



# ULTIMATE

## *INSET LIVE FUEL EFFECT GAS FIRE* MODEL 417

### INSTALLATION and SERVICING GUIDE

THE NATURAL GAS MODEL IS FOR G20  
AT A SUPPLY PRESSURE OF 20mbar  
THE PROPANE GAS MODEL IS FOR G31  
AT A SUPPLY PRESSURE OF 37mbar  
THESE APPLIANCES ARE 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 **Valor advice line** will be pleased to help.  
**Ring 0345 626 341** (Local call rates apply).

**Please leave these instructions with the user**

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## 1. APPLIANCE DATA

This product uses fuel effect pieces, burner compartment walls and gaskets containing Refractory Ceramic Fibres (RCF), which are man-made vitreous silicate fibres. Excessive exposure to these materials may cause temporary irritation to eyes, skin and respiratory tract. Consequently, it makes sense 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 on the control plate below the right side of the burner tray. It is visible when the bottom front cover is removed.

	Natural Gas Appliances	Propane Gas Appliances
Gas	G20	G31
Inlet Pressure	20mbar	37mbar
Input - Max. (Gross)	6.0kW (20,500Btu/h)	6.1kW (20,800Btu/h)
Input - Min. (Gross)	2.2kW (7,500Btu/h)	3.6kW (12,200Btu/h)
Output - Max.	3.5kW (11,900Btu/h)	3.17kW (10,800Btu/h)
Output - Min	1.1kW (3,750Btu/h)	1.87kW (6,350Btu/h)
Burner Test Pressure (Cold)	18.2± 0.75mbar (7.3± 0.3in w.g.)	36.2± 0.75mbar (14.53± 0.3in w.g.)
Gas Connection	8mm pipe	8mm pipe
Burner Injector	Bray Cat. 82 Size 360	Bray Cat. 92 Size 190
Pilot & Atmosphere Sensing Device	SIT Ref. OP9044	SIT Ref. OPLPG9221
Ignition	Piezo Electric. Integral with Gas Tap	Piezo Electric. Integral with Gas Tap
Aeration	Non-adjustable	Non-adjustable

## 2 GENERAL INSTALLATION REQUIREMENTS

**2.1** 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.

The Confederation for the Registration of Gas Installers (CORGI) requires its members to work to recognised standards.

The installation must be in accordance with these instructions.

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

- a) All the relevant parts of local regulations.
- b) The current edition of the Building Regulations issued by the Department of the Environment and the Welsh Office or the Building Standards (Scotland) (Consolidation) Regulations issued by the Scottish Development Department.
- c) All relevant codes of practice.

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

- BS 715
- BS 1251
- BS 1289 Part 1
- BS 1289 Part 2
- BS 4543 Part 2
- BS 5440 Part 1
- BS 5440 Part 2
- BS 5871 Part 2
- BS 6461 Part 1
- BS 6891
- BS 8303

In the republic of Ireland the installation must also conform with the relevant parts of:

- a) The current editions of:-
  - IS 813
  - ICP3
  - IS327

All relevant national and local rules in force.

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

**2.2.1** To a fireplace complete with surround and hearth complying with B.S 1251 The required fireplace, hearth, debris catchment area and clearance dimensions are shown in figure 1a.

**2.2.2** To a fireplace incorporating a twin walled metal flue box complying with the constructional requirements of the current edition of BS 715 and standing on a non-combustible base The dimensions of the flue box must conform to the opening shown in figure 1b. For flue details see sections 2.3 & 2.4.

**2.2.3** To a fireplace that has a precast concrete or clay flue block system conforming to BS1289. 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 13,000mm<sup>2</sup>. Older editions of BS1289 required a cross-sectional area of 13,000mm<sup>2</sup>. The current revision of the standard requires 16,500mm<sup>2</sup>. 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 100mm**.

The current version of BS1289 recommends 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.

**2.2.4** To a builder's opening within the dimensions shown in figure 1a.

**2.3** Suitable flues and minimum flue sizes are as follows:-

- a. 225mm x 225mm conventional brick flue.
- b. 175mm diameter lined brick or stone flue.
- c. 200mm diameter factory made insulated flue manufactured to BS 4543.
- d. 175mm diameter flue pipe (see B.S 6461 part 1 for suitable materials).
- e. Single wall, twin wall or flexible flue liner of minimum diameter 125mm. The materials to be used are stainless steel or aluminium as specified in B.S 715. It should be noted that, sharp bends or horizontal runs in metal flues at the top of the system can be a cause of problems in these types of installation.
- f. A properly constructed precast concrete or clay flue system conforming to BS 1289 Part 1 or 2.

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

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

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

**2.7** 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.

**2.8** If the fireplace opening is of underfloor draught type, it must be sealed to stop any draughts.

**2.9** 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 50mm above

floor level to discourage the placing of carpets or rugs over it.

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

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

**The appliance must not be fitted directly against a combustible wall.** If the appliance is to be fitted against a wall with combustible cladding, the cladding must be removed from the area covered by the outer surround (see figure 1c). We suggest that the actual surround is used as a template to mark the area for combustible cladding removal.

**2.10** The minimum allowable distance to a corner wall from the outside edge at either side of the front surround is 178mm.

**2.11** The front face of the fireplace should be reasonably flat over the area covered by the convection box 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 convection box can be made (see fig.15).

**2.12** The minimum height from the top surface 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 = 750mm.
- For a shelf deeper than 150mm  
Minimum height = 750mm + 12.5mm for every 25mm depth over 150mm.

**2.13** 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.

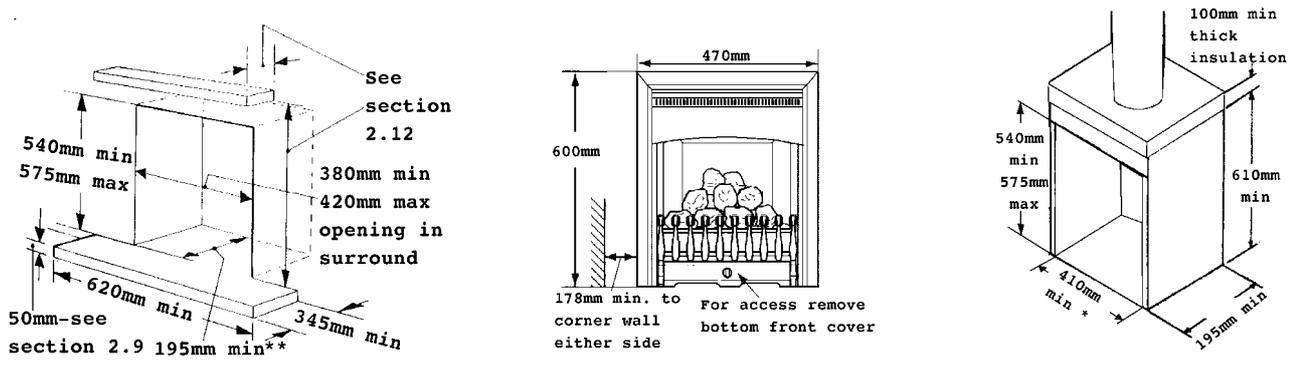
**2.14** The appliance must not be installed in any room which contains a bath or shower or where steam is regularly present.

**2.15** 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.

**2.16** In the United Kingdom (GB) no special ventilation bricks or vents are required in the room for this appliance.

In the Republic of Ireland (IE), permanent ventilation must comply with the regulations currently in force.

**2.17** Propane gas appliances must not be installed in a room which is built entirely below ground level (see BS 5871 Part 2).



(a) Fireplace Dimensions

\*\* Does not apply to pre-cast flues - See section 2.2.3.

(b) Twin walled metal flue box (Internal dimensions)

\* If internal width is greater than 440mm, the opening width must be reduced to not more than 440mm to ensure adequate sealing to fire.

**Fig. 1 Installation Data**

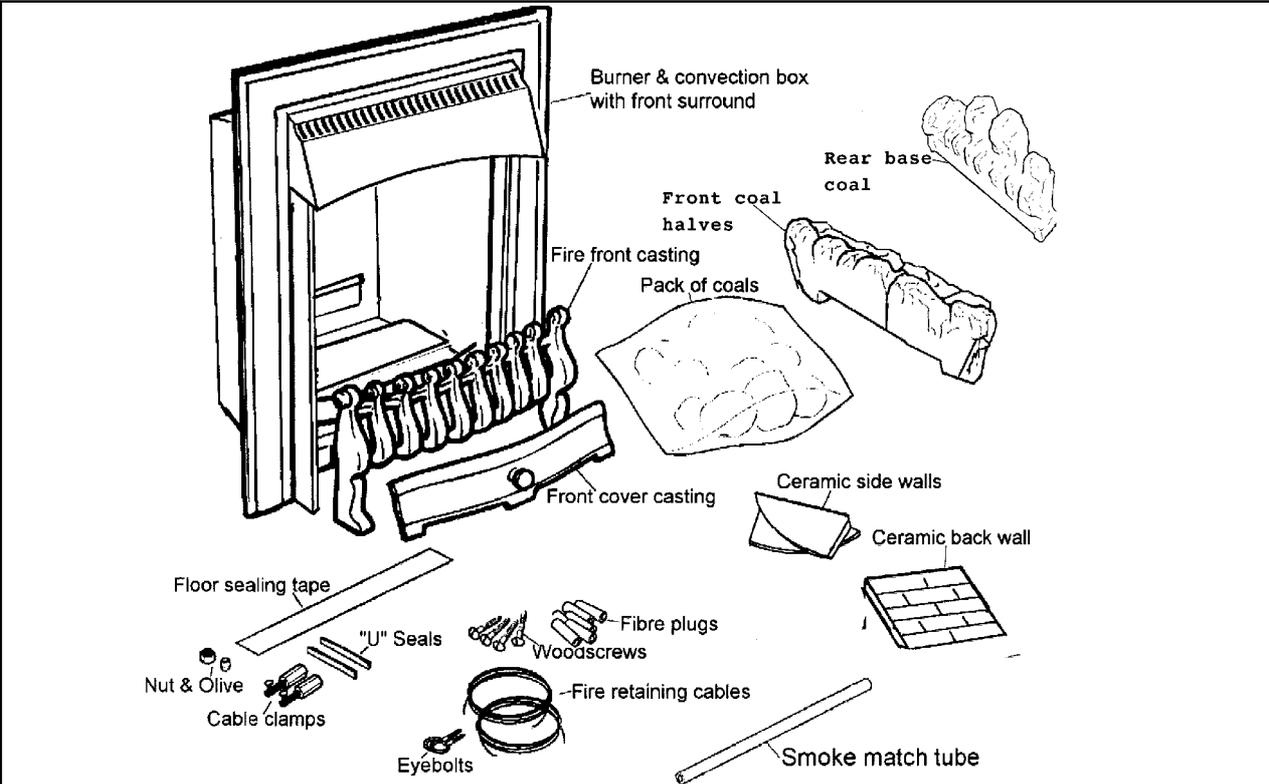
**3. UNPACKING**

The pack contains:

- 1 Burner & Convection box Unit with front surround
- 1 Nut & olive for 8mm inlet pipe
- 1 Ceramic back wall
- 1 Pair of ceramic side walls
- 1 Front base coal- left & right halves
- 1 Rear base coal
- 1 Pack of 7 loose coals
- 2 Small "U" seals for convection box side flanges
- 1 Strip of floor sealing tape
- 6 Fibre plugs
- 4 Woodscrews

- 2 Fire retaining cables
- 2 Cable clamps
- 4 Eyebolts
- 1 Installation template
- 1 Smoke match tube
- 1 Fire front casting
- 1 Bottom front cover casting
- 1 Literature pack

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



**Fig 2 Pack contents**

## 4. PRELIMINARY CHECKS

### 4.1 CHECK IGNITION SPARK

Before attempting to install, it is worth checking that the piezo electric spark ignition system operates satisfactorily.

To initiate the spark, depress the control knob and while keeping it depressed, turn anticlockwise through approximately 60° to the "PILOT/IGN" position. A spark should track from the electrode pin to the thermocouple tip. If there is no spark or incorrect tracking, check the spark gap between the electrode wire and thermocouple tip (see figure 3). If the spark gap is correct, check the ignition wiring.

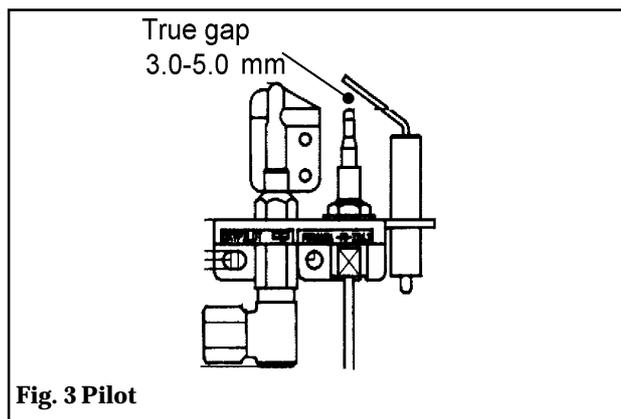


Fig. 3 Pilot

### 4.2 CHECK THE FIREPLACE

The fireplace must comply with all the requirements of section 2.

#### 4.2.1 Fireplace general condition

The fireplace floor should be reasonably flat to ensure that the convection box 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 convection box 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 outer surround (see figure 1c). We suggest that the actual

surround is used as a template to mark the area for combustible cladding removal.

#### 4.2.2 Soundness for appliance attachment

Two primary methods of retaining the appliance are provided:-

- 1) By fixing to the fireplace front.
- 2) Using concealed tension cables fixed to the rear of the fireplace opening together with secondary fixing to the fireplace floor.

The methods are detailed in section 7 of this manual. Before selecting the retention method, consult with the customer. Method 2 is provided for instances where drilling holes in the front surface of the fireplace surround is unacceptable to the customer or otherwise impractical. N.B. It is unwise to attempt to drill into marble without the proper tools and equipment.

If method 1 is chosen, make sure that the fireplace front surround area is sound enough to take the rawlplugs and woodscrews. If necessary, make sound with a suitable cement.

If method 2 is chosen, make sure that the areas at the back and towards the centre of the fireplace floor are sound enough to take the eyebolts and screws. If these areas have deteriorated due to prolonged use, they should be made sound with a suitable cement.

#### 4.2.3 Installations using a metal flue box

The whole of the top surface of the metal flue box must be covered with a layer of mineral wool or equivalent insulation at least 100mm thick (see figure 1b).

### 4.3 FIREPLACE FLUE PULL

After preparing the fireplace, apply a lighted match, paper or smoke match to the chimney opening. Observe the smoke. If there is a definite flow into the opening continue with the installation. If there is not a definite flow, preheat the chimney for a few minutes and recheck. If there is still no definite flow, the chimney may need attention. **Do not fit the appliance. Seek expert advice.**

## 5. GAS SUPPLY CONNECTION

A nut and olive are provided for an 8mm pipe inlet connection to the elbow at the bottom front of the appliance. 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.

### 5.1 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 sealed opening at the back of the convection box (near the left side) and run to the elbow at the front

The pipe run from the supply line up to the rear opening in the convection box must be kept clear of

the area which will be taken by the convection box when it is installed. A template is supplied to aid the installation of the pipe run.

We recommend the following method for installing with a concealed supply pipe:

**5.1.1** Cut the template to the shape shown by the "Debris catchment area". Note that the areas are different for fireplaces with conventional brick flues and precast flues.

**5.1.2** Place the template on the fireplace floor (printed side upward) with the front line level with the front surface of the fireplace. The centre line of the template should line up with the centre of the fireplace. Tape the template securely in this position

**5.1.3** Make sure that the fireplace is clear of all material over the full area covered by the template including that marked "Debris catchment area".

**5.1.4** Install the supply pipe to run through the thick line marked "Supply pipe entry" and up to the inlet elbow position.

Note that the centre of the appliance inlet elbow is 18mm above the fireplace floor. The inlet elbow should be removed from the appliance and fitted to the supply pipe at this stage.

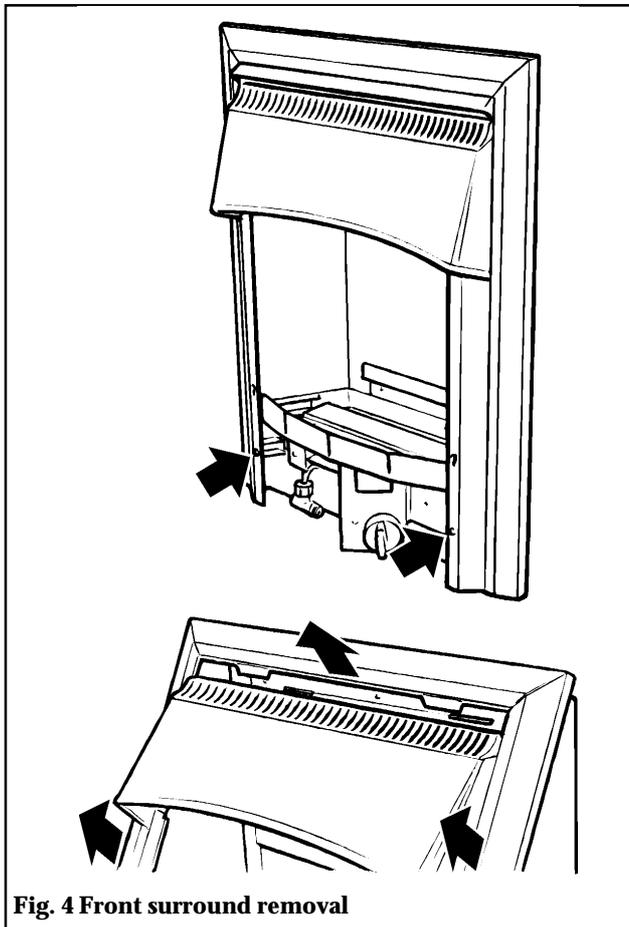
Remove the template. *Note: If the supply pipe connection is to be from the right side, keep the template, It will be useful for bending the pipe later on (Section 8.4)*

## 5.2 SIDE SUPPLY PIPE CONNECTION

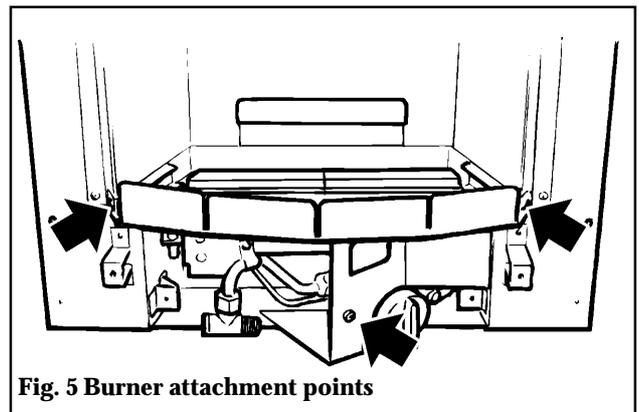
The appliance is designed to allow a side supply pipe to run in front of the front surround and through a cut- out at either rear bottom corner of the fire front casting. For side connection, final installation of the supply pipe should be left until the appliance is installed in the fireplace.

## 6. PREPARING APPLIANCE FOR INSTALLATION

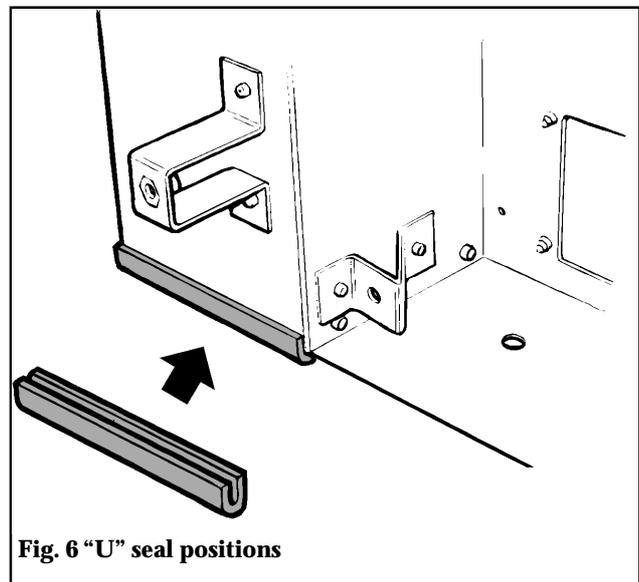
**6.1** Remove the two screws securing the bottom of the front surround to the sides of the convection box. Raise the front surround to allow the retaining lugs at the top to clear the slots in the convection box hood and then lift clear (see figure 4).



**6.2** Detach the burner unit from the convection box by removing three screws (see figure 5). Lift the burner unit clear.



**6.3** Fit the two small "U" section seals to the bottom edges of the convection box side flanges (see fig.6).



#### 6.4 For concealed connection only

Pierce a hole in the seal at the back of the convection box (see figure 7). The seal must envelop the pipe. If the hole is larger than the pipe, seal it with tape.. **Do not pierce the seal unless the supply pipe is to pass through it.**

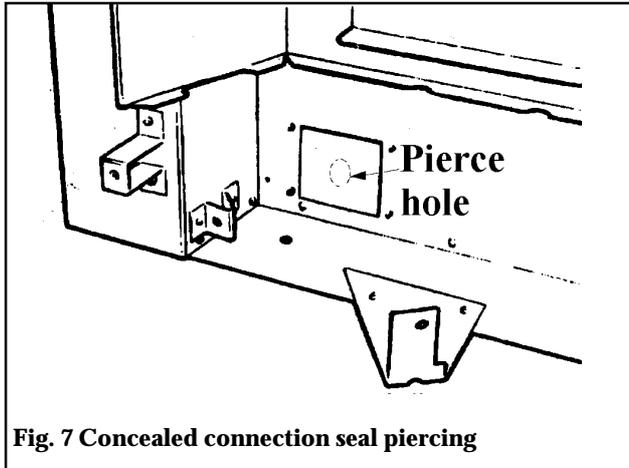


Fig. 7 Concealed connection seal piercing

#### 6.5

The appliance is supplied fitted with a flue restrictor (see figure 8). **If the appliance is being installed to a precast flue or with a 125mm liner, remove the restrictor since only in very exceptional circumstances will there be sufficient flue pull on this type of flue with the restrictor fitted. For all other installations leave the restrictor in place.**

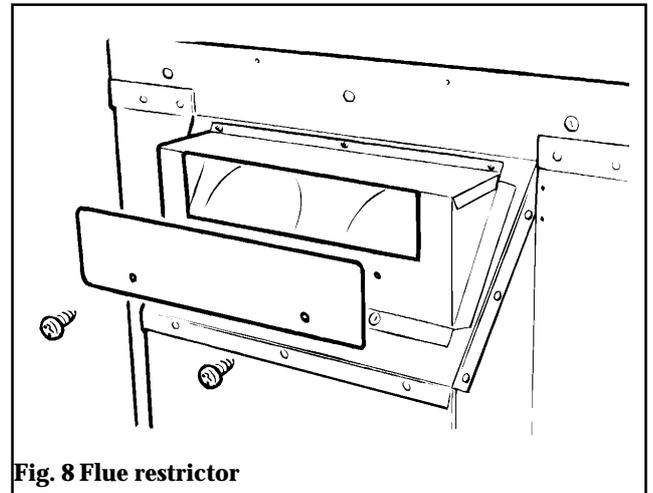


Fig. 8 Flue restrictor

### 7. CONVECTION BOX INSTALLATION

#### 7.1 METHOD (1) - FRONT FIXING TO FIREPLACE SURROUND

Make sure that the fireplace front surround area is sound enough to take the rawlplugs and woodscrews. If necessary, make sound with a suitable cement.

7.1.1 Place the convection box centrally in the fireplace in the position in which it is to be permanently installed. If a concealed connection is being used, insert the convection box into the fireplace feeding the supply pipe through the pierced hole in the rear seal.

7.1.2 Mark the fireplace front surround through the four fixing holes in the side flanges of the convection box (see figure 9).

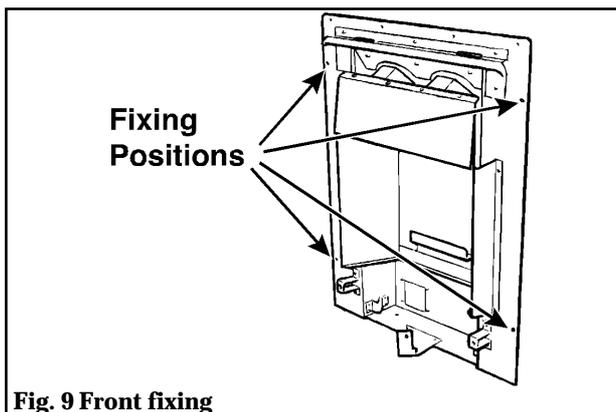


Fig. 9 Front fixing

7.1.3 Remove the convection box. Drill four holes in the fireplace front surround at the marked positions using a no.12 masonry drill.

7.1.4 Insert a rawlplug into each hole.

7.1.5 Place the convection box back in position in the fireplace.

7.1.6 Fit a woodscrew through each hole in the convection box flanges and tighten to seal the box to the fireplace surround.

#### 7.2 METHOD 2 - CABLE RETENTION AND FLOOR FIXING

Make sure that the areas at the back and towards the centre of the fireplace floor are sound enough to take the eyebolts and screws. If these areas have deteriorated due to prolonged use, they should be made sound with a suitable cement.

7.2.1 Drill four holes in the rear wall of the fireplace for the eyebolt plugs. The holes should be drilled within the range of positions shown in figure 10 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.

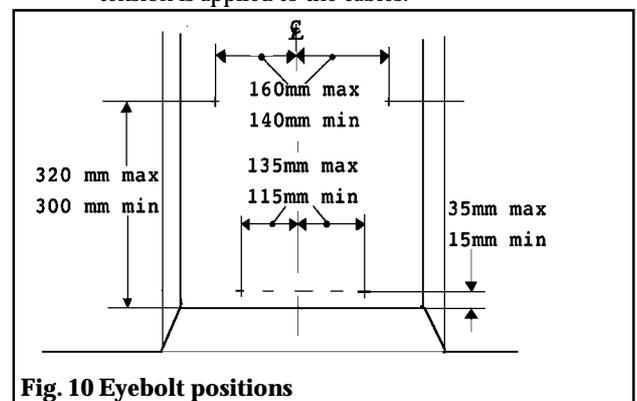


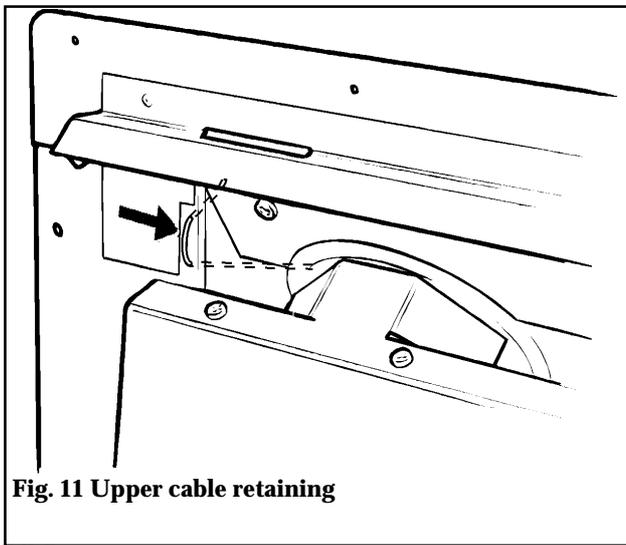
Fig. 10 Eyebolt positions

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

**7.2.3** Place the convection box 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 convection box.

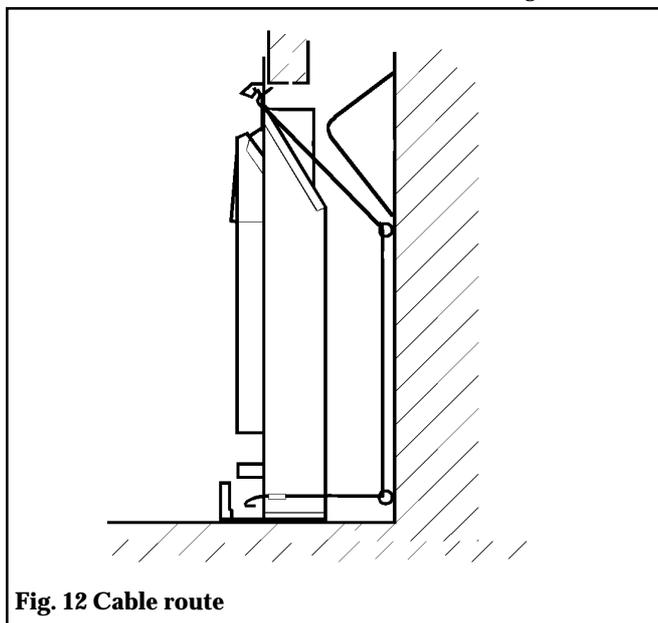
If a concealed connection is being used, insert the convection box into the fireplace feeding the supply pipe through the pierced hole in the rear seal.

**7.2.4** The convection box has two holes at each side of the convected air opening. Insert one end of each cable (one cable each side) from the back through the lower of the two holes and return the end through the upper of the holes (see figure 11). Give the cables a pull so that they grip against the convection box flanges.



**Fig. 11 Upper cable retaining**

**7.2.5** Thread the cables through the upper eyebolts in the rear wall and then through the lower eyebolts. Return the cables through the holes near the bottom of the convection box back panel and through the “V” shaped brackets near the bottom front sides of the convection box (see figure 12).

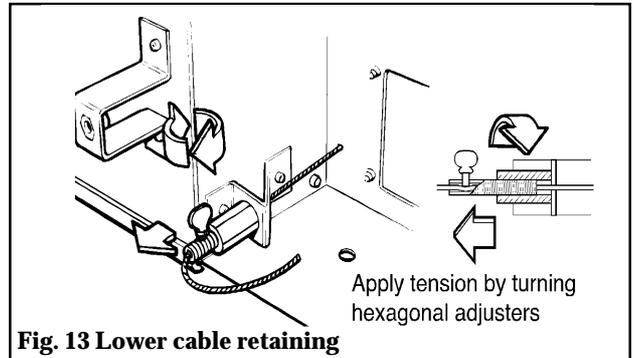


**Fig. 12 Cable route**

**7.2.6** Place the convection box fully back into the fireplace opening so that it is sealed against the fireplace front surround.

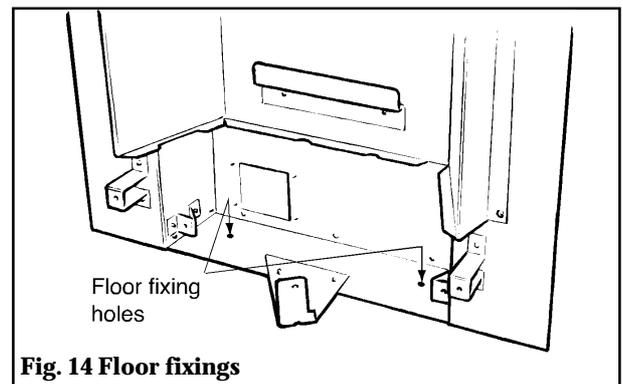
**7.2.7** Fit a cable retainer over the bottom end of each cable.

**7.2.8** Pull each cable taut. Push the cable retainers hard up against the “V” brackets. 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 13).



**Fig. 13 Lower cable retaining**

**7.2.9** Drill a hole into the fireplace floor through each of the two holes in the base of the convection box, using a no.12 masonry drill (see figure 14).



**Fig. 14 Floor fixings**

**7.2.10** Insert a fibre plug into each hole. Use the rawlplugs supplied with this appliance - **Never use plastic plugs instead of the fibre plugs supplied.** Fit a woodscrew in each plug and tighten.

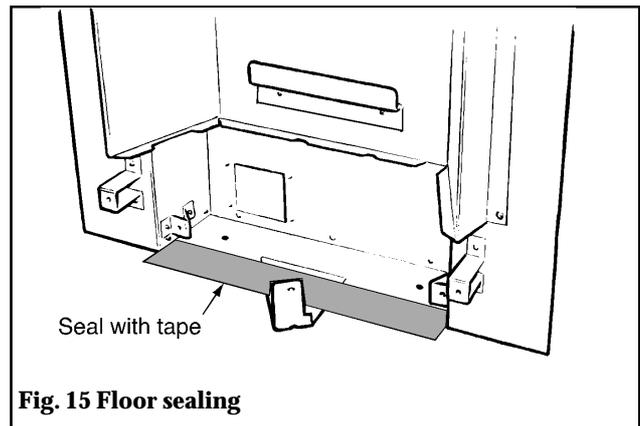
**7.2.11** Inspect the installation of the convection box against the fireplace surround. If the convection box is aligned squarely and the sealing is satisfactory, fully tighten the cable retainers.

**7.2.12** If the convection box is not correctly aligned, release the tension on the cables by slackening the screws and turning the hexagonal adjusters fully anticlockwise. The convection box should then automatically realign itself. Pull each cable taut again and push the cable retainers back against the “V” brackets. Again, tighten the screws in the retainers and apply tension to the cables by turning the hexagonal adjusters clockwise as far as possible.

**7.2.13** Push the free length of the cables inside the convection box so that they are available to allow easy removal and refitting of the appliance during subsequent service calls.

### 7.3 SEAL THE FLOOR FRONT (ALL INSTALLATIONS)

Using the floor sealing tape supplied, seal the bottom of the convection box to the fireplace and hearth floor. Run the tape over the burner fixing bracket. (see figure 15).



## 8. BURNER, FRONT SURROUND & SUPPLY PIPE INSTALLATION

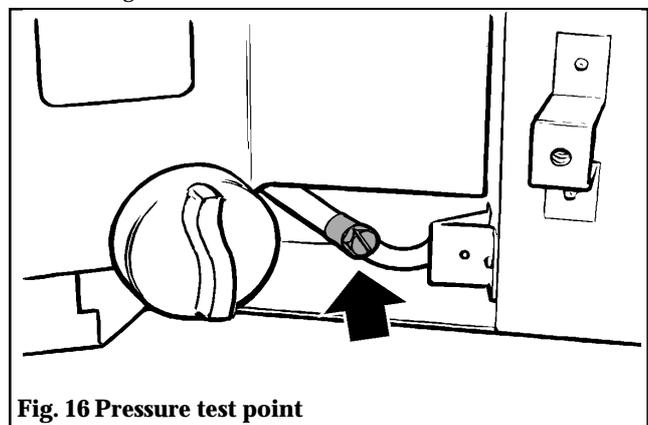
- 8.1** Refit the burner unit to the convection box with three screws.
- 8.2** Locate the two lugs at the top of the front surround in the slots in the convection box hood. Swing the bottom of the surround sides back against the convection box and lower the surround so that the lugs are fully seated in the slots in the convection box hood.
- 8.3** Refit the two screws to secure the surround sides to the convection box brackets.
- 8.4** Connect the supply line to the appliance.  
**For right hand side connection.** The supply pipe will have to be formed to go behind the control knob and burner support bracket. The installation template contains a diagram for bending this supply pipe.
- 8.5** Pressure check the installation pipework for gas soundness in accordance with the current edition of BS6891. A long brush may be required to reach some joints.
- 8.6 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.**
- 8.6.1** If closed, open the isolating valve at the inlet elbow.
- 8.6.2** Depress the control knob and turn anticlockwise partially towards the "PILOT/IGN" position until some resistance is felt. Keep depressed at this position to purge air from the system then, while keeping it depressed, turn fully to the "PILOT/IGN" position. A spark should be generated at the pilot while turning. The spark should ignite the pilot.
- 8.6.3** When pilot ignition has been achieved, keep the control knob depressed for approximately ten seconds to allow the thermocouple probe to warm up and then release it. If the pilot does not remain alight, ensure that the air has been purged, that the pilot orifice is clear and that the thermocouple connections are sound. Replace the pilot unit if necessary (see servicing section of this manual).
- 8.6.4** When the pilot is alight and stable, partially depress the knob and turn to "LOW". The pilot should then light the main burner at its low setting. There may be a delay of up to four seconds between the pilot

lighting and ignition of the gas at the main burner. This is normal and is due to the time required to fill the main burner compartment with sufficient gas for ignition.

- 8.6.5** When the burner is operating properly, partially depress the control knob and gradually turn it anticlockwise. The burner flames should gradually increase until the knob reaches the "HIGH" position. **When the above checks have been completed partially depress the control knob and turn to "OFF".**
- 8.6.6** 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 manual.
- 8.7 CHECK REFERENCE PRESSURE**

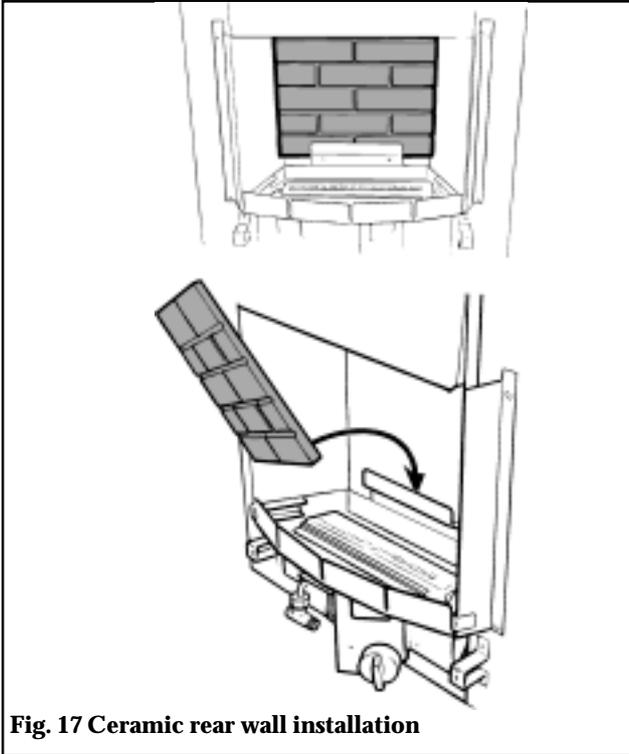
The appliance is pre-set to give the correct heat input at the inlet pressure shown in section 1 of this manual. No adjustment is necessary. Check the burner pressure by fitting a pressure gauge at the test point. The test point is on the pipe situated below the bottom right corner of the burner unit (See figure 16). Check the pressure with the appliance alight and set at maximum output.

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



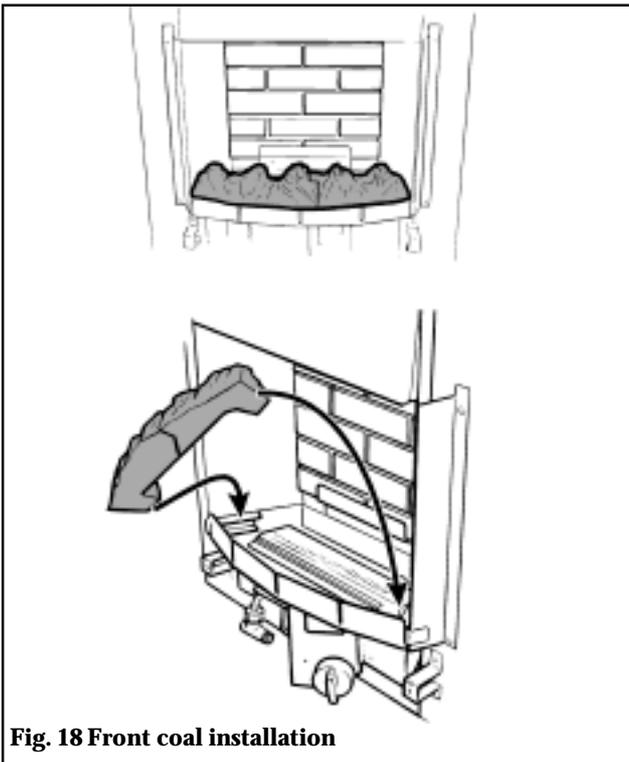
## 9. CERAMIC COALS & WALLS INSTALLATION

- 9.1** With its feather edge at the top, place the ceramic rear wall into the channel at the back of the fire box.. Push the wall flat against the rear of the fire box. (See figure 17).



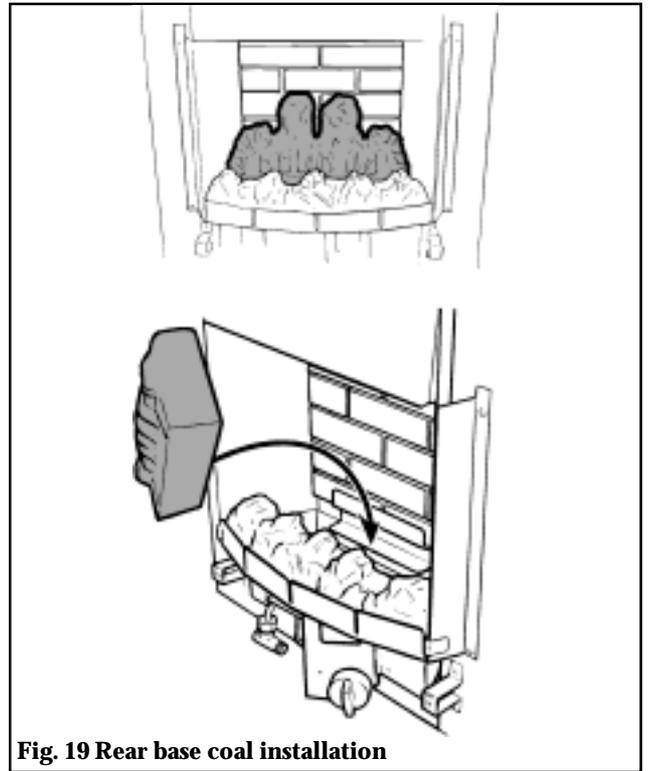
**Fig. 17 Ceramic rear wall installation**

- 9.2** Place the two halves of the front base coal in the burner compartment so that they rest on the ledges at the sides and front. Pull the coals forward so that they are immediately behind the front rim of the burner compartment (See fig. 18).



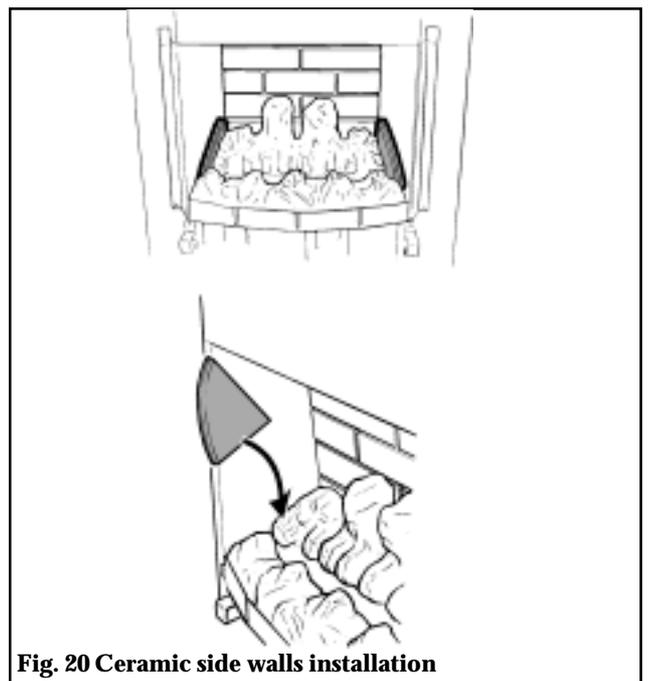
**Fig. 18 Front coal installation**

- 9.3** Place the rear base coal in the burner compartment behind the front coal. Its rear face should touch the rear ceramic wall (See figure 19).



**Fig. 19 Rear base coal installation**

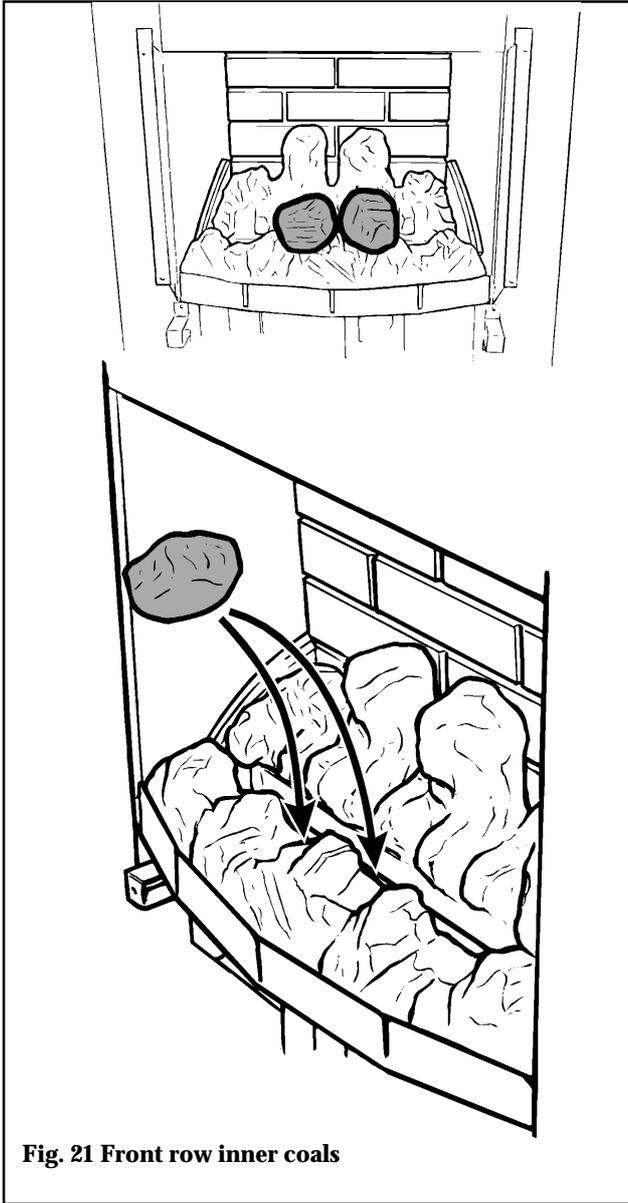
- 9.4** The ceramic side walls are marked at the rear bottom corners "L" (Left side) & "R" (Right side). Place the side walls against the sides of the fire box and in the recesses at the sides of the base coals. The markings "L" & "R" should be at the back bottom corners and facing to the centre of the back of the firebox (See figure 20).



**Fig. 20 Ceramic side walls installation**

**9.5** Install the 7 loose coals as follows. The smooth surfaces of the coals should be at the bottom and back.

**9.5.1** Select the two largest coals Place them in the central two valleys of the front coal (See figure 21).



**9.5.2** Place two of the remaining coals in the two outer valleys of the front coal (One each side of the large coals) (See figure 22). Place the left side coal so that the customer will be able to see the pilot flame below the coal.



**9.5.3** Place the three remaining coals behind and approximately midway between each of the coals in the front row (See figure 23).



**Fig. 23** Middle row of coals

## 10. FULL OPERATING CHECKS

### 10.1 RECHECK CONTROL SETTINGS

Now that all the ceramic fuel effects are in position, the control operation must be fully rechecked.

- 10.1.1** Make sure that the isolating valve at the inlet elbow is open.
- 10.1.2** Depress the control knob and turn anticlockwise partially towards the "PILOT/IGN" position until some resistance is felt. Keep depressed at this position to purge air from the system then, while keeping it depressed, turn fully to the "PILOT/IGN" position. A spark should be generated at the pilot while turning. The spark should ignite the pilot. Check that the pilot flame is visible - see section 9.5.2.
- 10.1.3** When pilot ignition has been achieved, keep the control knob depressed for approximately ten seconds to allow the thermocouple probe to warm up and then release it. If the pilot does not remain alight, ensure that the pilot orifice is clear.
- 10.1.4** When the pilot is alight and stable, partially depress the knob and turn to "LOW". The pilot should then light the main burner at its low setting. There may be a delay of up to four seconds between the pilot lighting and ignition of the gas at the main burner. This is normal and is due to the time required to fill the main burner compartment with sufficient gas for ignition.
- 10.1.5** When the burner is operating properly, partially depress the knob and gradually turn it anticlockwise. The burner flames should gradually increase until the knob reaches the "HIGH" position.
- 10.1.6** Partially depress the control knob and turn back to "PILOT/IGN". The main burner flames should be extinguished but the pilot should remain alight.
- 10.1.7** Partially depress the control knob and turn to "OFF". The pilot should be extinguished.

### 10.2 CHECK FOR SPILLAGE

**A spillage check must be made before leaving the installed appliance with the customer. Make this check with the appliance fully installed with the ceramic fuel effects and front surround in position.**

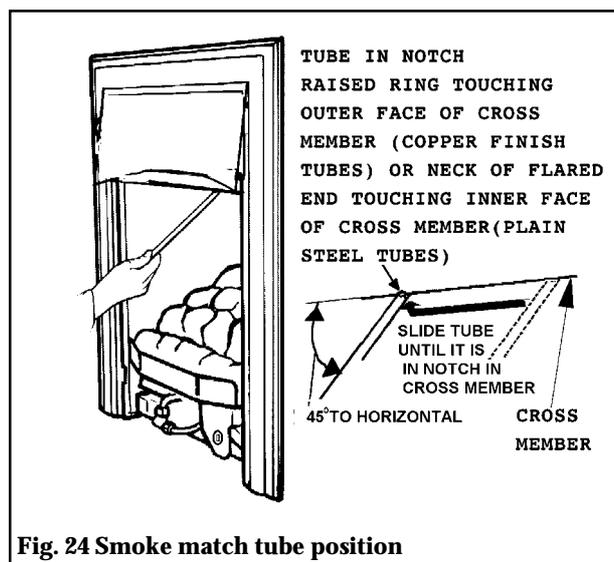
- 10.2.1** Close all doors and windows in the room containing the appliance.
- 10.2.2** Light the appliance and turn the control knob to "HIGH"
- 10.2.3** Leave the appliance on for five minutes.
- 10.2.4** **There are two types of smoke match holders. One has a copper finish, the other is plain steel. Please apply the relevant parts of the spillage test instructions.**

Place the smoke match tube into the convection box at the right hand side and immediately below the black top cross member. Angle it at approximately 45° to the horizontal.

**Copper finish tubes:** Insert the tube so that the raised ring (approx. 25mm from the end) touches the outside surface of the edge of the cross member (figure 24).

**Plain steel tubes:** Insert the tube so that the neck of its flared end touches the inside surface of the edge of the cross member (figure 24).

Keeping the raised ring (for copper finish tubes) or neck of flared end (for plain steel tubes) in contact with the edge of the cross member, slide the tube to the left until you feel it enter the notch in the edge of the cross member. Make sure that the tube is pointed upwards at 45° to the horizontal.



**Fig. 24 Smoke match tube position**

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 the smoke is still not drawn into the appliance, inspect the sealing to the fireplace surround. If the sealing is satisfactory but the appliance is installed with the flue restrictor (see section 6.5), remove the restrictor, reseal the appliance and retest. If smoke is still not drawn into the appliance **Disconnect the appliance and seek expert advice.**

- 10.2.5** 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.**

### 10.3 FLAME SUPERVISION & SPILLAGE MONITORING SYSTEM

This pilot unit incorporates a system which 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;

- 10.3.1 Light the appliance. Set at the "HIGH" position and leave for one minute.
- 10.3.2 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 Valor authorised parts.***

## 11. FINAL REVIEW

- 11.1 All models except black & chrome front casting Fit the fire front casting to the front surround. Locate the two screw heads at the rear top corners of the casting through the keyhole slots at the inner sides of the surround. If the screw heads do not project enough or project too far, the screws can be adjusted. Lower the casting so that it rests on the hearth (see figure 25).  
Black & chrome front casting Place the fire front casting in front of the appliance.

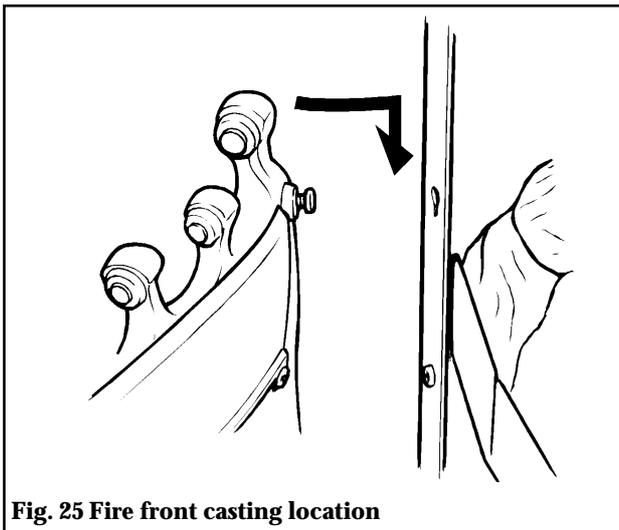


Fig. 25 Fire front casting location

- 11.2 Place the bottom front cover casting in position below the fire front casting.

- 11.3 Visually inspect the appliance. Clean off any marks incurred during installation.
- 11.4 Hand these instructions and the user's instructions to the customer.
- 11.5 Advise the customer how to operate the appliance. Point out that lighting instruction details are at the rear of the bottom front cover casting.
- 11.6 Explain to the customer that the appliance has a flame failure & spillage monitoring system. Point out the explanation of this system shown in the users instructions under "Operating the fire". 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.
- 11.7 Advise the customer that they should read their Owner's guide before operating the fire and always follow the advice in the section headed "Cleaning your fire".
- 11.8 ***Stress that no extra coals 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.***
- 11.9 Recommend that the appliance should be serviced and the chimney inspected by a competent person at least annually.

## 12. SERVICING & PARTS REPLACEMENT

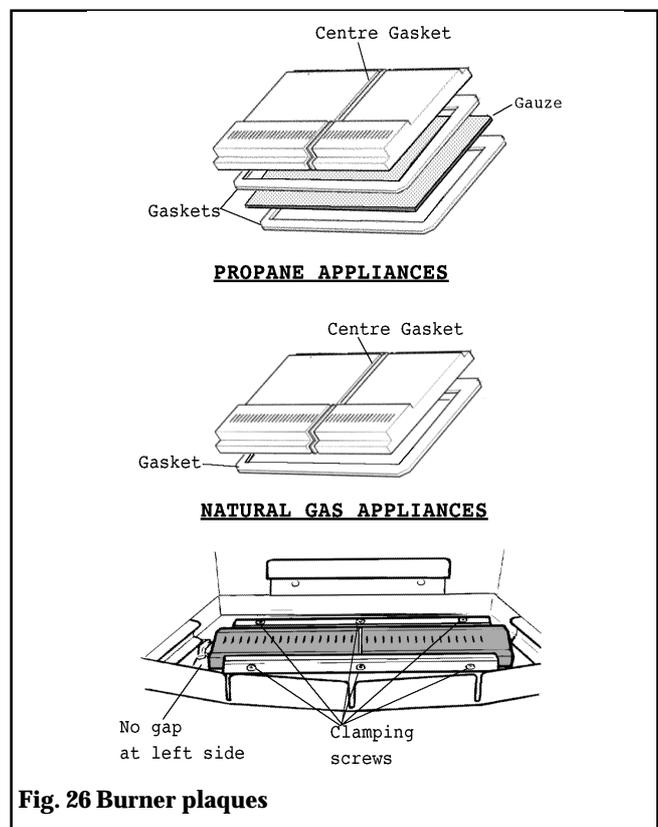
- **Always turn off the gas supply before commencing any servicing (The inlet elbow for this appliance incorporates an isolating valve).**
- **This product uses fuel effect pieces, burner compartment walls and gaskets containing Refractory Ceramic Fibres (RCF), which are man-made vitreous silicate fibres. Excessive exposure to these materials may cause temporary irritation to eyes, skin and respiratory tract. Consequently, it makes sense 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 coals 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 walls and coals are replaced correctly as described in the installation instructions.
- **Always test for gas soundness and spillage after servicing the appliance.**

### 12.1 TO REPLACE BURNER PLAQUE ITEMS (See figure 26)

- 12.1.1** Remove the 7 loose coals, ceramic side walls, front base coal, rear base coal and ceramic back wall. The plaques can be then be removed as follows without detaching the front surround or front casting.
- 12.1.2** Remove the plaque clamping strips by detaching 6 screws.
- 12.1.3** Remove the plaques, centre gasket and gasket under the plaques.  
Propane Gas Appliances only: If necessary, also remove the gauze and the gasket underneath it.
- 12.1.4** Propane Gas Appliances only: If necessary fit a new gasket below the gauze. Clean and replace the gauze.  
All Appliances: Fit a new gasket below the plaques.
- 12.1.5** Place the new left hand plaque in position.  
*Note: Plaques for Propane appliances are embossed with letter "P".*  
The left side of the plaque must touch the inside edge of the retaining flange at the left side of the burner well.
- 12.1.6** Place the new right hand plaque in position.  
*Note: Plaques for Propane appliances are embossed with letter "P".*  
Fit a new centre gasket between the plaques. If there is any play between the plaques and the end retaining flanges, push the plaques and gasket firmly to the left squeezing the gasket between the two plaques. Any gap should be between the right side of the plaque and the right side retaining flange.
- 12.1.7** 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.
- 12.1.8** Refit the ceramic fuel effects and walls as described in section 9 of this manual.



**Fig. 26 Burner plaques**

## 12.2 TO REMOVE THE FRONT SURROUND

- 12.2.1 Remove the bottom front cover casting.
- 12.2.2 Lift the fire front casting up and forward to release the locating screw heads at the back of the casting from the keyholes in the surround sides. Lift the casting clear.
- 12.2.3 Remove the two screws securing the bottom of the front surround to the sides of the convection box. Raise the front surround to allow the retaining lugs at the top to clear the slots in the convection box hood and then lift clear (see figure 27).
- 12.2.4 Replace in the reverse order.

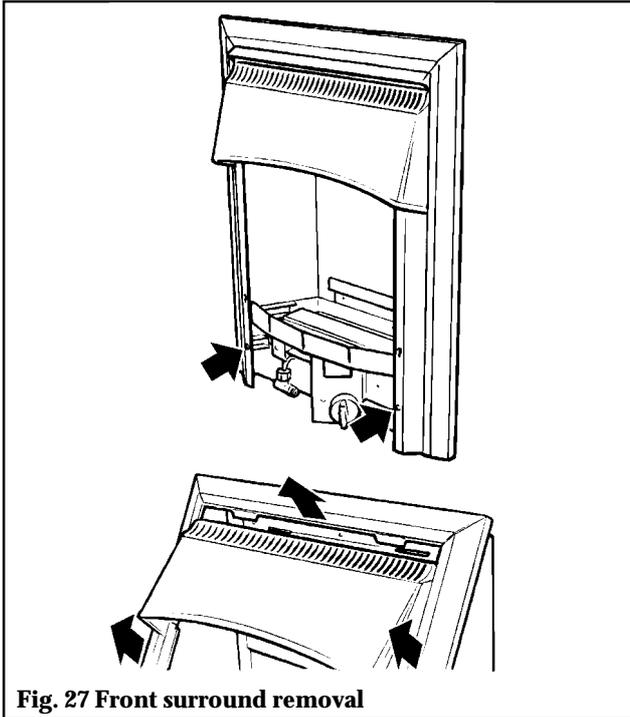


Fig. 27 Front surround removal

## 12.3 TO REMOVE THE COMPLETE BURNER UNIT (See figure 28)

- 12.3.1 Remove the 7 loose coals, ceramic side walls, front base coal, rear base coal and ceramic back wall.
- 12.3.2 Remove the front surround unit - See section 12.2.
- 12.3.3 Support the inlet isolating elbow to avoid straining the pipework and disconnect the appliance from the elbow.
- 12.3.4 Detach the burner unit from the convection box by removing 3 screws.
- 12.3.5 Replace in the reverse order.

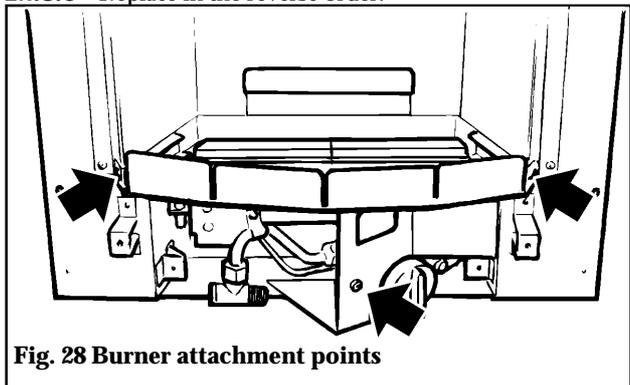


Fig. 28 Burner attachment points

## 12.4 TO REMOVE THE PILOT UNIT (See figure 29)

- 12.4.1 Remove the burner unit - See section 12.3.
- 12.4.2 Disconnect the electrode lead from tab underneath the electrode.
- 12.4.3 Undo the thermocouple nut at the gas tap.
- 12.4.4 Disconnect the pilot pipe from the pilot unit elbow.
- 12.4.5 Remove the first screw securing the dust cage to the pilot unit / burner. Carefully remove the dust cage and place aside.
- 12.4.6 Remove the second screw securing the pilot unit to the burner. Remove the pilot unit and place it aside.
- 12.4.7 Refit in the reverse order.

*Note 1 The pilot unit must be replaced as a whole assembly. Its individual components are not separately replaceable.*

*2. Once removed, ensure that the dust cage is cleaned before refitting. Make sure that it locates squarely onto the pilot unit without any gaps between the cage edges and the pilot unit.*

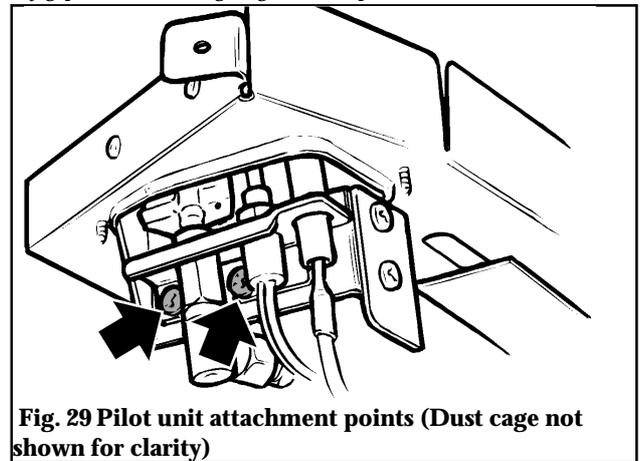


Fig. 29 Pilot unit attachment points (Dust cage not shown for clarity)

## 12.5 TO REMOVE THE GAS TAP/F.S.D.

- 12.5.1 Remove the burner unit - See section 12.3.
- 12.5.2 Disconnect the electrode lead from tab underneath the electrode.
- 12.5.3 Undo the thermocouple nut at the gas tap.
- 12.5.4 Disconnect the inlet pipe at the tap end.
- 12.5.5 Disconnect the pilot pipe at the tap end.
- 12.5.6 Disconnect the main burner pipe at the tap end.
- 12.5.7 Pull off the control knob.
- 12.5.8 Remove the gas tap fixing nut. Pull the tap clear of the control plate.
- 12.5.9 Replace in the reverse order.

## 12.5 TO REMOVE THE PIEZO GENERATOR

- 12.6.1 Remove the gas tap as section 12.5.
- 12.6.2 Make sure that the tap is in the off position.
- 12.6.3 Remove the circlip holding the piezo unit to the tap. Remove the piezo unit.
- 12.6.4 Replace in the reverse order.

## **12.7 TO GREASE THE CONTROL TAP/F.S.D.**

- 12.7.1** Detach the tap and remove the piezo generator as section 12.6 making sure that the tap is in the off position.
- 12.7.2** Remove the two screws from the head of the tap. Remove the niting head and spindle complete with collar and spring.
- 12.7.3** Note the position of the slot in the plug - mark its position on the tap body.
- 12.7.4** Remove the plug rotating slightly while pulling.
- 12.7.5** Clean and grease the plug lightly with a suitable grease. Do not apply excessive grease. Particularly, make sure that the gas ports in the tap are not restricted by grease.
- 12.7.6** Push the plug into the tap body and position the slot in line with the mark previously made on the tap body.
- 12.7.7** Reassemble the niting head and spindle complete with collar and spring making sure that the components are correctly engaged. Check the operation of the tap.
- 12.7.8** Refit the piezo generator.

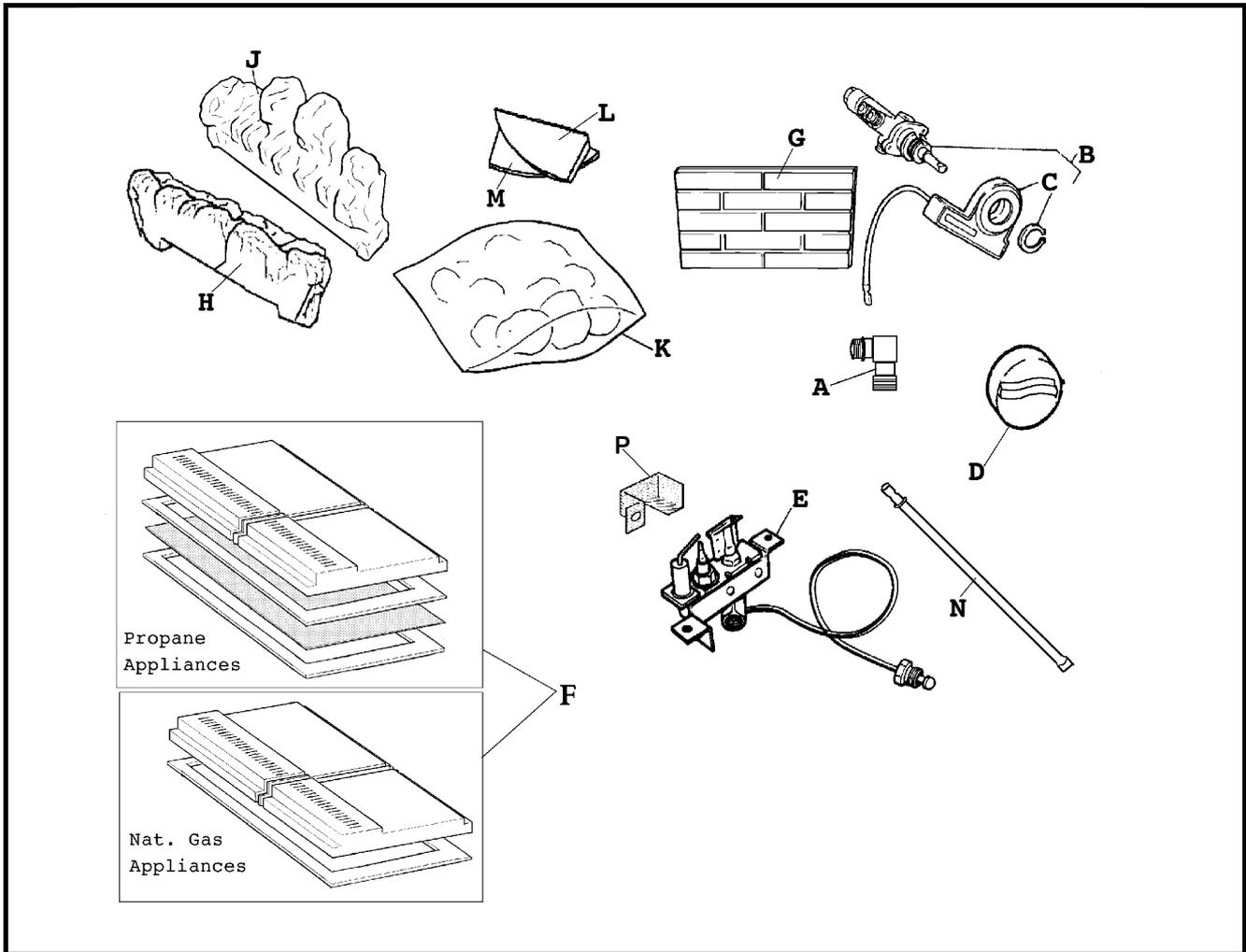
## **12.8 TO REMOVE THE MAIN BURNER ELBOW INJECTOR**

- 12.8.1** Remove the burner unit - See section 12.3.
- 12.8.2** Disconnect the main burner pipe from the elbow injector. If necessary, loosen the pipe at the gas tap end to swing the pipe clear of the injector.
- 12.8.3** Unscrew the elbow injector from the support bracket.
- 12.8.4** Refit in the reverse order.

## **12.9 TO REMOVE THE APPLIANCE FROM THE FIREPLACE**

- 12.9.1** Remove the 7 loose coals, ceramic side walls, front base coal, rear base coal and ceramic back wall.
- 12.9.2** Remove the front surround unit - See section 12.2.
- 12.9.3** If the appliance is fixed to the fireplace floor remove the burner unit (See section 12.3) and remove the two floor fixing screws.
- 12.9.4** If the appliance is attached by the front fixing method (See section 7.1), remove the four screws attaching the convection box side flanges.
- 12.9.5** If the appliance is fixed by the cable retention method (See section 7.2), slacken the hexagonal adjusters on the cable retainers and unscrew the thumbscrews to release the cables.
- 12.9.6** Refit as described in the relevant installation sections. Make sure gas soundness, sealing, spillage test and performance are satisfactory.

### 13. SHORT LIST OF SPARES



KEY	DESCRIPTION	NO. OFF	PART NO.
A	Injector (Elbow type) Bray cat 82 size 360 <i>For Natural Gas Appliances</i>	1	545959
	Injector (Elbow type) Bray cat 92 size 190 <i>For Propane Appliances</i>		566939
B	Gas tap & spark generator	1	545969
C	Spark generator	1	521069
D	Control knob	1	545979
E	Pilot unit <i>For Natural Gas Appliances</i>	1	545949
	Pilot unit <i>For Propane Appliances</i>		544929
F	Burner plaque & gasket set <i>For Natural Gas Appliances</i>	1	545989
	Burner plaque & gasket set <i>For Propane Appliances</i>		566929
G	Ceramic rear wall	1	545999
H	Front coal halves	1	546009
J	Rear base coal	1	563359
K	Pack of loose coals	1	563369
L	Ceramic side wall - right side	1	546039
M	Ceramic side wall - left side	1	546049
N	Smoke match tube	1	541169
P	Dust Cage	1	567619
-	Installation template (Not illustrated)	1	546059

### **Safety First.**

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



### **Quality and Excellence.**

#### **At the heart of every Valor fire.**

All Valor 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**

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



### **Careful Installation**

Valor 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.



Valor Heating, Erdington, Birmingham B24 9QP

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

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