



Wonderfire

INSTALLER'S GUIDE

MODEL
639



**Open Decorative
Gas Fire**

(G.C No. 32-032-47)

**THIS APPLIANCE IS FOR USE WITH NATURAL GAS (G20)
WHEN CONVERTED USING CONVERSION KIT NO. 0591301 THIS
APPLIANCE IS FOR USE WITH PROPANE GAS (G31)
THIS APPLIANCE IS FOR USE IN THE UNITED KINGDOM (GB) AND
THE REPUBLIC OF IRELAND (IE) ONLY.**

We trust that these instructions give sufficient details to enable this appliance to be installed and maintained satisfactorily. However, if further information is required, our Wonderfire **Technical Helpline** will be pleased to help.

Please telephone 08706 061 065

INSTALLER: Please leave this guide with the owner

INSTALLER'S GUIDE

Safety First.

Wonderfire fires are CE Approved and designed to meet the appropriate British Standards and Safety Marks.



Quality and Excellence.

At the heart of every Wonderfire fire.

All Wonderfire fires are manufactured to the highest standards of quality and excellence and are manufactured under a BS EN ISO 9001 quality system accepted by the British Standards Institute.



The Highest Standards

Wonderfire is a member of the Society of British Gas Industries which works to ensure high standards of safety, quality and performance.



Careful Installation

Wonderfire is a CORGI registered company. All our gas fires must be installed by a competent CORGI Registered Installer in accordance with our Installer Guide and should not be fitted directly on to a carpet or floor of combustible material.



Wonderfire, Wood Lane, Erdington, Birmingham B24 9QP

www.wonderfire.co.uk

Because our policy is one of constant development and improvement, details may vary slightly from those given in this publication

INSTALLER'S GUIDE

CONTENTS

1. SAFETY	4
2. LIST OF ACCESSORIES	5
3. APPLIANCE DATA	6
4. GENERAL INSTALLATION REQUIREMENTS	7
5. APPLIANCE CLEARANCES	14
6. UNPACKING	15
For models supplied with a coal effect fuel bed	15
For models supplied with a Pebble effect fuel bed	15
7. INSTALLATION OF APPLIANCE	16
Burner Positioning.....	17
For installations <u>without</u> the 'Liberty' casting.....	17
For installations <u>with</u> the 'Liberty' casting.....	17
8. BURNER AND SUPPLY PIPE INSTALLATION.....	20
Lighting the fire.....	20
9. INSTALLING THE FUEL BED COMPONENTS	22
10. FITTING THE FIREFRONT	33
11. FULL OPERATING CHECKS	34
Flame Supervision & Spillage Monitoring System	35
Final commissioning	35
12. SERVICING & PARTS REPLACEMENT	37
Checking the aeration setting of the burner.....	38
13. SHORT LIST OF SPARES.....	41

INSTALLER'S GUIDE

1. SAFETY

Installer

- Before continuing any further with the installation of this appliance please read the following guide to manual handling
- The lifting weight of this appliance is 9.5 kg. One person should be sufficient to lift the fire. If for any reason this weight is considered too heavy then obtain assistance.
- When lifting always keep your back straight. Bend your legs and not your back.
- Avoid twisting at the waist. It is better to reposition your feet.
- Avoid upper body/top heavy bending. Do not lean forward or sideways whilst handling the fire.
- Always grip with the palm of the hand. Do not use the tips of fingers for support.
- Always keep the fire as close to the body as possible. This will minimise the cantilever action.
- Use gloves to provide additional grip.
- Always use assistance if required.

INSTALLER'S GUIDE

2. LIST OF ACCESSORIES

<u>Description</u>	<u>Part number</u>
Replacement Chair brick	0552311
Replacement Chair brick Trims	
Flat Brass effect	0552321
Flat Satin Chrome effect	0552331
Flat Black	0552341
Aspire trims with firefronts	
Satin Chrome effect	9820111
Brass effect	9820112
Black	9820113
Copper effect	9820114
Bauhaus Firefront (Fret)	
Polished Brass effect 16in	9800121
Satin Chrome effect 16in	9800122
Charcoal Black	9800123
Blenheim Firefront (Fret)	
Brass effect 16in	9800040
Brass effect 18in	9800082
Antique (Black & Brass effect) 16in	9800075
Antique (Black & Brass effect) 18in	9800083
Chrome effect 16in	9800076
Chrome effect 18in	9800084
Black Cast Iron with Brass Finials 16in	9800039
Black Cast Iron with Brass Finials 18in	9800081
Liberty Casting	
Chrome effect	0503701
Gold effect	0503711
Flue box with Gold effect Trim	0503721
Flue box with Chrome effect Trim	0503731

INSTALLER'S GUIDE

3. APPLIANCE DATA

This product uses fuel effect pieces and gaskets containing Refractory Ceramic Fibres (RCF), which are man-made vitreous silicate fibres. Excessive exposure to these materials may cause irritation to eyes, skin and respiratory tract. Consequently, it is important to take care when handling these articles to ensure that the release of dust is kept to a minimum. To ensure that the release of fibres from these RCF articles is kept to a minimum, during installation and servicing we recommend that you use a HEPA filtered vacuum to remove any dust and soot accumulated in and around the fire before and after working on the fire. When replacing these articles we recommend that the replaced items are not broken up, but are sealed within a heavy duty polythene bag, clearly labelled as RCF waste. This is not classified as “hazardous waste” and may be disposed of at a tipping site licensed for the disposal of industrial waste. Protective clothing is not required when handling these articles, but we recommend you follow the normal hygiene rules of not smoking, eating or drinking in the work area and always wash your hands before eating or drinking.

This appliance does not contain any component manufactured from asbestos or asbestos related products.

The appliance data label is located below the burner and is visible when the fire front cover is removed.

	639 (Natural Gas)	639 (Propane)*
Gas	Natural (G20)	Propane (G31)
Inlet Pressure	20mbar (8in. w.g.)	37mbar (14.8in. w.g.)
Input - Max. (Gross)	6.85kW (23,380Btu/h)	6.7kW (22,860Btu/h)
Input - Min. (Gross)	2.3kW (7,850Btu/h)	4.0kW (13,650Btu/h)
Burner injector	Bray Cat.18U Size 420	Stereomatic. Size 170
Burner Test Pressure- Cold	17.9mbar \pm 0.75mbar (7.2in w.g. \pm 0.3in w.g.)	35.85 mbar \pm 0.75mbar (14.4in w.g. \pm 0.3in w.g.)
Inlet Pipe Connection	8mm	8mm
Pilot & Atmosphere Sensing Device	OP NG9030	OP LPG9222
Ignition	Integral Piezo Spark	Integral Piezo Spark
Aeration	Non-Adjustable	Non-Adjustable

*When converted using kit 0591301

4. GENERAL INSTALLATION REQUIREMENTS

4.1 The installation must be in accordance with these instructions.

For the user's protection, in the United Kingdom it is the law that all gas appliances are installed by competent persons in accordance with the current edition of the Gas Safety (Installation and Use) Regulations. Failure to install the appliance correctly could lead to prosecution. The Council for the Registration of Gas Installers (CORGI) requires its members to work to recognised standards.

In the United Kingdom the installation must also be in accordance with:

a) All the relevant parts of local regulations.

b) All relevant codes of practice.

c) The relevant parts of the current editions of the following British Standards:-

BS 1251

BS 4543 Part 2

BS 5440 Part 1

BS 5440 Part 2

BS 5871 Part 3

BS 6461 Part 1

BS 6891

BS 8303

d) In England and Wales, the current edition of the Building Regulations issued by the Department of the Environment and the Welsh Office. In Scotland the current edition of the Building Standards (Scotland) Regulations issued by the Scottish Executive. In Northern Ireland, the current edition of the Building Regulations (Northern Ireland) issued by the Department of the Environment for Northern Ireland. In the Republic of Ireland the installation must also conform with the relevant parts of:

The current editions of:-

3 IS 813

3 ICP3

3 IS327

b) All relevant national and local rules in force.

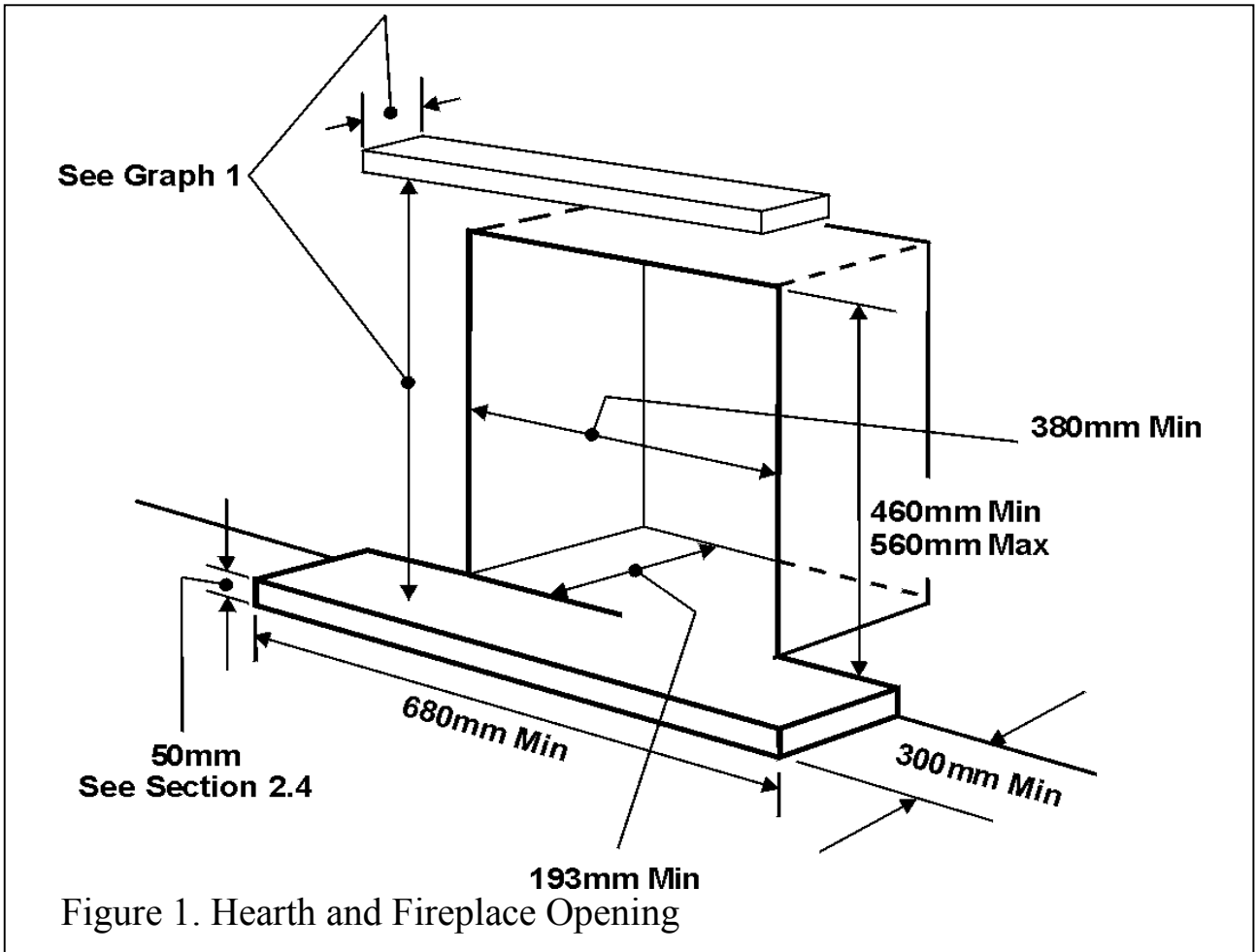
c) As supplied the appliance can be installed in the following situations: -

For installations without the 'Liberty' casting

- To a fireplace complete with surround and hearth as shown in figure 1 and complying with BS1251. The required fireplace, hearth, and clearance dimensions are shown in figure 1. For fireplace openings having dimensions

INSTALLER'S GUIDE

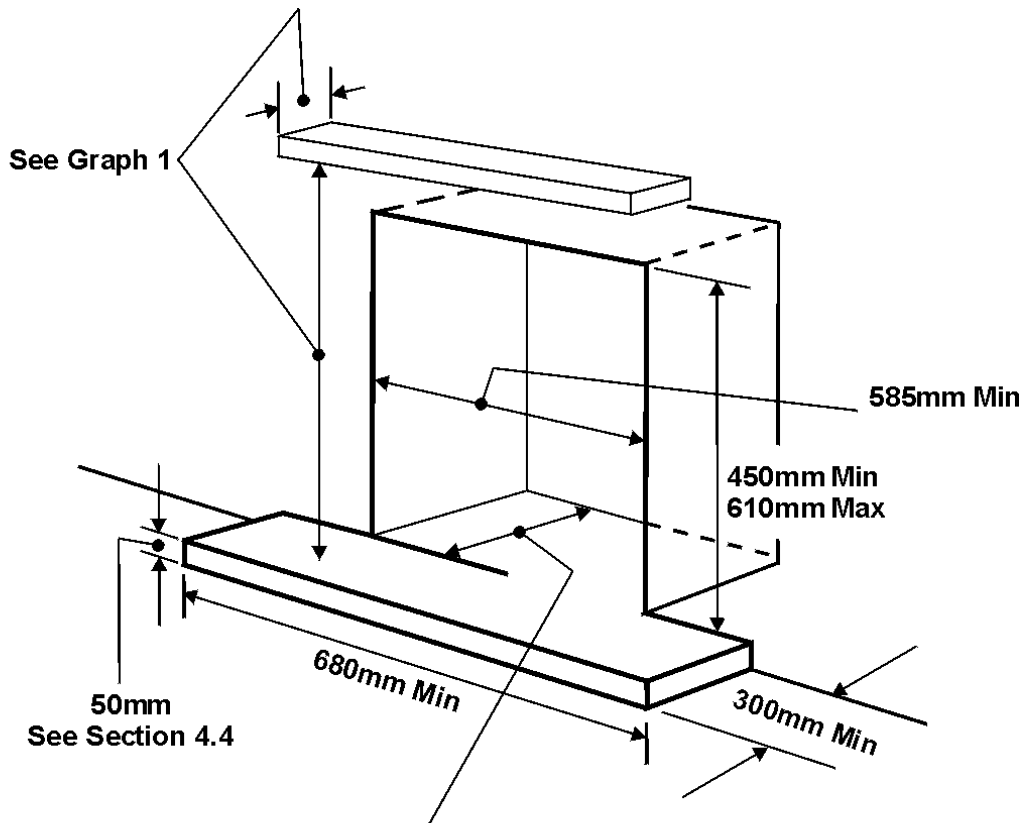
different to those shown in figure 1 refer to Table 1 and BS 5871-Part 3 for flue sizes.



For installations with the 'Liberty' casting.

- To a fireplace complete with surround and hearth as shown in figure 2 and complying with BS1251. The required fireplace, hearth, and clearance dimensions are shown in figure 2. For fireplace openings having dimensions different to those shown in figure 2 refer to Table 1 and BS 5871-Part 3 for flue sizes.

INSTALLER'S GUIDE



317mm Min with incandescent area level with front of fireplace opening
410mm Min with casting completely behind the front of the fireplace opening.

Figure 2. Hearth and fireplace opening for installations using the
LIBERTY CASTING ONLY.

- Into a fireplace that has a fireback of nominal size 400mm and conforming to BS1251.
- Into a Wonderfire Replacement Chair Brick. Part number 0552311
- Into a Wonderfire Flue box. The open area of the casting must be at least that shown in figure 45. See 'List of Accessories' section.

Suitable flues and minimum flue sizes are as follows: -

- d) 225mm x 225mm conventional brick flue.
- e) 175mm diameter lined brick or stone flue.
- f) 200mm diameter factory made insulated flue manufactured to BS4543.
- g) 175mm diameter flue pipe. See BS6461 Part 1 for suitable materials.
- h) Fireplace openings having dimensions different to those shown in figure 1 and figure 2 refer to Table 1 and BS 5871-Part 3 for flue sizes.

The minimum effective height of the flue must be 3m.

INSTALLER'S GUIDE

The flue must not be used for any other appliance or application.

Any chimney damper or restrictor should be removed. If removal is not possible, they must be secured in the open position.

If the appliance is intended to be installed to a chimney that was previously used for solid fuel, the flue must be swept clean prior to installation. All flues should be inspected for soundness and freedom from blockages.

4.3 If the fireplace opening is an underfloor draught type, it must be sealed to stop any draughts.

4.4 The appliance must be mounted behind a non-combustible hearth (N.B. conglomerate marble hearths are considered as non-combustible). The appliance can be fitted to a minimum class "O" – 100°C surround. The hearth material must be at least 12mm thick. The periphery of the hearth (or fender) should be at least 50mm above floor level to discourage the placing of carpets or rugs over it (See figure 1 or figure 2).

The surface of the hearth must be sufficiently flat to enable the bottom of the front surround and the bottom front cover to be aligned horizontally. Any excessive unevenness (uneven tiles, Cotswold stone, etc.) should be rectified.

4.4.1. 'Hole-in-the-wall' Installations

For installation without the 'Liberty' casting

- **It is recommended that a hearth should be installed as in figure 1.**

For installation with the 'Liberty' casting

- **It is recommended that a hearth should be installed as in figure 2.**
- **If a reduced depth Hearth is fitted, the fire must be installed so that the distance from the base of the fireplace opening in the wall to the finished floor level is 85mm minimum. It is recommended that the reduced hearth has a depth from the fixing plane of the fire of 100mm minimum. This is necessary to support the lower front casting.**

4.5 If the Fireplace opening is greater than the acceptable dimensions given in this guide, do not use the back of a fire surround or marble to reduce the opening. This may cause cracking of the surround back or marble

4.6 The appliance must not stand on combustible materials or carpets.

INSTALLER'S GUIDE

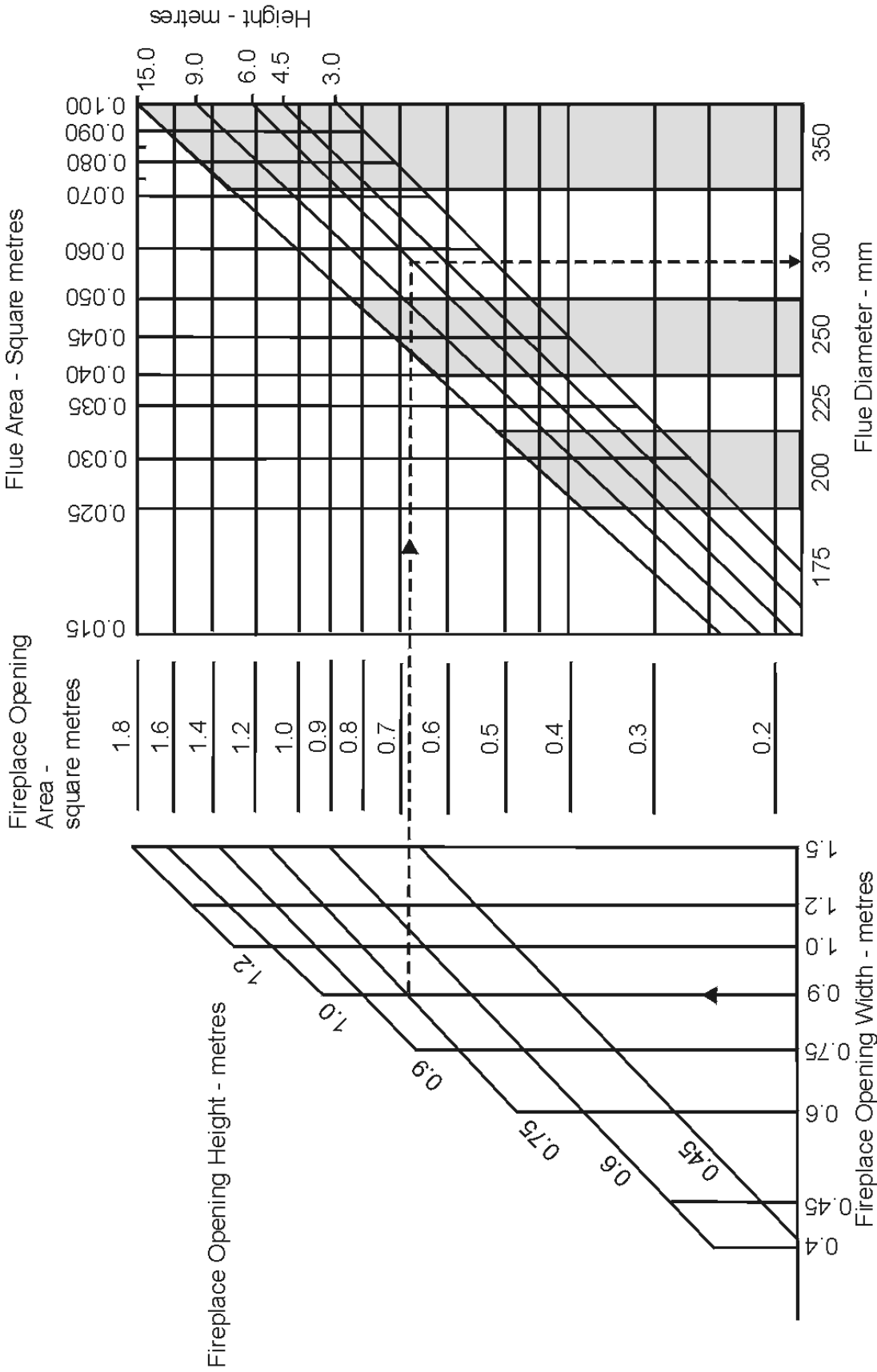


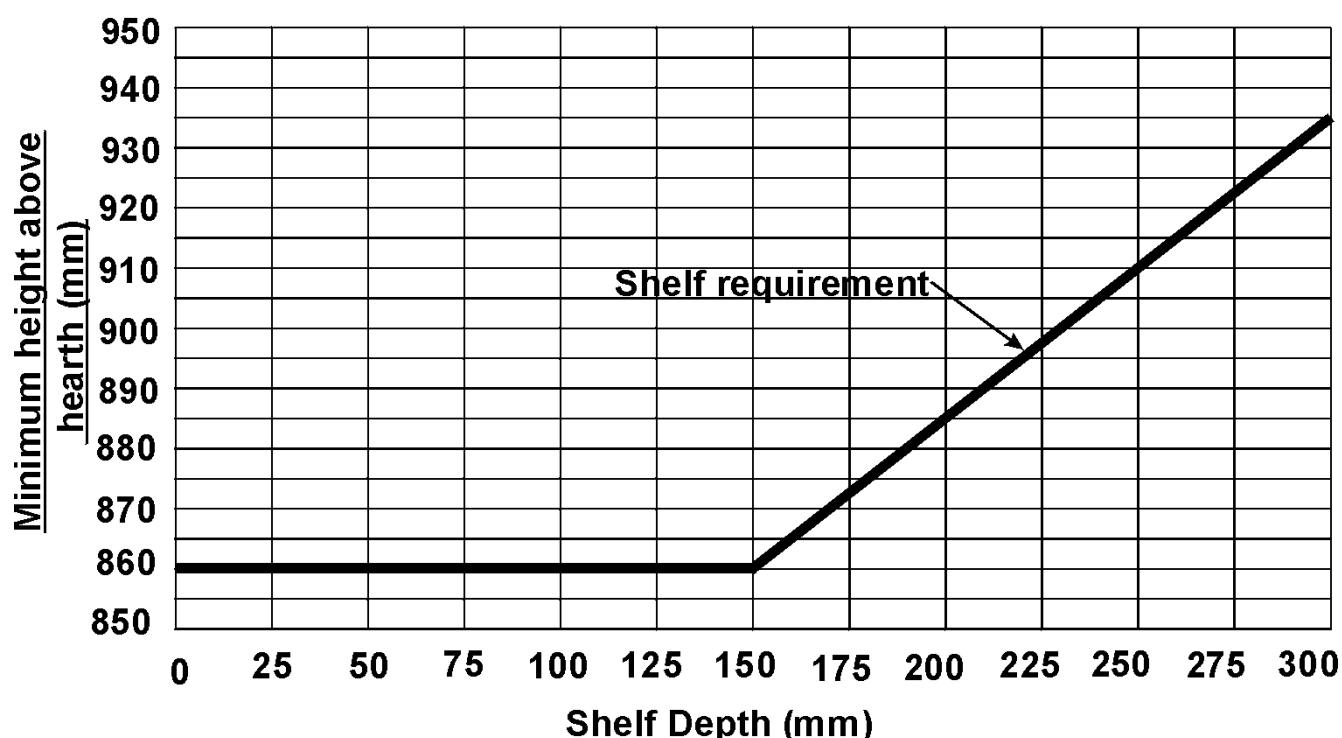
Table 1. Flue sizing table.

EXAMPLE

Fireplace opening is 0.9m wide x 0.75m high = 0.68m². Then for flue height 6.0m, use a 300mm diameter flue.

NOTE 1 Where choice is possible, the smallest diameter flue, particularly of short length, will be conducive to draught and therefore spillage.

NOTE 2 In the case of fireplace openings served by the above chart, a fireplace opening of greater width than height will be less likely to spill than one of width and height, despite their having the same fireplace opening areas.



Graph 1. Combustible shelf clearances.

4.7 The minimum height from the top of the hearth to the underside of any shelf made from wood or other combustible materials is as follows: -

- *For a shelf up to 150mm deep*

Minimum height = 860mm.

- *For a shelf deeper than 150mm*

860mm + 12.5mm for every 25mm depth over 150mm

(See Graph 1).

4.8 Note that soft wall coverings (e.g. embossed vinyl, etc.) are easily affected by heat. They may scorch or become discoloured when close to a heating appliance. Please bear this in mind when installing.

4.9 This appliance must not be installed in any room that contains a bath or shower or where steam is regularly present.

4.10 An extractor fan may only be used in the same room as this appliance, or in any area from which ventilation for the appliance is taken, if it does not affect the safe performance of the appliance. Note the spillage test requirements detailed further on in this manual. If the fan is likely to affect the appliance, the appliance must not be installed unless the fan is permanently disconnected.

4.11 In the United Kingdom (GB) no special ventilation bricks or vents are normally required in the room for this appliance. In the Republic of Ireland (IE) permanent ventilation must comply with the rules in force.

4.12 Propane gas appliances must not be installed in a room that is built entirely below ground level (see BS 5871 Part 3).

4.13 If the appliance is to be fitted against a wall with combustible cladding, the cladding must be removed from the area shown in figure 3

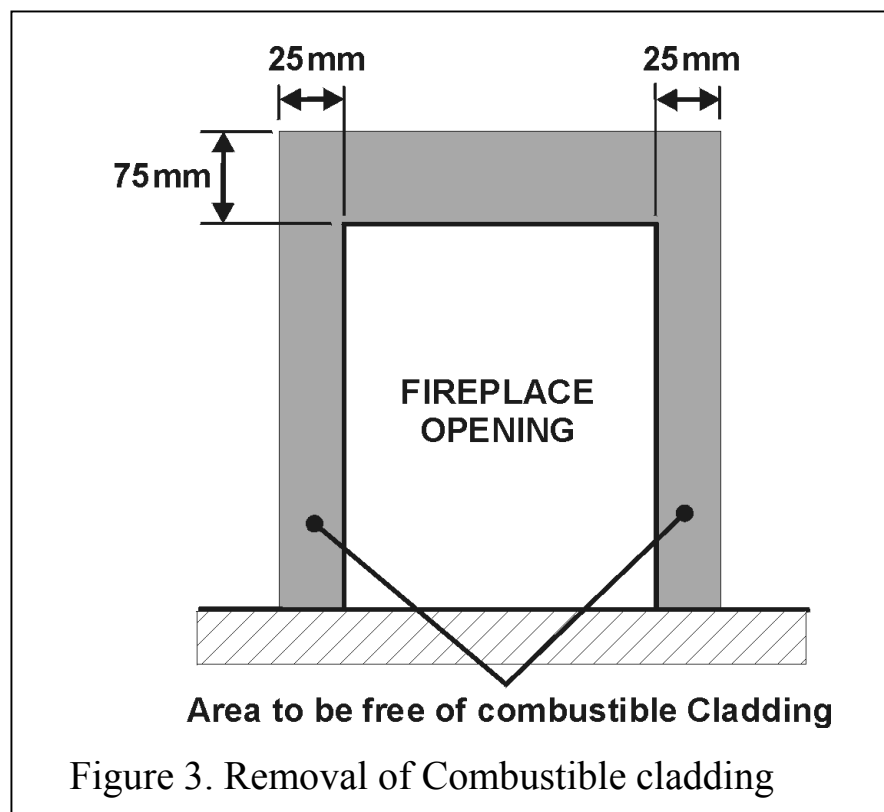


Figure 3. Removal of Combustible cladding

4.14 Combustible side projections up to 75mm forward of the fixing plane of the fire are to be a minimum of 125mm from the fireplace opening (See figure 4)

4.14.1 Combustible side projections greater than 75mm forward of the fixing plane of the fire are to be a minimum of 178mm from the fireplace opening (See figure 4).

4.14.2 Non-combustible side projections to be 75mm from the fireplace opening (See figure 4)

INSTALLER'S GUIDE

5. APPLIANCE CLEARANCES

Combustible projections up to 75mm forward of the fixing plane of the fire to be a minimum of 125mm from the fireplace opening. Projections above 75mm forward of the fixing plane of the fire to be a minimum of 178mm from the fireplace opening. Non-combustible projections to be 75mm from the fireplace opening.

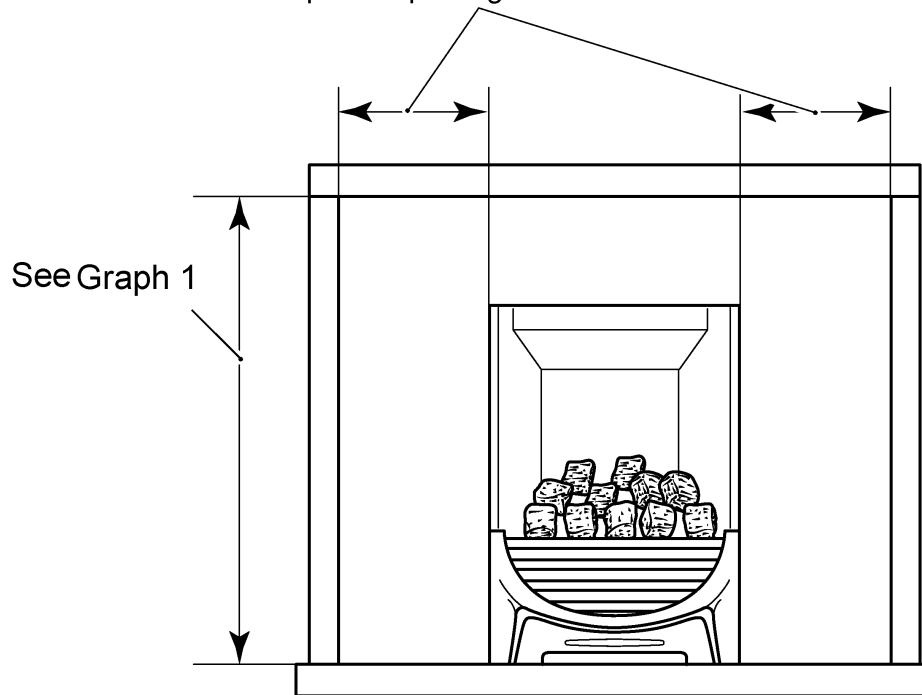


Figure 4. Appliance Clearances.

INSTALLER'S GUIDE

6. UNPACKING

Contents:

- 1 Burner assembly
- 1 Nut & olive for 8mm inlet pipe
- 2 Screws
- 2 Plastic screw plugs
- 1 Fuel bed matrix support plate
- 2 Self tapping screws
- 1 Combined instruction guide

For models supplied with a coal effect fuel bed

- 2 Front coals (1 x right hand 1 x left hand)
- 1 Coal matrix
- 1 Pack of loose coals containing 12 coals

For models supplied with a Pebble effect fuel bed

- 2 Front Pebbles (1 x right hand 1 x left hand)
- 1 Pebble matrix
- 1 Pack of loose pebbles containing 16 pebbles

- 1 Firefront and surround / Casting dependent upon model.

Carefully remove the contents. Take special care in handling the ceramic components and the coals / Pebbles. Check that all the listed parts are present and in good condition.

INSTALLER'S GUIDE

7. INSTALLATION OF APPLIANCE

INSTALLATION

7.1 Fireplace size

The fireplace must comply with the requirements described in section 4.

7.2 Fireplace flue pull.

Visually inspect the flue for any obstruction, and that a smooth transition from the fireplace opening into the flue is available. Close all doors and windows in the room in which the appliance is to be installed. After confirming with a match that smoke is drawn into the flue, light a 13 gram smoke pellet and check that there is a definite flow through the flue. Verify outside that the smoke exits from one terminal only and that the termination is suitable. Observe, where possible, upstairs rooms and loft spaces for signs of escaping smoke indicating a defective flue. If there is not a definite flow warm the flue for a few minutes and repeat the smoke pellet test. If there is still no definite flow the flue may need remedial work – **Do not fit the appliance until there is a definite flow through the flue.**

IMPORTANT

Before continuing with the installation of this gas fire the aeration setting on the burner must be checked. This is factory set. See section 12 (Servicing and parts replacement).

7.3 Installation of the burner unit

7.3.1 Prior to installation of the burner the coal matrix support plate must be fitted (See figure 5). Two self-tapping screws retain the plate.

Burner Positioning

- The two tags at the side of the burner can be folded against the side of the burner tray. This may be required for installations where the width of the fireplace opening is restricted or where the burner is used with the 'Liberty' casting (See figure 6)

For installations without the 'Liberty' casting

- Place the burner unit centrally within the fireplace opening. Position the burner to the rear of the opening, this may be moved forward providing the front of the burner tray does **not** protrude beyond the front plane of the fireplace opening (See figure 7).

For installations with the 'Liberty' casting

- Place the casting centrally within the fireplace opening. Position the casting to the rear of the opening. The

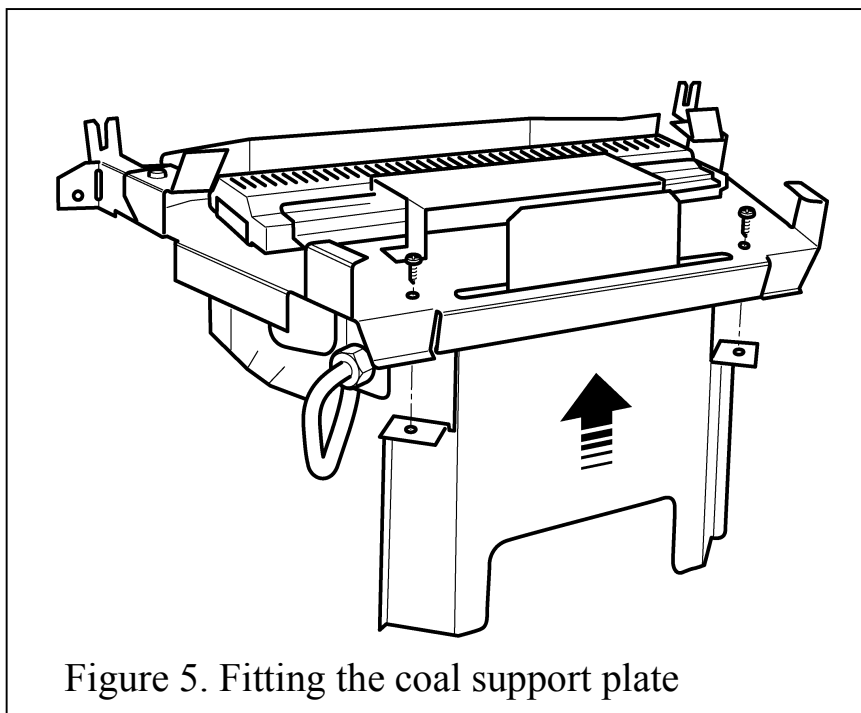


Figure 5. Fitting the coal support plate

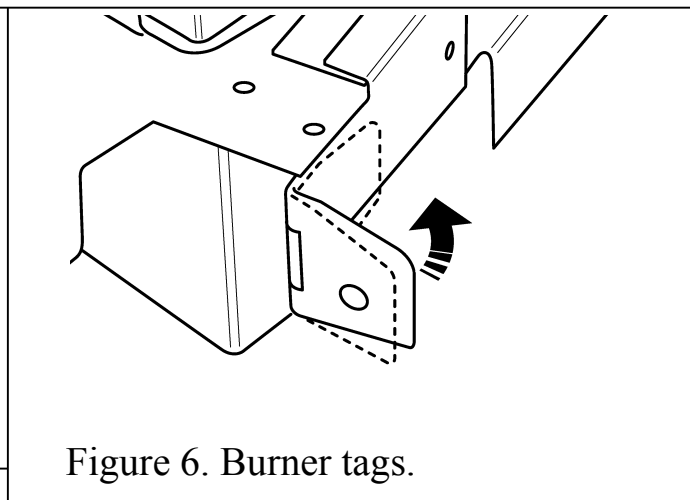


Figure 6. Burner tags.

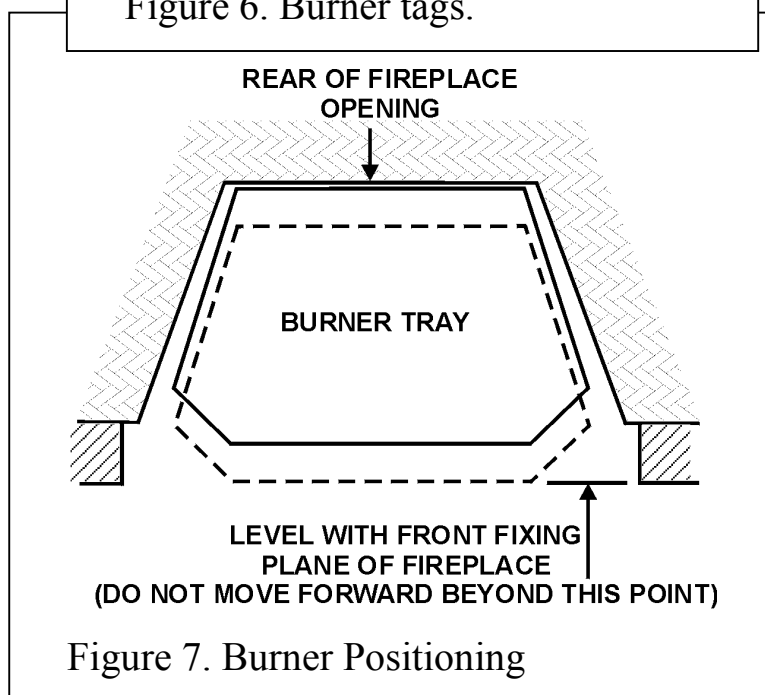


Figure 7. Burner Positioning

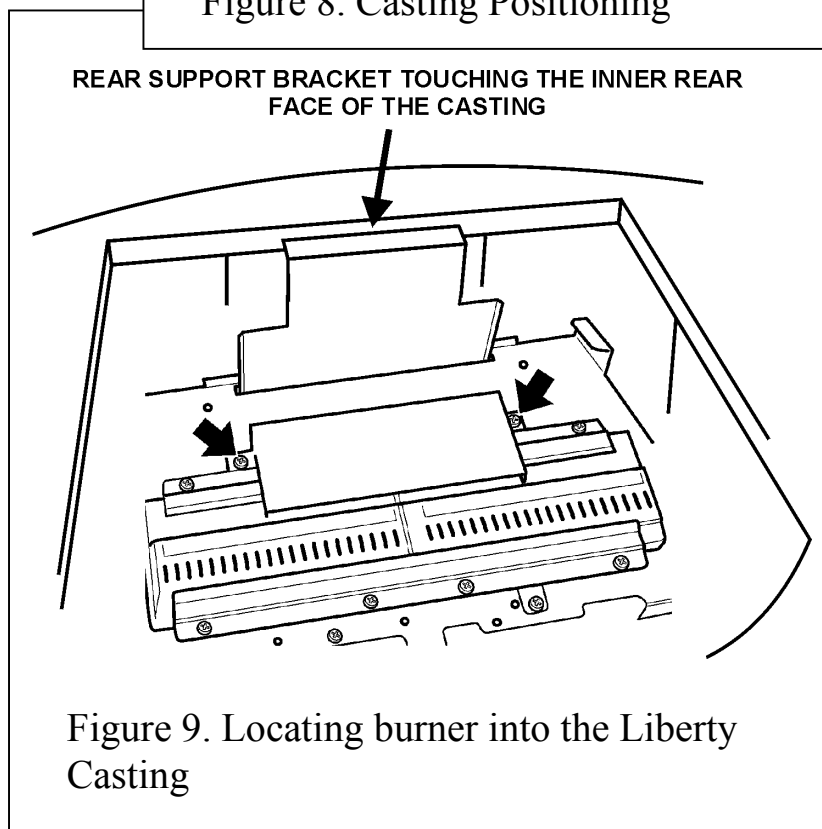
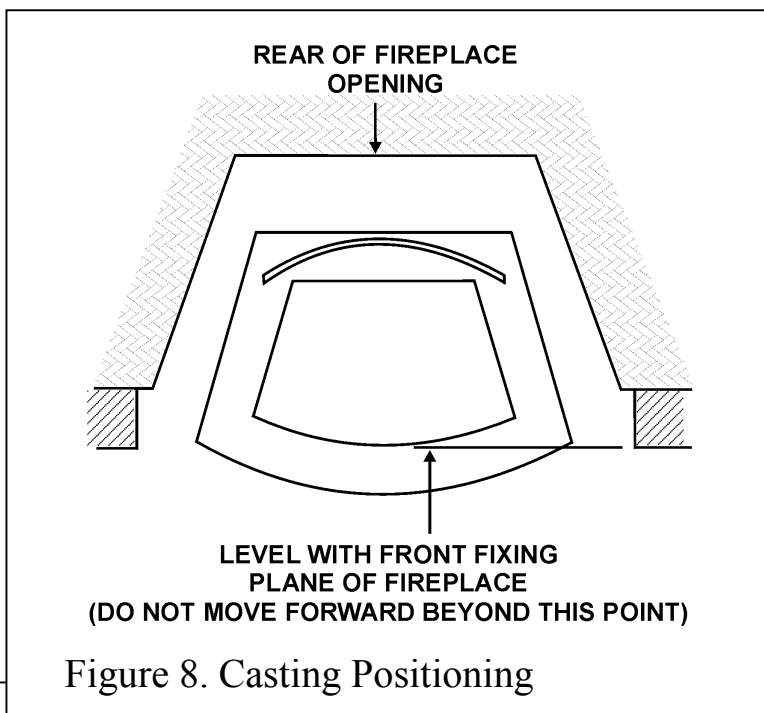
INSTALLER'S GUIDE

casting may be moved forward providing the inner front curve of the casting does **not** protrude beyond the front plane of the fireplace opening (See figure 8).

7.3.4 Locating the burner.

Method 1.

- Place the burner assembly in position. (If installing into a 'Liberty' casting the coal matrix support plate on the burner must touch the rear inner edge of the casting. See figure 9).
- Mark on the hearth the position of the fixing holes at the bottom front of the front leg (See figure 10).
- Remove the burner assembly.
- Using a 6mm masonry drill, drill into the hearth at the marked positions.
- Insert the supplied plastic screw plugs.
- Replace the burner assembly and fix in position using the wood screws provided (See figure 10)



Method 2.

- Place the burner assembly in the position (If installing into a 'Liberty' casting the coal matrix support plate on the burner must touch the rear inner edge of the casting. See figure 9).

INSTALLER'S GUIDE

- Mark on the fireplace floor the position of one of the fixing holes in the bracket that is attached to the rear of the front leg. There are two holes in this bracket to allow the soundest and most even surface of the fireplace floor to be used for fixing (See figure 11).
- Remove the burner assembly.
- Using a 6mm masonry drill, drill into the hearth at the marked position.
- Insert the supplied screw plug.
- Remove the fixing bracket from the front leg by undoing the screw.
- Place the bracket in position on the fireplace floor and fix in position using the woodscrew provided.
- Place the burner assembly back in position and attach to the bracket by refitting the screw.

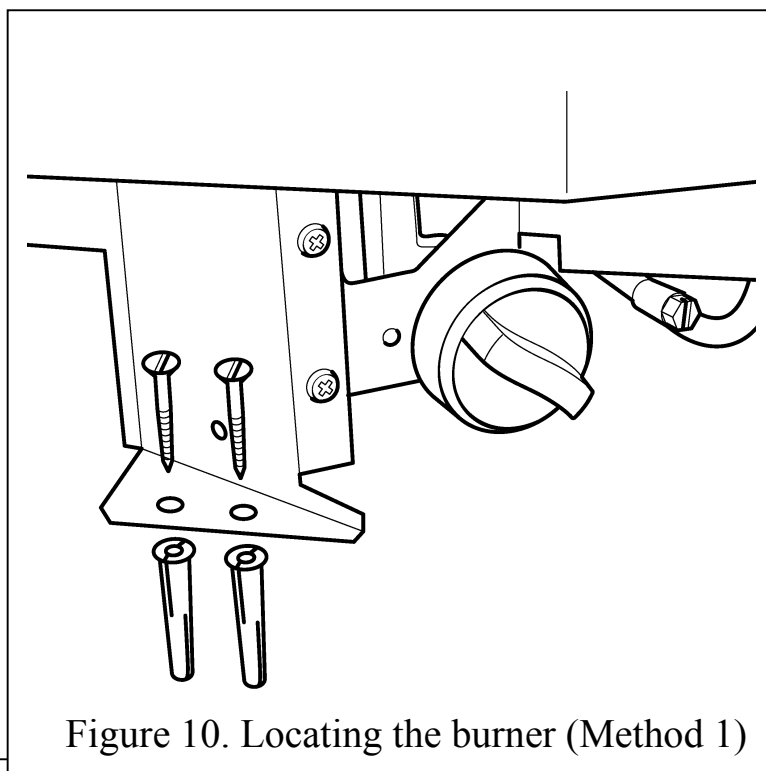


Figure 10. Locating the burner (Method 1)

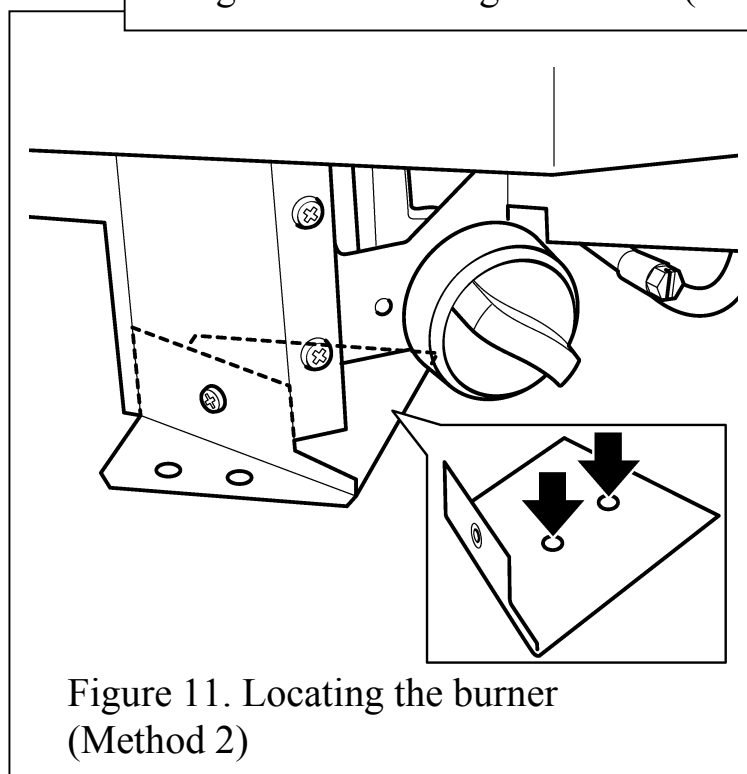


Figure 11. Locating the burner (Method 2)

8. BURNER AND SUPPLY PIPE INSTALLATION

A nut and olive is provided for an 8mm-pipe inlet connection directly to the gas control. The elbow can be rotated to allow a connection from any direction. The elbow includes a valve for isolating the gas supply.

The supply pipe must be rigid material. Flexible pipe must not be used. Connect the supply line to the appliance.

Pressure check the installation pipework for gas soundness in accordance with the current edition of BS6891.

Preliminary burner checks.

Some burner operations can be checked at this stage. Checking now will mean that less disassembly will be required if any problems are found. *A full check should still be made, however, after final installation.*

Lighting the fire

If closed, open the isolating elbow valve. Depress the control knob and rotate it anticlockwise to the pilot ignition position. A 'click' will be heard as the integral piezo operates. A spark should be seen between the electrode and thermocouple tip. Turn the control knob clockwise to the 'Off' position. Repeat this operation until a flame appears at the pilot. There may be a delay before the pilot lights due to air being purged from the system. When a flame appears at the pilot keep the control knob depressed and hold the pilot ignition position for five seconds. When the control knob is released the pilot flame should remain lit.

Operating the burner.

When the pilot burner is operating properly, gradually turn the control knob anticlockwise to 'HIGH' (Depress the knob slightly to get past the pilot ignition position). The main burner should now light. Depress the control knob slightly to release from the 'HIGH' position and turn back (clockwise) to 'LOW'. While turning, the burner flames should gradually become lower but remain alight. Depress the control knob slightly to release from the 'LOW' position and turn back (clockwise) to the Pilot ignition position. The main burner should extinguish but the pilot should remain alight. Depress the control knob slightly and turn back (clockwise) to turn OFF.

This will extinguish the pilot.

INSTALLER'S GUIDE

Check reference pressure.

The appliance is pre-set to give the correct heat input at the inlet pressure shown within Appliance data section of this manual. No further adjustment is necessary. The burner pressure should be checked by fitting a pressure gauge at the test point accessible to the right of the control knob (See figure 12). The pressure should be checked with the appliance alight and the control set at 'HIGH'. After checking the pressure, turn off the appliance. Remove the pressure gauge and replace the test point sealing screw. Re-light the appliance. Turn to 'HIGH' position and test around the sealing screw for gas soundness using a suitable leak detection fluid.

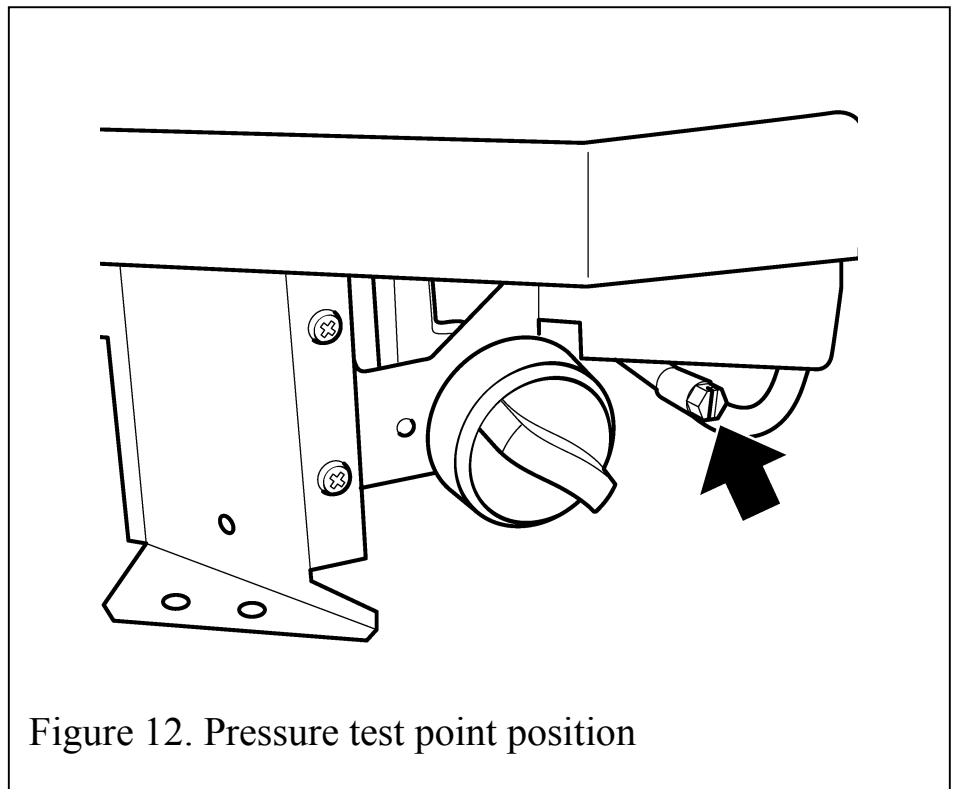


Figure 12. Pressure test point position

9. INSTALLING THE FUEL BED COMPONENTS

9.1 This section is for models supplied with a 'Coal' effect fuel bed only.

For 'Pebbles' see section 9.2

1. Place the ceramic base coal in the burner compartment. The bottom rear face of the coal should rest **against** the angled ledge at the back of the burner tray. **The coal does not rest on top of the angled ledge.** The bottom front edges of the coal base should locate against the left and right hand side

brackets. (See figure 13).

(Installer - Note that the small round holes in the burner plaques that will be covered by the base coal are not gas burner ports. They are simply a consequence of the plaque manufacturing process).

2. Place the left-hand ceramic front coal in position in front of the base coal (See figure 14).

3. Place the right hand ceramic front coal in position in front of the base coal. This should overlap the left-hand coal. Push the two sides together to minimise the gap. (See figure 14).

4. There will be a gap between the rear of the front coals and the front of the base coal. (See figure 14).

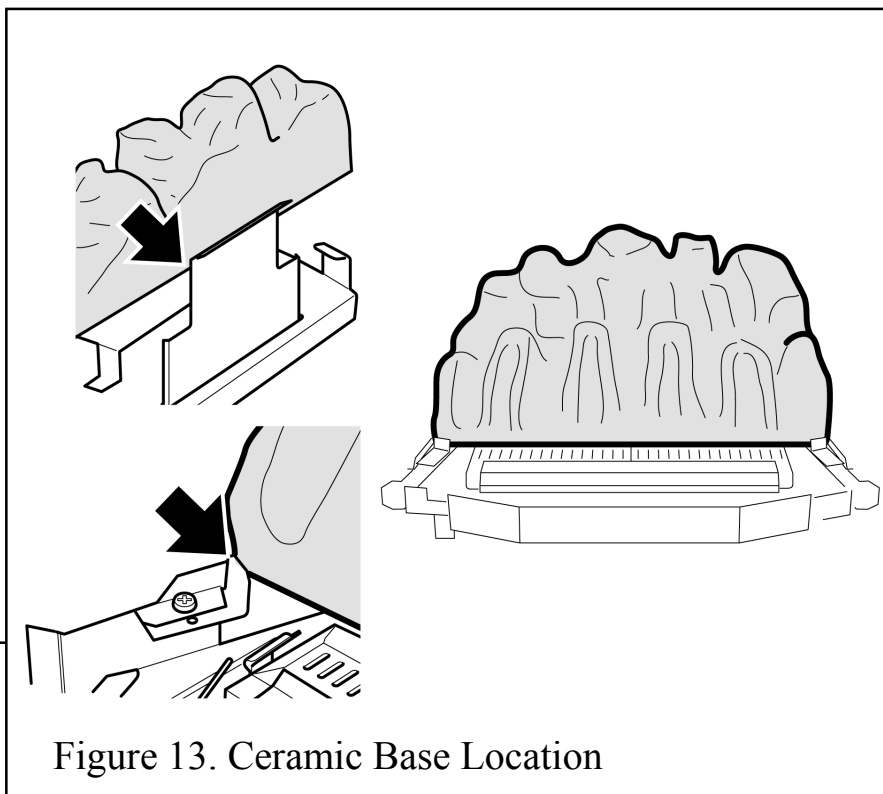


Figure 13. Ceramic Base Location

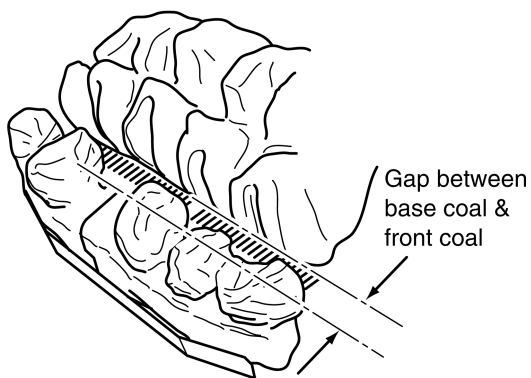
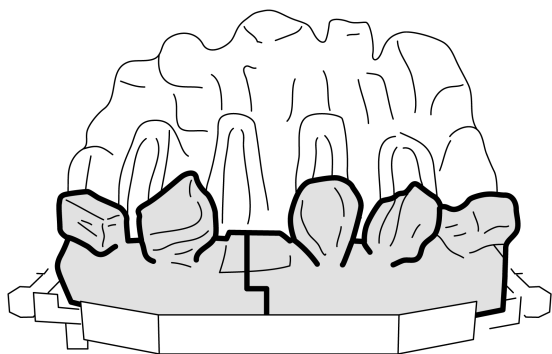


Figure 14. Front Coal Location

INSTALLER'S GUIDE

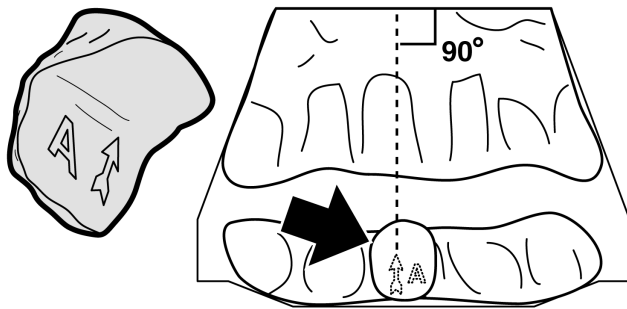
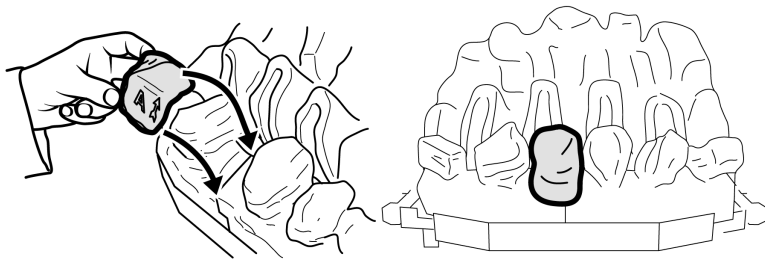


Figure 15. Front Row "Coal A"

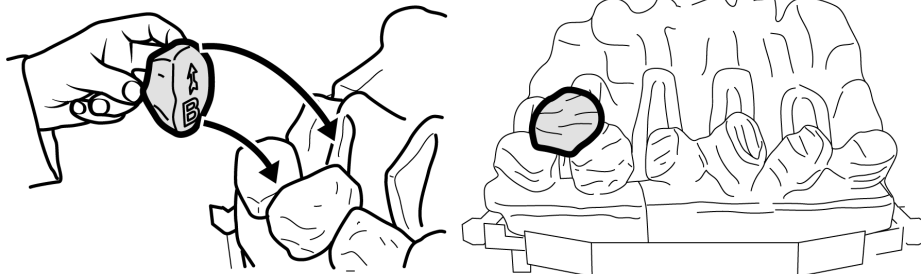


Figure 16. Second row "Coal B"



Figure 17. Second row "Coal C"

5. Install the 12 loose coals as follows. The underside of each coal is marked with a letter 'A' to 'L' and an arrow.

6. The coals should be positioned so that the arrows always point towards the back of the firebox. When located into position the stem of each arrow should be at 90° to the rear of the fireplace opening (See figure 15).

7. Hold coal 'A' upright with the arrow pointing to the top. Locate coal 'A' as

shown in figure 15.

8. Locate coals 'B' to 'E' so that they are firmly seated in the valleys in the coal base and front coal.

9. Hold coal 'B' upright with the

arrow pointing to the top. Locate coal 'B' as shown in figure 16.

10. Hold coal 'C' upright with the arrow pointing to the top. Locate coal 'C' as shown in figure 17.

INSTALLER'S GUIDE

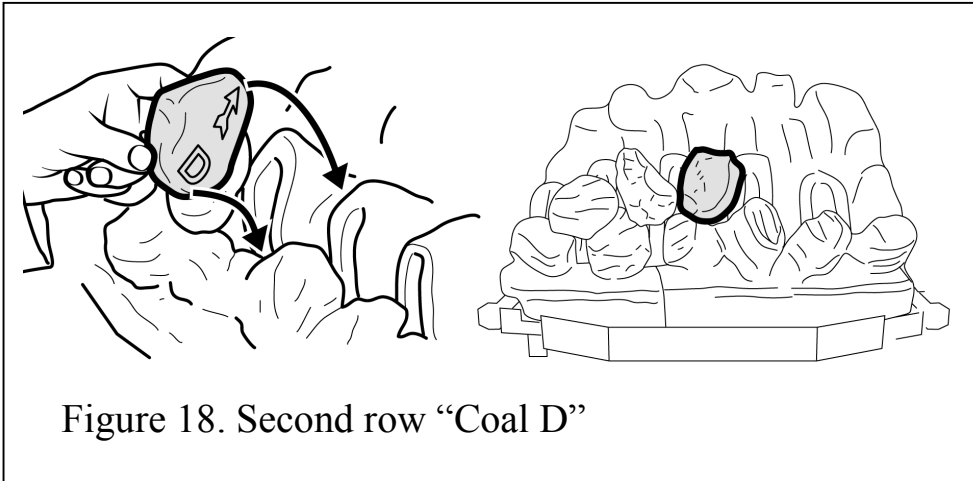


Figure 18. Second row "Coal D"

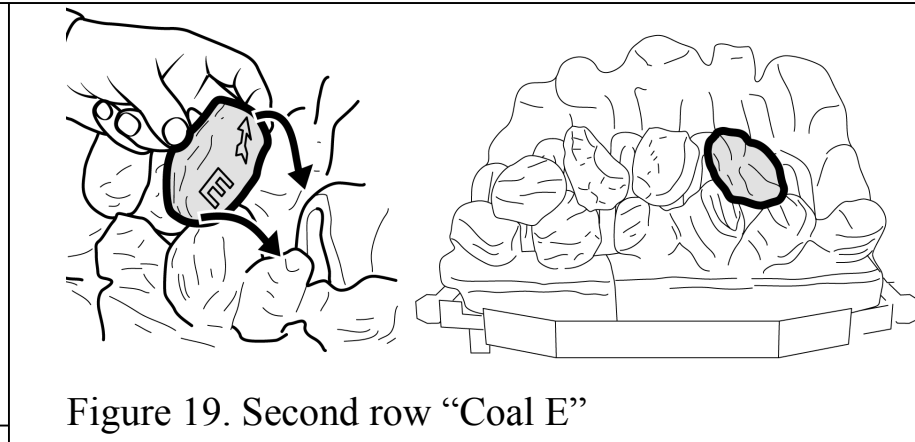


Figure 19. Second row "Coal E"

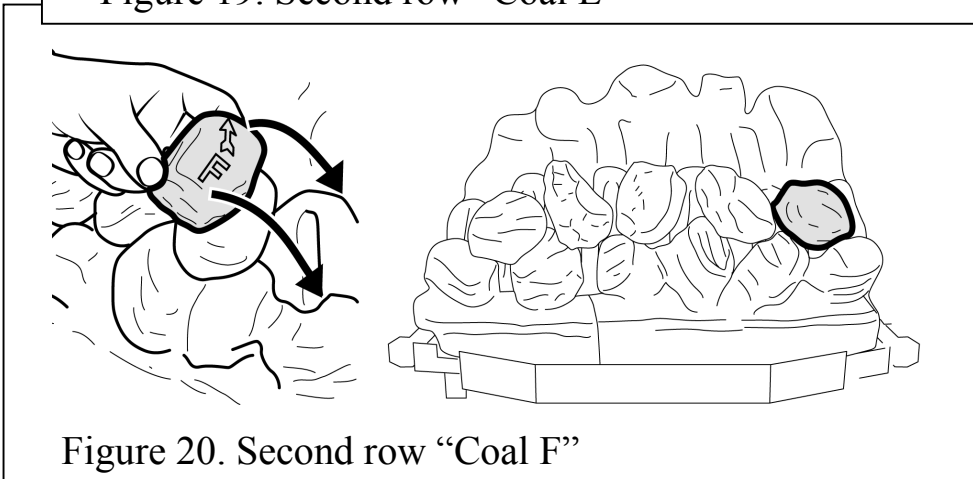


Figure 20. Second row "Coal F"

11. Hold coal 'D' upright with the arrow pointing to the top. Locate coal 'D' as shown in figure 18.

12. Hold coal 'E' upright with the arrow pointing to the top. Locate coal 'E' as shown in figure 19.

13. Hold coal 'F' upright with the arrow pointing to the top. Locate coal 'F' as shown in figure 20.

14. This will complete the second row of loose coals.

INSTALLER'S GUIDE

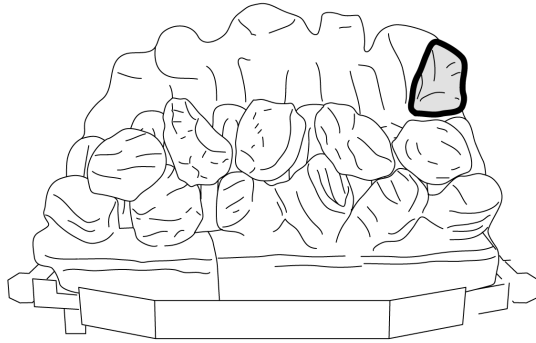
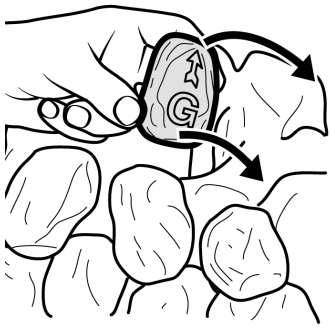


Figure 21. Third row "Coal G"

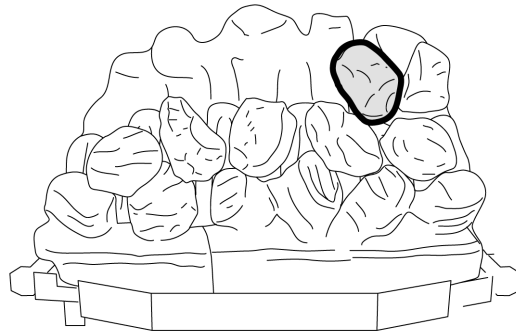


Figure 22. Third row "Coal H"

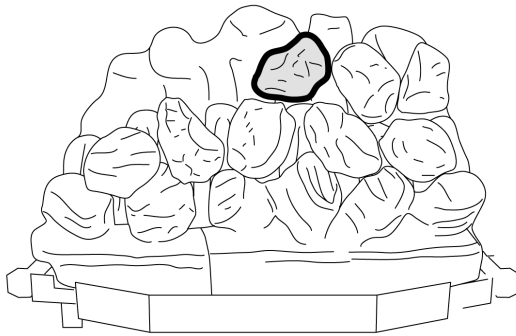
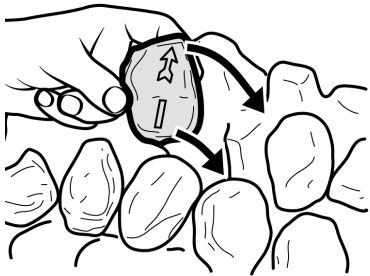


Figure 23. Third row "Coal I"

15. Locate coals 'G' to 'K' so that they are firmly seated in the valleys in the coal base.

16. Hold coal 'G' upright with the arrow pointing to the top. Locate coal 'G' as

shown in figure 21.

17. Hold coal 'H' upright with the arrow pointing to the top. Locate coal 'H' as shown in figure 22

18. Hold coal 'I' upright with the arrow pointing to the top. Locate coal 'I' as shown

in figure 23.

INSTALLER'S GUIDE

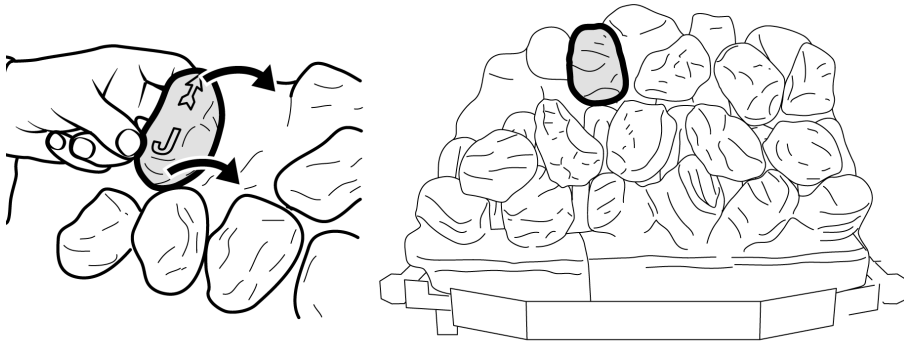


Figure 24. Third row "Coal J"



Figure 25. Third row "Coal K"



Figure 26 Third row "Coal L"

19. Hold coal 'J' upright with the arrow pointing to the top. Locate coal 'J' as shown in figure 24.

20. Hold coal 'K' upright with the arrow pointing to the top. Locate coal 'K' as

shown in figure 25

21. Hold coal 'L' upright with the arrow pointing to the top. Locate coal 'L' as shown in figure 26

INSTALLER'S GUIDE

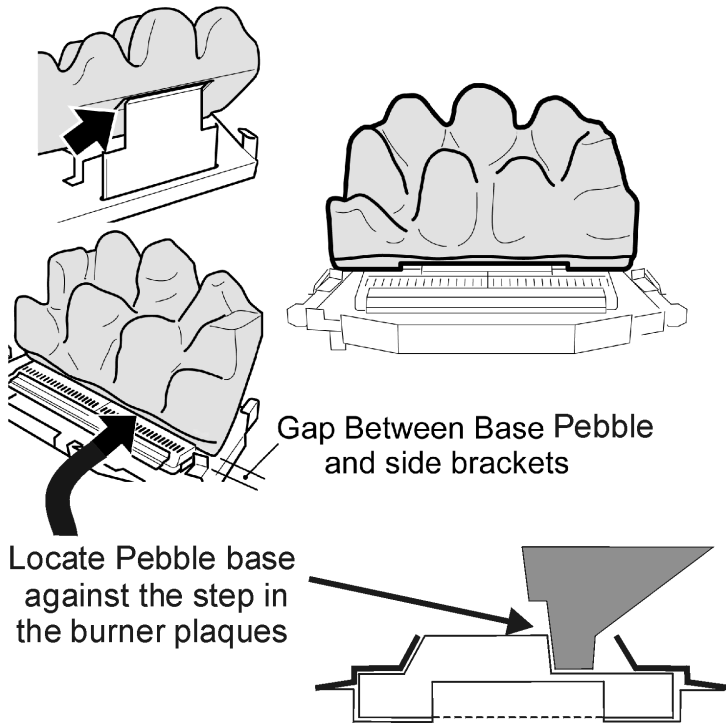


Figure 27. Ceramic Base Pebble Location

9.2 This section is for models supplied with 'Pebbles' effect fuel bed only.

For 'Coal' see section 9.1

1. Place the ceramic pebble base in the burner compartment. The bottom rear face of the pebble base should rest on the angled ledge at the back of the burner tray. The bottom front lower edge of the pebble base should locate against the step in the burner plaques. ***The front edges of the pebble base should not come into contact with the metal tags to the side of the burner tray*** (See figure 27).

2. (Installer – Note that the small round holes in the burner plaques that will be covered by the base coal are not gas burner ports. They are simply a consequence of the plaque manufacturing process).

3. Place the left-hand ceramic front pebbles in position in front of the base pebbles (See figure 28).

4. Place the right hand ceramic front pebbles in position in front of the base pebbles. This should join with the left-hand pebbles. Push the two sides together to minimise the gap. (See figure 28).

5. There will be a gap between the rear of the front pebbles and the front of the base pebbles. (See figure 28).

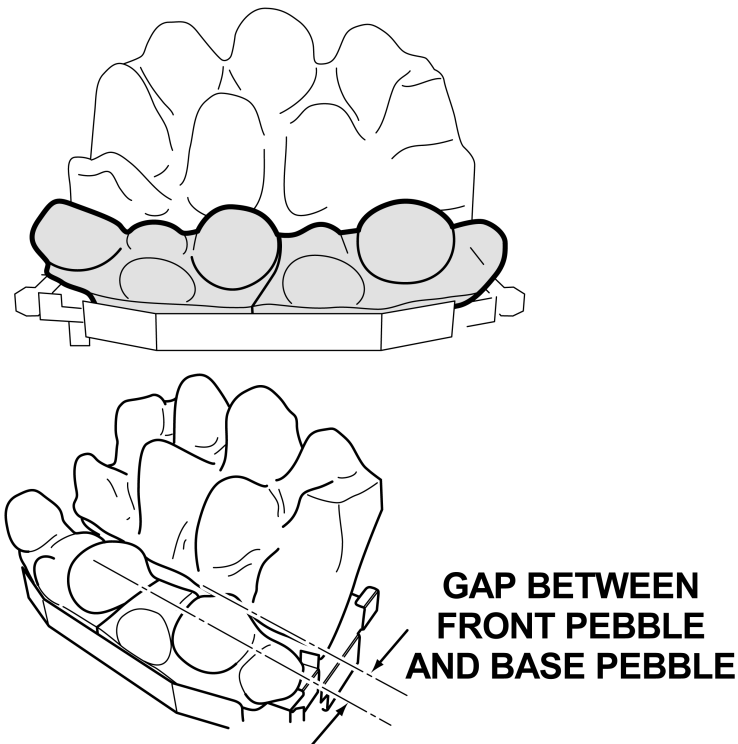


Figure 28. Front Pebble Location

the rear of the front pebbles and the front of the base pebbles. (See figure 28).

INSTALLER'S GUIDE

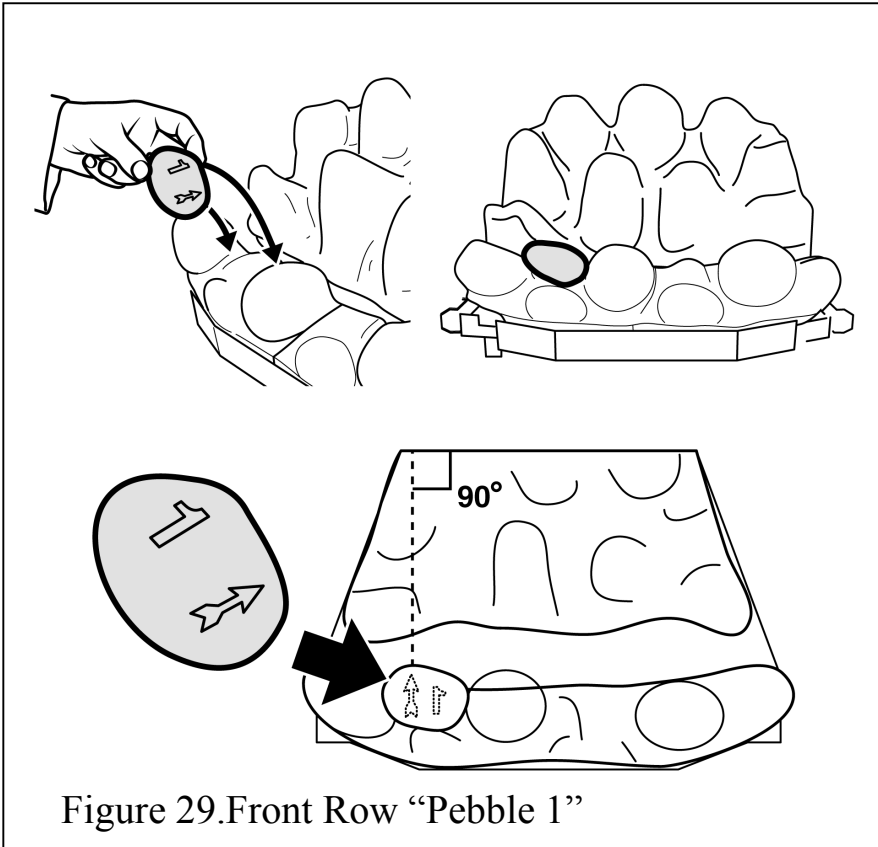


Figure 29. Front Row "Pebble 1"

Install the 16 loose pebbles as follows. The underside of each pebble is marked with a number '1' to '16' and an arrow.

6. The pebbles should be positioned so that the arrows always point towards the back of the fireplace opening. When located into position the stem of each arrow should be at 90° to the rear of the fireplace opening (See figure 29).

7. Hold pebble '1' upright with the arrow pointing to

the top. Locate pebble '1' as shown in figure 30. It should lie on top of the left hand front pebbles.

8. Hold Pebble '2' upright with the arrow pointing to the

top. Locate Pebble '2' as shown in figure 30. It should lie on top of the right hand front pebbles

9. This will complete the front row of pebbles.

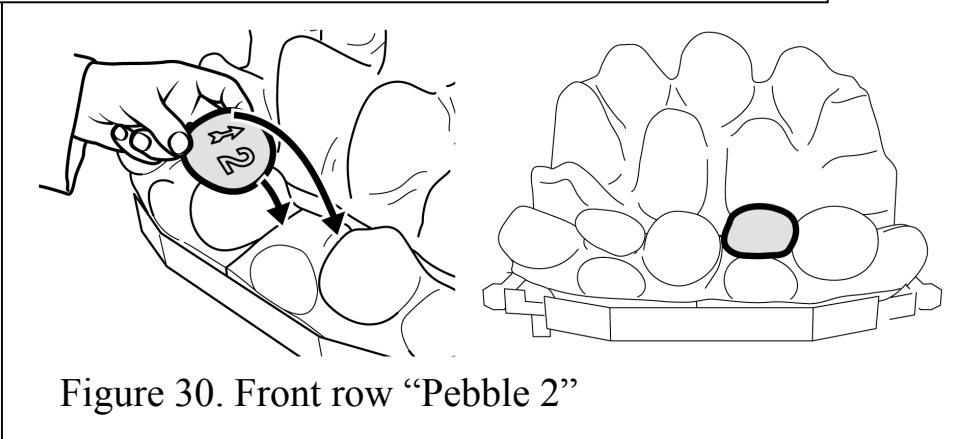


Figure 30. Front row "Pebble 2"

INSTALLER'S GUIDE



Figure 31. Second row "Pebble 3"

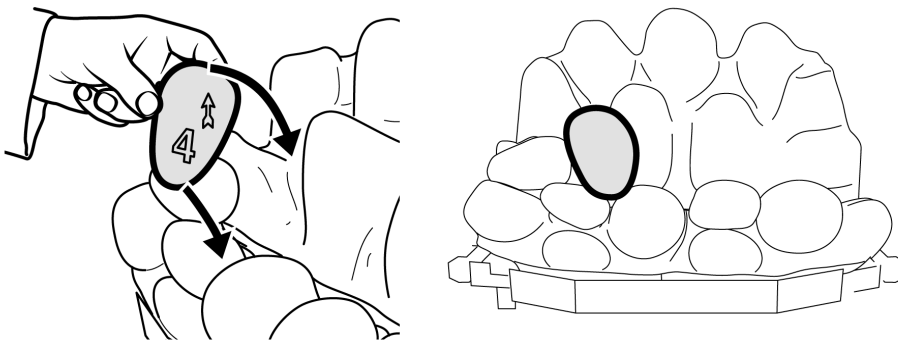


Figure 32. Second row "Pebble 4"



Figure 33. Second row "Pebble 5"



Figure 34. Second row "Pebble 6"

10. Locate pebbles '3' to '7' so that they are firmly seated in the valleys in the pebble base and front pebbles.

11. Hold pebble '3' upright with the arrow pointing to the top. Locate pebble '3' as shown in figure 31.

12. Hold pebble '4' upright with the arrow pointing to the top. Locate pebble '4' as shown in figure 32.

13. Hold pebble '5' upright with the arrow pointing to the top. Locate pebble '5' as shown in figure 33.

14. Hold pebble '6' upright with the arrow pointing to the top. Locate pebble '6' as shown in figure 34.

INSTALLER'S GUIDE

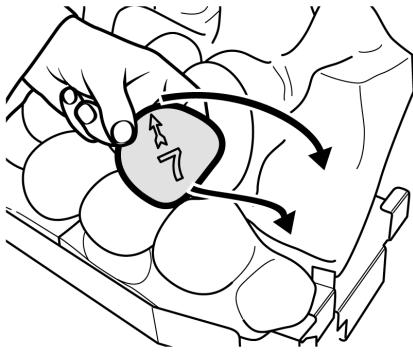
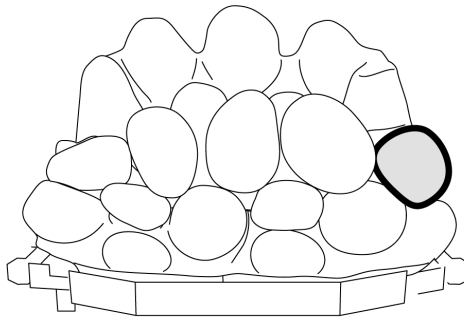


Figure 35. Second row "Pebble 7"



15. Hold pebble '7' upright with the arrow pointing to the top. Locate pebble '7' as shown in figure 35.

16. This will complete the second row of loose

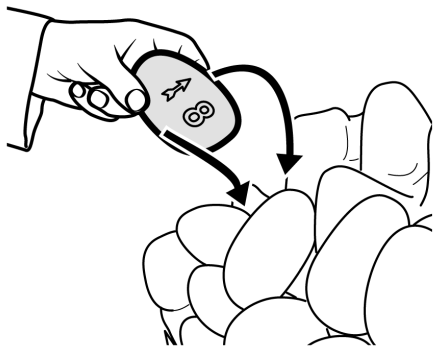
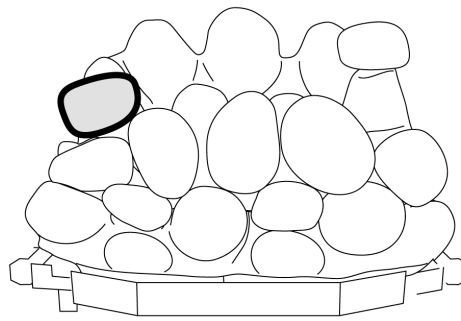


Figure 36. Third row "Pebble 8"



pebbles.

17. Locate pebbles '8' to '12' so that they are firmly seated in the valleys in the pebble base.

18. Hold pebble '8' upright with the arrow pointing to the top. Locate

pebble '8' as shown in figure 36.

19. Hold pebble '9' upright with the arrow pointing to the top. Locate pebble '9' as shown

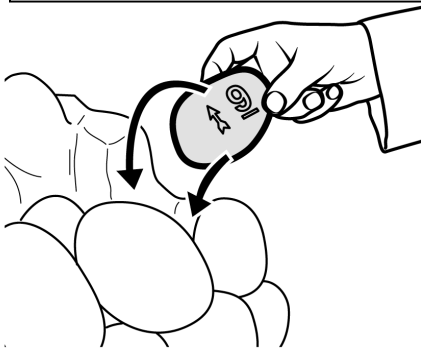
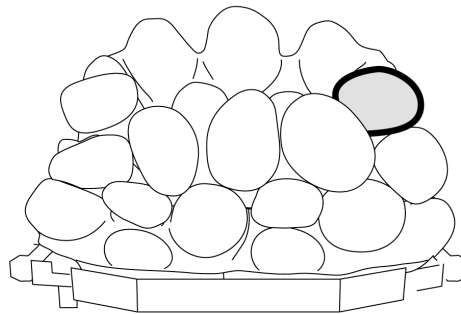


Figure 37. Third row "Pebble 9"



in figure 37.

20. Hold pebble '10' upright with the arrow pointing to the top. Locate pebble '10' as shown in figure 38.

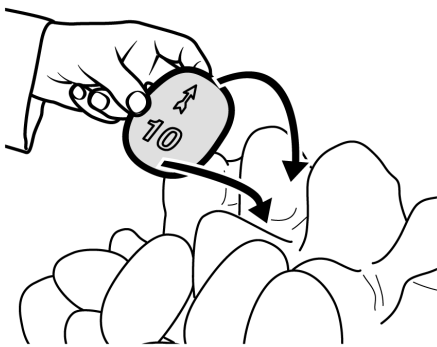


Figure 38. Third row "Pebble 10"

INSTALLER'S GUIDE

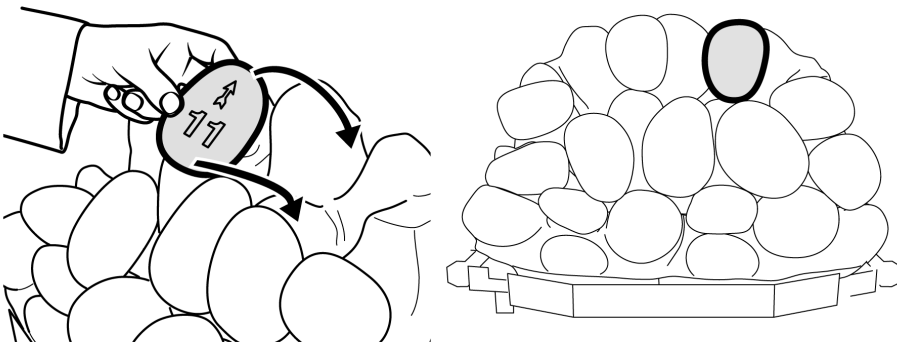


Figure 39. Third row "Pebble 11"

21. Hold pebble '11' upright with the arrow pointing to the top. Locate pebble '11' as shown in figure 39



Figure 40 Third row "Pebble 12"

22. Hold pebble '12' upright with the arrow pointing to the top. Locate pebble '12' as shown in figure 40.

23. Hold pebble '13' upright with the arrow pointing to the top. Locate pebble '13' as

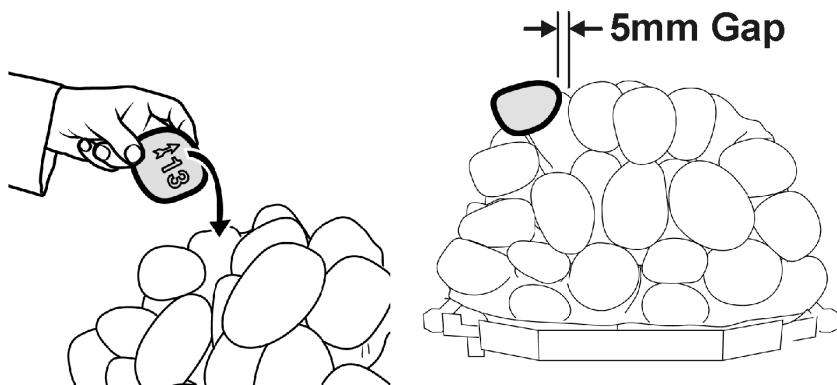


Figure 41. Fourth row "Pebble 13"

shown in figure 41. Leave a 5mm gap between pebble 13 and the pebble to its right.

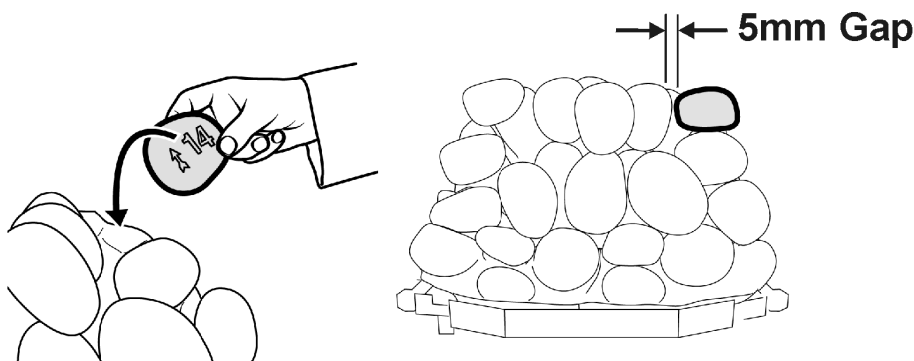


Figure 42. Fourth row "Pebble 14"

24. Hold pebble '14' upright with the arrow pointing to the top. Locate pebble '14' as shown in figure 42. Leave a 5mm gap between pebble 14 and the pebble to its left.

INSTALLER'S GUIDE

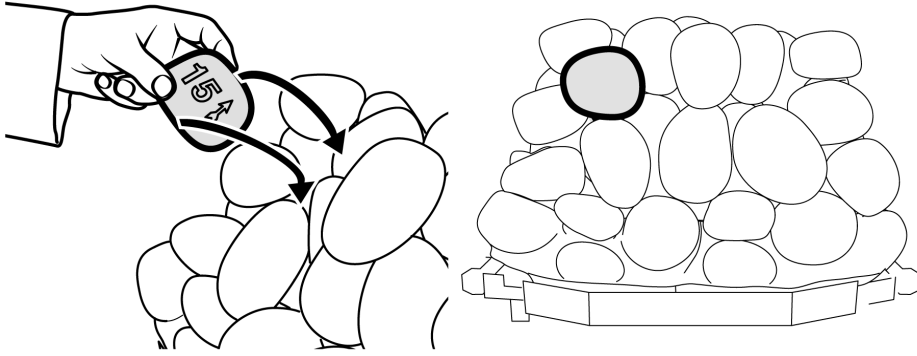


Figure 43 Fourth row "Pebble 15"

25. Hold pebble '15' upright with the arrow pointing to the top. Locate pebble '15' as shown in figure 43.

26. Hold pebble

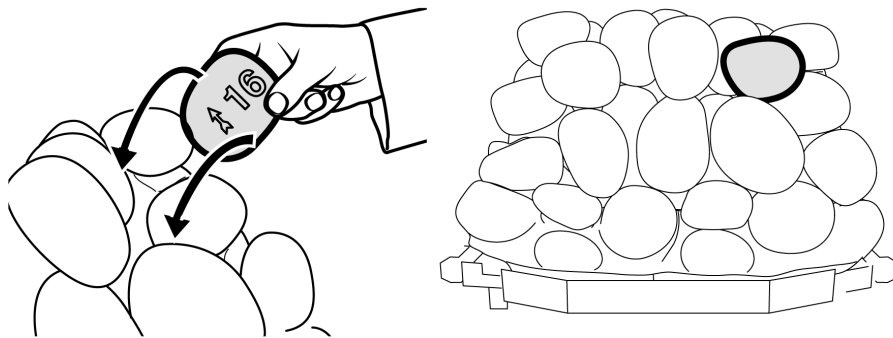


Figure 44 Fourth row "Pebble 16"

'16' upright with the arrow pointing to the top. Locate pebble '16' as shown in figure 44.

INSTALLER'S GUIDE

10. FITTING THE FIREFRONT

- A slotted firefront with a **minimum** free area as shown in figure 45 must always be used.

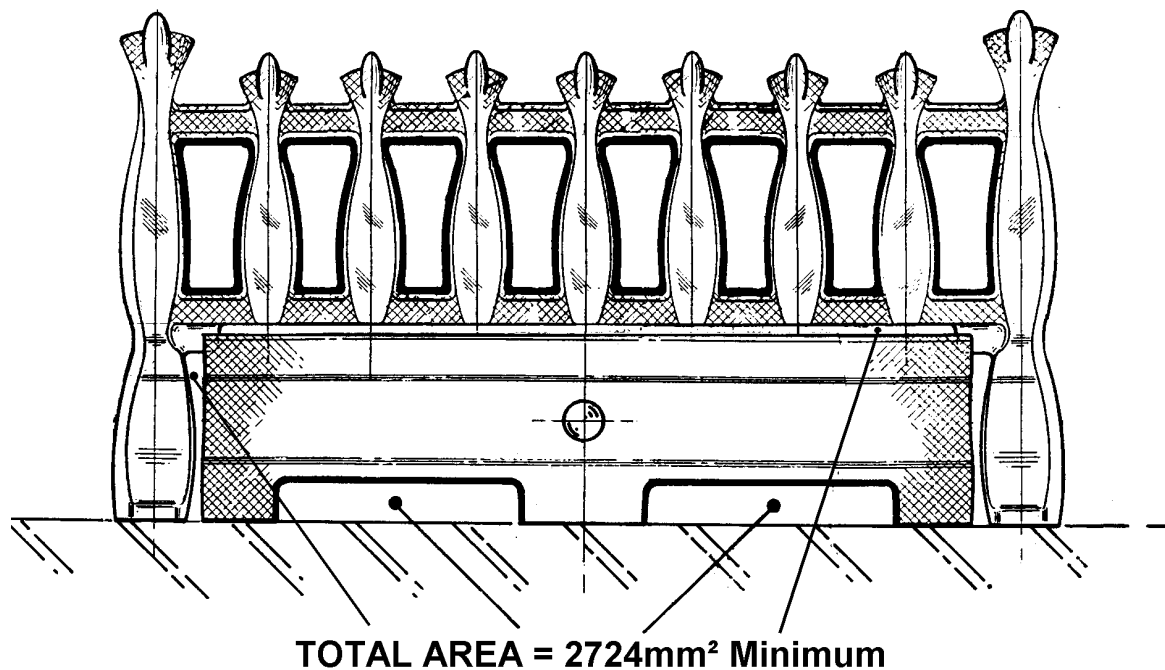


Figure 45 Firefront Minimum open area requirements.

- The 'Liberty' casting has been tested and approved for use with the 639 burner.

11. FULL OPERATING CHECKS

Spillage check.

For installations without the 'Liberty' casting

- *A spillage check must be made before leaving the installed appliance with the customer. Make this with all the ceramic fuel effect pieces and firefronts / castings in position. (See figure 46)*

For installations with the 'Liberty' casting

- *A spillage check must be made before leaving the installed appliance with the customer. Make this with all the ceramic fuel effect pieces and firefronts / castings in position. (See figure 47)*

- Close all doors and windows in the room containing the appliance. Light the appliance and set the control to the 'HIGH' position. Leave the appliance on for five minutes. See lighting instructions within section 8 of this guide.

For installations without the 'Liberty' casting

- Insert the smoke match at least 50mm away from the side of the fireplace opening and not more than 50mm from the top of the opening. The end of the smoke match should be level with the front face of the fireplace opening.

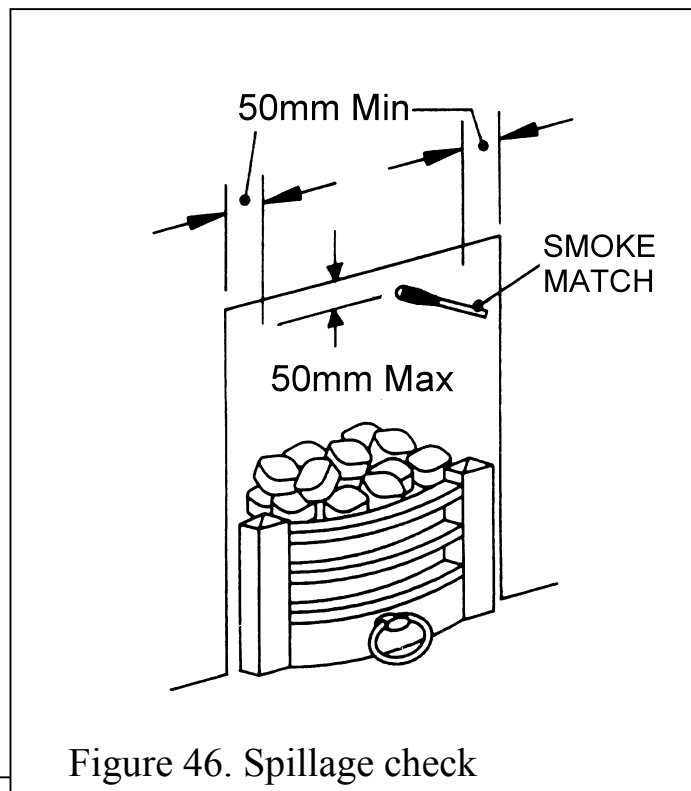


Figure 46. Spillage check

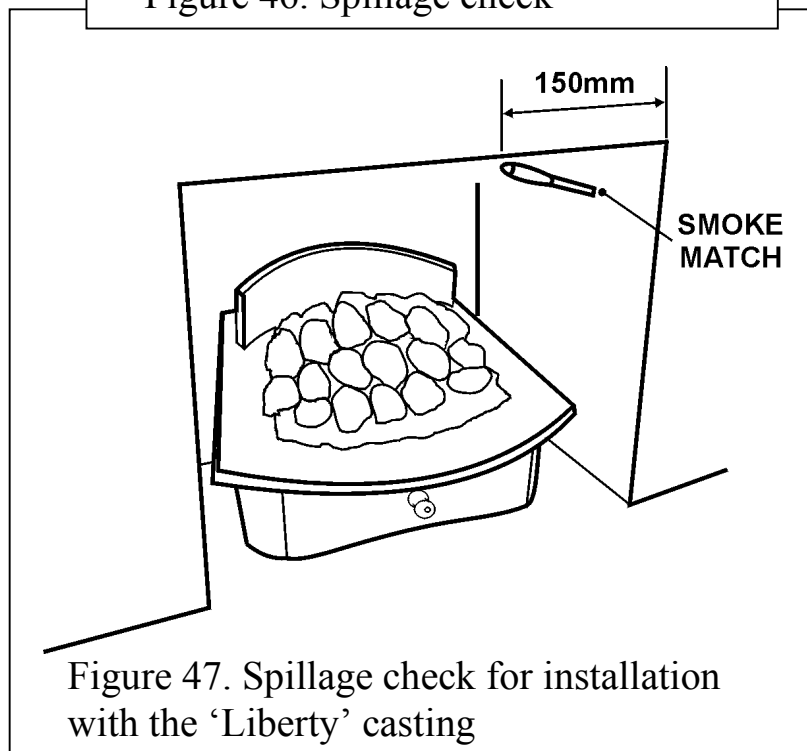


Figure 47. Spillage check for installation with the 'Liberty' casting

INSTALLER'S GUIDE

For installations with the 'Liberty' casting

- Insert the smoke match 150mm away from the right hand side of the fireplace opening. The smoke match should rest against the top of the opening. The end of the smoke match should be level with the front face of the fireplace opening.
- The installation is satisfactory if the smoke is drawn into the fireplace opening. If the smoke is not drawn into the fireplace opening, leave the appliance alight at the maximum setting for a further ten minutes and then repeat the test. If smoke is still not drawn into the appliance ***disconnect the appliance and seek expert advice.***
- If the above test is satisfactory, open all internal connecting doors, hatches, etc. in the room. Keep all doors and windows that open to the outside of the building closed. Switch on any extractor fan installed in the same room as the appliance or a connecting room. Open all doors and other openings between the fan and the appliance. Recheck for spillage as above. If the smoke is drawn into the appliance, continue with the installation. If the test is not satisfactory, ***disconnect the appliance and advise the customer of the cause of failure.***

Flame Supervision & Spillage Monitoring System

The pilot unit incorporates a system that will automatically shut off the gas supply if the pilot flame goes out or if there is insufficient oxygen due to spillage or lack of ventilation.

Check that the system operates properly as follows;

- Light the appliance. Set at the "HIGH" position and leave for one minute.
- Turn back to "OFF" to extinguish the pilot. **Note the time when the pilot goes out.**

Listen for a snap sound at the gas tap. **Note the time when the sound is heard.** An electromagnetic valve shutting off the gas supply through the tap causes this sound. The valve is located in the body of the tap. The valve should operate **within 60 seconds of the pilot going out.** If the valve does not operate within this time limit do not allow the appliance to be used until the fault has been corrected.

This monitoring system must not be adjusted, bypassed or put out of operation. This monitoring system, or any of its parts, must only be exchanged using Wonderfire authorised parts.

Final commissioning

- Visually inspect the appliance. Clean off any marks incurred during installation.
- Hand this guide to the customer.

INSTALLER'S GUIDE

- *Stress that no extra coals / Pebbles must be added over and above those supplied with the appliance and that any replacements must only be the authorised spares. Warn that ignoring this advice could cause incomplete clearance of the products of combustion with consequent health hazards.*
- Advise the customer how to operate the appliance. Point out that lighting instruction details are contained within the user's instructions.
- Explain that this appliance is fitted with an atmosphere-sensing device, ODS pilot unit that will automatically shut off the supply of gas to the fire if, for any reason, the flames go out. It will also shut off the gas supply if the flue is blocked or if there is not enough ventilation. If this device does operate or if the fire is turned off accidentally or intentionally, always wait three minutes before attempting to relight.
- Advise the customer that the fire front and ceramic pieces can be cleaned as described in the user's instructions and that the ceramic pieces must be replaced as described in those instructions.
- Recommend that the appliance should be serviced and the chimney inspected by a competent person at least annually.

12. SERVICING & PARTS REPLACEMENT

This product uses fuel effect pieces and gaskets containing Refractory Ceramic Fibres (RCF), which are man-made vitreous silicate fibres. Excessive exposure to these materials may cause irritation to eyes, skin and respiratory tract. Consequently, it is important to take care when handling these articles to ensure that the release of dust is kept to a minimum. To ensure that the release of fibres from these RCF articles is kept to a minimum, during installation and servicing we recommend that you use a HEPA filtered vacuum to remove any dust and soot accumulated in and around the fire before and after working on the fire. When replacing these articles we recommend that the replaced items are not broken up, but are sealed within a heavy duty polythene bag, clearly labelled as RCF waste. This is not classified as “hazardous waste” and may be disposed of at a tipping site licensed for the disposal of industrial waste. Protective clothing is not required when handling these articles, but we recommend you follow the normal hygiene rules of not smoking, eating or drinking in the work area and always wash your hands before eating or drinking.

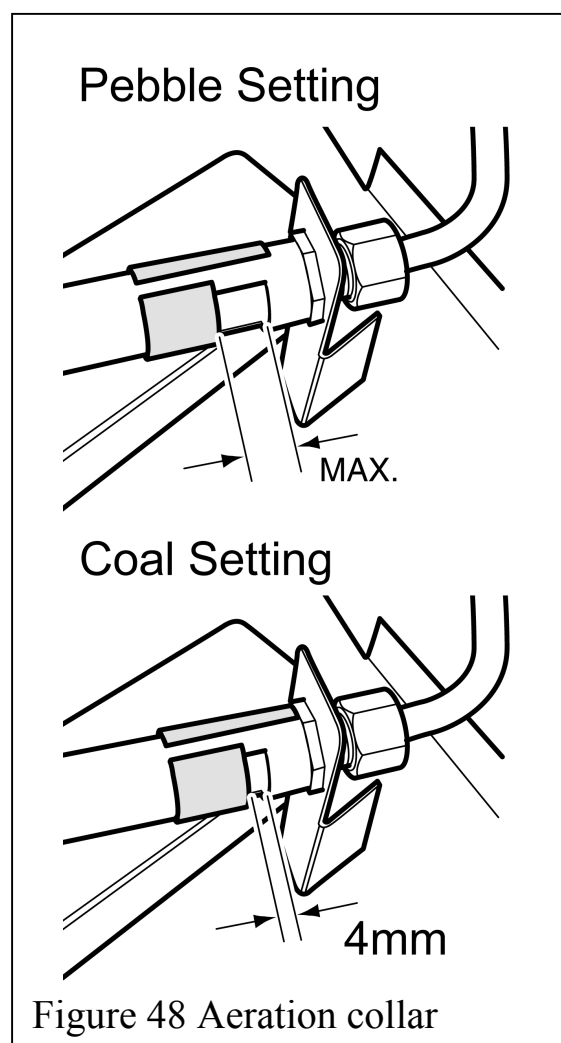
This appliance does not contain any component manufactured from asbestos or asbestos related products.

- *Always turn off the gas supply and allow the appliance to cool completely before commencing any servicing or replacement of parts.*
- Check that the appliance is clean and that soot or debris is not blocking the gaps between the coals / Pebbles causing an imperfect flame.
- Check that soot or debris is not impairing the electrode spark or pilot burner.
- Check that soot or debris is not blocking any of the slots in the main burner.
- After servicing, make sure that the ceramic components and coals / Pebbles are replaced correctly as described in this guide.
- *Always test for gas soundness and spillage after servicing the appliance.*

INSTALLER'S GUIDE

CHECKING THE AERATION SETTING OF THE BURNER.

- The aeration setting on the burner is different depending on the fuel bed used. The aeration setting is factory set.
- If a 'Pebble' fuel bed is used, the aeration collar should be positioned so that the opening in the rear of the mixer tube is fully open. (See figure 48)
- If a 'Coal' fuel bed is used, the aeration collar should be positioned so that the opening in the rear of the mixer tube is partially closed. Slide the aeration collar towards the injector as far as it will go. The gap should be 4mm (See figure 48)



TO REMOVE THE BURNER UNIT

- Remove the firefront and place in a safe position.

(Models with 'Coal' effect fuel bed)

- Remove the 12 loose coals, the front coals and the coal matrix. Place in a safe position.

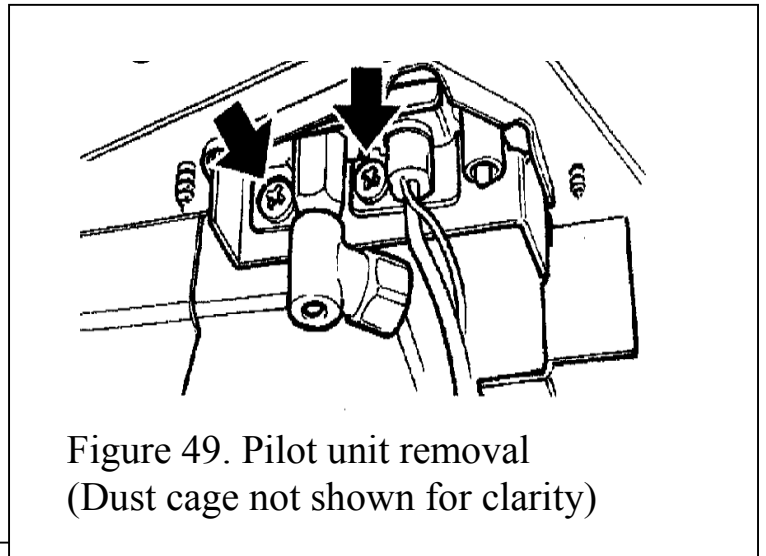
(Models with 'Pebble' effect fuel bed)

- Remove the 16 loose pebbles, the front pebbles and the base. Place in a safe position.
- Close the valve in the inlet elbow.
- Disconnect the appliance from the inlet elbow.
- Remove the front leg fastening screws (See figure 10 or 11 depending upon method of fix).
- Lift the burner out of the fireplace opening.
- Replace in the reverse order.

INSTALLER'S GUIDE

TO REMOVE THE ODS PILOT UNIT

- Remove the burner unit - See above.
- If lying the burner on its back make sure that the surface it is placed onto is protected from being scratched.
- Detach the pilot pipe from the gas shut-off tap.
- Detach the thermocouple from the gas shut-off tap by unscrewing the thermocouple nut.
- Detach the electrode lead from the underside of the electrode tab.
- Remove the first screw securing the dust cage to the pilot unit & burner. Carefully remove the dust cage and place aside. See figure 49.
- Remove the second screw securing the pilot unit to the burner. Remove the pilot unit and place it aside.
- Disconnect the pilot pipe from the pilot unit elbow.
- Refit in the reverse order.

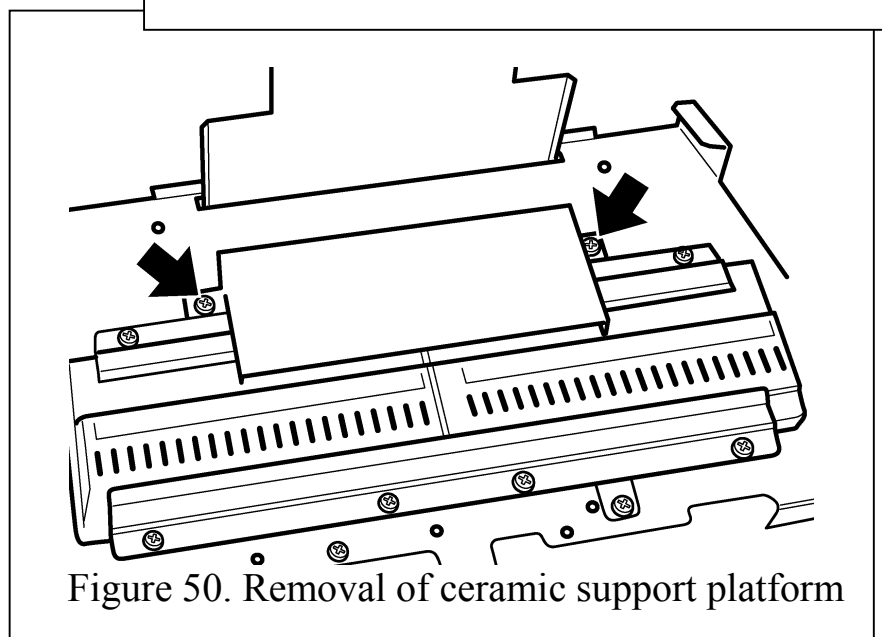


TO REMOVE THE GAS TAP / FSD.

- Remove the burner unit - See above.
- Detach the thermocouple from the gas shut-off tap by unscrewing the thermocouple nut.
- Detach the piezo / electrode lead

from the base of the electrode.

- Remove the main burner supply pipe from the gas tap.
- Remove the pilot burner supply pipe from the gas tap.
- Remove the injector supply pipe from the gas tap.
- Remove the gas control knob.
- Detach the gas tap-retaining nut from the front leg and remove the gas tap.



INSTALLER'S GUIDE

- Refit in the reverse order.

TO REMOVE THE MAIN BURNER INJECTOR

- Remove the burner unit - See above.
- Disconnect the main burner pipe from the injector at the venturi end. If necessary, loosen the pipe at the gas tap end to swing the pipe clear of the injector.
- Unscrew the injector from the rear support bracket.
- Refit in the reverse order.

TO REPLACE BURNER PLAQUES

- See figure 51
- Remove the bottom front and fire front castings.

(Models with 'Coal' effect fuel bed)

- Remove the 12 loose coals, the front coals and the coal matrix. Place in a safe position.

(Models with 'Pebble' effect fuel bed)

- Remove the 16 loose pebbles, the front pebbles and the base. Place in a safe position.

- Close the valve in the inlet elbow
- The plaques can then be removed as follows: -
- Remove the ceramic support platform (See figure 50)
- Remove the plaque clamping strips by detaching 8 screws.
- Remove the plaques and the combination gasket between and under the plaques. If necessary remove the gauze and the gasket beneath it.
- If necessary fit a new gasket below the gauze. Clean and replace the

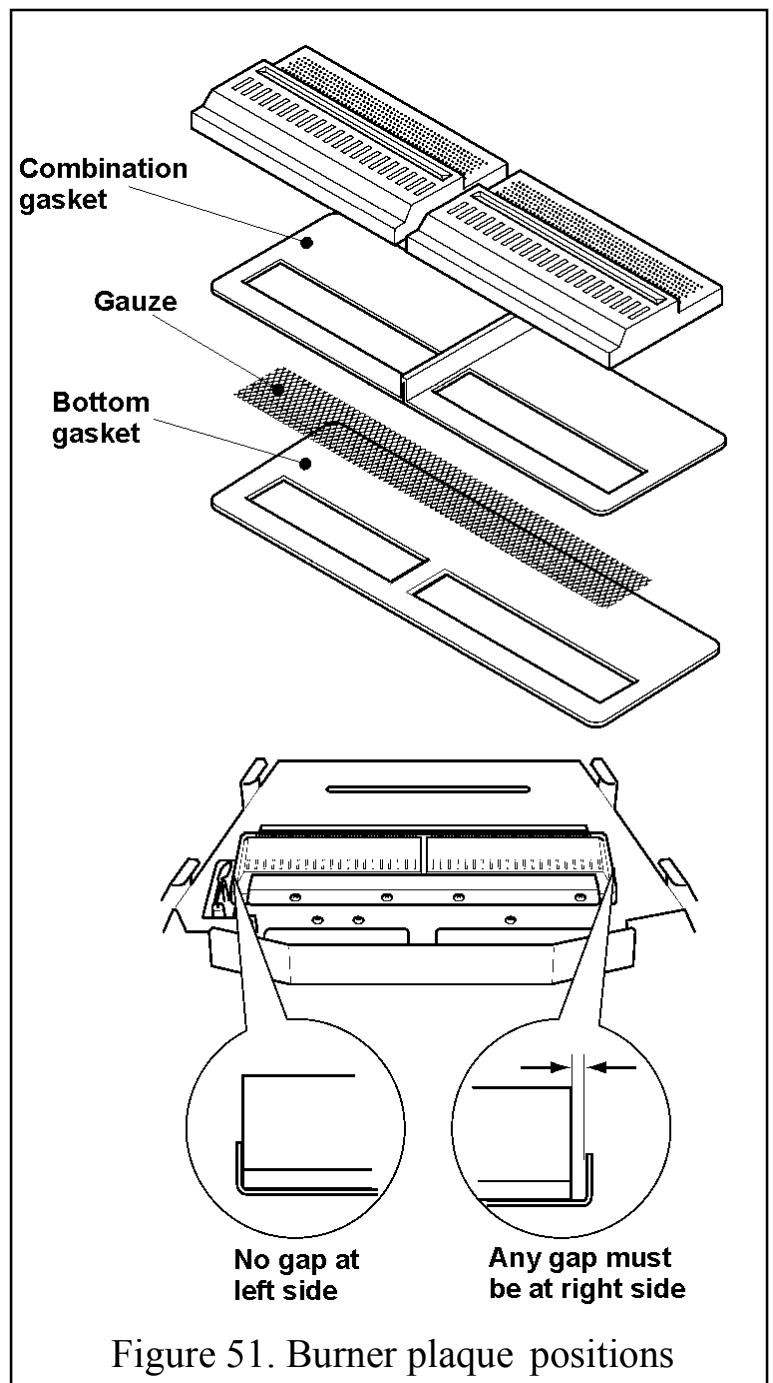


Figure 51. Burner plaque positions

INSTALLER'S GUIDE

gauze. Fit a new combination gasket below the plaques. Push the gasket ends inwards to form a dividing gasket between the plaques.

- Place the new left hand plaque in position. The left side of the plaque must touch the inside edge of the retaining flange at the left side of the burner well.
- Place the new right hand plaque in position. Make sure that the centre section of the combination gasket is between the two plaques. If there is any play between the plaques and the end retaining flanges, push the plaques firmly to the left squeezing the centre section of the combination gasket between the two plaques. Any gap should be between the right side of the plaque and the right side-retaining flange.
- Fit the front and rear plaque clamping strips. Make sure that the plaques are as far to the left as possible. *It is important that the left side plaque is accurately positioned so that it has the correct relationship to the pilot.* Fully tighten the clamping strips.
- Refit the coals/ Pebbles as described in section 6 of this guide. Refit the decorative firefront.

13. SHORT LIST OF SPARES

DESCRIPTION	NO. OFF	MAKER'S PART NO.	
		MODEL	
		639 (Nat. Gas)	639 (Propane)
Pilot unit	1	720A249	720A300
Burner injector	1	720A072	3002350
Burner plaque & gasket set	1	000A913	000A931
Gas tap	1	3002368	3002368
(Models with 'Coal' fuel effect bed)			
Coal matrix	1	3002190	3002190
Front coal Set	1	3002330	3002330
Pack of 12 loose coals	1	3002193	3002193
(Models with 'Pebble' fuel effect bed)			
Pebble matrix	1	3002448	3002448
Front Pebble set	1	3002516	3002516
Pack of 16 loose pebbles	1	3002442	3002442

Because our policy is one of constant development and improvement, details may vary slightly from those given in this publication.

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