

BAXI FIRES DIVISION

INSTALLER GUIDE

Model 946 Heat Engine

(GC No. 32-032-63)



INSET LIVE FUEL EFFECT GAS FIRE

**THIS APPLIANCE IS FOR USE WITH NATURAL GAS (G20)
WHEN CONVERTED USING CONVERSION KIT NO. 0595231 THIS
APPLIANCE IS FOR USE WITH PROPANE GAS (G31)
THIS APPLIANCE IS SUITABLE ONLY FOR INSTALLATION IN THE UNITED
KINGDOM (GB) AND THE REPUBLIC OF IRELAND (IE).**

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

Baxi Fires Division Technical Helpline will be pleased to help.

Telephone **08706 061 065** (National call rates apply in the United Kingdom).

In the Republic of Ireland telephone **0044 8706 061 065**.

INSTALLER: Please leave this guide with the owner

BAXI ● VALOR ● WONDERFIRE

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Safety First.

Baxi Fires Division fires are CE Approved and designed to meet the appropriate British Standards and Safety Marks.



Quality and Excellence.

At the heart of every Baxi Fires Division fire.

All Baxi Fires Division 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

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



Careful Installation

Baxi Fires Division 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.

B A X I F I R E S D I V I S I O N

Baxi Fires Division, Erdington, Birmingham B24 9QP
www.firesandstoves.co.uk

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

INSTALLER GUIDE

CONTENTS

<u>Section</u>	<u>Heading</u>	<u>Page</u>
1.	SAFETY	4
2.	APPLIANCE DATA	4
3.	GENERAL INSTALLATION REQUIREMENTS	5
4.	PACK CONTENTS	12
5.	FIREPLACE CHECK	13
	5.1 Fireplace check.	13
	5.2 Fireplace flue pull.	13
6.	IGNITION CHECK	14
7.	GAS SUPPLY CONNECTION	14
8.	PREPARING APPLIANCE FOR INSTALLATION	15
	8.1 Appliance preparation.	15
	8.2 Fitting the fascia.	15
	8.3 Fitting the foam seal.	15
	8.4 The flue restrictor.	16
9.	FIREBOX INSTALLATION	17
	9.1 Cable retention.	17
	9.2 Floor sealing.	18
10.	BURNER INSTALLATION	19
11.	CERAMIC COALS INSTALLATION	20
12.	CERAMIC PEBBLES INSTALLATION	22
13.	FIREFRONT INSTALLATION	24
14.	FULL OPERATING CHECKS	24
	14.1 Check the control settings.	24
	14.1.1 Lighting the burner.	24
	14.1.2 Operating the burner.	25
15.	SPILLAGE AND FLAME SUPERVISION CHECKS	25
16.	FINAL REVIEW	27
17.	SERVICING AND PARTS REPLACEMENT	28
	17.1 Checking the aeration setting of the burner.	29
	17.2 To remove the burner unit.	29
	17.3 To remove the pilot unit.	29
	17.4 To remove the gas valve.	30
	17.5 To replace the burner.	30
	17.6 To remove the main burner injector.	30
	17.7 To remove the appliance from the fireplace.	31
	17.8 To remove the fascia.	31

INSTALLER 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 heat engine is 4.4 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.

2. APPLIANCE DATA

This product uses fuel effect pieces and a burner compartment rear wall 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.

INSTALLER GUIDE

Gas	Natural (G20)	Propane (G31) *
Inlet Pressure	20mbar	37mbar
Input - Max. (Gross)	6.0kW (20,500Btu/h)	6.1kW (20,800Btu/h)
Input - Min. (Gross)	2.3kW (7,850Btu/h)	3.8kW (12,965Btu/h)
Inlet Test Pressure (Cold)	20.0 ± 1.0mbar (8.0 ± 0.4in w.g.)	37.0 ± 1.0 mbar (14.85 ± 0.4in w.g.)
Gas Connection	8mm pipe	8mm pipe
Burner Injector	SU - 074	Stereomatic size 128
Pilot & Atmosphere Sensing Device	SU 028	SU 020
Ignition	Piezo Electric. Integral with Gas Tap	Piezo Electric. Integral with Gas Tap
Aeration	See section 17.1	Non-adjustable

* When converted using Kit 0595231

The appliance data label is located on a plate at the base of the fire. This can be seen by removing the firefront casting set / firefront.

3. GENERAL INSTALLATION REQUIREMENTS

3.1 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:

All the relevant parts of local regulations.

All relevant codes of practice.

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

BS 715 BS 1251 BS 1289 Part 1 BS EN 1806

BS 4543 Part 2 BS 5440 Part 1 BS 5440 Part 2 BS 5871 Part 1

BS 6461 Part 1 BS 6891

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.

INSTALLER GUIDE

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 be carried out by a competent person and installed in accordance with:

- a) The current edition of IS 813 “Domestic gas installations”
- b) All relevant national and local rules in force.
- c) The current building regulations

Where no specific instructions are given, reference should be made to the relevant British Standard Code of Practice.

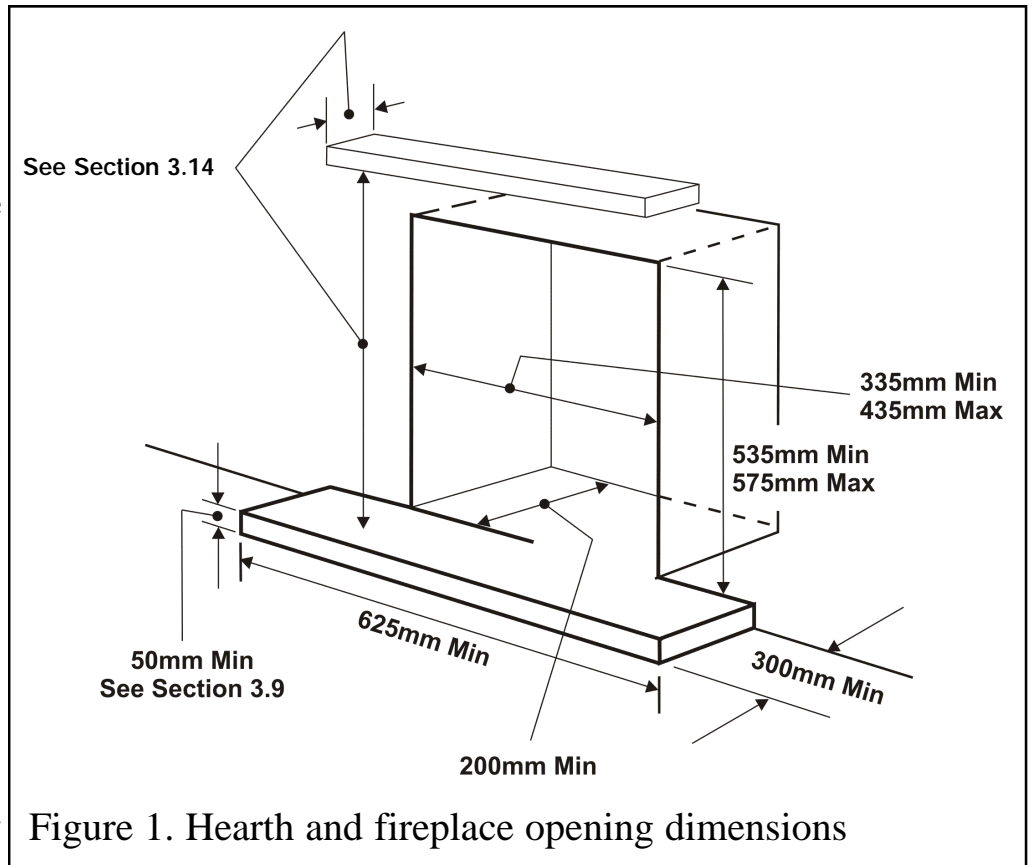
3.2 In the United Kingdom, as supplied, this appliance can be installed in the following situations: -

3.2.1 A masonry chimney with a minimum diameter of 175mm (7”) free from any obstruction, and with any damper or restrictor plate in the chimney removed or secured, and having a minimum effective flue height of 3m (10ft). A masonry chimney having a correctly installed flue liner to BS715 and with a minimum flue diameter of 125mm is also acceptable. Chair brick removal may not be required providing at least 50mm clearance is available from the flue outlet to any fireplace component. The appliance is designed to cater for low lintel installations (min height 505mm) providing a minimum distance of 25mm is maintained between the lintel and the front face of the fireplace (i.e. 25mm rebated fire surround).

3.2.1.1 ‘Hole-in-the-wall’ Installations

- It is recommended that a hearth should be installed as in figure 1.
- 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 at least 72mm. The recommended reduced hearth depth is 100mm. This is necessary to support the firefront.

3.2.2 To a fireplace incorporating a metal flue box conforming to BS715 with a minimum internal depth of 150mm.



INSTALLER GUIDE

Incombustible mineral wool insulation of not less than 50mm thickness must be applied to the top surface of the firebox (See figure 2) and it must stand on a non-combustible hearth (See figure 1).

3.2.3 To a fireplace that has a precast concrete or clay flue block system conforming to BS1289 or BS EN 1806. The appliance is suitable for installations conforming to older versions of BS1289 as well as the current edition. The flue blocks must have a minimum width not less than 63mm and a cross-sectional area not less than 13,000mm². Older editions of BS1289 required a cross-sectional area of 13,000mm².

The current revision of the standard requires 16,500mm². This appliance is suitable in both cases. The total depth of the opening measured from the finished front of the fireplace (Including plaster, surround etc.) must be **not less than 120mm** (See figure 3).

The current versions of BS1289 and BS EN 1806 recommend that there should be an air space or insulation between the flue blocks and the plaster because heat transfer may cause cracking on directly plastered flues. However, generally this appliance is suitable for installations under all circumstances unless there is a history of cracking problems. Remember that faults such as cracking may be caused by poorly built and restrictive flues, e.g. mortar extrusions, too many bends, flue heights below three metres, restrictive terminations, etc.

3.2.4 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.

3.3 The following flues are suitable:

- 225mm x 225mm conventional brick flue.

If a flue liner is used, it must be a minimum of 125mm diameter. The liner must be sealed to the surrounding area above the fireplace opening and to the top of the chimney. An approved terminal must be fitted.

- A properly constructed precast flue conforming to B.S 1289 or BS EN 1806.
- A flue pipe with a minimum diameter of 127mm. See B.S 6461 Part 1 for suitable

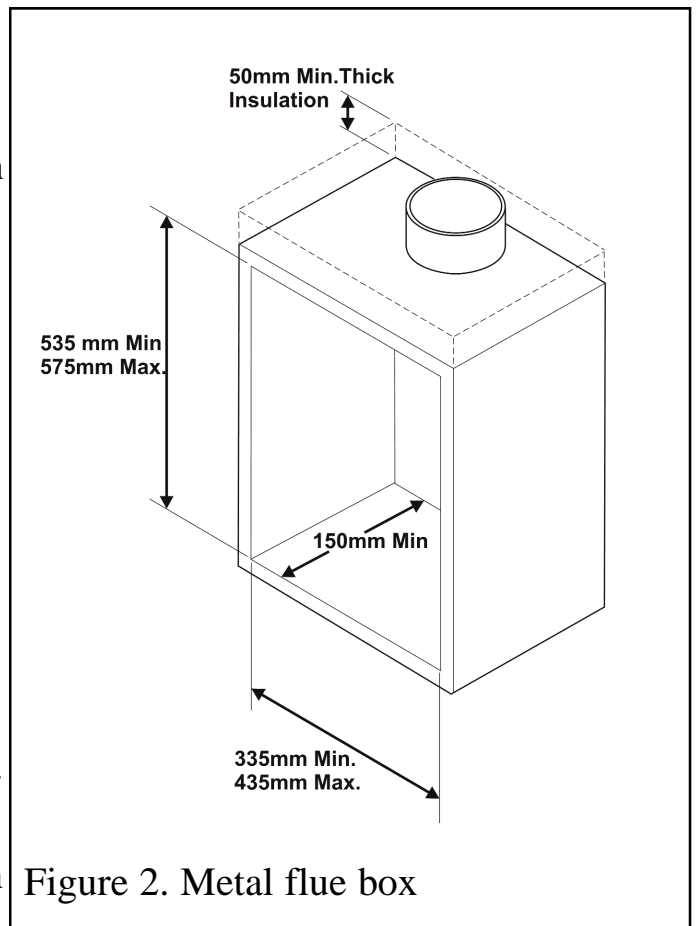


Figure 2. Metal flue box

INSTALLER GUIDE

materials. Metal flue pipes must comply with B.S 715.

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

3.3.2 The flue must be clear of any obstruction and its base must be clear of debris.

3.3.3 The flue must be completely sealed so that combustion products do not come into contact with combustible materials outside the chimney.

3.3.4 The flue must serve only one fireplace.

3.4 The flue must conform to BS 5440: Part 1 in design and installation. The flue, measured from the bottom of the fireplace opening to the bottom of the terminal, shall be not less than 3m in actual vertical height. When calculated in accordance with BS 5440: Part 1 Annex A, the minimum **equivalent** height of the flue shall be 2.0m of 125mm dia. flue pipe.

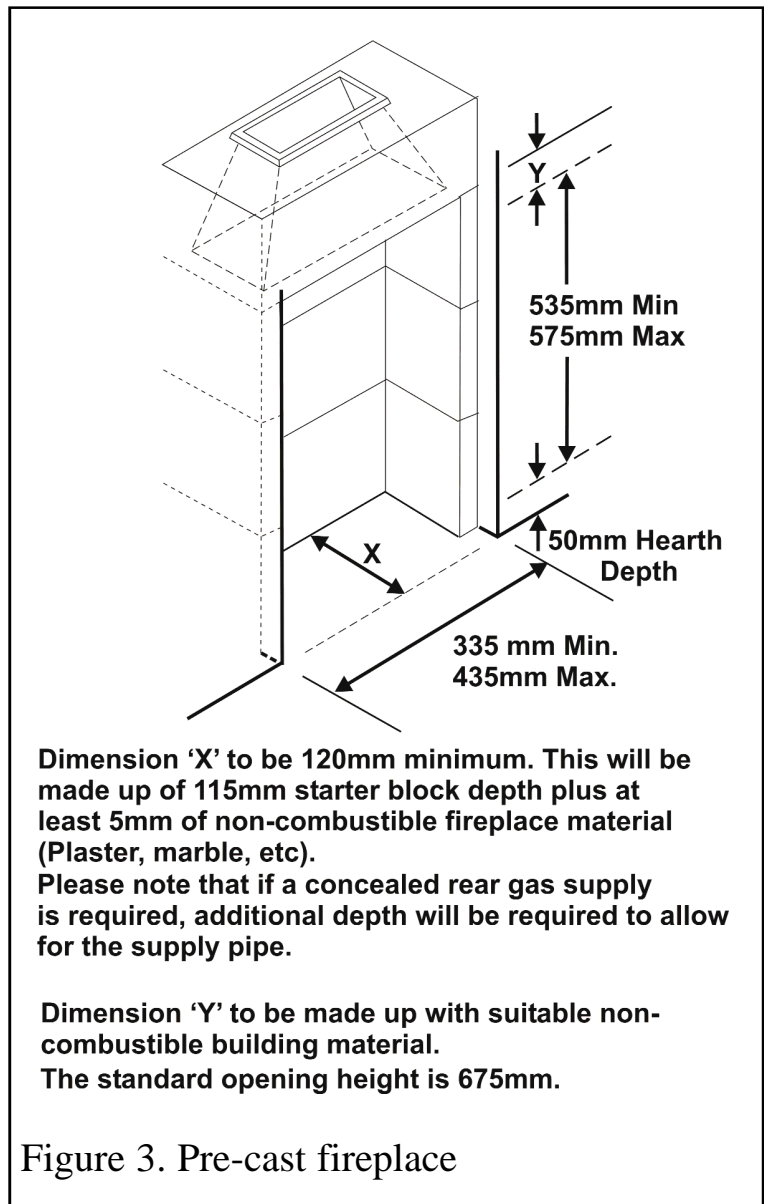
3.5 The flue must not be used for any other appliance or application.

3.6 Any chimney dampers or restrictors should be removed. If removal is not possible they must be fixed in the open position.

3.7 If the appliance is intended to be installed to a chimney, which 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.

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

3.9 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 purpose made proprietary class "O"-150°C surround. The hearth material must be at least 12mm thick. The periphery of the hearth (or fender) should be at least



INSTALLER GUIDE

50mm above floor level to discourage the placing of carpets or rugs over it. The appliance must not stand on combustible materials or carpets (See figure 1).

3.10 The front face of the fireplace should be reasonably flat over the area covered by the hotbox top and side flange seals to ensure good sealing. These faces should be made good if necessary. The fireplace floor should be reasonably flat to ensure that a good seal with the hotbox can be made.

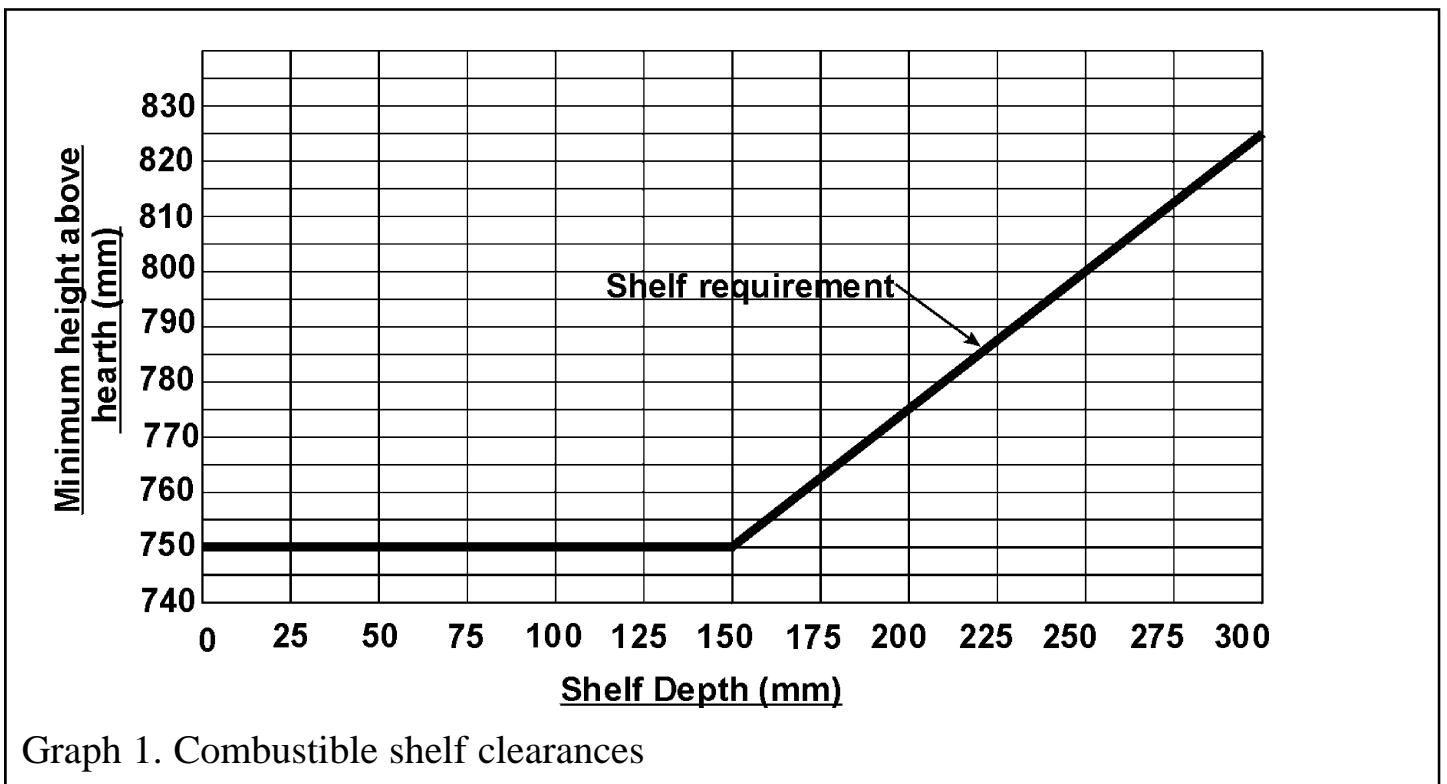
3.11 Note that soft wall coverings (e.g. embossed vinyl, etc.) are easily affected by heat. They may scorch or become discoloured when close to a heating appliance. Please bear this in mind when installing.

3.12 The appliance must not be installed in any room, which contains a bath, or shower or where steam is regularly present.

3.13 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.

3.14 The minimum height from the top surface of the hearth to the underside of any shelf made from wood or other combustible materials is detailed below.

- *For a shelf up to 150mm deep:* Minimum height = 750mm.
- *For a shelf deeper than 150mm:* 750mm + 12.5mm for every 25mm depth over 150mm (See Graph 1).



Graph 1. Combustible shelf clearances

INSTALLER GUIDE

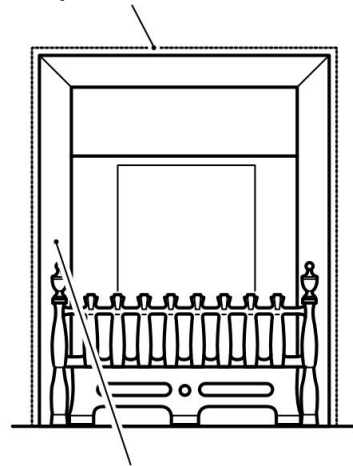
3.15 Normal adventitious ventilation is usually sufficient to satisfy the ventilation requirements of this appliance. In GB reference should be made to BS 5871 Part 2 and in IE reference should be made to the current edition of IS 813 “Domestic gas Installations” which makes clear the conditions that must be met to demonstrate that sufficient ventilation is available

3.16 Propane gas appliances must not be installed in a room, which is built entirely below ground level (See BS 5871 Pt2).

3.17 If the appliance is to be fitted against a wall with combustible cladding, the cladding must be removed from the area covered by the fascia. The cladding must also not touch the fascia (See figure 4). We suggest that the actual fascia is used as a template to mark the area for combustible cladding removal and that this area is increased by at least 2mm all round.

3.18 The minimum allowable distance from the outside of the appliance fascia to a corner wall having combustible material or any other combustible surface which projects beyond the front of the appliance is shown in figure 5.

2mm Gap to Combustible Cladding



Use fascia as template

Figure 4. Removal of combustible cladding (Firefront may differ from that shown)

100mm minimum mandatory clearance to combustible surfaces projecting beyond front of appliance. For access purposes a 10mm clearance is recommended to non-combustible surfaces

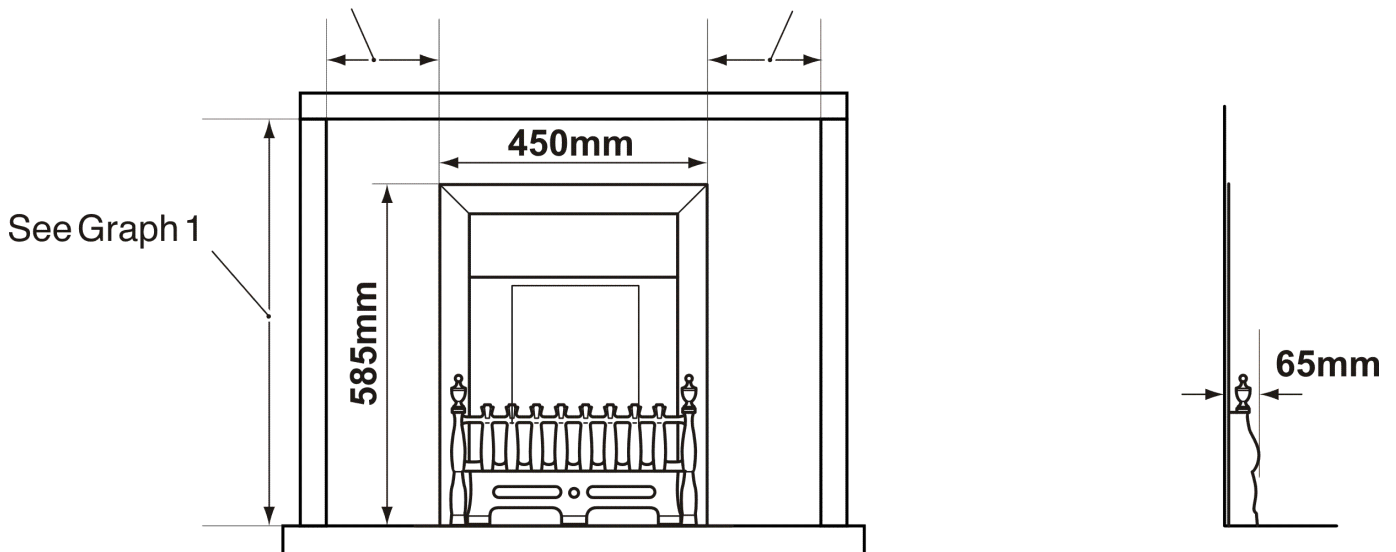


Figure 5. Appliance dimensions (Firefront may differ from that shown)

INSTALLER GUIDE

A 10mm access clearance from a non-combustible surface is necessary at both sides (See figure 5).

3.19 Proprietary terminals must comply with BS 715 or BS 1289. Any terminal or termination must be positioned in accordance with BS 5440 Part 1 to ensure that the products of combustion can be safely dispersed into the outside atmosphere. Where the appliance is connected to an unlined brick chimney it is generally unnecessary for the chimney pot to be replaced or for a terminal to be fitted unless the flue has a diameter smaller than 170mm.

3.20 The appliance is fitted with an A.S.D (Atmosphere sensing device). If the appliance closes down after a period of operation for no apparent reason, the consumer should be informed to stop using the appliance until the installation and appliance have been thoroughly checked. The A.S.D will shut the appliance down if an unacceptable amount of harmful products of combustion accumulate. Under no circumstances should the A.S.D be altered or bypassed in any way. Only a genuine manufacturers replacement part should be fitted. The individual A.S.D components are not replaceable.

3.21 A fireguard complying with BS 8423 should be fitted for the protection of young children, the elderly, or the infirm.

INSTALLER GUIDE

4. PACK CONTENTS

Remove all the items carefully to prevent damage. Take special care when handling the ceramic components. Some items may be contained in the packaging fittings - Examine the packaging carefully before discarding. Check that all the items are present and undamaged.

- | | | | |
|---|---|---|--|
| 1 | Hotbox and burner assembly | 1 | Grommet for rear of hotbox. |
| 1 | Loose parts pack including: - | 1 | Ceramic fuel effect base |
| 1 | Burner tray trim | 1 | Loose ceramic pack |
| 1 | Length of self-adhesive foam seal | 1 | Fascia pack - (Contains three separate pieces) |
| 2 | Tension cables | 1 | Firefront (Not shown) |
| 2 | Cable adjusters | 1 | Literature pack. |
| 1 | Flue restrictor with 2 securing screws | | |
| 4 | Eyebolts | | |
| 4 | Fibre plugs | | |
| 1 | Strip of floor sealing tape | | |
| 1 | Nut and Olive for 8mm inlet pipe | | |
| 1 | Inlet "T" connector including pressure test point | | |

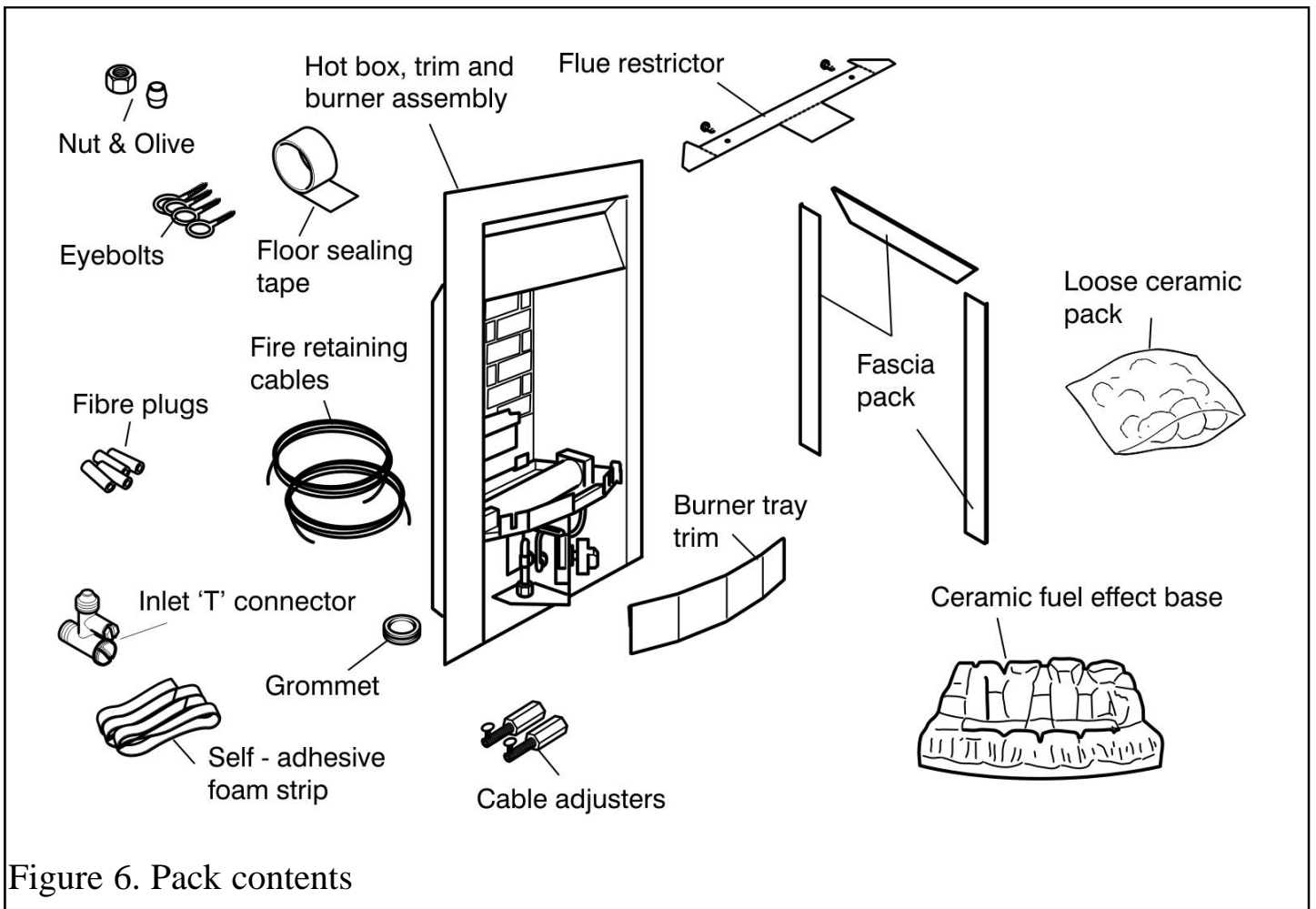


Figure 6. Pack contents

INSTALLER GUIDE

5. FIREPLACE CHECK

5.1 Fireplace check.

5.1.1 Fireplace size

The fireplace must comply with the requirements described in section 3.2. This may entail removing the fireback and infill material behind the fireback.

5.1.2 Fireplace general condition

The fireplace floor should be reasonably flat to ensure that the hotbox can be installed without it rocking and so that a good seal can be made at the bottom front of the box. The front face of the fireplace should be reasonably flat over the area covered by the hotbox top and side flange seals to ensure good sealing. These faces should be made good if necessary. If the appliance is to be fitted against a wall with combustible cladding, the cladding must be removed from the area covered by the fascia. The cladding must also not touch the fascia (See figure 4). We suggest that the actual fascia is used as a template to mark the area for combustible cladding removal and that this area is increased by at least 2mm all round.

5.1.3 Soundness for appliance attachment

One primary method of retaining the appliance is provided: -

1) Using concealed tension cables fixed to the rear of the fireplace opening. The method is detailed in section 9 of this manual. Make sure that the areas at the back of the fireplace are sound enough to take the eyebolts. If these areas have deteriorated due to prolonged use, they should be made sound with a suitable cement.

5.1.4 Installations using a metal flue box

The whole of the top surface of the metal flue box must be covered with a minimum 50mm layer of mineral wool or equivalent insulation (See figure 2).

5.2 Fireplace flue pull.

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.**

INSTALLER GUIDE

6. IGNITION CHECK

Before attempting to install, it is worth checking that the ignition system performs satisfactorily.

Set the control knob to the 'OFF' position.

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 pilot tip. If there is no spark check the following: -

- Ensure that the electrode lead is connected to the terminal at the base of the electrode.
- If the above is correct, check for damage to the electrode lead.

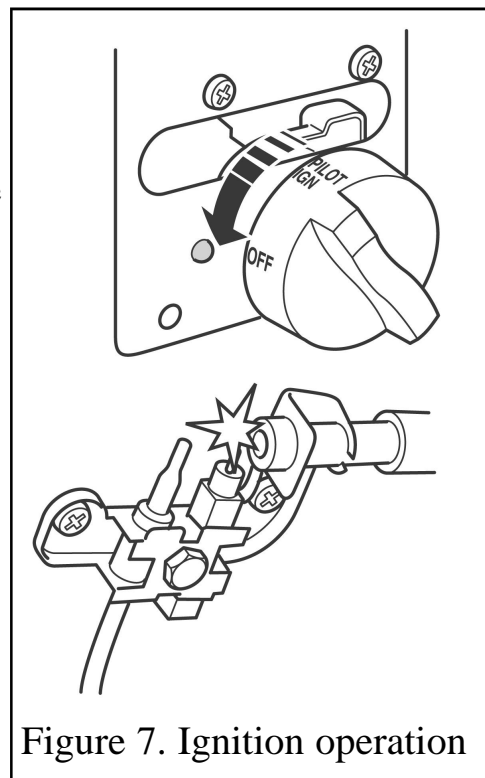


Figure 7. Ignition operation

7. GAS SUPPLY CONNECTION

A nut and olive are provided for an 8mm pipe inlet connection to the 'T' connector at the bottom front of the appliance. The inlet 'T' connector can be rotated to allow a connection from any direction. The inlet 'T' connector includes a valve for isolating the gas supply and a pressure test point.

The supply pipe must be rigid material. Flexible pipe must not be used.

Concealed supply pipe connection.

If a concealed connection from inside the fireplace is required then, **before the appliance is fitted into the fireplace** it will be necessary to extend the supply line so that it will project through the hole in the back of the hotbox and run to the inlet 'T' connector at the front. The pipe run from the supply line up to the rear opening in the hotbox must be kept away from the area which will be taken by the hotbox when it is installed. Note that the centre of the appliance inlet 'T' connector is 25mm above the fireplace floor. The inlet 'T' connector should be fitted to the supply pipe at this stage.

INSTALLER GUIDE

8. PREPARING APPLIANCE FOR INSTALLATION

8.1 Appliance preparation.

1. Remove any transit tape and packing and inspect for any evidence of mishandling which might affect the performance. Each unit is flame tested before it leaves the factory and as a result there may be slight discolouration around the burner ports.
2. Detach the burner unit from the hotbox by removing two screws (See figure 8). Lift the burner unit clear.

IMPORTANT

Before continuing with the installation of this gas fire the aeration setting on the burner must be checked. The aeration is factory set, but will require adjustment (See section 17.1).

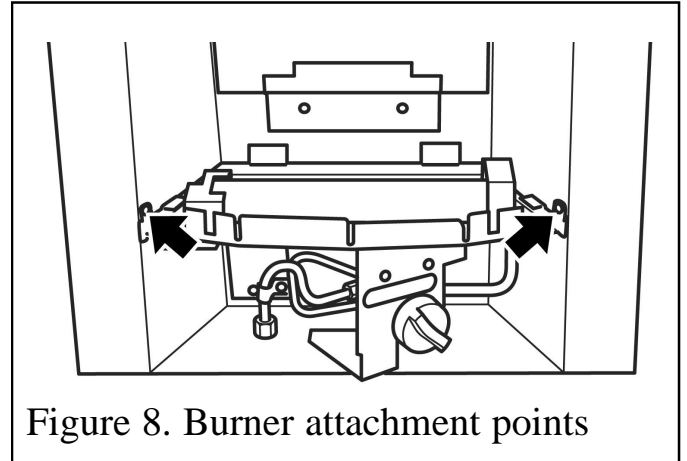


Figure 8. Burner attachment points

3. It is important that the grommet supplied in the loose parts pack is fitted to the hole in the rear of the hotbox.

8.2 Fitting the fascia.

1. The fascia is supplied in three pieces. Remove any protective film. The two longer pieces are the left and right sides. The shorter piece is the top. The left and right hand pieces have folded edges, one of which is shorter than the other. This shortened edge should be fitted at the inner top on both sides. Fit the top piece last and centralise (See figure 9)

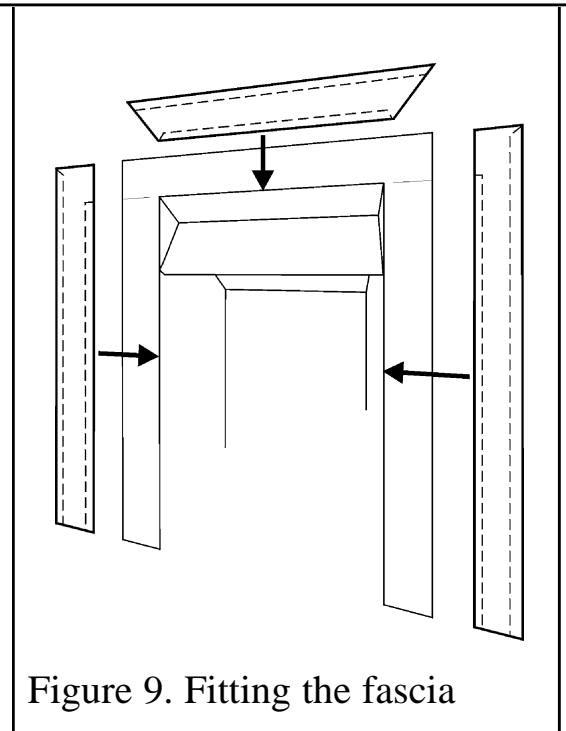


Figure 9. Fitting the fascia

8.3 Fitting the foam seal.

There is a length of self adhesive foam seal supplied with the fire. This will need to be fitted to the outer rear edges of the side and top flanges of the convector box. This will be fitted over the flanges of the fascia. **It is therefore important to ensure that the fascia is positioned correctly before fitting the foam seal.** Cut the foam seal to the required length. Be careful not to stretch the seal when measuring. Remove the protective backing from the foam seal and fit this to the rear of the convector box flange (See figure 10).

INSTALLER GUIDE

8.4 The flue restrictor.

This appliance is supplied with a flue restrictor for use where the flue draught is excessive. **The restrictor must not be fitted where a precast flue or a 125mm flue liner is used.** For flue liners greater than 125mm and all other installations the restrictor should be fitted. There may however, be certain exceptional circumstances where fitting the restrictor causes the fire to fail the spillage test. In such cases the restrictor will have to be removed. After removal conduct the spillage check again. The restrictor is packed flat with the appliance and will require bending prior to fixing. Bend the restrictor as shown in figure 11. Fit the restrictor as shown in figure 12 using the two screws provided.

The Foam Seal should touch at this point
Ensure that there is no gap between the seals

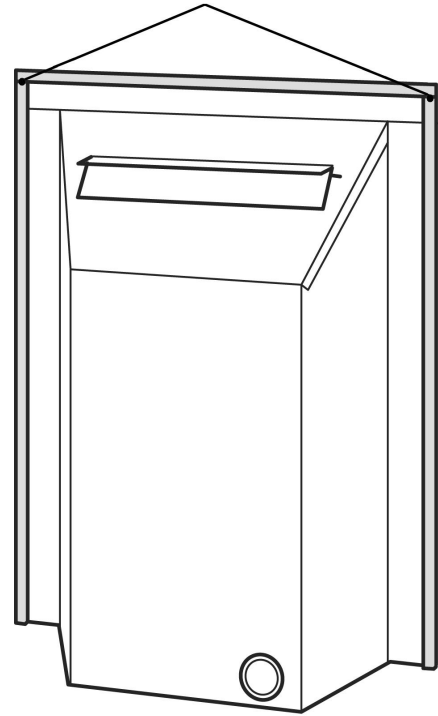


Figure 10. Fitting the foam seal

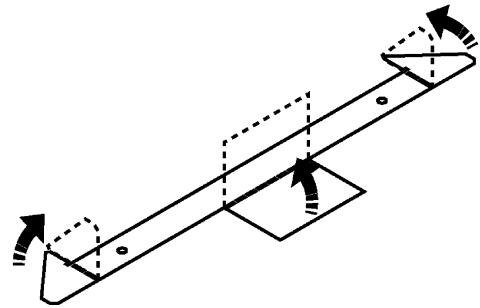


Figure 11. Bending the restrictor

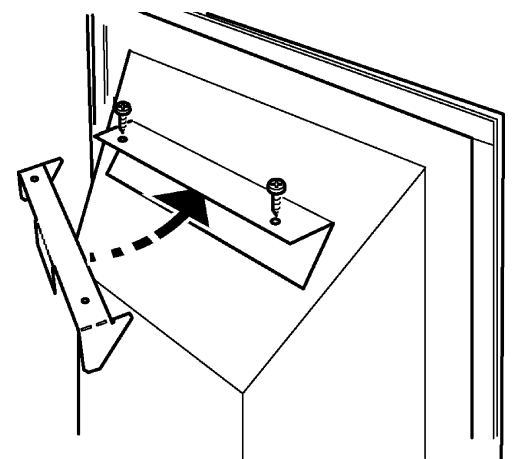


Figure 12. Fixing restrictor

INSTALLER GUIDE

9. FIREBOX INSTALLATION

9.1 Cable retention.

1. Make sure that the relevant areas at the fireplace back are sound enough to take the eyebolts. If these areas have deteriorated due to prolonged use they should be made sound with a suitable cement.
2. Drill four holes in the rear wall of the fireplace for the fibre plugs. The holes should be drilled within the range of positions shown in figure 13 using a no.12 masonry drill.

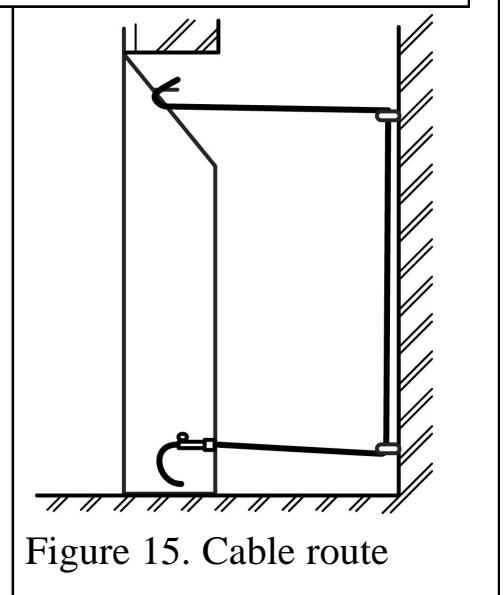
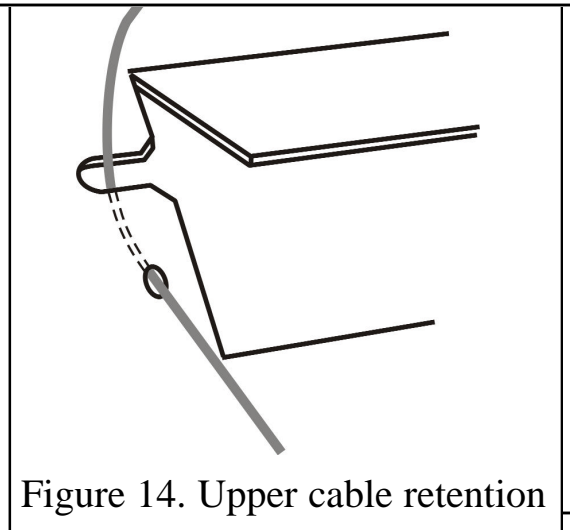
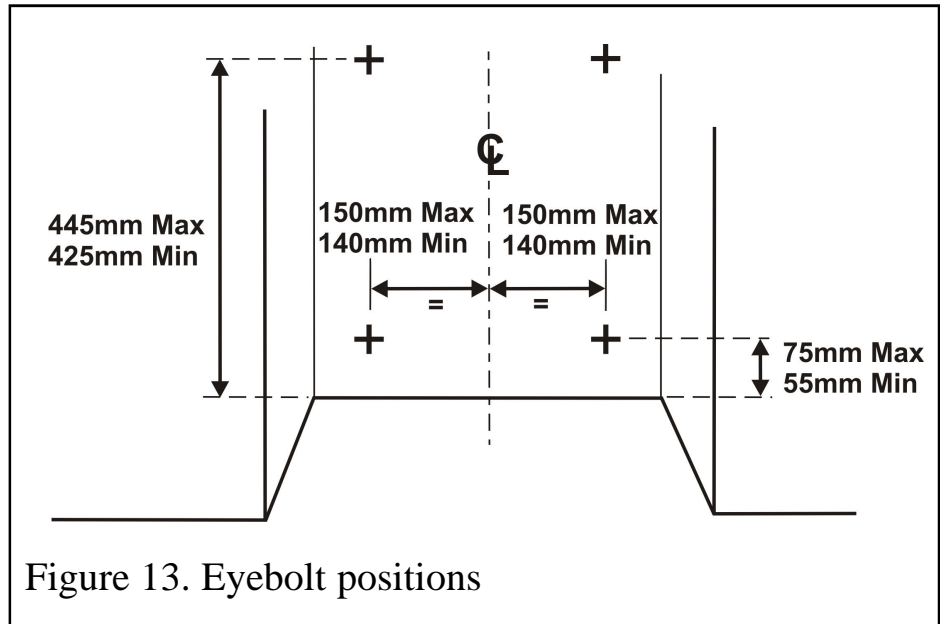
The holes should be equidistant each side of the centre line of the fireplace to ensure that the appliance finishes centrally in the opening when tension is applied to the cables.

3. Insert a fibre plug into each hole. Use the fibre plugs supplied with this appliance - **Never use plastic plugs instead of the fibre plugs supplied.** Screw the eyebolts into the plugs. Make sure that the eyebolts are secure.

4. Place the hotbox unit close to the fireplace but allow sufficient access into the fireplace opening so that the cables can be threaded through the eyebolts and returned through the back of the hotbox. If a concealed connection is being used, insert the hotbox into the fireplace feeding the supply pipe through the pierced hole in the rear grommet.

5. The rear of the hotbox has a slot and hole each side of the outlet opening. Assemble one end of the cable to the top of the fire by passing it through the small round hole and locking by positioning the cable in the adjacent slot (See figure 14). Give the cables a pull so that they grip.

6. Thread the cables through the eyebolts. Return the cables through the holes near the bottom of the hotbox side panels (See figure 15).



INSTALLER GUIDE

7. Place the hotbox fully back into the fireplace opening so that it is sealed against the fireplace front surround.
8. Fit a cable retainer over the bottom end of each cable.
9. Pull each cable taut. Push the cable retainers hard up against the back panel. Tighten the screws in the retainers so that they clamp the cables in position. Apply tension to the cables by turning the hexagonal adjusters by hand (See figure 16).
10. Inspect the installation of the hotbox against the fireplace surround. If the hotbox is aligned squarely and the sealing is satisfactory, fully tighten the cable retainers.
11. If the hotbox is not correctly aligned, release the tension on the cables by slackening the screws and turning the hexagonal adjusters fully anticlockwise. The hotbox should then automatically realign itself. Pull each cable taut again and push the cable retainers back against the back panel. Again, tighten the screws in the retainers and apply tension to the cables by turning the hexagonal adjusters clockwise as far as possible.
12. Do not cut off any excess cable, instead coil up the cable so that they are available to allow easy removal and refitting of the appliance during subsequent service calls.

9.2 Floor sealing.

Using the floor sealing tape supplied, seal the bottom of the hotbox to the fireplace and hearth floor. Run the tape over the centre bracket.

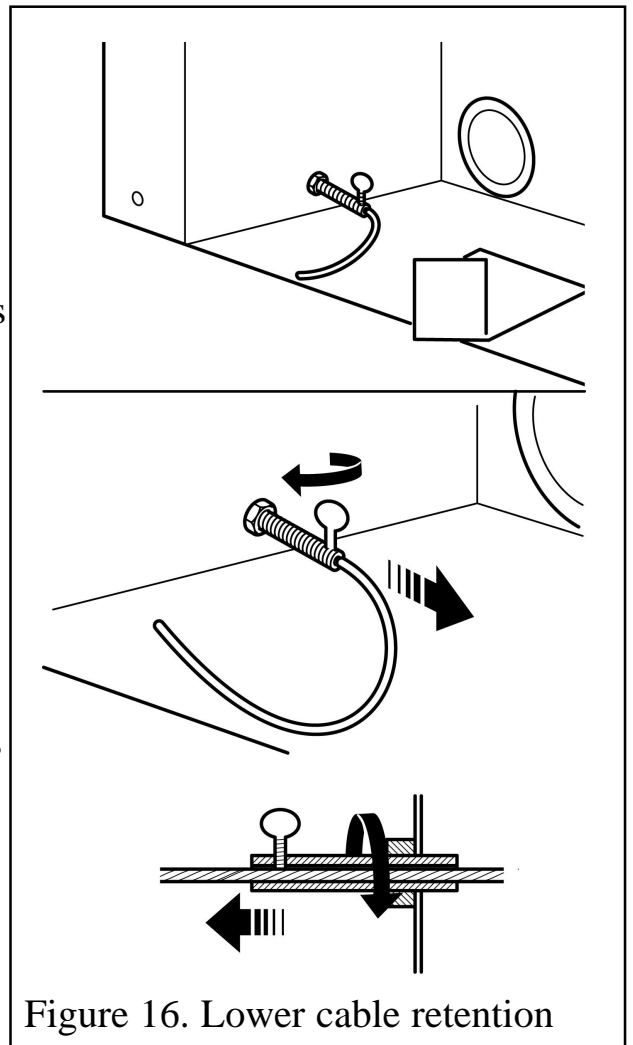


Figure 16. Lower cable retention

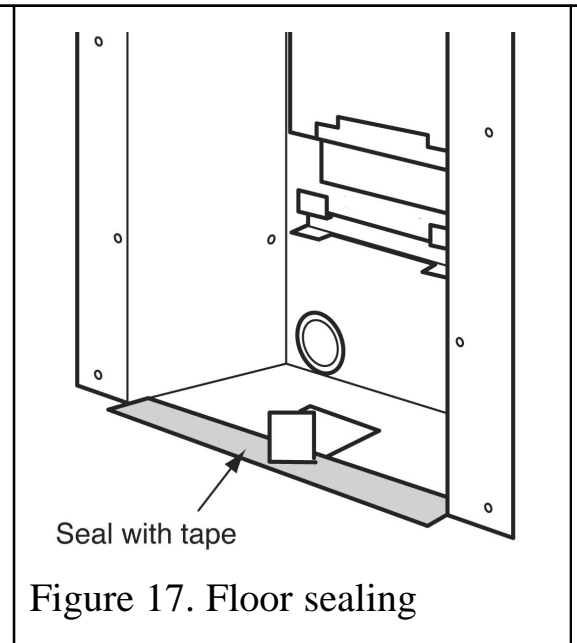


Figure 17. Floor sealing

INSTALLER GUIDE

10. BURNER INSTALLATION

10.1 Burner and supply pipe installation.

1. Refit the burner unit to the hotbox using the two screws removed previously
2. Connect the supply line to the appliance.
3. If closed, open the isolating valve at the inlet 'T' connector.
4. Turn on the gas supply and pressure check the installation pipework for gas soundness. In the United Kingdom check in accordance with the current edition of BS 6891. In the Republic of Ireland refer to the current edition of I.S. 813 "Domestic gas installations".

10.2.1 Lighting the burner.

1. 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 pilot tip.
2. 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.

10.2.2 Operating the burner.

1. 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.

If the above checks are satisfactory, continue with the installation. If not, check the control and ignition circuitry and components.

10.3 Inlet pressure check..

The appliance is pre-set to give the correct heat input at the inlet pressure shown in section 2 of this manual. No adjustment is necessary.

1. Check the inlet pressure by fitting a pressure gauge at the test point. The test point is on the inlet 'T' connector (See figure 18). Check the pressure with the appliance alight

INSTALLER GUIDE

and set at maximum output.

2. After checking, turn off the appliance. Remove the pressure gauge and replace the test point sealing screw.
3. Relight the appliance. Turn to the maximum output position and test around the sealing screw for gas soundness with a suitable leak detection fluid.

10.4 Fitting the burner tray trim.

1. Fit the burner tray trim over the front rim of the burner tray. Push the trim fully down (See figure 19).

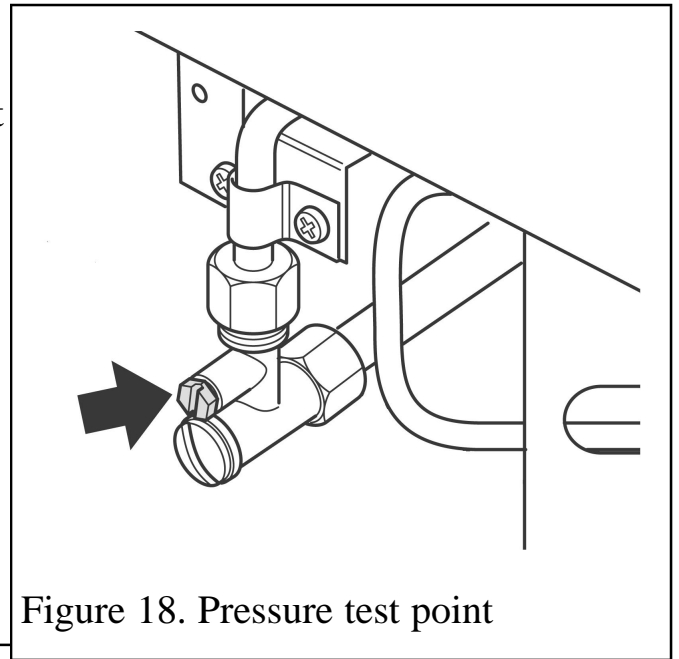


Figure 18. Pressure test point

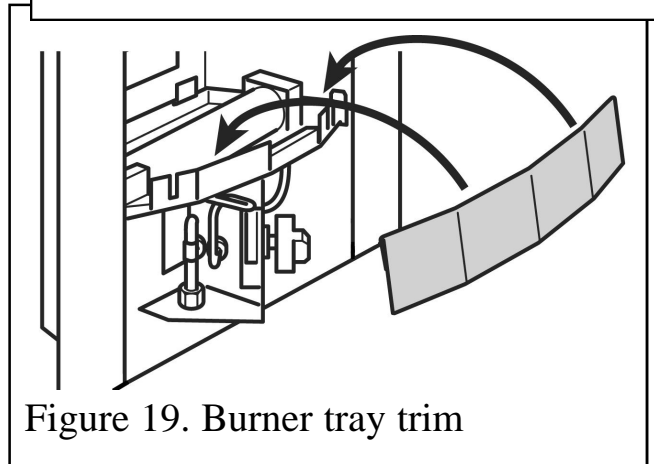


Figure 19. Burner tray trim

11. CERAMIC COALS INSTALLATION

This section is for models supplied with a ‘Coal’ fuel effect only.

For ‘Pebble fuel effect’ see section 12

The ceramic fuel effect may cause staining / discolouration to decorative surfaces. It is therefore advisable to protect decorative surfaces.

1. Place the base coal in the firebox (See figure 20).

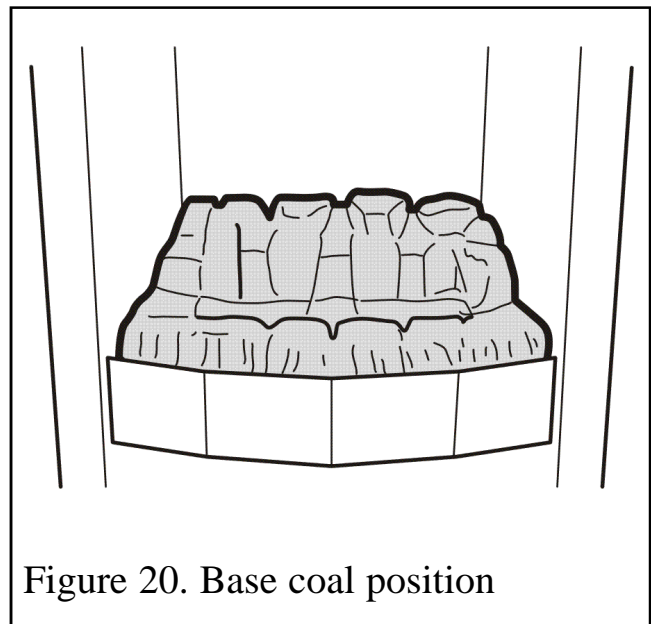


Figure 20. Base coal position

INSTALLER GUIDE

2. Install the fourteen loose overlay ceramic coals as follows. The smooth surfaces of the ceramic coals should be at the bottom and back. Place five of the ceramic coals along the top of the front base coal (See figure 21). The ceramic coals should be evenly spaced. Each ceramic coal can be rotated to give a random effect. Placing the ceramic coals with flat sides facing forward will give a very uniform appearance.

Important : *The front ceramic coals should not cover the opening slots in the base ceramic coal. If the opening slots in the base ceramic coal are covered by more than 2 -3 millimetres a poor flame picture will result (See figure 22).*

A gap is required between the outer left hand ceramic coal and the ceramic coal to its right. This is for pilot viewing.

3. Place five loose ceramic coals on top of the first row of ceramic coals. These should be evenly spaced. Rest them on the ledges above the slots in the base coal (See figure 23).

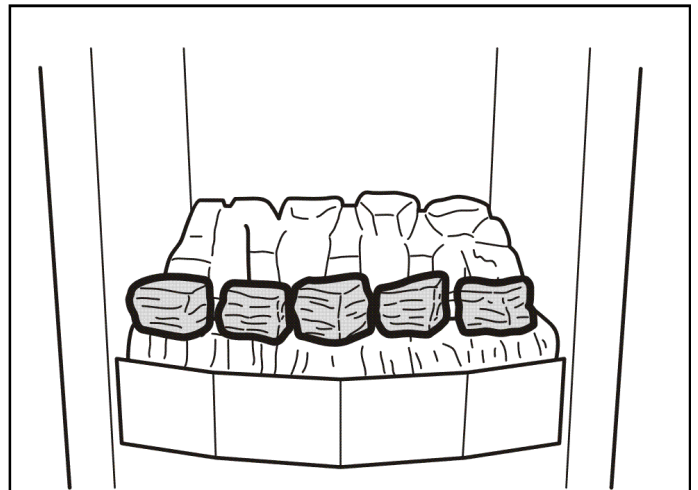


Figure 21. First row of ceramic coals

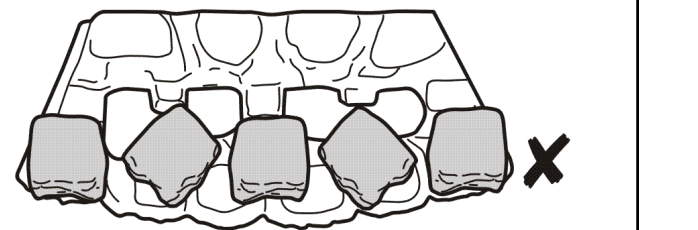
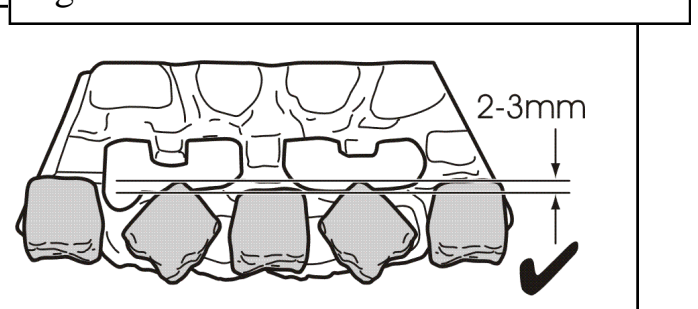


Figure 22. Ceramic coal positions



Figure 23. Second row of ceramic coals

INSTALLER GUIDE

4. Place the remaining four ceramic coals on top of the base ceramic coal rear (See figure 24).



Figure 24. Third row of ceramic coals

12. CERAMIC PEBBLES INSTALLATION

This section is for models supplied with a 'Pebble' fuel effect only.

For 'Coal fuel effect' see section 11

The ceramic fuel effect may cause staining / discolouration to decorative surfaces. It is therefore advisable to protect decorative surfaces.

1. Place the base pebble in the firebox. It should rest on the ledges at the rear sides of the burner unit (See figure 25).

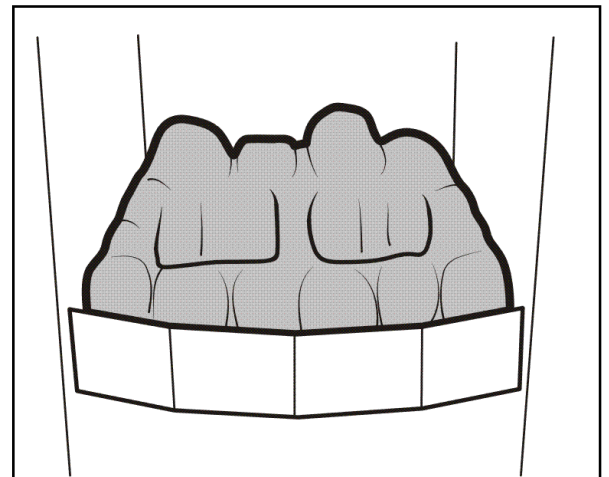


Figure 25 Rear base pebble position

Install the 6 loose pebbles as follows. The underside of each pebble is marked with a letter 'A' to 'F' and an arrow.

2. 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 26).

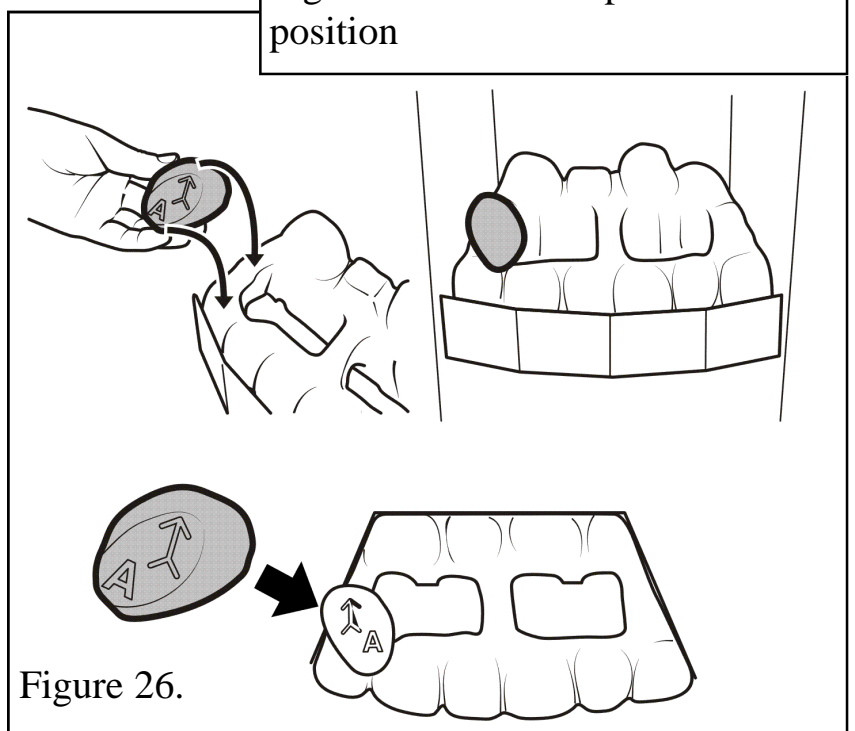
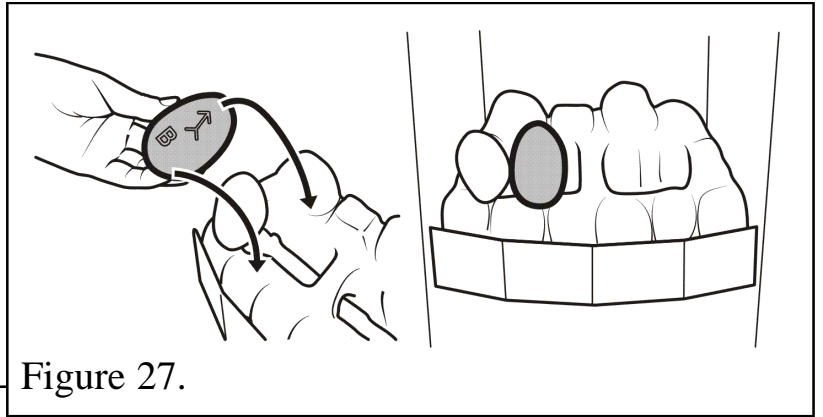


Figure 26.

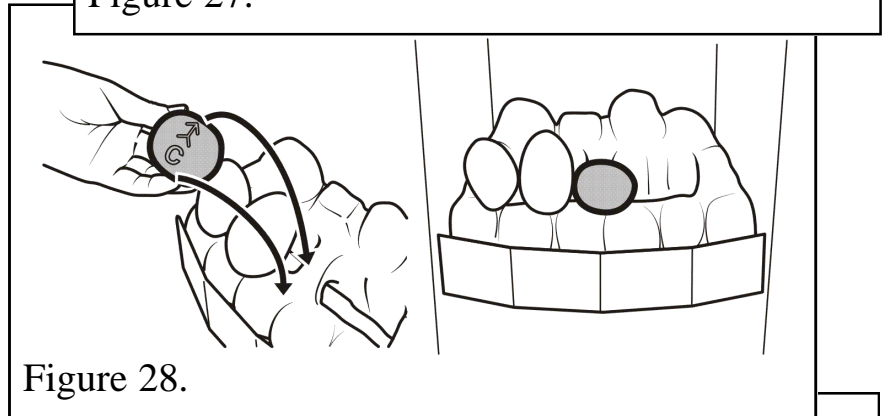
INSTALLER GUIDE

3. Hold pebble 'A' upright with the arrow pointing to the top. Place pebble "A" on top of the base pebble (See figure 26).

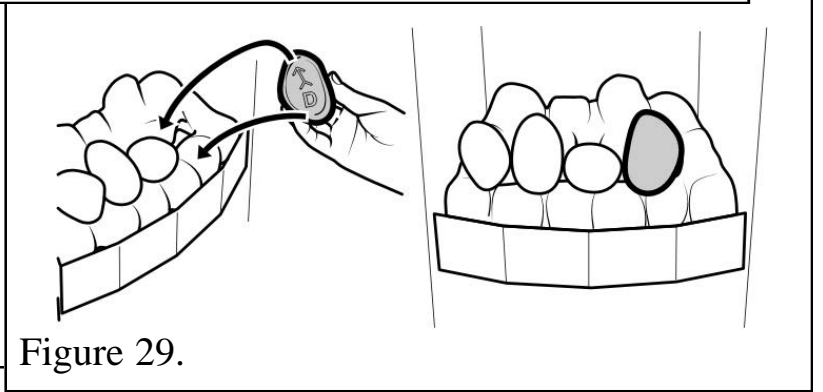


4. Hold pebble 'B' upright with the arrow pointing to the top. Place pebble "B" on top of the base pebble. (See figure 27).

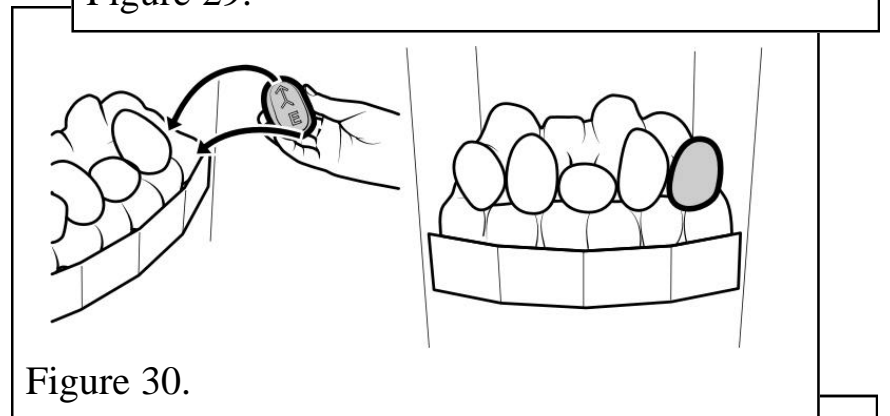
5. Hold pebble 'C' upright with the arrow pointing to the top. Place pebble "C" on top of the base pebble (See figure 28).



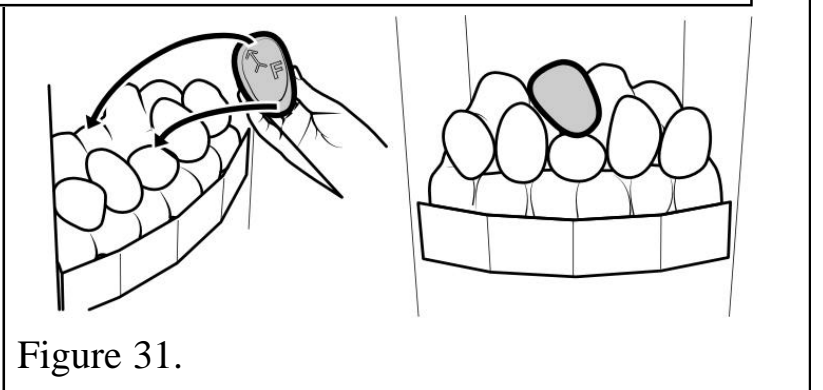
6. Hold pebble 'D' upright with the arrow pointing to the top. Place pebble "D" on top of the base pebble (See figure 29).



7. Hold pebble 'E' upright with the arrow pointing to the top. Place pebble 'E' on top of the base pebble (See figure 30).



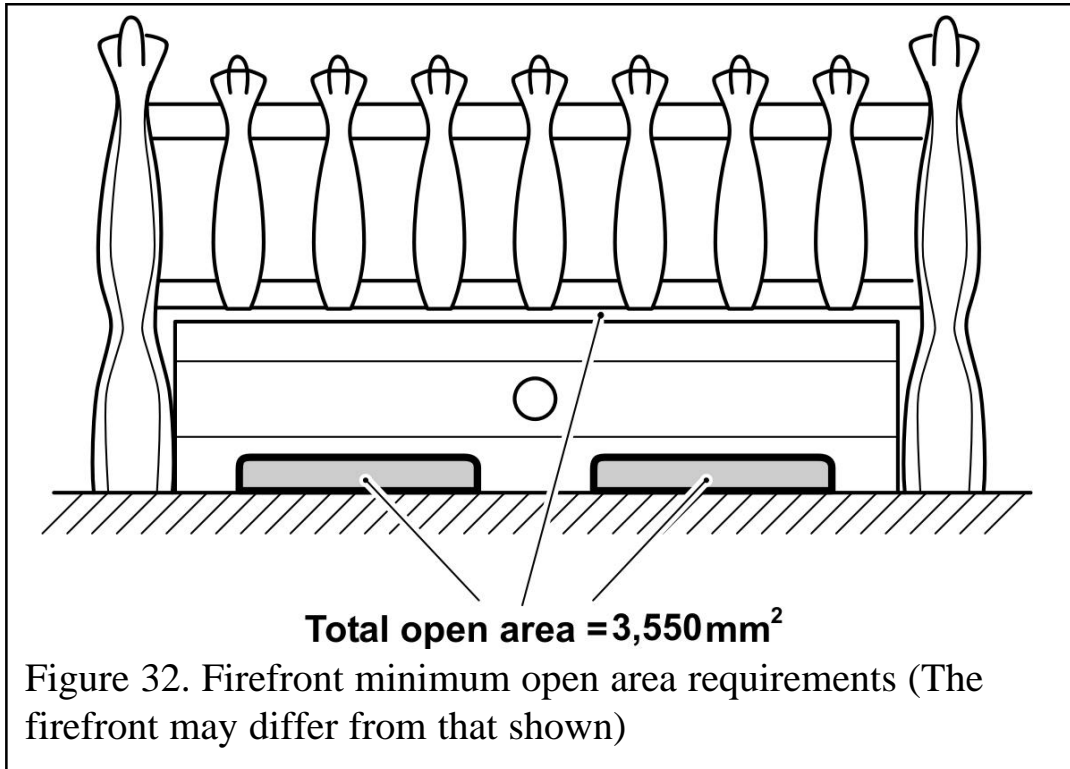
8. Hold pebble 'F' upright with the arrow pointing to the top. Place pebble 'F' on top of pebble 'C'. It should rest against the rear of the pebble base (See figure 31).



INSTALLER GUIDE

13. FIREFRONT INSTALLATION

- A slotted firefront with a **minimum** free area as shown in figure 32 must always be used.
- For models supplied with a Baxi Fires Division firefront, the open area may differ slightly from that stated in figure 32. In these cases the firefront will have been tested with the fire and found to be satisfactory for use with the fire.



14. FULL OPERATING CHECKS

14.1 Check the control settings.

With the ceramic fuel effect in position the control operation must now be fully rechecked. Make sure that the isolating valve at the inlet 'T' connector is open.

- *When first turned on from cold, the flames will appear predominantly blue.*
- *When operating the fire for the first time, some vapours may be given off which could set off smoke alarms in the vicinity. These vapours are quite normal with new appliances. They are totally harmless and will disappear after a few hours use.*

14.1.1 Lighting the burner.

1. If closed, open the isolating valve at the inlet 'T' connector.
2. Depress the control knob and rotate it anticlockwise to the pilot ignition position. A

INSTALLER GUIDE

'click' will be heard as the integral piezo operates. A spark should be seen between the electrode and pilot tip.

3. 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.

14.1.2 Operating the burner.

1. When the pilot burner is operating properly, gradually turn the control knob anti-clockwise 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.

If the above checks are satisfactory, continue with the installation. If not, check the control and ignition circuitry and components as described in the servicing section of this guide.

While cooling the ceramic fuel effect may make some crackling noises. This is quite normal.

15. SPILLAGE AND FLAME SUPERVISION CHECKS

15.1 Check for spillage.

A spillage check must be made before leaving the installed appliance with the customer. Make this with all the ceramic fuel effect pieces and firefront casting / firefront in position.

1. Close all doors and windows in the room containing the appliance.
2. Light the appliance and turn the control knob to "HIGH".
3. Leave the appliance on for five minutes.
4. Place the smoke match into the appliance canopy (See figure 33).
5. The installation is satisfactory if the smoke is drawn into the appliance. If the smoke is not drawn into the appliance, 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

INSTALLER GUIDE

appliance, inspect the sealing to the fireplace surround. If the sealing is satisfactory but the appliance is installed with the flue restrictor (See section 8.4), remove the restrictor, reseal the appliance and retest. If smoke is still not drawn into the appliance, **disconnect the appliance and seek expert advice.**

6. 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. Recheck for spillage as above. If an extractor fan is installed in the same room as the appliance or a connecting room, check that spillage does not occur with the fan operating and all doors and other openings between the fan and the appliance open. 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.**

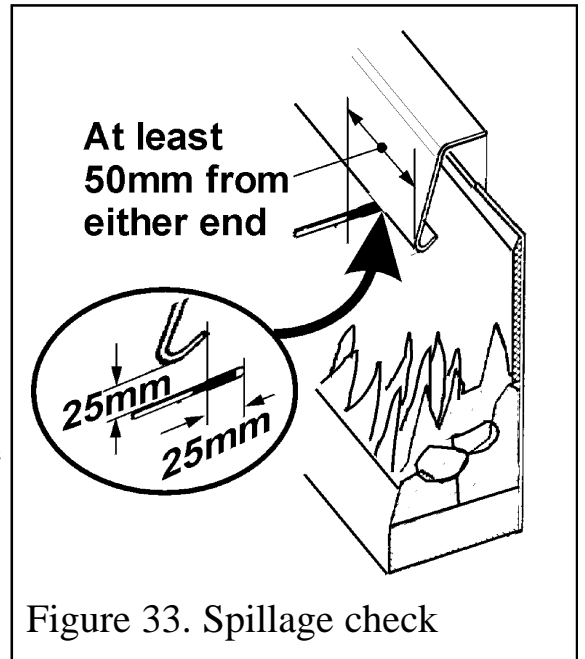


Figure 33. Spillage check

15.2 Flame supervision and 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.** This sound is caused by an electromagnetic valve shutting off the gas supply through the tap. 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 Baxi Fires Division authorised parts.

INSTALLER GUIDE

16. FINAL REVIEW

1. Visually inspect the appliance. Clean off any marks incurred during installation.
2. Advise the customer how to operate the fire.
3. Explain to the customer that the appliance has a flame failure and spillage monitoring system. Point out the explanation of this system shown in the owner guide. Advise that if the fire goes out for any reason, wait at least three minutes before relighting. Stress that if the monitoring system repeatedly shuts off the fire, the appliance should be switched off and a specialist should be consulted. Point out that the lighting instruction details are on a metal plate attached at the bottom of the appliance.
4. Advise that the fire may give off a slight odour while new. This is quite normal and it will disappear after a short period of use.
5. Advise that any cleaning must only be carried out when the fire is off and cold.
6. Advise the customer that they should read the Owner guide before operating the fire and always follow the advice in the section headed “Cleaning your fire”.
7. Advise the customer that the appliance will operate to its maximum potential if the flue is primed during the first 20 – 30 minutes of use. To do this, simply turn the control to its highest setting. This will also burn off any carbon deposits that may have formed during previous use.

If using the appliance for long periods it is beneficial to change between settings. This will also help to remove any carbon deposits that may form during use.

8. Recommend that the appliance should be serviced and the chimney inspected by a competent person (In the UK a CORGI registered person) at least annually.

If the appliance is in premises in the United Kingdom occupied by a tenant, point out that by law a landlord must have any gas appliance, flue and pipework which is situated in a tenant’s premises checked for safety at least every 12 months.

9. Advise the customer that the castings, fascia, firebox and ceramic pieces can be cleaned as described in the owner guide and that the loose ceramic fuel effect pieces must be replaced as described in those instructions.

Stress that no extra ceramic fuel effect pieces 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.

10. **Inform the customer that the Serial number for the appliance is located on the metal plate, located behind the lower front casting and underneath the burner.**
11. Hand the literature pack with this guide to the customer.

17. SERVICING AND PARTS REPLACEMENT

Always turn off the gas supply and allow to cool completely before commencing any servicing (The appliance inlet “T” connector incorporates an isolating valve). It is recommended that, at least once a year, the appliance is disconnected and the fireplace opening checked and cleared of any debris.

This product uses fuel effect pieces and a burner compartment rear wall 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.

- Check that the appliance is clean and that soot or debris is not blocking the gaps between the ceramic fuel effect pieces 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 rear wall and ceramic fuel effect pieces are replaced correctly as described in the this guide.
- Always test for gas soundness and spillage after servicing the appliance.

INSTALLER GUIDE

17.1 Checking the aeration setting of the burner.

1. The aeration shutter is factory set for use with a 'pebble' ceramic fuel effect. It is important to ensure that the aeration setting is correct for the ceramic fuel effect used. Check the aeration shutter setting even if fitting the 'pebble' fuel effect (See figure 34).
2. To adjust the aeration setting to suit the fuel effect used, loosen the two aeration shutter screws, slide the aeration shutter to the desired position and tighten the fixing screws.

17.2 To remove the burner unit.

1. Remove the firefront casting and ash pan cover / firefront.
2. Remove the ceramic fuel effect. The ceramic fuel effect may cause staining / discolouration to decorative surfaces. It is therefore advisable to protect decorative surfaces.
3. Support the inlet 'T' connector to avoid straining the pipework and disconnect the appliance from the inlet 'T' connector.
4. Detach the burner unit from the hotbox by removing two screws (See figure 35).
5. Replace in the reverse order.

17.3 To remove the pilot unit.

1. Remove the burner unit (See section 17.2.)
2. If lying the burner on its back, ensure that the work surface is suitably protected. This will avoid damage to the work surface.
3. Detach the pilot pipe from the pilot unit.
4. Detach the thermocouple from the gas valve
5. Detach the electrode lead from the rear of the piezo spark generator on the gas valve.
6. Remove the two screws securing the pilot unit (See figure 36).
7. Refit in the reverse order. *Note: The pilot unit is an atmosphere sensing device. It must be replaced as a whole assembly. Its individual components are not separately replaceable.*

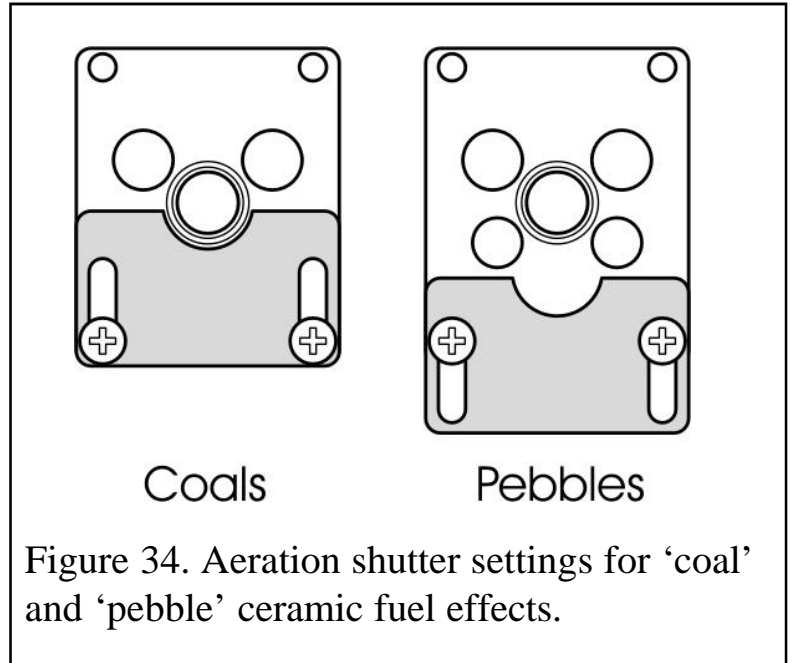


Figure 34. Aeration shutter settings for 'coal' and 'pebble' ceramic fuel effects.

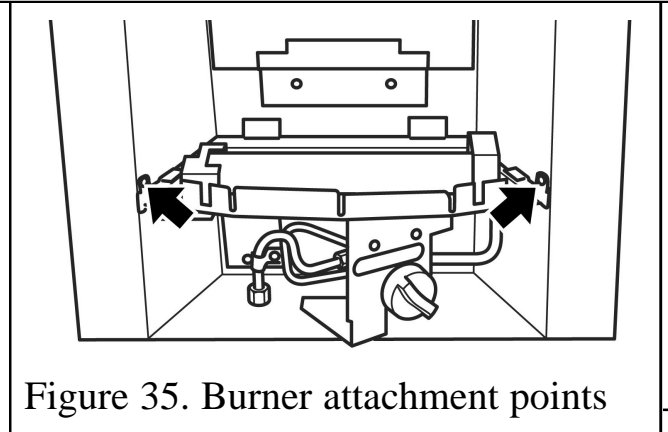


Figure 35. Burner attachment points

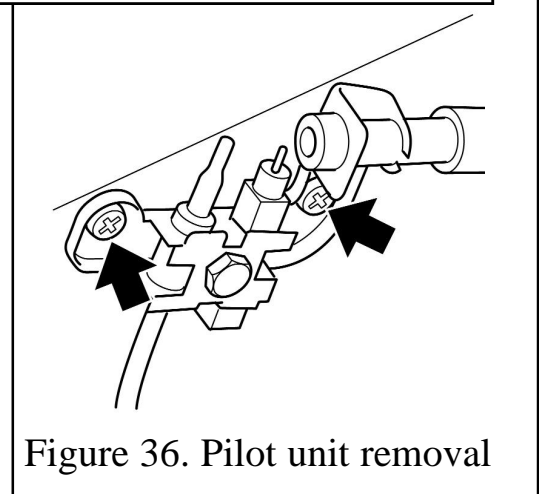


Figure 36. Pilot unit removal

INSTALLER GUIDE

17.4 To remove the gas valve.

(See figure 37).

1. Remove the burner unit (See section 17.2).
2. If lying the burner on its back, ensure that the work surface is suitably protected. This will avoid damage to the work surface. Turn the burner unit upside down.
3. Detach the pilot pipe from the gas valve.
4. Detach the inlet pipe.
5. Detach the injector pipe.
6. Detach the electrode lead from the rear of the piezo spark generator on the gas valve.
7. Remove the control knob by pulling forward.
8. Remove the thermocouple by unscrewing the thermocouple nut at the gas valve.
9. Remove the hexagonal nut securing the gas valve to the mounting bracket.
10. Remove the gas valve.
11. Refit in the reverse order.

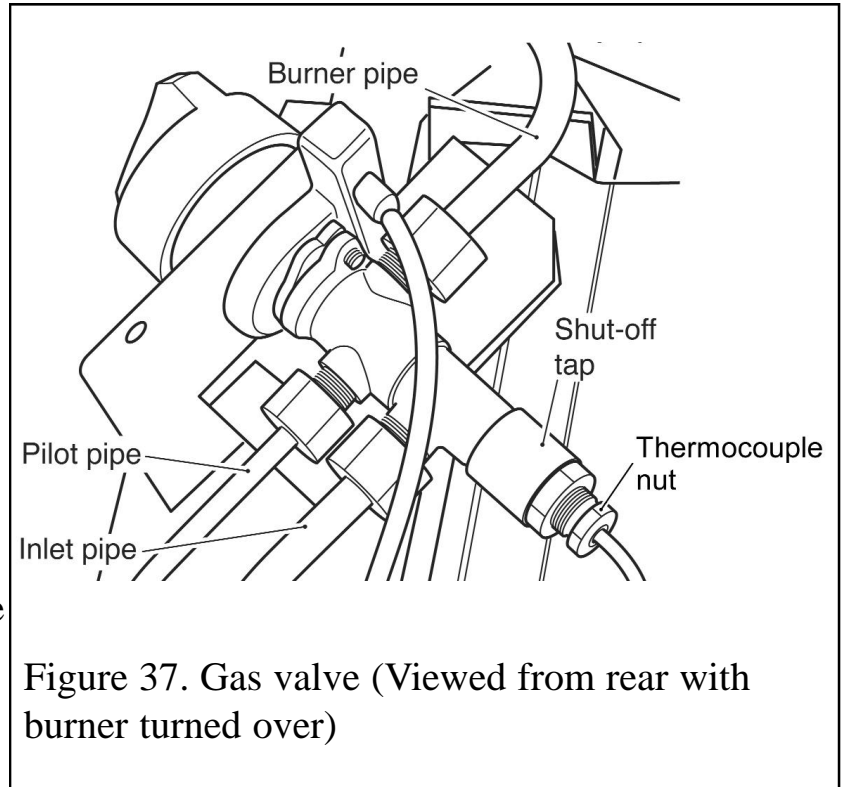


Figure 37. Gas valve (Viewed from rear with burner turned over)

17.5 To replace the burner.

(See figure 38).

1. Remove the burner unit (See section 17.2).
2. Support the elbow injector and unscrew the injector nut.
3. Remove the two screws from the burner clamping plate (See figure 38).
4. Lift the right hand side of the burner, slide it to the right and lift clear.
5. Refit in reverse order.

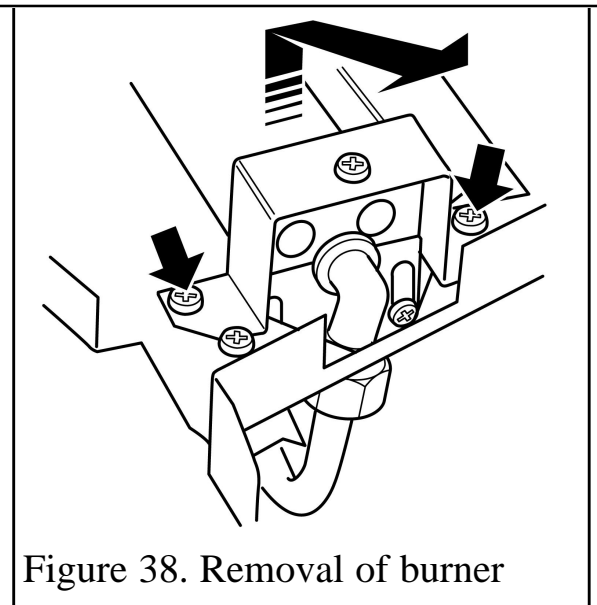


Figure 38. Removal of burner

17.6 To remove the main burner injector.

(See figure 39).

1. Remove the burner (See section 17.5).
2. Remove the burner clamping screw (See figure 39).
3. Unscrew the injector from the burner.
4. Refit in the reverse order.

INSTALLER GUIDE

17.7 To remove the appliance from the fireplace.

1. Remove the burner unit (See section 17.2).
2. Slacken the hexagonal adjusters on the cable retainers and unscrew the thumbscrews to release the cables.
3. Refit as described in the relevant installation sections. Make sure gas soundness, sealing, spillage test and performance are satisfactory.

17.8 To remove the fascia.

Important : Before removing the fascia check to see if the foam seal covers the flange on the rear of the fascia. If it does then ensure that a replacement foam seal is available.

1. Remove the appliance from the fireplace (See section 17.7)
2. If the foam seal covers the flange on the rear of the fascia remove the foam seal from the rear of the convector box.
3. Carefully lift off the top fascia piece and place carefully aside. Carefully remove the two side pieces and place carefully aside.
4. Refit in the reverse order (See section 8.2 - 'Fitting the fascia')
5. If the foam seal was removed previously fit the replacement foam seal (See as in section 8.3).
6. Refit the convector box as described in the relevant installation sections. Make sure gas soundness, sealing, spillage test and performance are satisfactory.

