



K i n d e r

probably the best gas fires under the sun

# Kalahari SC Powerflue

**DECORATIVE FUEL EFFECT  
POWERFLUE GAS FIRES**

## **Installation and Maintenance Instructions**

**Hand these instructions to the user**

**Model No. KPFC00SN is for use on Natural Gas (G20) at a supply pressure of 20 mbar in G.B. / I.E.**

**Model No. KPFC00SP is for use on Propane Gas (G31) at a supply pressure of 37 mbar in G.B. / I.E.**

# CONTENTS

<b>Section 1</b>	<b>Information and Requirements</b>	<b>PAGE</b>
1.0	Appliance Information	3
1.1	Conditions of Installation	4
1.2	Flue Terminal Position	4
1.3	Fireplace / Surround Suitability	5
1.4	Fireplace Opening	6
1.5	Shelf Position	6
1.6	Installation Types	6-7
1.7	Hearths	7-9
1.8	Spillage Monitoring System	10
<b>Section 2 Installation of Fire</b>		
2.1	Unpacking the fire	11
2.2	Marking the Firebox Recess	11
2.3	Fitting the Fan Unit / Firebox	12-20
2.4	Making the Electrical Connection	21
2.5	Making the Gas Connection	21
2.6	Making the Solenoid / Wiring Loom Connection	22
2.7	Final Fitting of the Fan Unit	22-23
2.8	Gas Tightness & Inlet Pressure	24
<b>Section 3 Assembling Fuel Bed and Commissioning</b>		
3.1A	Assembling the ceramics and fuel bed (Pebble Fuelbed)	24-27
3.1B	Assembling the ceramics and fuel bed (Coal Fuelbed)	28-31
3.2	Lighting the appliance	32
3.3	Checking for clearance of combustion products	33
<b>Section 4 Maintenance</b>		
4.1	Removal of the Burner Assembly	34-35
4.2	Removal of the Battery Ignitor	35
4.3	Replacement of the Battery	35
4.4	Removal of the Pilot Assembly	35
4.5	Replacement of the Control Cable	36-37
	Parts Shortlist	37

This appliance is manufactured by:-  
BFM Europe Ltd,  
Trentham Lakes,  
Stoke-on-Trent, ST4 4TJ

## SECTION 1 INFORMATION AND REQUIREMENTS

### 1.0 APPLIANCE INFORMATION

Model	KPFC00SN	KPFC00SP
Gas Type	G20	G31
Main injectors (2 off)	Size 260	Size 85
Pilot Type	Copreci Single Flame 21100 / 162	Copreci Single Flame 21100 / 167
Max. Gross Heat Input :	6.9 kW	
Min. Gross Heat Input :	4.2 kW	
Cold Pressure :	19.0 +/-1.0 mbar	36.0 +/-1.0 mbar
Ignition :	1.5V Battery Generator	
Supply Voltage :	230V a.c.	
Supply Frequency :	50Hz	
Supply Fuse :	3 Amp to BS 1362	
Power Input :	90W	
IP Rating :	IP23	
Electrode Spark Gap	4.5mm	
Packed Weight (without fender)	24kg	

#### **Fire box Dimensions (with trim's fitted)**

#### **Kalahari Models**

Width :	(with standard trim, no spacer)	470mm
Height :	(with standard trim, no spacer)	586mm
Depth :	(overall-without fender)	170mm
Depth :	(overall-with spacer fitted)	120mm
Gas Connection :	8mm Compression	(Supplied with fire)

# INSTALLATION REQUIREMENTS

## 1.1 CONDITIONS OF INSTALLATION

It is the law that all gas appliances are installed in accordance with the rules in force only by a CORGI Registered Installer in G.B, in accordance with these installation instructions and the Gas Safety (Installation and Use) Regulations 1998 as amended. Failure to install appliances correctly could lead to prosecution. It is in your own interest and that of safety to comply with the law.

The installation must also be in accordance with all relevant parts of the Local and National Building Regulations where appropriate, the Building Regulations (Scotland Consolidation) issued by the Scottish Development Department, and all applicable requirements of the following British Standard Code of Practice.

1. B.S. 5871 Part 3 Installation of Decorative Fuel Effect Gas Fires
2. B.S. 6891 Installation of Gas Pipework
3. B.S. 5440 Parts 1 & 2 Installation of Flues and Ventilation
4. B.S. 1251 Open fire place components
5. B.S. 715 Metal flue pipes for gas appliances
6. B.S. 6461 Part 1 Installation of Chimneys and flues
7. I.S. 813 : 1996 Domestic Gas Installation (Republic of Ireland)

**No purpose made additional ventilation is normally required for this appliance, when installed in G.B. When Installing in I.E. please consult document I.S. 813 : 1996 Domestic Gas Installation, which is issued by the National Standards Authority of Ireland. If installing in Northern Ireland, please consult local building regulations. Any purpose made ventilation must be checked periodically to ensure that it is free from obstruction.**

## 1.2 FLUE TERMINAL POSITION

The minimum acceptable dimensions from the flue terminal to obstructions and ventilation openings are shown below in fig. 1 and listed in the table (Fig. 2 below) **IT IS IMPORTANT THAT THE POSITION OF THE FLUE ALLOWS THE FREE PASSAGE OF AIR ACROSS IT AT ALL TIMES.**

Fig. 1

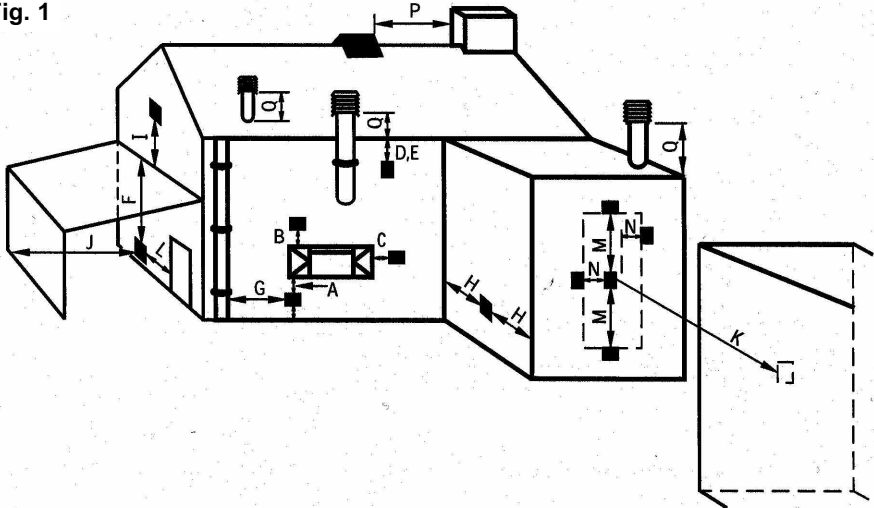


Fig. 2

DIMENSION	TERMINAL POSITION	MINIMUM DIMENSION
A	Directly below an opening, air brick, opening window	300mm (12 in.)
B	Above an opening, air brick, opening window	300mm (12 in.)
C	Horizontally to an opening, air brick, opening window etc.	300mm (12 in.)
D	Below gutters, soil pipes or drain pipes	75mm (3 in.)
E	Below eaves	200mm (8 in.)
F	Below balconies or car port roof	200mm (8 in.)
G	From a vertical drain pipe or soil pipe	150mm (6 in.)
H	From an internal or external corner	200mm (8 in.)
I	Above ground roof or balcony level	300mm (12 in.)
J	From a surface facing the terminal	600mm (24 in.)
K	From a terminal facing the terminal	1200m (48 in.)
L	From an opening in the car port	1200m (48 in.)
M	Vertically from a terminal on the same wall	1500mm (59 in.)
N	Horizontally from a terminal on the same Wall	300mm (12 in.)
O	From the wall on which the terminal is mounted	50mm (2 in.)
P	From a vertical structure on the roof	N/A
Q	Above intersection with roof	150mm

### 1.3 FIREPLACE / SURROUND SUITABILITY

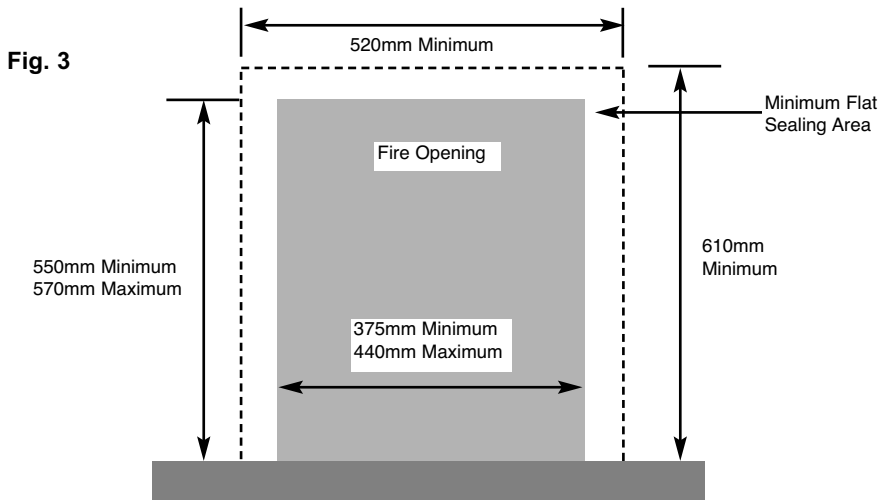
The fire must only be installed on a hearth it **must not be installed directly onto carpet or other combustible floor materials.**

The fire is suitable for fitting to non-combustible fire place surrounds and proprietary fire place surrounds with a temperature rating of at least 150°C.

**If a heating appliance is fitted directly against a wall without the use of a fire surround or fire place all combustible material must be removed from behind the trim. Soft wall coverings such as blown vinyl, wall paper etc. could be affected by the rising hot air and scorching and/or discoloration may result. Due consideration should be made to this when installing or decorating.**

### 1.4 FIRE PLACE OPENING

The front opening of the fire place must be between 375 and 440 mm wide, and between 550 and 570mm high. If the opening exceeds these dimensions then a surround must be constructed from suitable non-combustible material to produce a correct size opening. Any surround must be suitably sealed to the fire place to prevent leakage. See below in fig.3



### 1.5 SHELF POSITION

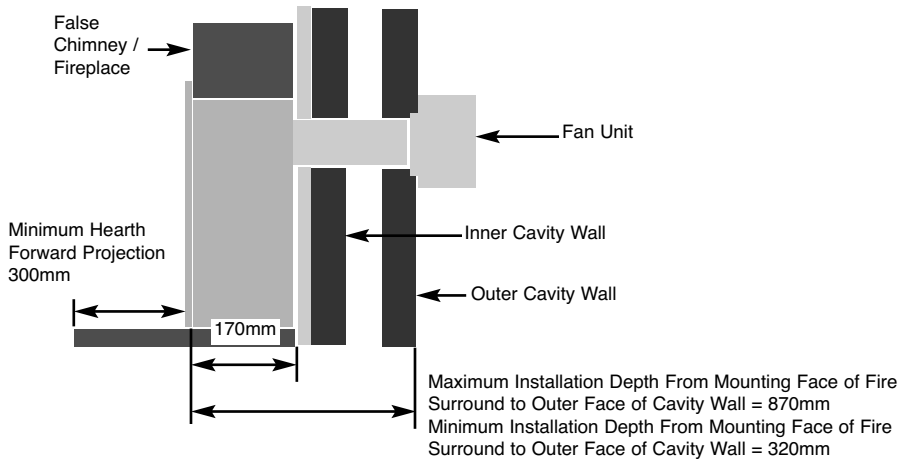
The fire may be fitted below a combustible shelf providing there is a minimum distance of 200mm above the top of the fire and the shelf does not project more than 150mm. If the shelf overhangs more than 150mm the distance between the fire and the shelf must be increased by 15mm for every 25mm of additional overhang over 150mm.

## 1.6 INSTALLATION TYPES

This fire can be fitted against an outside facing flat wall surface or into a fireplace opening cut into the wall.

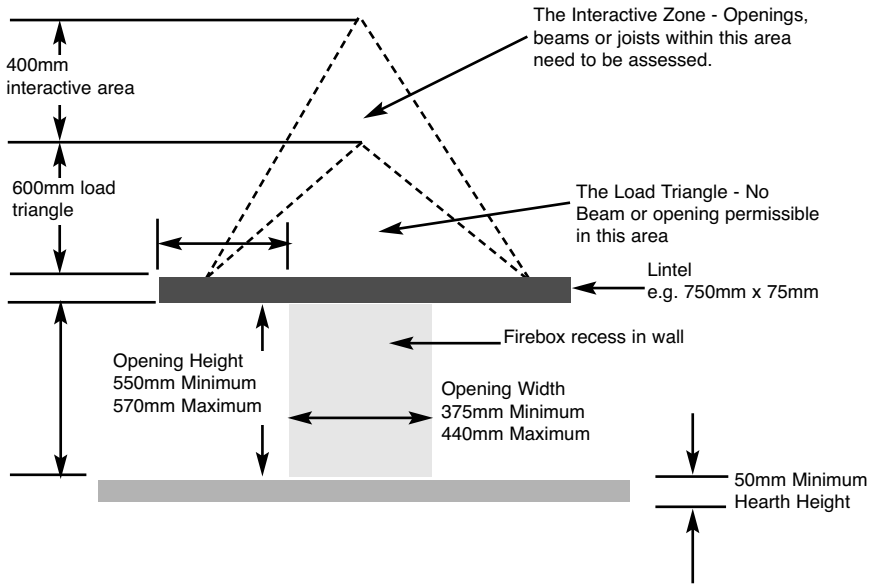
**When fitting the fire in front of the inner cavity wall,** the distance between the mounting face of the fire and the rear face of the firebox (170mm nominally), a false chimney breast or fireplace surround should be constructed. The firebox must then be secured into the fireplace using the method described in section 2. Any combustible material must be removed from the area around the firebox flange. In all installations, ensure that there is no structural damage to the property or the damp course. See fig. 4 below

Fig. 4



**When fitting the fire into a cavity wall,** this requires the opening of the inner leaf of brickwork, to recess the firebox into. The opening needs to be sufficient to accommodate the firebox. To support the wall above the hole, a suitable lintel must be inserted across the top of the opening. If fitting the appliance into a cavity wall, a lintel 750mm long having a thickness of 75mm with a height of the inner wall should be used. The lintel could be either pre-cast concrete or steel - Catnic CN52 or CN 46 could be used, depending upon the inner wall thickness. Before proceeding with the installation of the fire, an assessment of the area immediately above the fire is required, see Fig. 5 overpage. If there is no existing openings within either triangle, proceed with forming the opening. However, if openings or beams occur within either triangle, then you should seek specialist advice from a structural engineer or consider relocating the proposed position of the firebox.

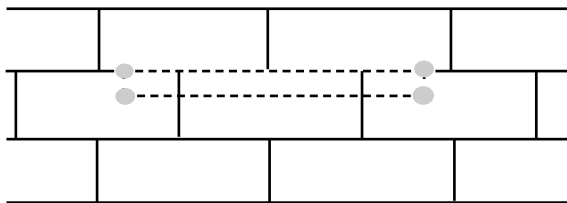
**Fig. 5**



**To proceed with the installation when the above stated criteria have been satisfied :-**

Mark out where possible, centrally beneath a block joint where the lintel is to be fitted. Unless lime mortar has been used it will be necessary to drill four holes with a masonry drill, then use a mechanical cutter such as a “shark saw” to cut out the correct size of slot in the inner leaf of brickwork for the lintel you have chosen to install. See fig. 6 below.

**Fig. 6**

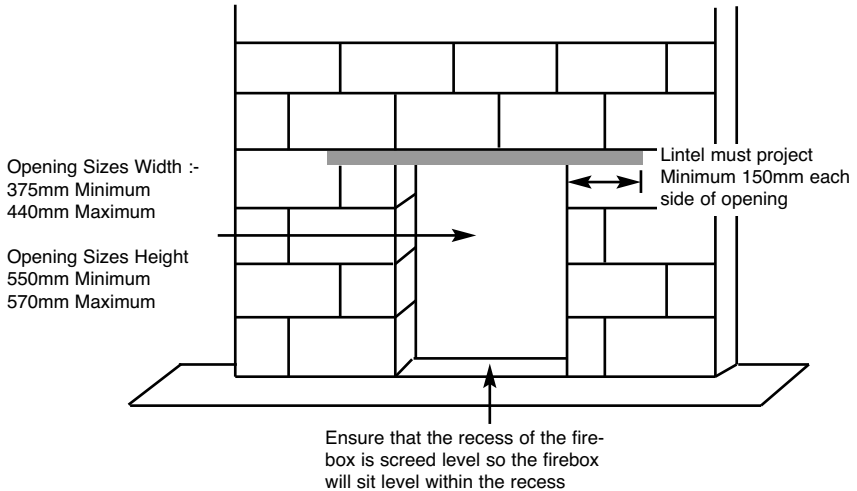


Fit the lintel, ensure that it is bedded on mortar. Do not bed on a dry bed. Then remove all debris from the cavity and construct the opening to the minimum / maximum opening sizes as shown overpage (fig. 8) and in section 1.4, (fig. 3)



Remove any combustible material from within the area of the opening. No combustible material can be allowed to come into contact with any area of the appliance.

**Fig. 7**



## **1.7 HEARTHS**

This appliance must only be installed on to a concrete or non-combustible hearth. The hearth material must be a minimum thickness of 12mm with the top surface at least 50mm above the floor. The hearth must be fitted symmetrically about the fire opening and have a minimum width of 760mm and a minimum projection of 300mm forwards from the fire opening. If the black spacer frame is used, the hearth projection forward from the fireplace opening will require to be 350mm.

## 1.8 SPILLAGE MONITORING SYSTEM

This appliance is fitted with an atmosphere sensing spillage monitoring system in the form of an oxygen sensing pilot. This is designed to shut the fire off in the event of a partial or complete blockage of the flue pipe causing a build up of combustion products in the room in which the fire is operated. **The following are important warnings relating to this spillage monitoring system :-**

- 1) The spillage monitoring system must not be adjusted by the installer.
- 2) The spillage monitoring system must not be put out of operation.
- 3) When the spillage monitoring system is exchanged only a complete original manufacturers part may be fitted. It is not possible to replace individual parts on the pilot system on this appliance, only a complete pilot assembly (including the thermocouple) may be fitted.

## SECTION 2 INSTALLATION OF FIRE

### 2.1 UNPACKING THE FIRE

Carefully lift the fire out of the carton. Remove the loose item packaging carefully from the front of the appliance. Check the contents as listed :-

#### Packing Check List

1off	Fire box / burner assembly
1off	Boxed fuelbed base, ceramic front rail and 18 synthetic coals
1off	Loose items bag.
1off	Flue Tube
1off	Fan Unit
1off	Flue Collar & Seal
1off	Cable Fixing Kit
1off each	User instruction book and Installation book

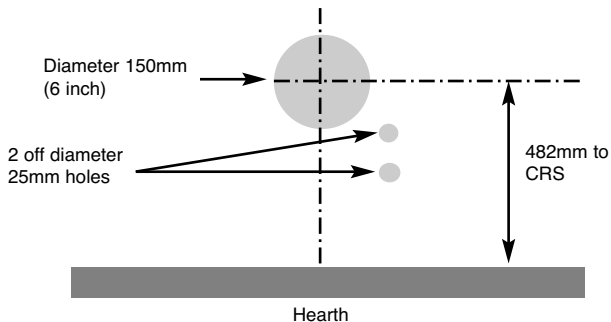
### 2.2 MARKING THE FIREBOX RECESS

Drill a pilot hole into the outer leaf of brickwork at a height of 482mm from the hearth level, centrally about the firebox, then using a core drill, drill a hole of 150mm (6 inch) diameter, centrally about the horizontal line drawn above the level of the hearth, and vertically central to the centre line of the appliance. See fig. 8 below.

**NOTE :** If the fire is to be fitted against the inner cavity wall, the inner and outer cavity walls will require drilling.

Fig. 8

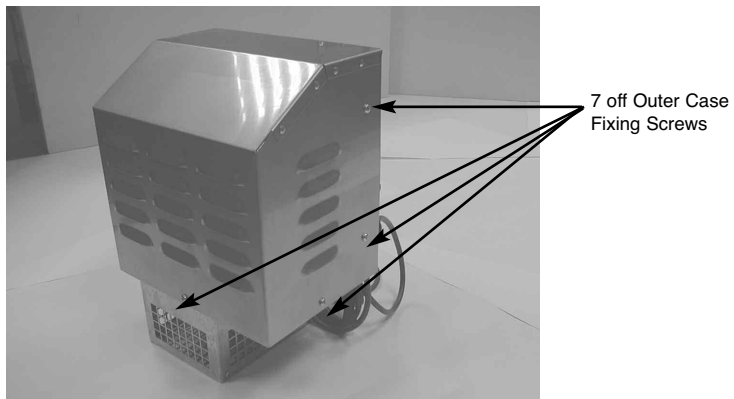
**IMPORTANT NOTE :**  
**DO NOT FIT THIS APPLIANCE FAN UNIT ABOVE  
A HEIGHT OF 1.4M FROM GROUND LEVEL**



### 2.3 FITTING THE FAN UNIT / FIREBOX

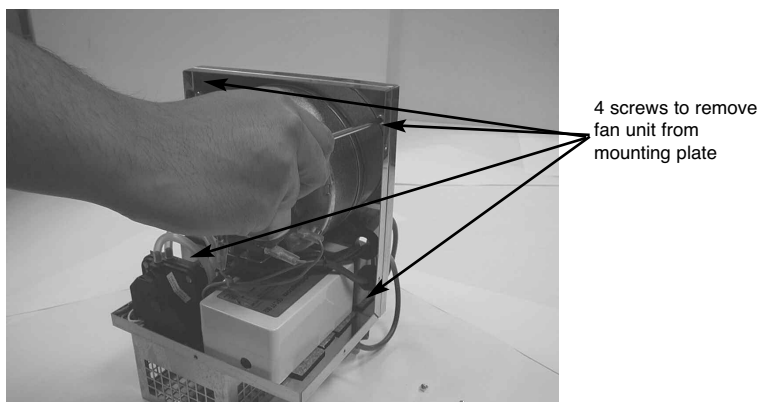
- a) Remove the 7 outer case fixing screws which hold the fan unit cover in place. See fig. 9 below.

**Fig. 9**



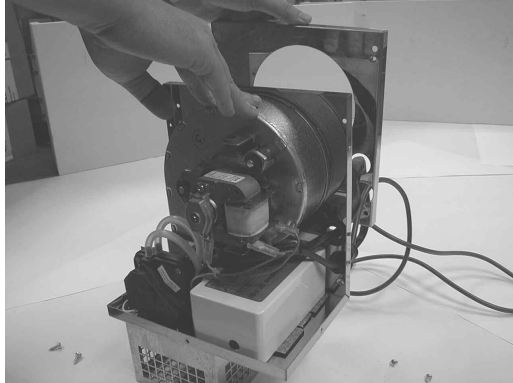
- b) Remove the fan mounting plate from the main body of the fan unit by removing the four screws from the fan unit as indicated below in fig. 10

**Fig. 10**



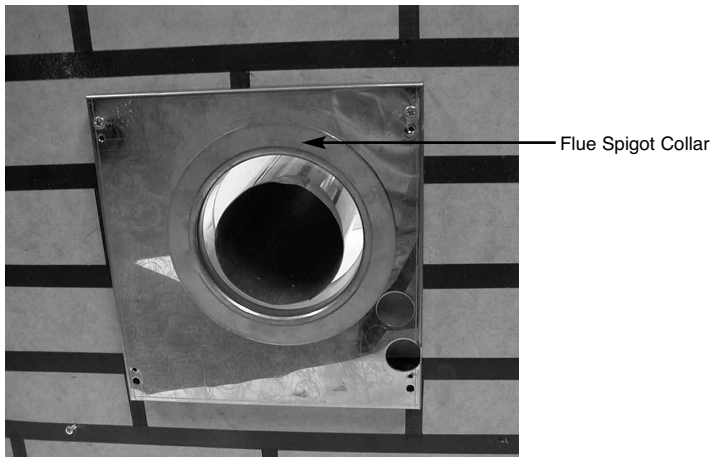
- c) When the fan mounting plate screws have been removed, slide the fan mounting plate cover over the wiring harness and mains cable as shown below in fig. 11, taking care not to damage the wiring harness / cables

**Fig. 11**



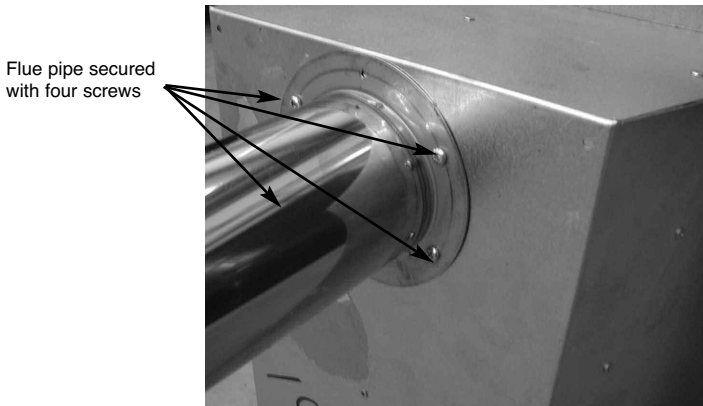
- d) Screw the fan mounting plate you have just removed centrally about the hole drilled in the outer cavity wall, using the 4 screws and rawplugs provided. Insert flue spigot collar into the hole cut in the outer cavity wall as shown below in Fig. 12.

**Fig. 12**



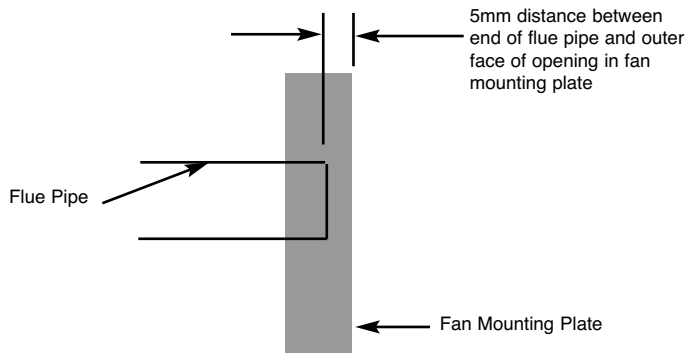
- e) Screw the flue pipe & gasket to the rear of the firebox using the 4 off screws provided. See fig. 13 below.

**Fig. 13**



- f) Locate the fire into the fireplace opening / surround and locate the flue pipe into the fan mounting plate as shown on the previous page in Fig. 13. The spigot ring has an amount of play within it to account for tolerances in the hole alignment. Mark the flue pipe and cut to length, ensuring that it finishes 5mm before the mounting panel opening. See fig. 14 below.

**Fig. 14**



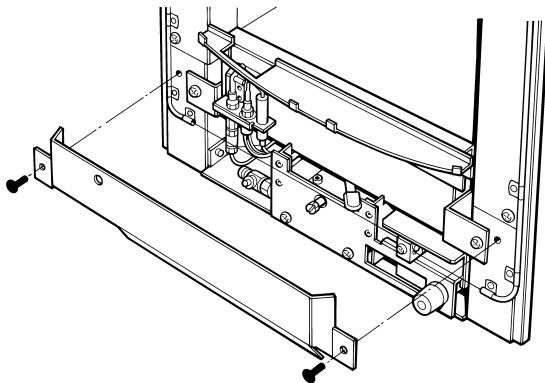
**NOTE :** A suitable cutting blade should be used to cut the flue pipe to length. It is recommended that a 32 T.P.I. blade is used.

- g) Remove the fire from the fireplace opening and remove any burrs from the cut edge of the flue pipe.

**Proceed as follows to remove the burner assembly from the firebox :-**

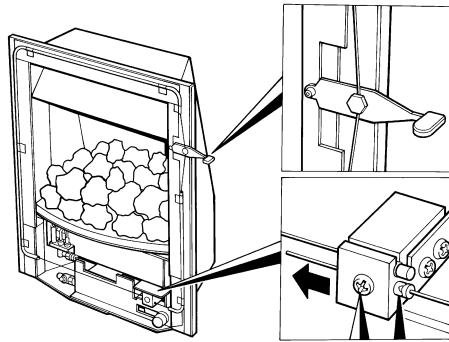
- h) Remove the trim. Remove the burner heat shield from the front of the fire box to allow access to the burner, as shown below in fig. 15

**Fig. 15**



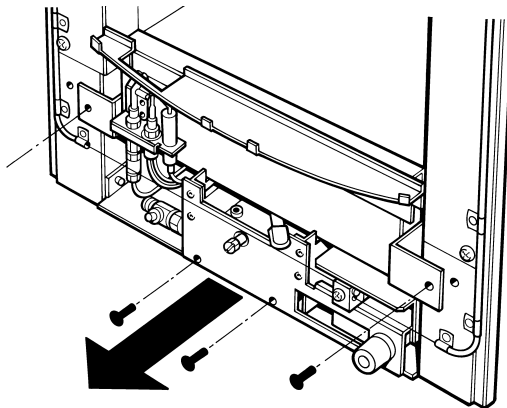
- i) Ensure that the hearth is protected from damage and carefully lift the fire box into the fire opening, then slide it back into position. Check that the fire box flange fits flush to the sealing face of the fire surround or wall with no gaps present.
- j) Remove the burner. To allow burner removal, the control lever operating cable must be removed. The control lever operating cable can be seen running across the base of the fire, below the burner. To release the cable, unscrew the cable securing screw located in the centre of the aluminium operating arm and pull the cable out from its fixing hole. Release the other end of the cable by pushing the cable forwards to the right, i.e. into the operating arm so as to release the tension. Pull the cable nipple out of the retaining hole and remove the cable through the slot in the operating arm. See fig. 16 overpage

**Fig. 16**



- k) Unscrew the burner assembly fixing screws at either side of the firebox, and the two fixing screws at the base of the fire (See fig. 17 below). Carefully pull the base of the burner forwards from the fuel-bed support panel. The burner can now be removed from the appliance.

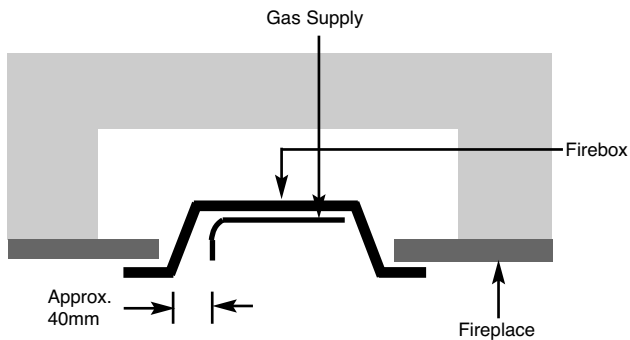
**Fig. 17**



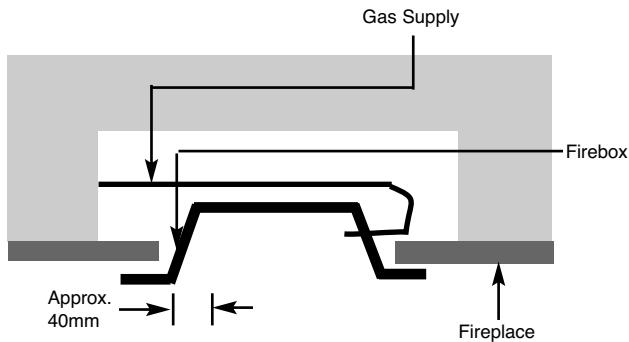


- l) Whilst the fire box is still in position, decide which side the gas supply is to enter the fire from. If concealed pipe work is required plan the pipe run to enter the fire box through one of the openings in the sides of the fire box below the fuelbed support panel and connect to the isolating / inlet elbow. The gas connection to the appliance should be made to the isolating / inlet elbow using 8mm rigid tubing. There must be no soldered joints within the firebox. See fig. 18 & 19 below for suggested concealed pipe layouts.

**Fig. 18**



**Fig. 19**



**Note : Before breaking into the gas supply a gas tightness test should be carried out to establish that the existing pipework is sound.**

Carefully withdraw the fire box from the opening to enable the gas supply and fire fixing to be completed.

Depending on whether the spacer option has been selected, (50mm black spacer) there is a choice of methods of fixing the firebox which are provided to enable the installer to deal with any type of installation.

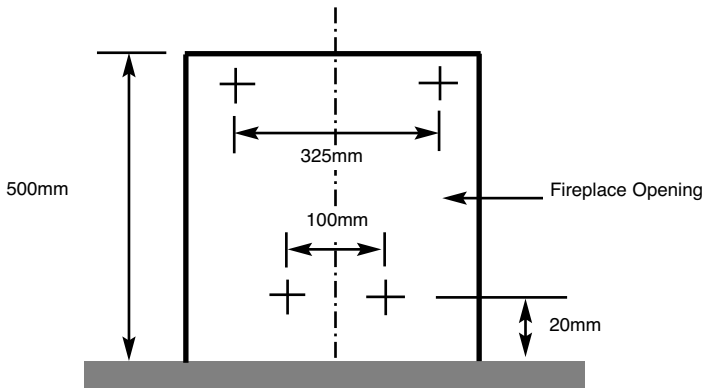
**The preferred method of fixing which is suitable for almost all situations is the cable fixing method which is described in the following section in detail.**

If the 50mm black spacer is used, the fire may be secured using the cable method as described below, or alternatively, in installations where the cable method is not suitable (eg. loose masonry in rear of fire opening) the spacer may be removed from the fire box and secured to the fire surround using protruding screws which engage on to the key hole slots on the rear face of the spacer. The spacer will then need to be sealed to the fire surround. The fire box can then be refitted to the spacer. The foam seal (supplied) must be fitted around the perimeter of the spacer in a "goalpost" arrangement to ensure a seal is achieved to the fireplace.

To fit using the **preferred** cable method proceed as follows-

- m) Mark out and drill 4 off No 14 (6mm) holes in the back face of the fire opening in the positions shown below in fig. 20

**Fig. 20**



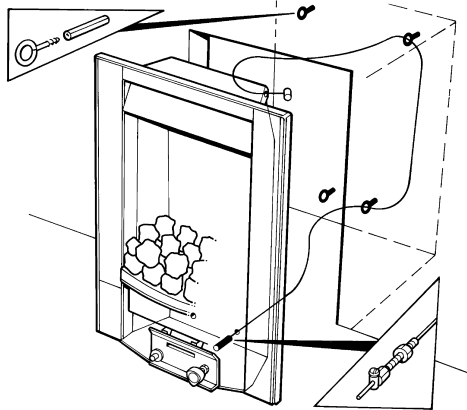
Fit the wallplugs provided and screw the fixing eyes securely into the rear of the fire opening.

- n) Uncoil the two fire fixing cables and thread one end of each of the cables through one of the two holes on each side of the flue outlet shroud.
- o) Position the fire carefully on the (protected) surface of the hearth and reach into the fire opening. Thread each of the cables vertically downwards through the pair of fixing eyes on the same side of the fire. Thread the free end of the cables through the corresponding circular

hole on each side of the lower rear of the fire. Carefully slide the fire box back into the fire opening and pull both cables tight.

- p) Thread a tensioning screw over each of the cables and ensure that the tensioning nut is screwed fully up against the hexagon shoulder of the tensioning screw (this provides maximum travel for the tensioning nut).
- q) Fit a screwed nipple on to each of the cables and pull hand tight up against the tensioning screw, then secure each nipple with a flat bladed screwdriver. See fig. 21 below

**Fig. 21**



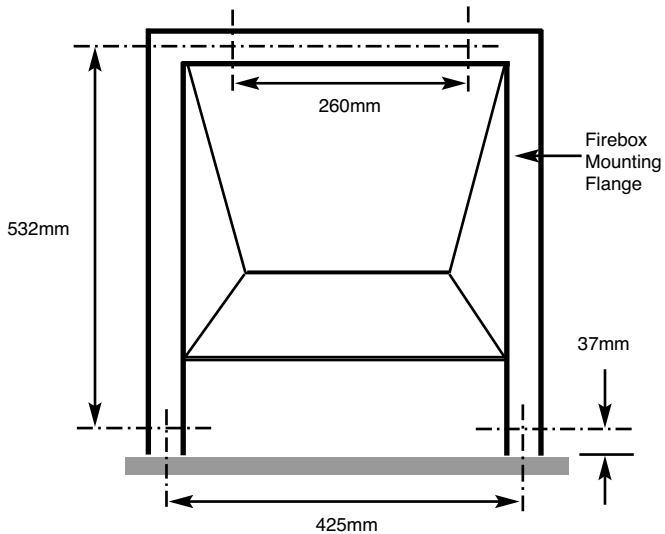
- r) Evenly tighten the tensioning nuts to tension both cables and pull the fire snugly against the wall. Do not overtighten, it is only necessary to pull the seal up against the sealing face of the wall, it does not need to be compressed. Check that there are no gaps behind the seal.
- s) With the fire securely in place, if a concealed gas connection has been made through either of the access holes in the sides of the fire, the holes should be closed around the pipe to prevent leakage of air through the gap around the pipe, with the length of foil tape provided.
- t) Refit the burner. Fit the four retaining screws and check that the burner is correctly locked into position. Reconnect the solenoid pipe to the burner assy. and carry out a gas tightness test.
- u) Refit the front burner heat shield to the sides of the fire box (2 Screws) and secure the trim to the fire using the magnets provided.

- v) **Before making the final gas connection, thoroughly purge the gas supply pipework to remove all foreign matter, otherwise serious damage may be caused to the gas control valve on the fire.**

The other firebox fixing method is as follows :-

In installations where the cable method is not suitable (e.g. loose masonry in rear of fire opening) the firebox can be secured to the fire surround using four screws and wall plugs provided. Below (fig. 22) is a diagram to indicate the hole centre positions available on the firebox to facilitate the screw fixing to the fireplace / surround.

**Fig. 22**



## 2.4 MAKING THE ELECTRICAL CONNECTION

**WARNING :** THIS APPLIANCE MUST BE EARTHED AND SHOULD BE PREFERABLY CONNECTED VIA A 3 AMP FIXED FUSED SPUR WITH A MINIMUM CONTACT SEPARATION OF 3MM.

IT MAY HOWEVER BE CONNECTED TO A 3 PIN PLUG TO BS 5733, THAT IS FITTED WITH A 3 AMP FUSE TO BS 1362.

- a) Remove the fan box cover as shown in fig. 10 (page 12) if you have not already done so.
- b) Feed the mains cable and wiring harness through the hole in the fanbox mounting wall plate and preferably connect to a 3A fixed fused spur or 3 pin plug, within the room to which the appliance will be installed. If an extension to this cable is required, this must be completed with a junction box in line with the latest I.E.E. regulations.
- c) Temporarily fix the fan unit to the wall mounting plate.

NOTE : If the supply cable is in any way damaged, do not proceed with installation, call the manufacturer or service agent to arrange for a new cable to be fitted.

**Check that the supply voltage to the appliance is 230v (+/- 5%).**

**The means of disconnection from the supply must have a minimum contact separation of 3.0mm in all poles, and be in an accessible position, following installation of the fire.**

## 2.5 MAKING THE GAS CONNECTION

The gas connection should be made in accordance with fig. 18 & 19 on page 17.

If the appliance is to be routed through a floor or wall the pipe must be sleeved or enclosed in a suitable protective sleeve.

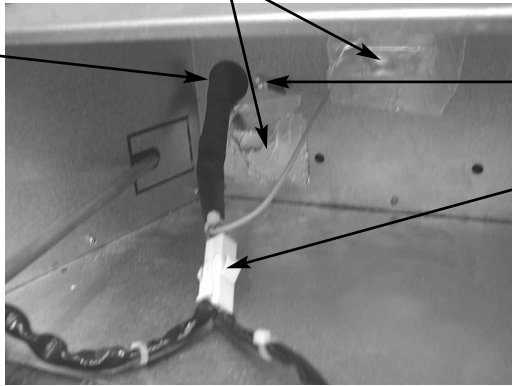
## 2.6 MAKING THE SOLENOID / WIRING LOOM CONNECTION

Feed the control cables for the solenoid and earth wire through the grommet on the rear left hand side of the firebox (when viewed from the front), and connect the solenoid plug and earth lead to the wiring loom from the fan unit. See fig. 23 overpage. Also connect the two flying leads to the fan control switch (Right Hand side) **IT IS ESSENTIAL THAT THE EARTH LEAD IS FITTED. THIS WIRE IS LOW VOLTAGE 24V. SEE FIG. 23 OVERPAGE FOR DETAILS OF THE EARTH WIRE CONNECTION.**

Any cut-outs in the rear panel not used must be sealed with the length of foil tape supplied in the loose items pack

**Fig. 23**

Grommet



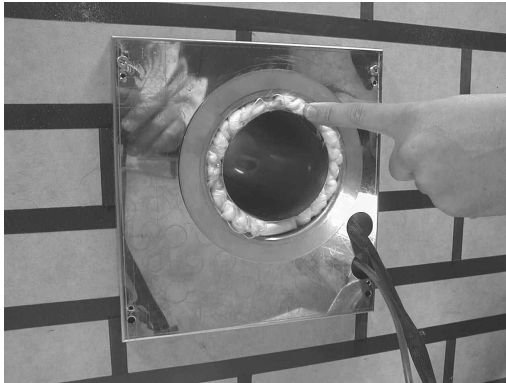
Earth Wire to be secured to rear panel of firebox

Wiring Loom Connection (Solenoid to Fan Unit)

## 2.7 FINAL FITTING OF THE FAN UNIT

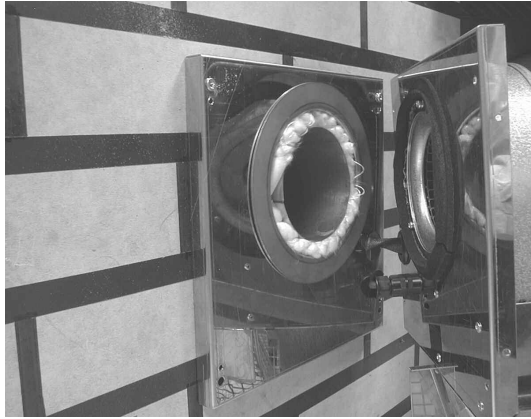
- a) Fit the flue spigot ring over the flue pipe, and then insert the circular rope seal into the gap between the flue spigot ring and the flue pipe as shown below in fig. 24.

**Fig. 24**



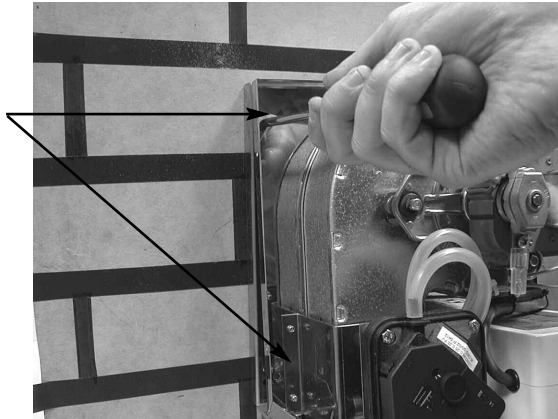
- b) Refit the fan box to the wall plate using the four No. 10 screws provided, taking extreme care not to trap any wiring. Check that there are no gaps between the fan box seal and the wall plate. See fig. 25 and 26 overpage.

**Fig. 25**



**Fig. 26**

Fan unit secured to fan mounting plate with 1 off screw in each corner as shown below



Refit the fan unit cover with the seven screws as removed in fig. 10 on page 12. Seal any gaps in the brickwork to prevent moisture ingress. **Do not under any circumstances block any ventilation openings in the fan unit cover.**

**IF YOU HAVE INSTALLED THIS PRODUCT INTO THE CAVITY, YOU MUST CHECK YOU HAVE COMPLIED WITH THE REQUIREMENTS OF ALL LOCAL & NATIONAL BUILDING REGULATIONS.**

## 2.8 GAS TIGHTNESS AND INLET PRESSURE

- a) Remove the pressure test point screw from the inlet elbow and fit a manometer.
- b) Turn on the main gas supply and carry out a gas tightness test.
- c) Depress the control knob and turn anti-clockwise to the position marked pilot. Hold in the control knob for a few seconds to purge the pipe work then press the igniter button. The burner should light, continue to hold the control knob for a few seconds then turn to the full-on position.
- d) Check that the gas pressure is **19.0 mbar (+/- 1.0mbar) 7.6 in w.g.(+/- 0.4 in w.g.) for NG models or 36.0 mbar (+/- 1.0mbar) 14.4 in w.g.(+/- 0.4 in w.g.) for LPG models.**
- e) Turn off the fire, remove the manometer and refit the pressure test point screw. Check the pressure test point screw for gas tightness with the appliance turned on using a suitable leak detection fluid or detector.

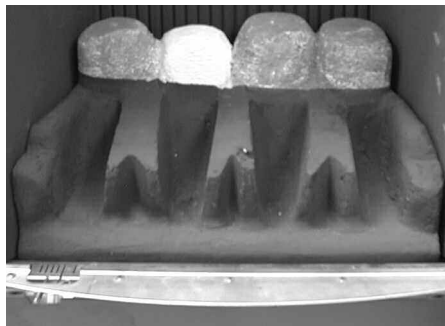
## SECTION 3A ASSEMBLING FUEL BED AND COMMISSIONING - KINDER KALAHARI MODELS SUPPLIED WITH PEBBLE PACK AS EXTRA COST OPTION

### 3.1A ASSEMBLING THE CERAMICS AND FUEL BED

**NOTE :** The position of the fuel-bed components are critical to the performance of the product. Therefore please ensure that the fuel-bed components are positioned as described in the following section prior to requesting a service call due to soot build up, poor flame pattern etc.

- a) Place the ribbed ceramic fuelbed base on top of the fuelbed support and pull fully forwards to the burner. **Make sure that the fuelbed base is located centrally in the fire box. Ensure that the fuelbed base fit fully down onto the fuel bed support and is not lodged on the burner. See fig. 27 below.**

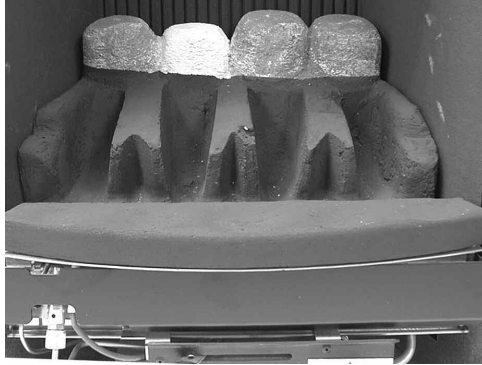
Fig. 27





- b) Position front ceramic rail on burner front ceramic support and ensure that the locating channel in the front ceramic rail is correctly located onto the lip on the burner front ceramic support. (See fig. 28 below)

**Fig. 28**



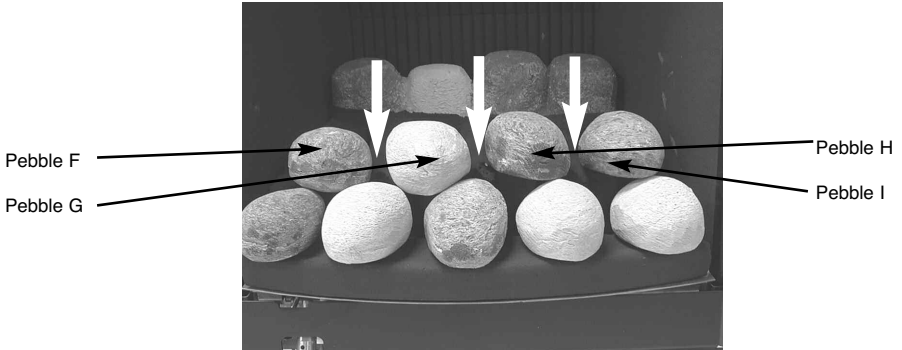
- c) Pick pebbles A to E and arrange along the the front rail, ensuring that they are evenly spaced. Use the recess's in the front ceramic rail as a guide for placement. (See fig. 29 below)

**Fig. 29**



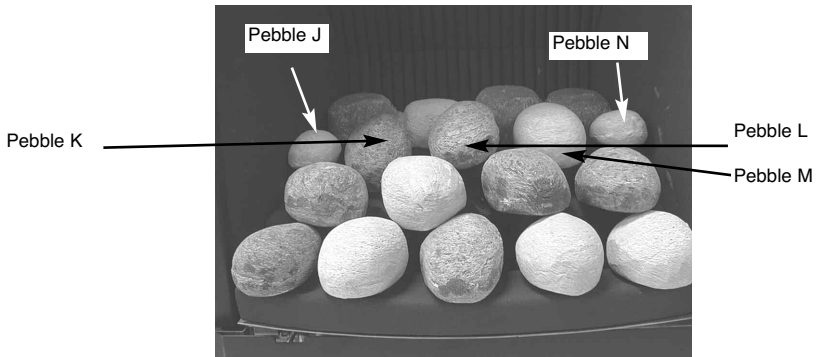
- d) Select pebbles F to I and arrange behind the front row of pebbles, ensuring that flame paths as indicated below are not interrupted. (See fig. 30 below)

**Fig. 30**



- e) Select pebbles K, L & M and arrange along the rear of the fuelbed, using the ribs in the rear of the fuelbed as a guide for placement. (See fig. 31 below)

**Fig. 31**



- f) Select the two small pebbles (J & N) and position to fill the gaps at each end of the third row of pebbles, as shown above in Fig. 31

The exact position and fit of the pebbles may be finely adjusted to give the most pleasing and random appearance.

**Warning : Use only the pebbles supplied with the fire. When replacing the pebbles remove the old pebbles and discard them. Fit a complete set of pebbles of the correct type. Do not fit additional pebbles or any pebbles other than a genuine replacement set.**

To ensure that the release of fibres from these R.C.F (Refractory Ceramic Fibre) articles is kept to a minimum, during installation and servicing we recommend that you use a HEPA filtered vacuum to remove any dust accumulated in and around the appliance before and after working on the appliance. When replacing these articles we recommend that the replaced items are not broken up, but are sealed within heavy duty polythene bags, clearly labelled as “RCF waste”. RCF waste is classed as a “stable”, non reactive hazardous waste and may be disposed of at a landfill licensed to accept such 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.

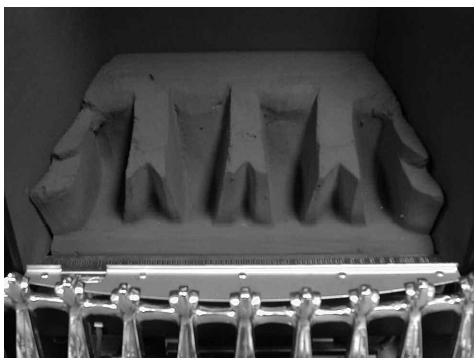
## SECTION 3B ASSEMBLING FUEL BED AND COMMISSIONING - KINDER KALAHARI (COAL FUELBED MODELS)

### 3.1B ASSEMBLING THE CERAMICS AND FUEL BED

**NOTE :** The position of the fuel-bed components are critical to the performance of the product. Therefore please ensure that the fuel-bed components are positioned as described in the following section prior to requesting a service call due to soot build up, poor flame pattern etc.

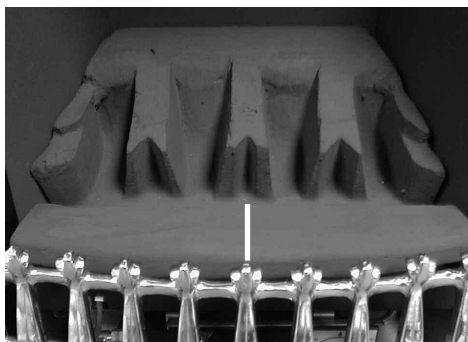
- a) Place the ribbed ceramic fuelbed base on top of the fuelbed support and pull fully forwards to the burner. **Make sure that the fuelbed base is located centrally in the fire box. Ensure that the fuelbed base fit fully down onto the fuel bed support and is not lodged on the burner. See fig. 32 below.**

Fig. 32



- b) Position the two halves of the front ceramic (L/H & R/H) on the locating channel in the front ceramic, ensuring it is located onto the lip on the burner front ceramic support. (See fig. 33 below)

Fig. 33



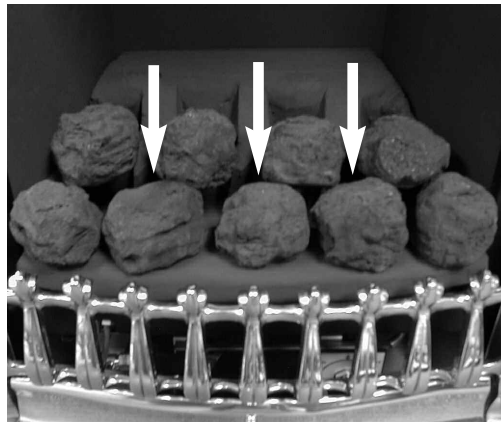
- c) Fit five of the large sized coals onto the front ceramic rail, ensuring that they are evenly spaced. Use the recess's in the front ceramic rail as a guide for placement. (See fig. 34 below)

**Fig. 34**



- d) Select four of the large coals and arrange behind the front row of coals, ensuring that flame paths as indicated below are not interrupted. (See fig. 35 below)

**Fig. 35**



- e) Select three of the large coals and arrange along the rear of the fuelbed, using the ribs in the rear of the fuelbed as a guide for placement. (See fig. 36 below)

**Fig. 36**



- f) Select the two small coals and position to fill the gaps at each end of the third row of coals, as shown. Fig. 37

**Fig. 37**



- g) Select the remaining four coals and position along the rear edge of the fuelbed (See fig. 38 below)

**Fig. 38**



The exact position and fit of the coals may be finely adjusted to give the most pleasing and random appearance.

**Warning :** Use only the coals supplied with the fire. When replacing the coals remove the old coals and discard them. Fit a complete set of coals of the correct type. Do not fit additional coals or any coals other than a genuine replacement set.

To ensure that the release of fibres from these R.C.F (Refractory Ceramic Fibre) articles is kept to a minimum, during installation and servicing we recommend that you use a HEPA filtered vacuum to remove any dust accumulated in and around the appliance before and after working on the appliance. When replacing these articles we recommend that the replaced items are not broken up, but are sealed within heavy duty polythene bags, clearly labelled as “RCF waste”. RCF waste is classed as a “stable”, non reactive hazardous waste and may be disposed of at a landfill licensed to accept such 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.

### 3.2 LIGHTING THE APPLIANCE

- a) Switch on the mains supply at the fixed fused spur.
- b) Turn on the gas isolation tap, which can be found at the back of the firebox. Depress the control lever fully downwards to the position marked "Z" Hold down the control lever for a few seconds to allow the gas to reach the pilot.
- c) The fan will achieve optimum speed and the air pressure switch (in the fan unit) will detect sufficient air flow within the flue and operate the solenoid valve (this produces an audible click)
- d) The fire will then begin its ignition sequence. If the pilot does not light, continue to press the control lever until ignition occurs. The pilot flame can be seen by looking underneath the front ceramic rail, above the burner heat shield, at the front left hand side of the fuel. When the pilot has lit, continue to hold the control lever down for 5-10 seconds to allow the thermocouple to heat up, before releasing the lever apply one firm downwards push to ensure that the f.s.d. valve is fully latched, if the pilot goes out when the control lever is released, repeat the lighting sequence.
- e) After lighting, move control lever up to the high position and the main burner will light. It is recommended that for the most efficient performance the fire is allowed to warm up for a few minutes with the flame adjuster set to the left hand position and the control lever set to high.
- f) The gas control can be moved from the High to Low position to give the desired heat output and the flame control adjusted to give the most pleasing flame effect or maximum glow.
- g) To turn the fire off, FULLY raise the control lever to the OFF position.

**WARNING : If the fire goes out for any reason or is turned off and it is necessary to re-light the fire it is important to allow the fire to cool for 3 minutes before attempting to re-light it.**



### 3.3 CHECKING FOR CLEARANCE OF COMBUSTION PRODUCTS

- a) Close all doors and windows in the room.
- b) Light the fire and allow to run for approximately 5 minutes on high position.
- c) After approximately 5 minutes hold a smoke match just inside and below the centre of the lower front edge of the top of the fire. (It is recommended that a suitable smoke match holder is used when checking for clearance of combustion products). All smoke generated should be drawn back into the flue. If slight spillage occurs or if in doubt, repeat the test after a further 5-10 minutes. **If the test indicates that spillage is occurring, check that the supply voltage to the appliance is 230V (+/- 5%). If the supply voltage is outside these parameters, this could be causing the appliance to spill. Obtain the correct supply voltage and re-test the appliance from cold.**
- d) If spillage persists, the fan unit is not functioning correctly and a fault exists. If, after investigation the fault cannot be traced and rectified, the fire must be disconnected from the gas supply and expert advice obtained from the manufacturer.
- e) If there is an extractor fan fitted anywhere in the vicinity of the appliance, the spillage test should be repeated with the fan running on maximum and all interconnecting doors open.
- f) After ensuring that the fire is safe to use it should be left on high position to fully warm up. During this time a slight odour may be noticed, this is due to the "newness" of the fire and will soon disappear.

At this stage any minor adjustments to the pebbles / coals should be made using suitable long handled tongs and taking care not to damage the pebbles.

Finally, hand the Installation and Maintenance Instructions and the Users Instructions over to the customer and explain the operation of the fire.

## SECTION 4 MAINTENANCE

### Servicing Notes

Servicing should be carried out annually by a competent person such as a CORGI registered engineer. **This is a condition of the Kinder Fires extended guarantee schemes.**

The service should include visually checking the chimney and fire opening for accumulations of debris and a smoke test to check for a positive up-draught in the chimney.

The condition of the pebbles or coals (dependent upon model purchased) should be checked and **if necessary the whole set should be replaced with a genuine replacement set.**

The burner assembly is designed to be removed as a complete unit for ease of access. **After any servicing work a gas tightness test must always be carried out. Before carrying out any servicing work, the appliance must be disconnected from the electricity supply.**

### For Diagrams refer to Section 2

#### 4.1 Removal of the burner assembly

4.1.1 Prepare the work area (lay down dust sheets etc.)

4.1.2 Lift the fender and ash pan cover out of the way and put them in a safe location. Remove all of the loose coals and front ceramic rail. Unscrew the two pozi-drive fixing screws which secure the burner heat shield and remove it from the fire.

4.1.3 Isolate the gas supply and remove the inlet pipe from the appliance inlet elbow. To allow burner removal, the control lever operating cable must be removed. The control lever operating cable can be seen running across the base of the fire, below the burner. To release the cable, unscrew the cable securing screw located in the centre of the aluminium operating arm and pull the cable out from its fixing hole. Release the other end of the cable by pushing the cable towards the right i.e. into the operating arm so as to release the tension. Pull the cable nipple out of the retaining hole and remove the cable through the slot in the operating arm. Remove the two retaining screws at the base of the burner unit, and the screw each side of the burner unit. The base of the burner unit can now be pulled forward, allowing the burner to be removed from the fire box. Remove the burner assembly from the fire.

4.1.4 Refit the burner assembly to the firebox by carefully pushing the bottom of the burner back into position. Secure using the two screws into the side frame of the firebox, and two screws into the base.

It is now necessary to refit and correctly tension the operating cable. To do this, first set the control lever to the horizontal (central position), this is the position which creates maximum tension in the operating cable. Refit the operating cable to the aluminium operating arm, firstly locating the nipple on one end of the cable into recess in operating arm and then feed the other end through hole in operating arm. Pull the operating cable until it is finger tight and secure with screw into operating arm (do not over-tighten). Move the control lever fully downwards and check that the left hand micro-switch operates the igniter and that the control valve spindle is fully depressed. Move the control lever upwards to the "off" position and check that the right hand (cut-off) micro-switch operates. Check that the control lever operates smoothly and safely.

## **4.2 Removal of the battery ignitor**

- 4.2.1 Remove the burner assembly as above.
- 4.2.2 Disconnect the ignition lead and earth lead from the igniter. Unscrew the Battery retaining cap and place battery to one side. Then unscrew igniter retaining ring and remove igniter from panel. Re-assemble in reverse order and carry out a gas soundness test.

## **4.3 Replacing the battery**

- 4.3.1 Unscrew Battery retaining cap situated at the front right of the fire and remove the battery
- 4.3.2 Replace in the reverse order using a 1.5V AA Alkaline Battery.

## **4.4 Removing the Oxy-Pilot Assembly**

**Note: Because this appliance is fitted with an atmosphere sensing 'Oxy-Pilot' it is not possible to replace the thermocouple separately, because the thermocouple position is factory set to a tight tolerance. Any replacement of parts on the pilot requires a complete new pilot assembly.**

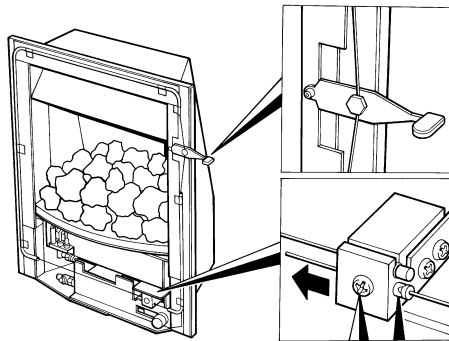
- 4.4.1 Remove the burner assembly as in section 4.1
- 4.4.2 Unscrew and remove the thermocouple retaining nut from the end of the control tap, disconnect the ignition lead from the pilot electrode and the two inline leads from the microswitch.
- 4.4.3 Unscrew and remove the two pozi-drive screws which secure the pilot assembly to the burner. Remove the pilot.
- 4.4.4 Re-assemble in reverse order and carry out a gas tightness test.

**Note :** Prior to replacing the oxypilot on this product due to suspected failure of the component, please remove all debris that has collected on the lint guard of the oxypilot itself.

## 4.5 Replacing the Control Cable

- 4.5.1 The control lever operating cable can be seen running across the base of the fire, below the burner. To release the cable, unscrew the cable securing screw located in the centre of the aluminium operating arm and pull the cable out from its fixing hole. Release the other end of the cable by pushing the cable towards the right i.e. into the operating arm so as to release the tension. Pull the cable nipple out of the retaining hole and remove the cable through the slot in the operating arm. See fig. 38 below.

**Fig. 38**



- 4.5.2 Hold the hexagonal control lever cable locking bush with a spanner and unscrew the locking screw using a 2mm allen key to release the cable from the control lever. The control cable can now be removed from the cable guide tubes.
- 4.5.3 To fit the replacement cable, thread the end of the new cable into the long length of p.t.f.e. sleeve (as supplied) , taking care not to kink the sleeve. Now carefully feed the sleeve and cable into the left hand cable guide tube until the ends emerge above the control lever. Now thread the short length of p.t.f.e. sleeve over the end of the cable and thread the sleeve and cable into the top of the short cable guide tube.
- 4.5.4 When the end of the cable emerges from the short cable guide tube, locate the nipple on the other end of the cable into the locating hole in the aluminium operating arm. Thread the free end of the cable into the cable retaining hole on the operating arm, but at this stage do not tighten the securing screw.

- 4.5.5 Fit the hexagonal control lever cable locking bush onto the control lever and fit the control cable loosely into the bush in the gap between the two lengths of p.t.f.e. sleeve. Ensure that the cable is located in the retaining hole in the locking bush and tighten the screw sufficiently to retain the cable but still allowing it to slide for adjustment.
- 4.5.6 It is now necessary to correctly tension the operating cable. To do this, first set the control lever to the horizontal (central position), this is the position which creates maximum tension in the operating cable. Pull the free end of the operating cable through the operating arm until it is finger tight and secure with screw into operating arm (do not over tighten).
- 4.5.7 Slide the operating arm fully to the right hand position and hold in position, slide the control lever relative to the cable until the cable retaining screw lines up with the hole in the spacer frame. This sets the control lever in the correct position. Hold the hexagonal locking bush with a spanner and tighten the retaining screw using the 2mm allen key. Move the control lever fully downwards and check that the left hand micro-switch operates the igniter and that the control valve spindle is fully depressed. Move the control lever upwards to the "off" position and check that the right hand (cut-off) micro-switch operates. Check that the control lever operates smoothly and safely.

## **PARTS SHORTLIST**

Replacement of any other parts must be carried out by a competent person such as a CORGI registered gas installer. The part numbers of the replaceable parts are as follows, these are available from your local stockist, whose details may be found on the BFM Europe website, address as shown overpage.

Kalahari Fuelbed base	B-56320
Kalahari Fuelbed front rail (pair)	B-56330
Kalahari Replacement coal set	B-56970
Kalahari L/H Fibre Board	B-56200
Kalahari R/H Fibre Board	B-56210
Kalahari Upper Rear Fibre Board	B-56230
Kalahari Lower Rear Fibre Board	B-56220
Control Board & On / Off Switch	50-35480
Solenoid	50-36190
Air-Pressure Switch	50-35880

**This appliance must only be used with the trim and fret / ashpan supplied**





**Due to our policy of continual improvement and development the exact accuracy of illustrations and descriptions contained in this book cannot be guaranteed**

**Part No. B-77480  
Issue 3**



BFM Europe Ltd.  
Trentham Lakes  
Stoke-on-Trent  
Staffordshire  
ST4 4TJ

**Telephone - General Enquiries : (01782) 339000**  
**Telephone - Service : (0844) 7700169**