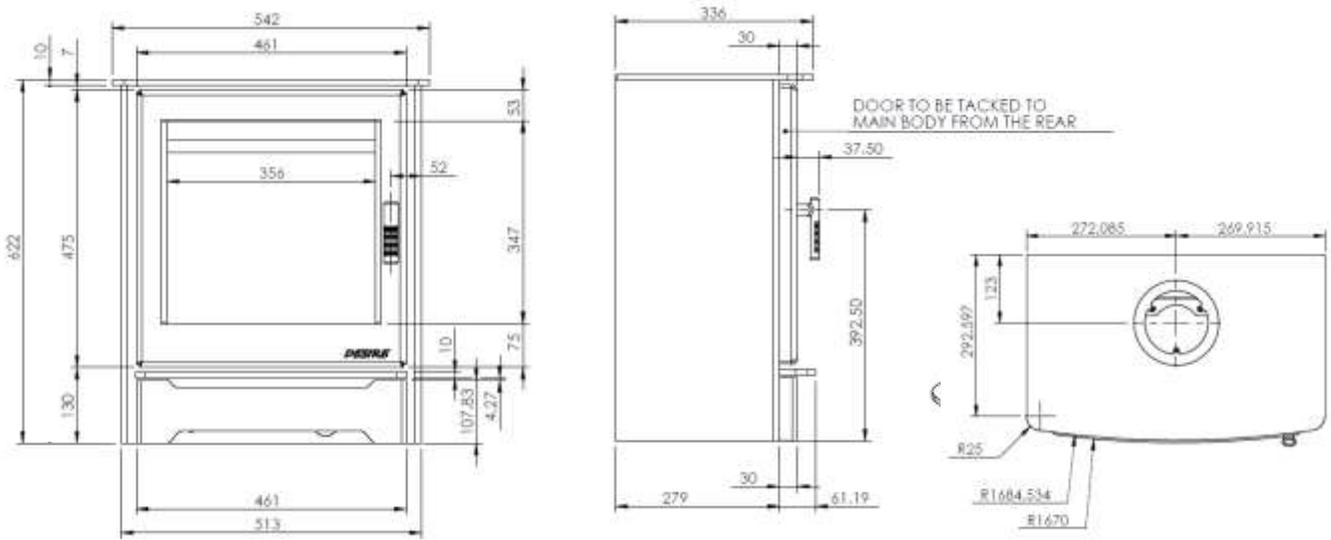
**Please note this product is designed to only use natural gas G20.**

The installation of this appliance must be in accordance with the relevant parts of the LOCAL AND NATIONAL BUILDING REGULATIONS as issued by the department of the Environment or BUILDINGSTANDARD (Scotland Consolidation) REGULATIONS issued by the Scottish Development Department

**Installation of this appliance must only be undertaken by a Gas Safe registered installer.**

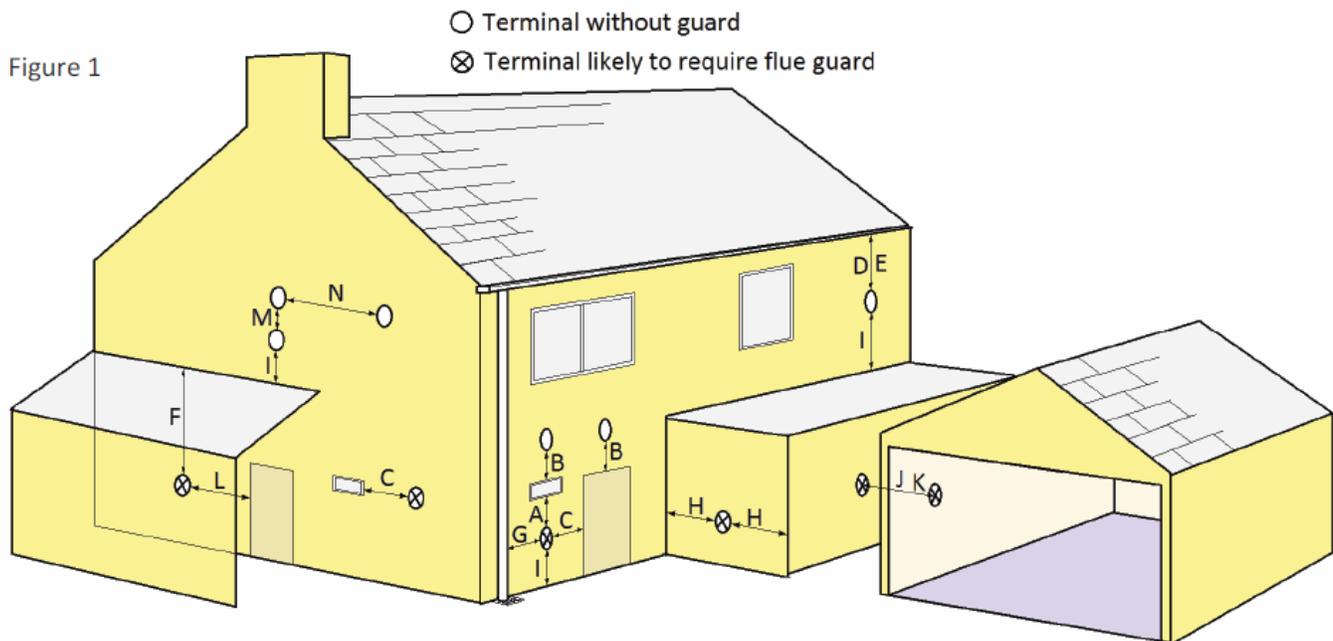
# Dimensions

All dimensions are in millimetres.



## Siting the Appliance

Regulatory requirements for flue terminal location



Key	Terminal Position	Minimum Distance
A*	Directly below an opening, air brick, opening window etc	300mm
B*	Above an opening, air brick, opening window etc	300mm
C*	Horizontally to an opening, air brick, opening window etc	300mm
D	Below gutters, soil pipes or drains	300mm
E	Below eaves	300mm
F	Below balconies or car port roof	600mm
G	From a vertical drain pipe or soil pipe	300mm
H**	From an internal or external corner	600mm
I	Above ground, roof or balcony level	300mm
J	From a surface facing the terminal	600mm
K	From a terminal facing a terminal	600mm
L	From an opening in a car port (e.g. door, window) into dwelling	1200mm
M	Vertically from a terminal on the same wall	1500mm
N	Horizontally from a terminal on the same wall	300mm

\* in addition, the terminal should not be nearer than 300mm to an opening in the building fabric formed for the purpose of accommodating a built-in element such as a window frame or door frame.

\*\* The reference to external corners does not apply to building protrusions not exceeding 450mm, such as disused chimneys or external walls.

A terminal guard is supplied with this appliance. It is a requirement in England and Wales that this guard is fitted where the flue terminal may come into contact with people near the building or be susceptible to damage. In the republic of Ireland the installation must conform to the relevant section of IS813 "Domestic Gas Installations".

## Siting the Appliance

This appliance **MUST** only be installed against a non-combustible surface. Combustible surfaces will require shielding in accordance with the necessary building regulations. The information on this page provides details of the maximum and minimum flue length, appliance clearances can be found on the next page.

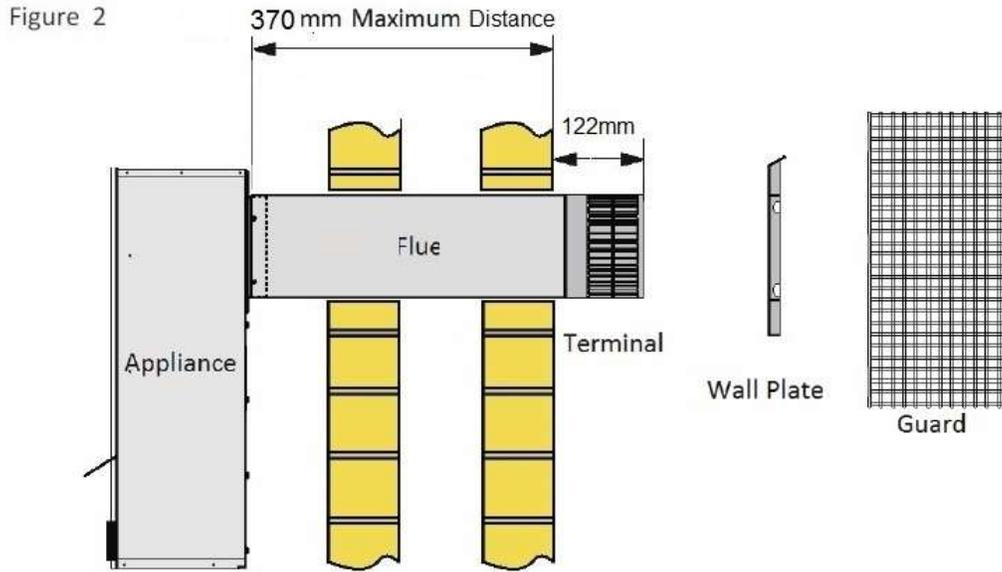
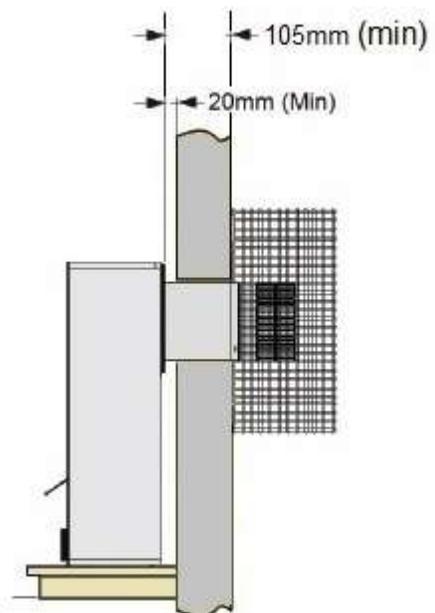


Figure 2 above shows the maximum flue length of 370mm. If the wall thickness (inside face of internal wall to the external face of the external wall) exceeds 350mm then the installation cannot proceed.

Please note a 20mm clearance is required behind the appliance, this **cannot** be reduced.

The minimum flue length is 105mm as shown right, this dimension is worth noting when installing into timber frame buildings. The bracket arms allow the appliance to be further into the room (should your wall thickness be less than 105mm) but please note the 50mm hearth protrusion required in front of the appliance.

A cardboard template is provided to assist with marking out the flue position for drilling/cutting.

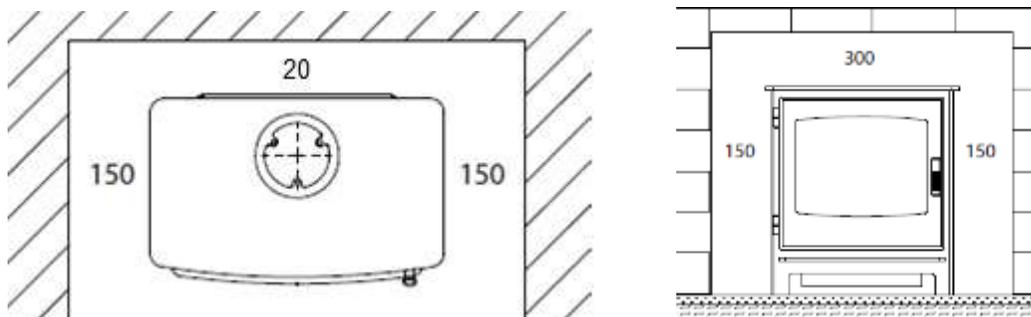


## Hearth Requirements

The appliance needs to be located onto a solid non-combustible hearth with a minimum thickness of 12mm. The hearth must be capable of withstanding the weight of the appliance.

**NB Side measurements taken from the Lid of the stove (Dimension E on page 4):  
Rear measurement taken from the dilution box**

Clearances



Hearth Protrusion (in front of the Ash lip)  
Shelf Distance (above the stove)

50mm  
300mm

The specified minimum rear clearance (20mm) is to non-combustible material. Combustible materials behind the appliance will need to be shielded (as per the shielding method laid out in building regulations approved document J). This dimension **cannot** be reduced.

If the appliance is intended to be installed into a non-combustible opening, the clearances to the sides and above can be reduced. However it is recommended that the specific minimum clearances are maintained, irrespective of the materials used in the construction of the opening. This has been tested and approved, to allow adequate air flow and access to the controls, as well as allowing access for smoke **tests and future maintenance of the flue and the appliance**. Clearances to combustible materials **cannot** be reduced

## Additional Requirements

- Curtains should not be positioned above the appliance at a distance of less than the minimum specified for shelves
- An additional guard is to be used to take account of the special hazards that exist in nurseries and other places where there are young children or aged or infirm persons present.

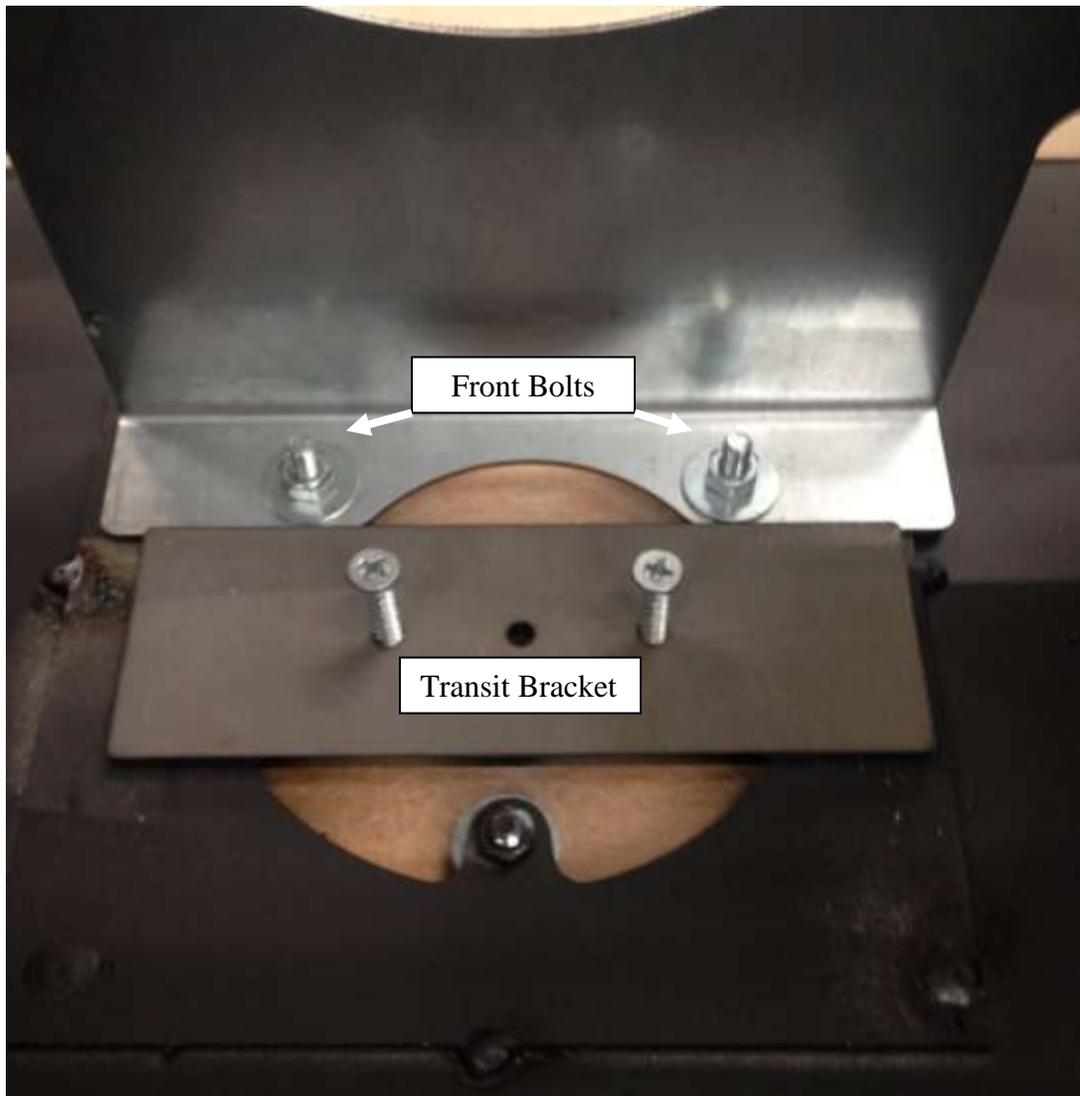
## Preparing the Gas Supply

The gas supply can be prepared for a concealed fitting from the rear or sides (knock-out panels on sides – see diagram on page 10). When using the side entry points please be aware of the position of the stove body in order to prevent interference between the body and gas supply pipe. In all installation conditions the gas connection should be provided using 8mm (O/O) copper tubing. A gas soundness test should be performed to ensure that all existing pipework in the property is sound.

## Assembly - Preparation

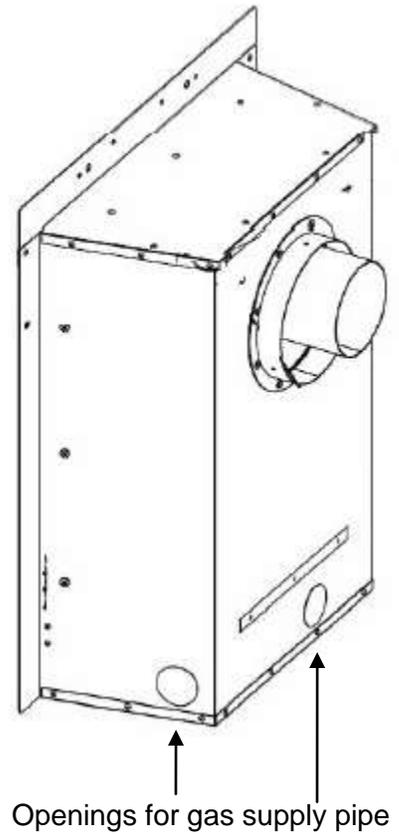
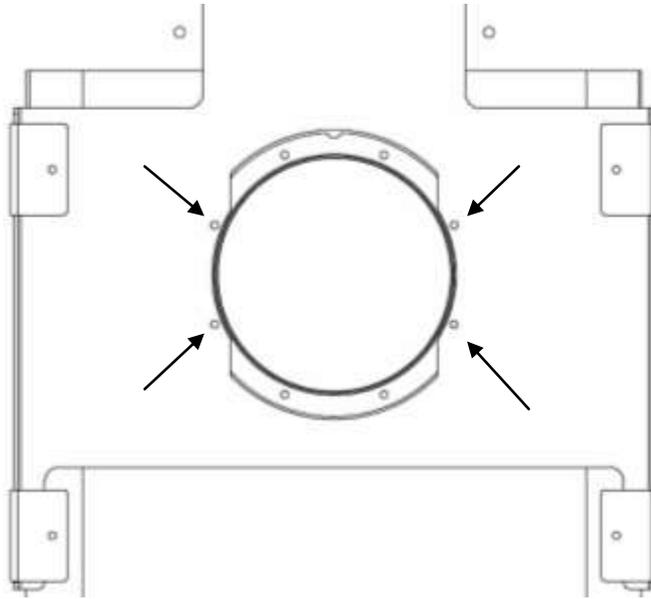
Start by un-packing the stove box, please note the stove body will be delivered upside down on the pallet. Retain all packaging material until the installation is fully commissioned.

1. Remove the transit bracket to enable the stove body to be removed from the pallet. Remove the two front bolts (including nuts and washers) to disconnect the burner bracket from the stove body, place the stove body to one side.

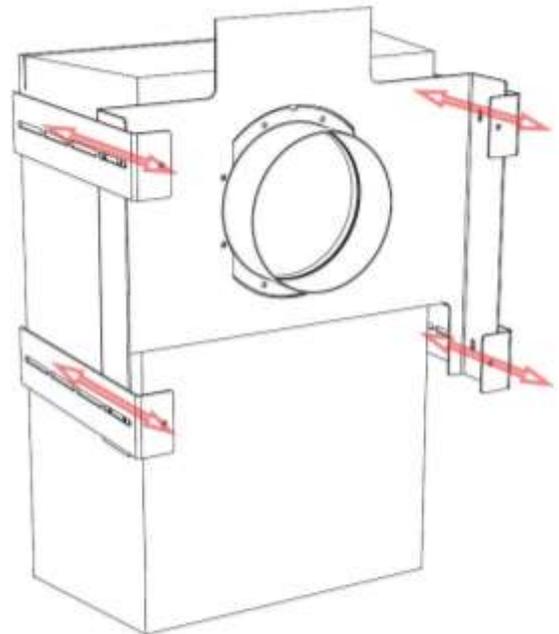


## Assembly – Burner Bracket

2. Next un-pack the burner box and carefully un-pack the burner assembly.
3. Remove the four screws marked on the diagram below, align the burner bracket with these four fixing points and secure the burner bracket to the rear of the burner assembly.

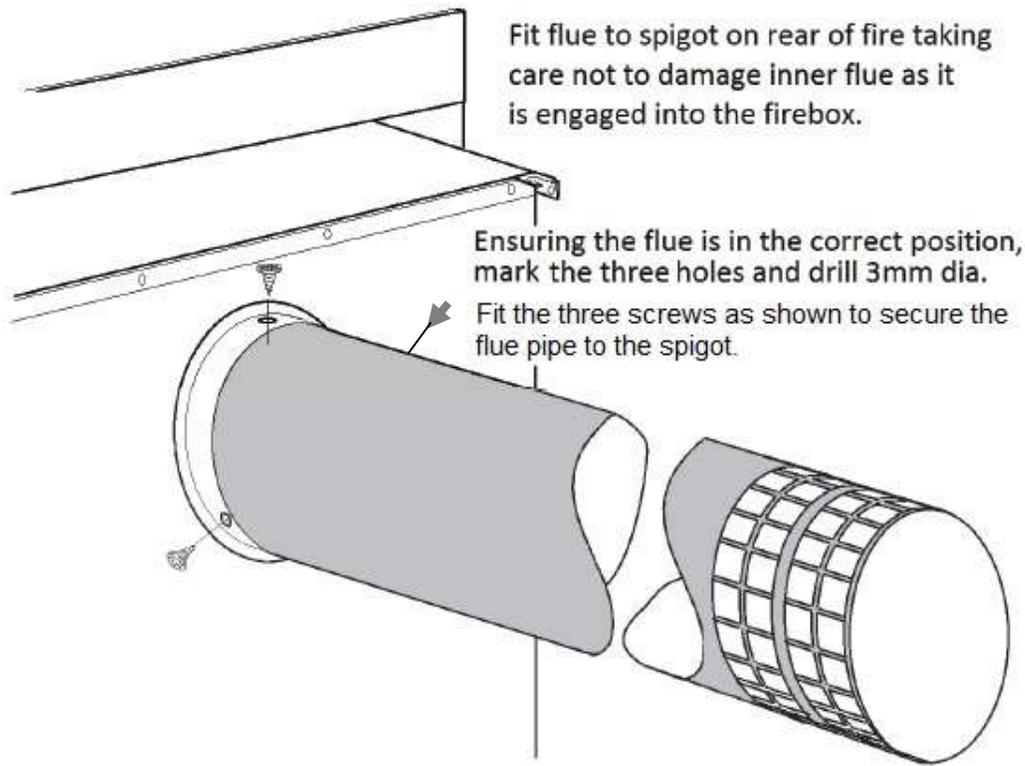


4. Slacken off the fixings on each of the four bracket arms (two on each arm) to allow the arms to slide. These arms will need to be adjusted suit your installation.
5. Use the provided cardboard template to help you mark the position for the flue. Please note that timber frames buildings will require a metal sleeve and a minimum 25mm air gap between the outside diameter of the flue pipe and the metal sleeve.



## Assembly – Flue Pipe

6. Once the correctly sized flue hole has been made, offer the appliance up in order to mark the position for the four bracket arms. These positions will need to be drilled and plugged using suitable fixings (not supplied).
7. Test fit the flue pipe to the burner assembly and wall; it is possible to trim down the provided flue pipe. Once the final position of the appliance has been established (and the flue pipe trimmed if necessary) secure the flue pipe to the burner assembly as shown below.



8. Ensure there is an air tight seal between the spigot and flue pipe.
9. Position the burner assembly into its final position taking care not to damage the flue pipe as it passes through the wall. Outside the property secure the wall plate to the flue pipe and seal the plate against the brickwork using mortar or high temperature sealing compound.
10. Make any final adjustments to the four adjustable burner bracket arms and ensure the fixings are tightened on each arm. Fix each of the arms against the rear wall using appropriate heat-proof fixings (not supplied).

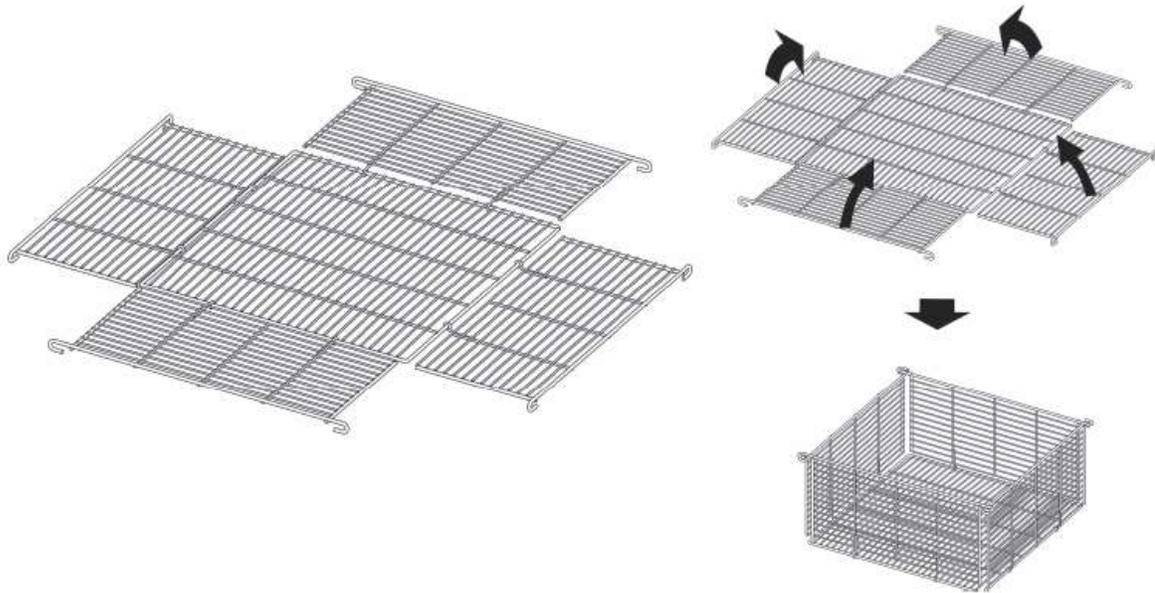
## Assembly – Terminal Guard

The terminal guard can now be assembled and fitted to the outside wall.

The terminal guard supplied with this appliance is required to be fitted, when installed in England and Wales if the terminal could come into contact with people moving around the building or if the terminal could become damaged.

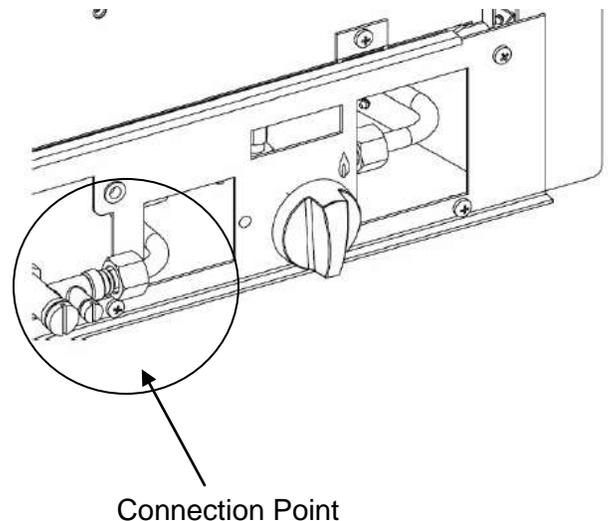
If being installed into the republic of Ireland, refer to the current edition of IS813 “Domestic Gas Installations” if in doubt it is recommended that the terminal guard is always fitted.

The diagram below shows the method of assembly of the terminal guard. The guard should be secured to the wall using appropriate fixings and plugs (not supplied).



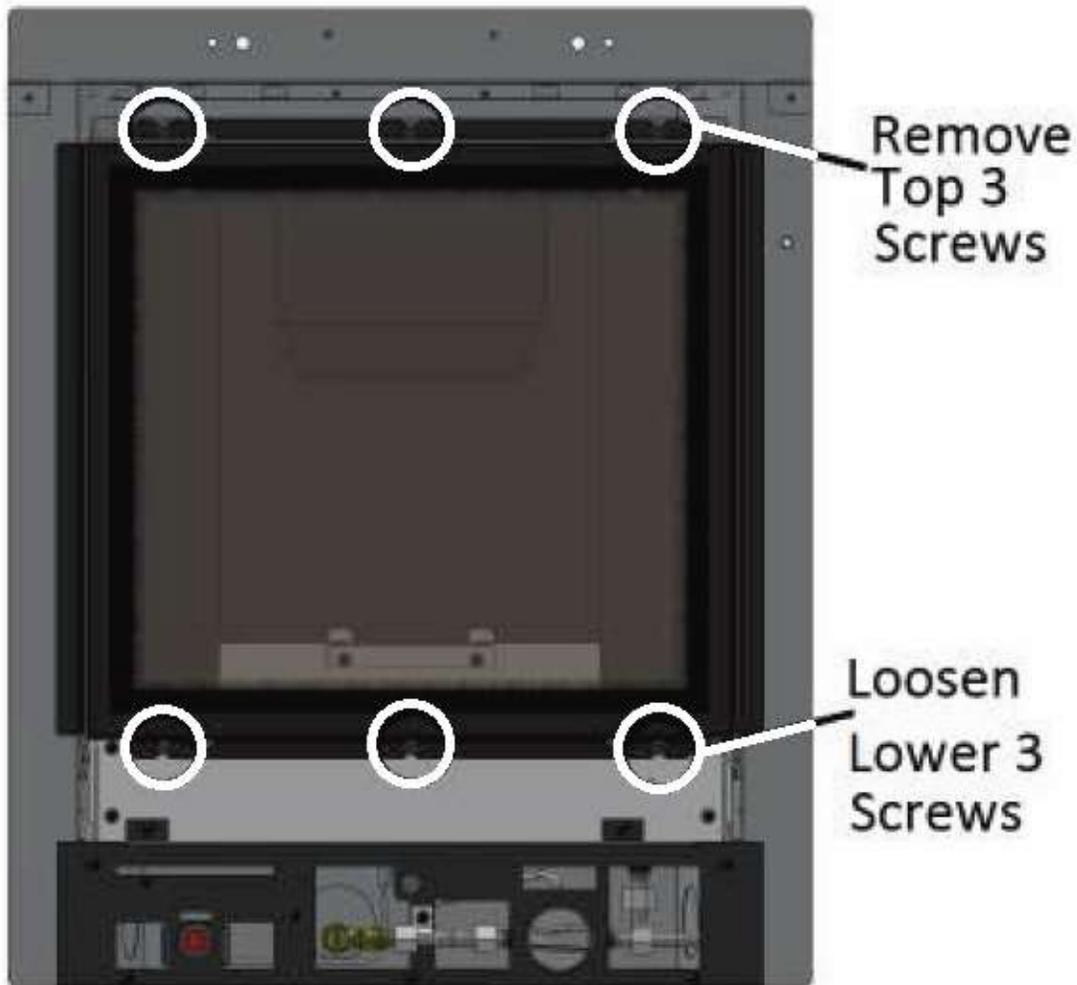
## Assembly – Gas Supply Connection

In all installation conditions the gas connection should be provided using 8mm (O/O) copper tubing. The diameter of the gas supply pipe will only reduce down to 8mm a maximum of 1 metre from the appliance. The connection to the appliance will be made using the supplied pressure test elbow. This elbow is supplied loose and should be fitted as per the label on the instruction pocket.



## Assembly – Removing the Glass

Prior to laying the coal ceramics, you will first need to remove the front glass frame assembly. First remove the top three fixings marked on the picture below and just loosen the lower three fixings. The frame and glass can now be carefully lifted upwards off the lower fixings (take care to support the glass within the frame when removing this assembly). Put the assembly in a secure location to prevent any damage until it is required for re-fitting.



Remove the cardboard box containing the ceramics from inside the burner assembly, take care when un-packing as the ceramics are very fragile. Ensure the ceramics are not damaged in any way before proceeding to position them.

## Assembly - Positioning the Ceramics

Take care whilst handling and positioning the ceramics as they are fragile and easily broken.

1. Position the main fuel bed centrally left to right and pushed to the rear as shown.



2. Position the front right ceramic. Ensure its lower edge is sitting down onto the support bracket.



## Assembly - Positioning the Ceramics

3. Position the front left ceramic. Ensure its lower edge is sitting down onto the support bracket.



4. Position the rear right ceramic as shown.



## Assembly - Positioning the Ceramics

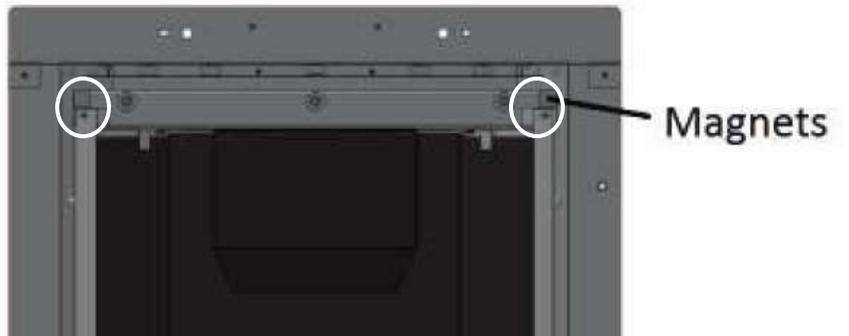
1. Position the rear left ceramic as shown.



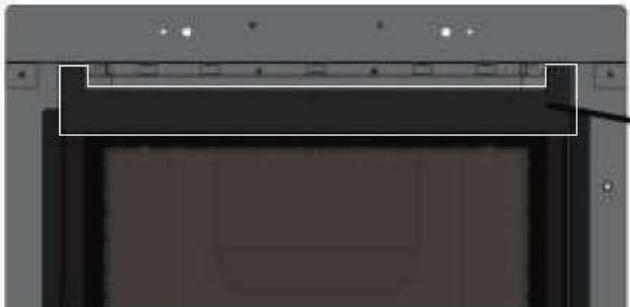
Please note only the original manufacturers ceramics may be used with this appliance

## Assembly – Attaching the top cover plate

Once the ceramics are correctly positioned the glass panel assembly can be re-fitted to the burner assembly.



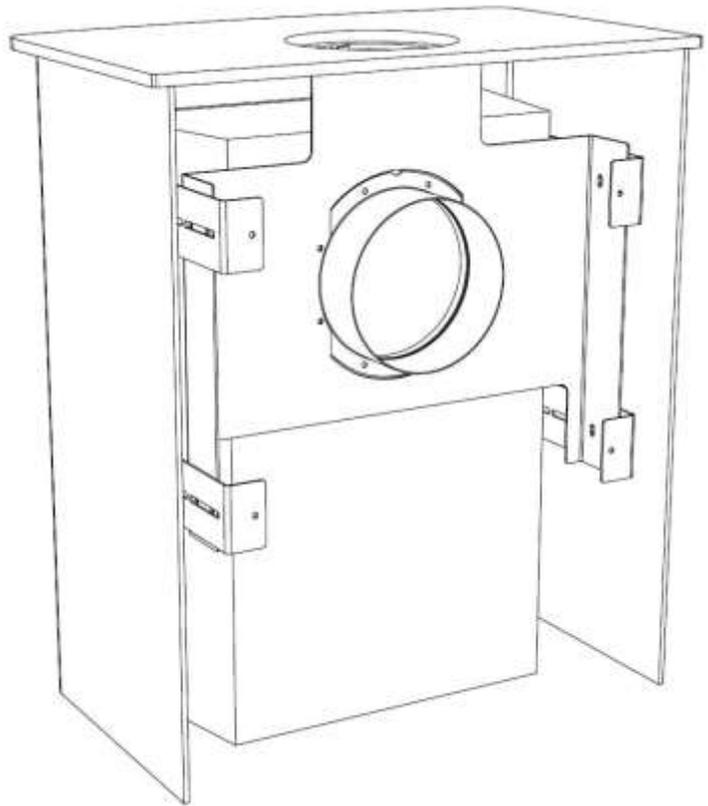
Attach the top cover plate as shown using the two magnets provided



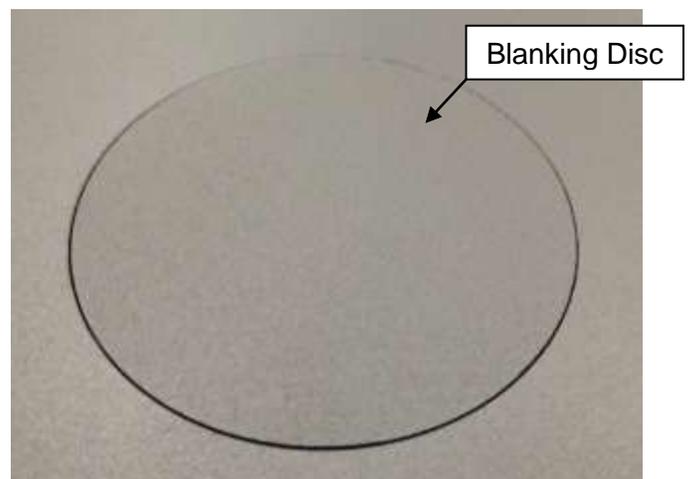
## Assembly – Fitting the Stove Body

The next step is attaching the stove body to the burner bracket.

Carefully position the stove body over the burner and bracket assembly and attach using the two front bolts (inc nuts and washers) that were removed in step 1 of the product assembly.



Place the Steel fret into position at the base of the stove body, the fret is free standing as it will need to be removed to gain access to the controls which operate the appliance. Once the appliance has been lit the fret can be replaced. A blanking disc is provided and will sit loosely on the top of the stove to conceal the bracket fixings. Alternatively a dummy flue spigot can be provided as an option to enable a dummy flue pipe to be connected – not supplied as standard. To attach the dummy spigot, use the three bolts provided (two of which are actually the bracket bolts).



## Pressure Testing

Test the operating pressure of the appliance by attaching a pressure gauge to the test point of the pressure test elbow. This connection should be made when the appliance is OFF. Ensure that gas is turned on at the gas meter and purge the air from the appliance by following the instructions below.



Push Button Electronic Igniter  
(un-screw to access battery)

Pressure test point

Control Valve Knob

Rotating the control valve knob to the ★ (IGN) position and push the Push igniter button (red button located bottom left) the pilot should light. If the appliance does not light after 10 seconds the knob should be rotated back to the ● (OFF) position and then back to the ★ (IGN) position to generate the spark at the electrode. Check that the spark is being generated correctly at the pilot assembly. Continue with this procedure until the air is purged from the appliance and the pilot is lit. Once lit, hold the control knob in for up to 10 seconds. Once the pilot is established, turn the control knob anti-clockwise to the ● (HIGH) position. Allow the appliance to run for a minimum of 5 minutes. Next check that the inlet pressure to the appliance is at 20 mbar (+/- 1 mbar).

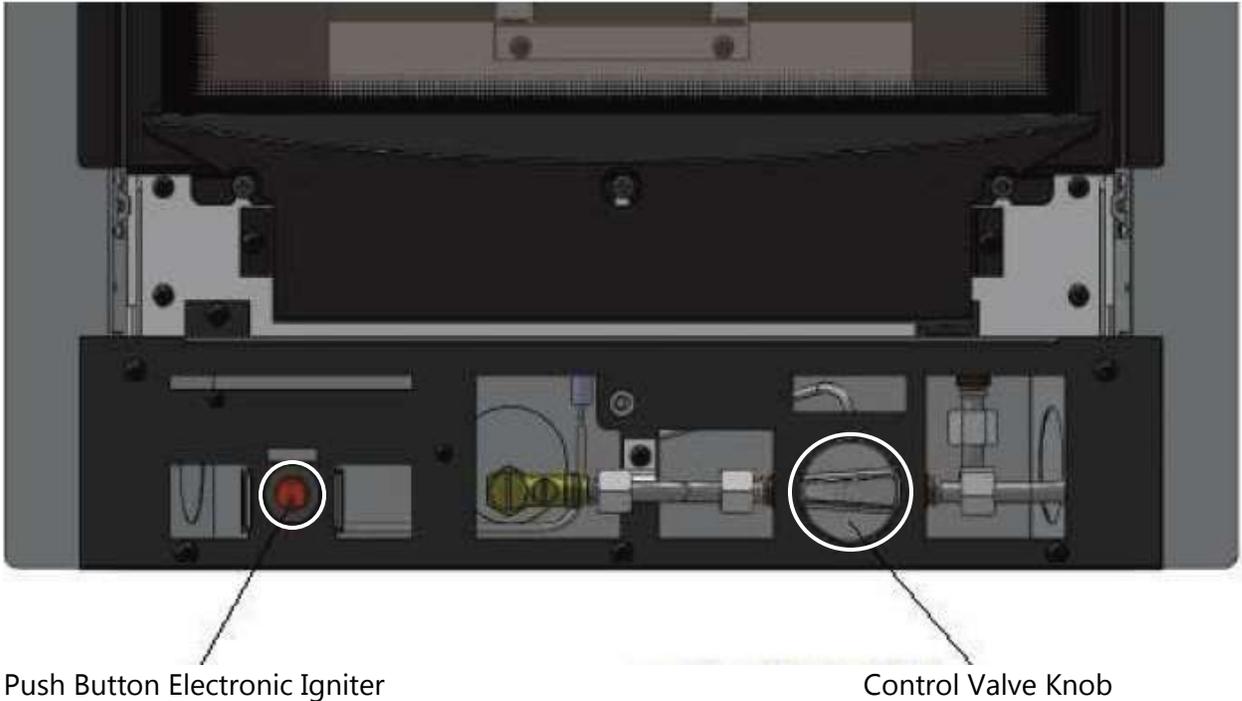
Please note the flames will appear blue until the appliance reaches temperature. This can take between 10 and 20 minutes.

If the appliance is extinguished or goes out, wait 3 minutes before attempting to re-light.

Please note the battery for the push button ignitor is located directly behind the button itself, it can be accessed by un-screwing the button in an anti-clockwise direction. The ignitor uses a single AA battery which will periodically need to be replaced

**Please note during the initial firings of the appliance it will emit a strong odour, this is normal and part of the paint curing process and will reduce with repeated use.**

## Operating the Stove



1. Push the control valve knob in fully and rotate anti-clockwise to the ★ (IGN) position. Press the electronic ignitor (red button located bottom left). This will create a spark at the pilot causing it to ignite. If the pilot does not light, rotate the control knob to the ● (OFF) position and retry. If the pilot does not light on the second attempt then turn the control knob back to the ● (OFF) position and wait 3 minutes before trying again.
2. Once the pilot is lit keep the control knob pushed in fully for up to 10 seconds.
3. Now release the control knob, the pilot should remain lit, if it goes out return the knob to the ● (OFF) position and wait 3 minutes before starting again at step 1.
4. To turn the appliance to the (LOW) setting, turn the control knob anti clockwise to the smaller 🔥 symbol.
5. To turn the appliance to the (HIGH) setting, turn the control knob anti clockwise to the larger 🔥 symbol.
6. The output of the appliance is fully adjustable between the (HIGH) and (LOW) settings.
7. To turn the fire to pilot only, press the control knob slightly and turn to the ★ (IGN). To fully extinguish the burner and pilot, turn the control to the ● (OFF) position.

## Maintenance

### Health and Safety

The appliance uses fuel effect pieces manufactured from refractory ceramic fibres (RCF). Care must be taken to avoid excessive exposure to these materials as they may cause irritation to the eyes, skin, nose and throat. When handling avoid inhaling and contact with the skin and eyes. It is recommended that disposable gloves are worn in addition to a face mask and eye protection. After handling wash hands thoroughly and any other exposed parts which may have come into contact with the material.

If a vacuum cleaner is used to clean the fuel bed or areas around the appliance (where fragments of the material may have fallen) it is recommended that the vacuum cleaner has a HEPA filter fitted.

Care should be taken when disposing of RCF materials. It is important to keep any dust to a minimum so it is recommended that the fuel effect components are placed into a heavy duty plastic bag, this bag should be clearly labelled RCF WASTE. These materials are not classified as hazardous waste but should be disposed of at a site that has been approved for the disposal of industrial waste.

### Cleaning the appliance

Ensure the appliance is turned off and has been allowed to cool for a period of at least an hour.

### Metal Parts

Metal parts can be cleaned with a slightly damp cloth, once wiped the surface should be dried using a soft clean cloth. Do not use any abrasive cleaning products (chemicals or cleaning implements) as these may scratch surfaces.

### Fuel Bed

The fuel effect components supplied with this product are extremely fragile and must be handled with great care. The ceramics in this appliance are not covered by the warranty due to their fragility.

Cleaning of these components should only be undertaken once the appliance is switched off and has been allowed to cool for a minimum period of one hour. The stove body and glass panel will need to be removed. The ceramics should be lifted carefully piece by piece from the appliance and placed onto a dust sheet (or similar material). They can be brushed gently using a soft dry brush to remove any dust or deposits. If you intend to use a vacuum cleaner then this should only be done once the loose deposits of soot etc have been removed. Ensure each ceramic is structurally sound and that no significant part of the ceramic has broken away. If any of the ceramics are found to be broken then they should be replaced before using the appliance. Only original manufacturer's parts should be used in this appliance. Do not use any additional components to the fuel bed layout. It is important to note that small hairline cracks in the surface of the ceramics is (due to heat expansion) is perfectly normal and should not cause alarm. Ensure any replacement ceramics are positioned correctly as per these instructions.

## Commissioning Form

**THIS SECTION MUST BE COMPLETED AND SIGNED BY THE INSTALLATION ENGINEER**

PLEASE LEAVE WITH THE CUSTOMER AND THE APPLIANCE.

Size of Governor setting: (i.e.) Natural Gas 20mbar.

Length and size of gas supply: \_\_\_\_\_

Meter pressure Fire only on: \_\_\_\_\_

Meter pressure with all other appliances on: \_\_\_\_\_

Burner pressure Fire only on: \_\_\_\_\_

Burner pressure with all other appliances on: \_\_\_\_\_

Gas rate - Natural Gas - Time for 1 cubic foot in seconds: \_\_\_\_\_

Top or Rear Flue Installation: \_\_\_\_\_ Overall length of flue: \_\_\_\_\_

Is there any spillage: \_\_\_\_\_ Is the draught excessive: \_\_\_\_\_

Is there any permanent ventilation in the room: \_\_\_\_\_

Is the TTB connected correctly (both ends): \_\_\_\_\_

Is the aeration of the pilot correct: \_\_\_\_\_

Does the flame encircle the Thermocouple: \_\_\_\_\_

Installation Engineers Name:

\_\_\_\_\_

Installers \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Post Code: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_ Mobile: \_\_\_\_\_ Other: \_\_\_\_\_

Gas Safe Registration No:

\_\_\_\_\_

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

## Servicing Instructions

The following procedures can and should only be performed by Gas Safe registered installer. The Appliance MUST be serviced annually by a Gas Safe engineer.

### Removal / Replacement of gas carrying components

The removal and the replacement of gas carrying components will required the removal of the burner tray. The following information details the removal of this tray.

Turn off the gas supply at the isolation point.

Remove the fret and stove body, place these items in a suitable location where they cannot be damaged in any way.

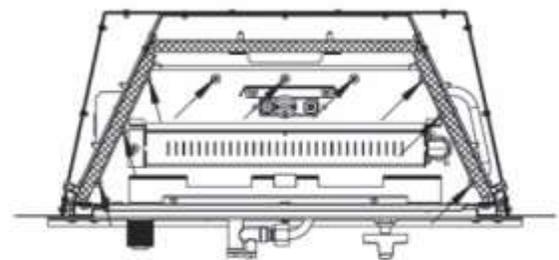
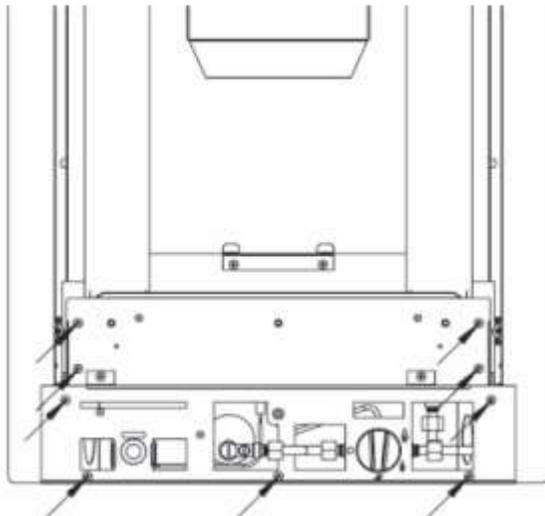
Remove the top cover plate and the glass panel, take care not to damage the glass and place in a safe location (where they cannot be damaged).

Disconnect the gas supply from the pressure test elbow.

Remove the screws securing the burner tray to the firebox, note that some screws are located within the combustion chamber.

Re-assemble the tray in the reverse order.

Note that great care should be taken not to damage the ceramic seals which surround most of the mating surfaces of the burner tray. If any of these are damaged they should be replaced prior to re-assembly.



Manual Control

Now carefully pull the tray from the fire box, the burner tray can now be serviced or repaired accordingly. See the following page for details.

## Servicing Instructions

### Removal of gas components

1. Remove the control knob from the valve
2. Remove the locknut from the front of the valve
3. Undo the three nuts around the periphery of the valve body – Gas Inlet / Burner / Pilot
4. Remove the thermocouple nut from the back of the valve
5. The valve can be removed and serviced / repaired as necessary
6. Re-assemble in reverse order
7. Re-assemble the burner tray in the fire box (see previous page)

### Replacement of the pilot

1. Remove the two (2) screws from the underside of the tray to release the pilot
2. Undo the pilot gas supply from the base of the pilot
3. Remove the thermocouple nut from the back of the valve
4. Remove the ignitor lead from the base of the igniter
5. The pilot assembly can now be removed and replaced
6. Re-assemble in reverse order
7. Re-assemble the burner tray into the firebox (see previous page)

### Replacement of the injector

1. Remove the burner from the burner tray, including the burner front plate
2. Unscrew the injector nipple from the elbow fixed to the burner tray
3. The injector can now be removed and replaced
4. Re-assemble in reverse order
5. Re-assemble the tray into the fire box (see previous page)

Only replacement components supplied by the manufacturer should be used in the service of this appliance

## Guarantee

Your decorative gas fire, when installed in accordance with the installation instructions and operated in accordance with these instructions should provide many years of safe and efficient operation.

Should you wish to claim under the warranty, please contact the supplier / dealer from whom you purchased the appliance. Do not claim directly to Broseley Fires, or Be Modern, as they are unable to process any direct claim from an end user.

We thank you for purchasing our product and trust it will provide excellent service.

This appliance carries a guarantee of One (1) Year.

We agree to repair free of charge or, at our option, replace the appliance or part thereof, which may prove to be defective within the guarantee period.

The guarantee is void if:

- The appliance is not installed and operated in accordance with our instructions, or
- Repairs or modifications have been carried out by the purchaser or any third party not authorised by us or:
- The appliance has been misused or accidentally damaged, or
- Damage is due to 'fair wear and tear.' or
- The appliance or defective component(s) are not returned to us, prepaid postage.
- The appliance has not been serviced annually by a 'Gas Safe Registered' engineer.

The rights given in this guarantee are limited to the UK mainland and are in addition to any to which you may have a statutory entitlement.

Please retain your purchase receipt. We will need to see this in the event of a claim under warranty.

<p>Broseley Fires Ltd, First Floor, Unit B Knights Court, Archers Way, Battlefield Enterprise Park, Shrewsbury, Shropshire SY1 3GA Tel: 01743 461444 Fax: 01743 461446 <a href="http://www.broseleyfires.com">http://www.broseleyfires.com</a></p>	<p>Bemodern Ltd. 19/34 Bedesway Bede Industrial Estate Jarrow Tyne and Wear NE32 3BE Tel: 0191 4898266 Fax: 0191 4834148 <a href="http://www.bemodern.co.uk">http://www.bemodern.co.uk</a></p>
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