



# Stirling

# MC & SC

**COAL EFFECT GAS FIRE**

**Installation and Maintenance Instructions**

**Hand these instructions to the user**

**Model No. FSCC12MN, FSCC23MN, FSCC42SN, FSCC53SN are only for use on Natural Gas (G20) at a supply pressure of 20 mbar in G.B. / I.E.**

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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	FSCC12MN, FSCC23MN, FSCC42SN, FSCC53SN		
Gas Type	G20		
Main injectors (2 off)	Size 235		
Pilot Type	MC Models	S.I.T. Oxystop YA OP 9022	or Copreci 21100 / 141
	SC Models	SIT Oxystop YA OP 9055	or Copreci 21100 / 162

Max. Gross Heat Input : 6.5 kW  
 Min. Gross Heat Input : 4.2 kW

Cold Pressure : All models - 20.0 +/-1.0 mbar

Ignition : Push Button Piezo (MC models)  
 1.5V Battery Generator (SC models)

Electrode Spark Gap 4.0mm

Weight (with fender) 19.5 kg FSCC42SN / FSCC53SN  
 19.0 kg FSCC12MN / FSCC23MN

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

Width : (with standard trim, no spacer) 480mm  
 Height : (with standard trim, no spacer) 590mm  
 Depth : (overall-without fender) 125mm

Depth : Flush-fit (from mounting face to rear) 125mm

Gas Connection 8mm Compression (Supplied with fire)

#### **Efficiency Declaration**

The efficiency of this appliance has been measured as specified in BS 7977-1 : 2002 and the result is 55%.

The gross calorific value of the fuel has been used for this efficiency calculation. The test data from which it has been calculated has been certified by Advantica. The efficiency value may be used in the UK Government's Standard Assessment Procedure (SAP) for energy rating of dwellings.

# INSTALLATION REQUIREMENTS

## 1.1 CONDITIONS OF INSTALLATION

It is the law that all gas appliances are installed 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. B.S. E.N. 1858 Chimneys Components & Concrete Flue Blocks
8. 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 AND CHIMNEY SUITABILITY

This appliance is designed for use with conventional brick built or lined chimneys and fabricated flues and metal flue boxes conforming to BS 715 / BS EN 1856-2 All flues must conform to the following minimum dimensions.

<b>Minimum diameter of circular flues</b>	<b>125 mm (Without Flue Restrictor Fitted)</b>
<b>Minimum effective height of all flue types</b>	<b>3 metres</b>

**When fitting to conventional chimneys or 175mm flues it may be desirable to leave the flue restrictor baffle in place to reduce the flue flow and increase the efficiency of the fire. Safe clearance of products must always be checked by carrying out a smoke match test as described.**

### 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 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.

### 1.5 FLUE / CHIMNEY INSPECTION

Before commencing installation, a flue or chimney should be inspected to ensure that all the following conditions are satisfied.

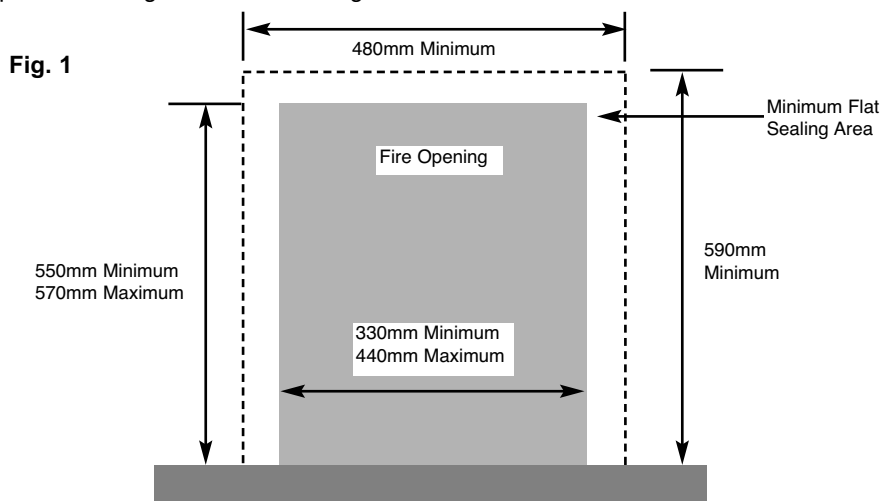
1. Check that the chimney / flue only serves one fire place and is clear of any obstruction. Any dampers or register plates must be removed or locked in the open position.
2. Brick/stone built chimneys or any chimney or flue which has been used for an appliance burning fuel other than gas must be thoroughly swept. The base of the chimney / flue must also be thoroughly cleared of debris etc.
3. Any under-floor air supply to the fire place must be completely sealed off.
4. Ensure that the inside of the chimney / flue is in good condition along its length and check that there is no leakage of smoke through the structure of the chimney during and after the smoke pellet test. **With pre-cast flues it is especially important to check the inside of the flue for extruded cement / sealant protruding from the joints between the flue blocks. If present, these should be removed by rodding the flue before proceeding with the installation.**
5. **Using a smoke pellet, check that there is an up-draught in the chimney / flue and that the smoke can be seen issuing from the terminal / chimney pot outside.**

**There must be no leakage of smoke through the structure of the chimney during or after the smoke pellet test and it is important to check inside upstairs rooms adjacent to the chimney / flue.** Check the chimney pot / terminal and general condition of the brickwork or masonry. If the chimney or flue is in poor condition or if there is no up-draught do not proceed with the installation. If there is a history of down-draught conditions with the chimney / flue, a tested and certificated flue terminal or cowl suitable for the relevant flue type should be considered.

6. **A spillage test must always be carried out during commissioning of the appliance.**

### 1.6 FIRE PLACE OPENING AND CHIMNEY CATCHMENT SPACE

The front opening of the fire place must be between 330 and 430 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.1



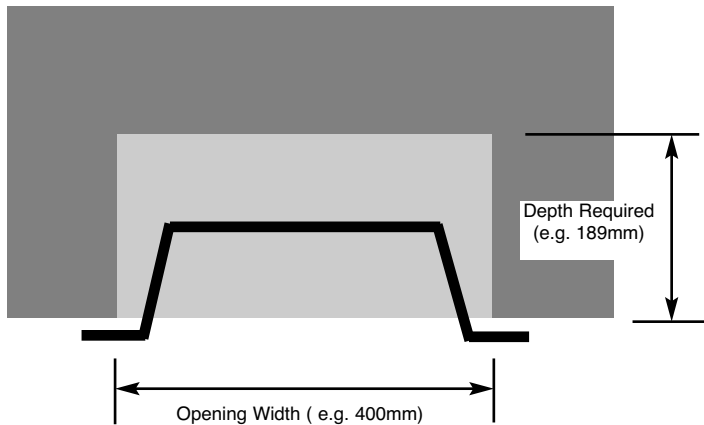
When installing into a brick built chimney, you must ensure that there is sufficient depth to accommodate any debris which may fall from the chimney. This depth must be sufficient to accommodate 12 litres of volumetric space.

**Table A - Installation Depth Requirements for a Flavel Stirling being installed into a brick built chimney, requiring 12.0 litres of debris collection volume (fig. 2)**

Opening Width (mm)	Minimum Depth Required (mm)
330 (minimum opening width)	222
340	218
350	215
360	211
370	205
380	199
390	193
400	189
410	183
420	178
430	172
440 (maximum opening width)	168

For example, if the appliance was to be fitted into a 400mm wide opening, the depth required would be 189mm. See fig. 2 below for explanatory diagram.

**Fig. 2**



## 1.7 FITTING TO FIREPLACES WITH EXISTING CHAIRBRICKS AND CONVENTIONAL BRICKBUILT CHIMNEYS

This appliance is suitable for use in fireplaces fitted with an existing chairbrick without the need for removal of the chairbrick, providing the minimum depth of the fireplace exceeds 190mm. If the depth is less than 190mm then the spacer (optional) must be used to give a minimum clearance from the rear of the fire to the rear of the chairbrick of at least 90mm to allow sufficient space for the collection of debris which may fall down the chimney. The fireplace must be checked to ensure that no part of the chairbrick is within 50mm of the flue outlet of the fire when installed.

## 1.8 FITTING TO PRE-CAST FLUE INSTALLATIONS

**When installing this appliance into pre-cast flues, always ensure that the spigot restrictor baffle has been removed.**

**To install the fire box in to pre-cast flue starter blocks, there must be at least 132mm from the mounting face of the fire to the rear of the pre-cast flue starter block** to allow sufficient space for debris collection. It is important to consider this depth when choosing a fire surround as the thickness of the fire surround must be sufficient to give a total depth of **at least 132 mm to the rear of the starter block**, otherwise there will be insufficient depth. To increase this depth the fire surround may be packed away from the wall using suitable non-combustible board, providing the installation is correctly sealed. If in doubt about the suitability of the fire contact BFM Europe for advice before proceeding. It is important to ensure that the pre-cast flue is in good condition and is free from extruded mortar or sealant from between the flue blocks.

**This appliance has been tested for use in a pre-cast flue block complying with BS EN 1858. In accordance with BS EN 1858, pre-cast flues built with directly plastered faces (front or rear) are not correctly installed as to ensure proper operation with any type of gas fire. In some instances of this flue construction, temperature cracking of surface plaster may occur through no fault of the appliance. An air gap or some form of insulation material should be installed to prevent normal flue temperatures from damaging wall surfaces.**

## 1.9 FITTING TO PRE-FABRICATED TWIN WALL METAL FLUE BOXES

The appliance may be fitted to twin wall metal flue boxes conforming to the constructional requirements of BS 715, (for example the Selkirk LFE 125 box). The box must have a minimum flue diameter of 125mm internal and minimum internal dimensions of 160mm deep by 580mm high by 350mm wide. There are no maximum dimensional requirements for the box. The top face of the box must be insulated with a minimum thickness of 50mm of non-combustible mineral wool insulation or similar material. The flue box must stand on a non-combustible base of minimum thickness 12mm.



## 1.10 HEARTHES

This appliance must only be installed on to a concrete or non-combustible hearth. The hearth material must be a minimum thickness of 13mm 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.

## 1.11 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 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 ceramic base, front ceramic rail and fire bed and 19 synthetic coals (2 small, 13 medium & 4 large)
- 1off Loose items bag.
- 1off Black or Brass Trim (dependent upon model chosen)
- 1off Fret & Ashpan Cover
- 1off each User instruction book and Installation book

### 2.2 INSTALLING THE FIRE BOX

Establish which type of flue you are intending to install the fire in to :-

**225 x 225mm (9 inch x 9 inch) brick built chimneys**

**175mm (7 inch) diameter lined brick or stone flue, insulated pre-fabricated metal flue box to BS 715 / BS EN 1856-2 or Pre-Cast Flue to B.S. E.N. 1858**

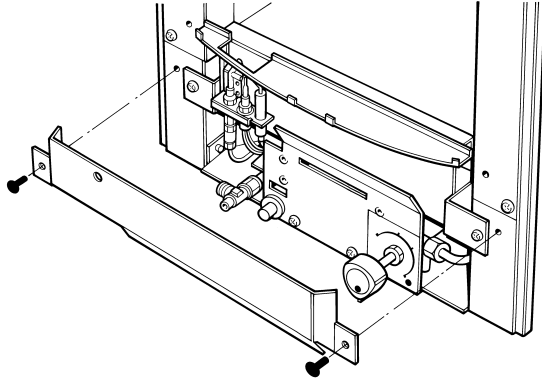
When installing into 125mm (5 inch) diameter lined brick or stone flue, or insulated pre-fabricated metal flue box to BS 715 / BS EN 1856-2 and pre-cast flues the restrictor baffle must not be fitted.

**A spillage test must always be carried out to check satisfactory clearance of flue products, regardless of the type of flue the appliance is being fitted to.**

**For manual control models, proceed as follows :-**

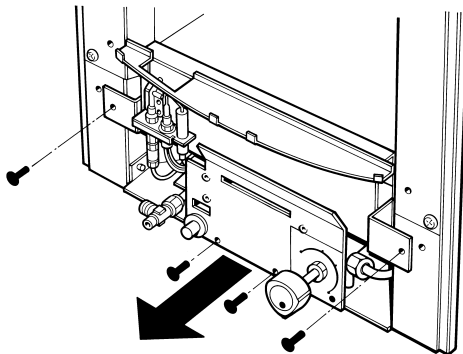
- a) Remove the trim / fret. Remove the burner heat shield from the front of the fire box to allow access to the burner. See fig. 3 below.

**Fig. 3**



- b) 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.
- c) Remove the four retaining screws securing the burner to the firebox. The base of the burner unit can now be pulled forward, allowing the burner to be removed from the fire box. See fig. 4 below.

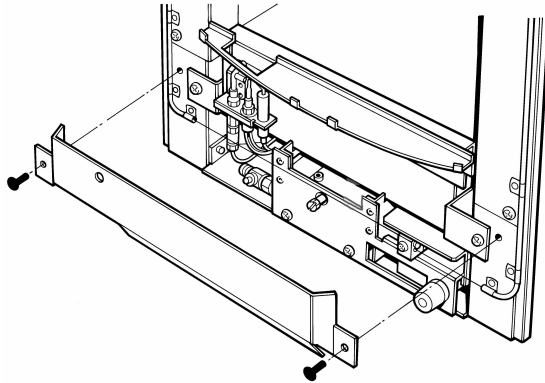
**Fig. 4**



**For slide control models, proceed as follows:**

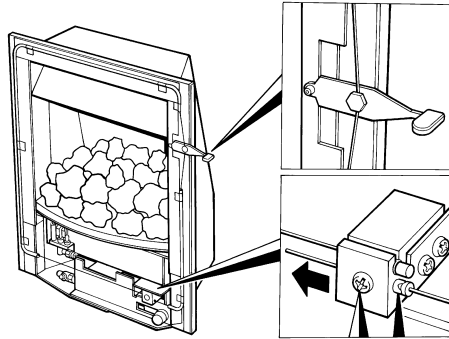
- a) Remove the trim. Remove the burner heat shield from the front of the fire box to allow access to the burner. See fig. 5 below.

**Fig. 5**



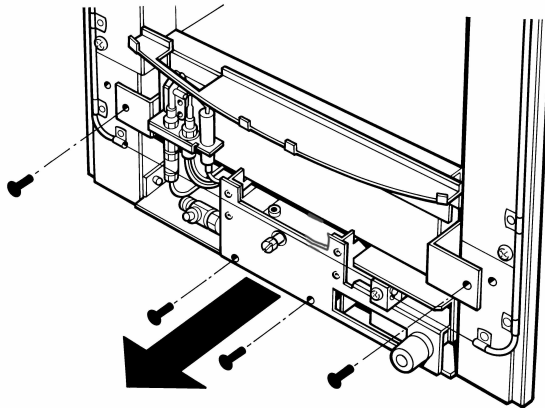
- b) Ensure that the hearth is protected from damage and carefully lift the fire box into the fire opening, then slide it back into position. Check that the fire box flange fits flush to the sealing face of the fire surround or wall with no gaps present.
- c) Remove the burner. To allow burner removal, 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. 6 overpage

**Fig. 6**



- d) 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. 7 below). Carefully pull the base of the burner forwards from the fuel-bed support panel. The burner can now be removed from the appliance.

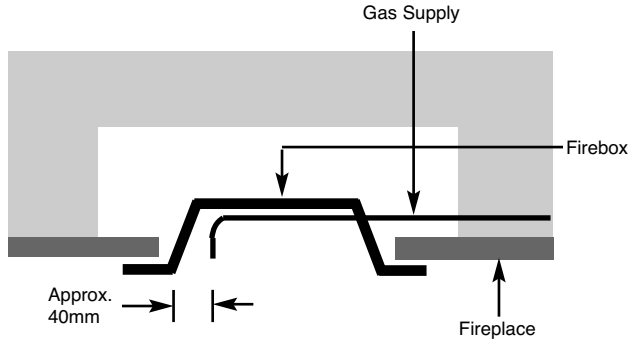
**Fig. 7**



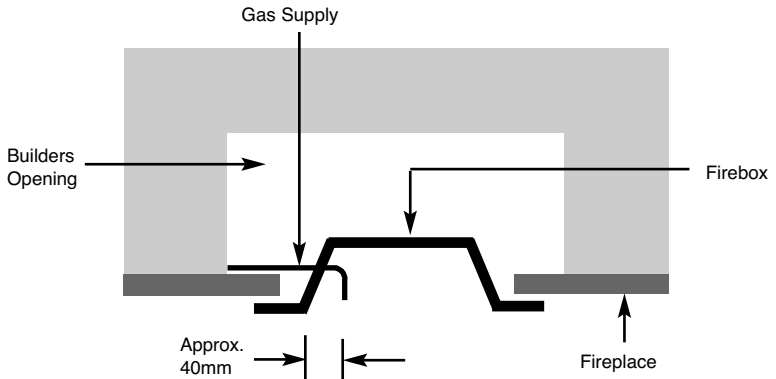
## Continue for all models

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. 8a & 8b below for suggested concealed pipe layouts.

**Fig. 8a**



**Fig. 8b**



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

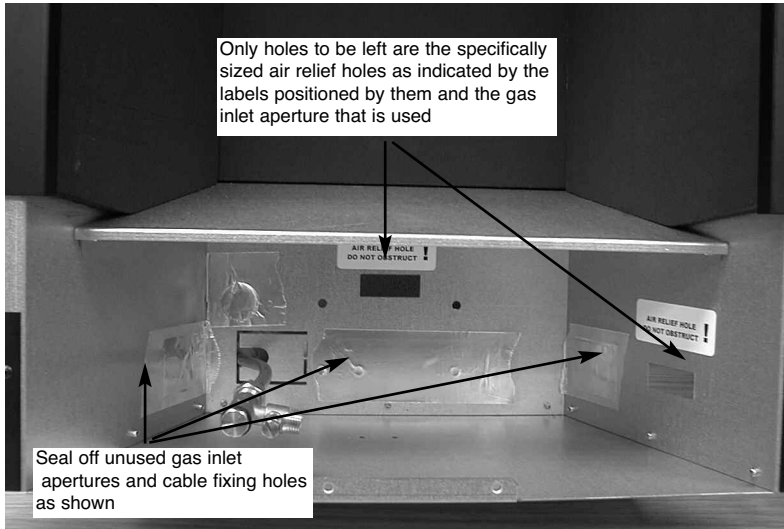
Carefully withdraw the fire box from the opening to enable the gas supply and fire fixing to be completed.

There is a choice of methods of fixing the firebox which are provided to enable the installer to deal with any type of installation.

**IMPORTANT : Sealing of the Gas Unused Gas Pipe Inlet Apertures**

In line with current CORGI regulations, **it is imperative that the gas supply inlet apertures that are not utilised during the installation are sealed with the foil tape as supplied.** Failure to seal these inlet apertures could lead to flame reversal, which in turn will damage the burner and control systems of the product. Fig. 9 below shows a correctly sealed installation.

**Fig. 9**



***PLEASE NOTE :-***

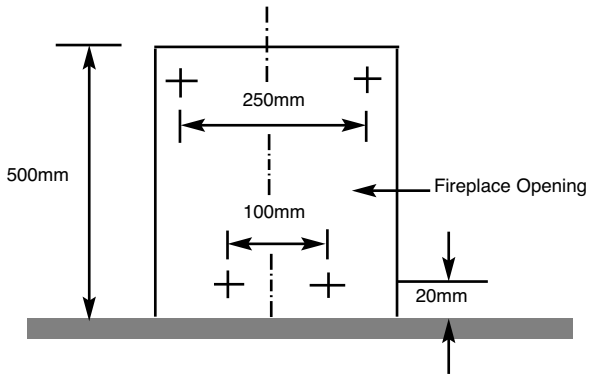
**BFM EUROPE LTD. WILL NOT BE LIABLE FOR GUARANTEE CLAIMS THAT ARE AS A DIRECT RESULT OF THE UNUSED GAS INLET APERTURES NOT BEING CORRECTLY SEALED.**

**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.**

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

- e) 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. 10

**Fig. 10**

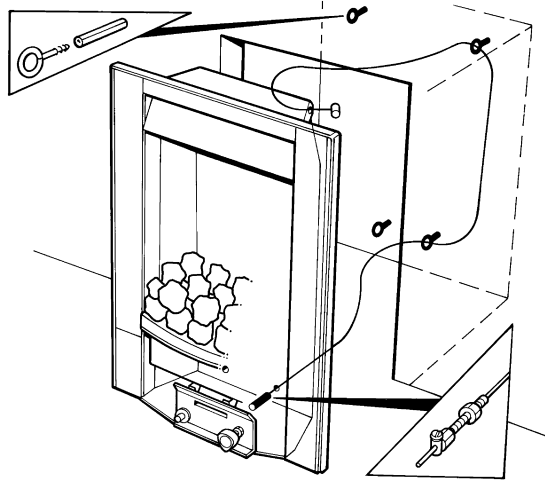


Fit the wallplugs provided and screw the fixing eyes securely into the rear of the fire opening. If the clearance at the rear of the fire is at the minimum specified for a precast flue application, it may be necessary to bend over the lower fixing eyes after screwing them fully in to the rear of a pre-cast starter block.

- f) 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.
- g) 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.
- h) 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).
- i) 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. 11 overpage.



Fig. 11



- j) 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.
- k) 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.
- l) Refit the burner. Fit the four retaining screws and check that the burner is correctly locked into position. On slide control models refit the control cable. To do this, firstly locate the nipple on one end of the cable into recess in operating arm and then secure the front part of the operating arm back onto the rear of the operating arm with the retained screw.

This should not be overtightened. 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.

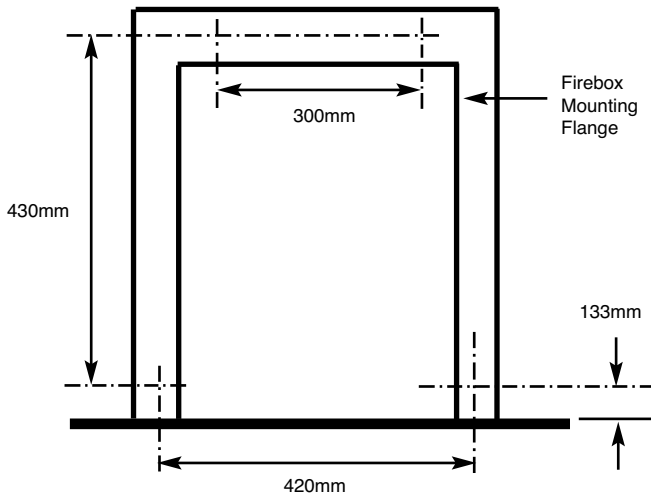
**NOTE : The cable is factory set, and therefore should need no adjustment**

- m) 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.
- n) **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.12) is a diagram to indicate the hole centre positions available on the firebox to facilitate the screw fixing to the fireplace / surround.

**Fig. 12**



### **2.3 GAS TIGHTNESS AND INLET PRESSURE (MANUAL CONTROL MODELS)**

- 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 for Natural Gas (G20) models is **20.0 mbar (+/- 1.0mbar) 8.0 in w.g.(+/- 0.4 in w.g.)**
- 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.

### **2.4 GAS TIGHTNESS AND INLET PRESSURE (SLIDE CONTROL MODELS).**

- a) Remove the pressure test point screw from the pressure test point and fit a manometer.
- b) Turn on the main gas supply and carry out a gas tightness test.
- c) Depress the control lever to the position marked pilot. Hold down the control lever for a few seconds to purge the pipe work. The burner should light, continue to hold the control lever for a few seconds to latch the valve then lift to the full-on position.
- d) Check that the gas pressure for Natural Gas (G20) models is **20.0 mbar (+/- 1.0mbar) 8.0 in w.g.(+/- 0.4 in w.g.)**
- 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 3 ASSEMBLING FUEL BED AND COMMISSIONING

### 3.1 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. 13 below.**

Fig. 13



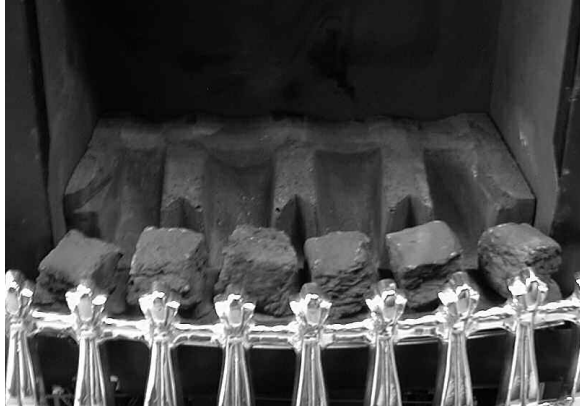
- b) Position the two halves of the front ceramic (L/H & R/H) on the locating channel in the front ceramic, ensuring it is located onto the lip on the burner front ceramic support. (See fig. 14 below)

Fig. 14



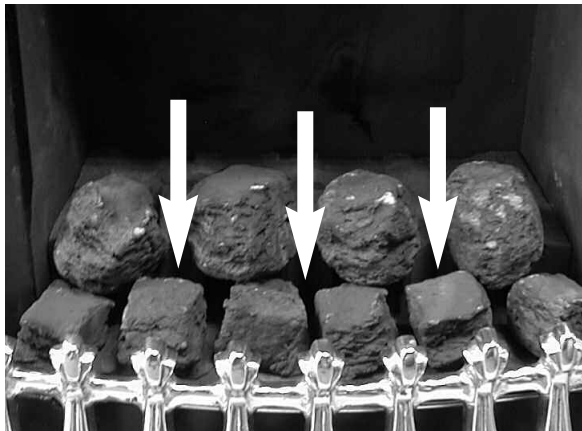
- c) Fit six of the medium sized coals onto the front ceramic rail, ensuring that they are evenly spaced. Use the recess's in the front ceramic rail as a guide for placement. (See fig. 15 below)

**Fig. 15**



- 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. 16 below)

**Fig. 16**



- e) Select four of the medium coals and arrange along the rear of the fuelbed, using the recesses in the rear of the fuelbed as a guide for placement. (See fig. 17 below)

**Fig. 17**



- f) Select three of the medium sized coals and arrange along the fuelbed behind the second row of large coals, as shown below in Fig. 18

**Fig. 18**



- g) Select the two smallest coals and position to fill the gaps at each end of the third row of coals, as shown. (See below fig. 19 below.)

Fig. 19



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 (Manual Control Models)**

- a) Turn on the gas isolation tap.
- b) 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.
- c) Continue to hold-in the control knob and press the igniter button. If the burner does not light, continue to press the igniter button until ignition occurs. Continue to hold the control knob for 5-10 seconds to allow the thermocouple to heat up, if the pilot goes out when the control knob is released, repeat the lighting sequence.
- d) Turn the control knob in the anti-clockwise direction to the high position and the main burner will light.
- e) Turn the control knob clockwise to the low position and the gas input will be reduced to the minimum setting.
- f) Slightly depress the control knob and turn to the pilot position, the main burner will go out but the pilot will remain lit.
- g) Slightly depress the control knob and turn to the off position, the pilot will now be extinguished.

### **3.3 LIGHTING THE APPLIANCE (Slide Control Models)**

- a) Turn on the isolation valve. Depress the control lever fully downwards to the position marked. Hold down the control lever for a few seconds to allow the gas to reach the pilot.
- b) 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 fuelbed. 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.
- c) 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 control lever set to high.



- d) The gas control can be moved from the High to Low position to give the desired heat output.
- e) 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.**

### **3.4 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 and the flue restrictor baffle has been fitted, it should be removed and the test repeated after the fire has cooled.**
- d) If spillage persists, the flue 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.
- e) If there is an extractor fan fitted anywhere in the vicinity of the appliance, or in adjacent rooms 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 coals should be made using suitable long handled tongs and taking care not to damage the coals.

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 Flavel 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 coals 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 check must always be carried out.**

### Manual Control Fires – For Diagrams refer to Section 2

#### 4.1 Removing the burner assembly from the fire.

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

4.1.2 Remove the trim. Lift the fender and ash pan cover out of the way and put them in a safe location. Remove the loose coals from the fuel bed and front ceramic rail. Remove the front ceramic from the rail. Unscrew the two pozi-driv 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. Unscrew and remove the four screws which retain the burner. Remove the burner assembly from the fire.

4.1.4 To refit the burner assembly. Push the base of the control panel fully into the fire and secure with the four screws. Refit the gas supply pipe and carry out a gas tightness test. Refit the burner heat shield then refit the coals referring to section 3 for the correct coal layout. The fender and ash pan cover can now be re-positioned. Refit the trim.

#### 4.2 Removing the Piezo Igniter

4.2.1 Remove the burner assembly as in section 4.1

4.2.2 Disconnect the ignition lead from the piezo and unscrew the retaining nut on the rear of the control panel. Withdraw the piezo from the front of the control panel. Reassemble in reverse order and carry out a gas tightness test.

### **4.3 Removing the Control Tap from the fire.**

- 4.3.1 Remove the burner assembly as in section 4.1.
- 4.3.2 Pull the control knob off the control tap spindle.
- 4.3.3 Loosen and remove the three gas pipe retaining nuts from the control tap and release the ends of the gas pipes from the control tap body. Loosen and remove the thermocouple securing nut from the end of the control tap.
- 4.3.4 Unscrew the control tap locknut from the front of the control panel and remove the control tap.
- 4.3.5 To refit a control tap, reassemble in reverse order noting that the control tap locates with a flat in the control panel. Carry out a gas tightness test after re-assembly.

### **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 and disconnect the ignition lead from the pilot electrode.
- 4.4.3 Unscrew and remove the two pozi-driv 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.

### **Slide Control Fires**

#### **4.5 Removal of the burner assembly**

- 4.5.1 Prepare the work area (lay down dust sheets etc,)
- 4.5.2 Remove the trim. 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.

4.5.3 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 outwards and downwards from the fire box. Remove the burner assembly from the fire.

4.5.4 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. Refit the coals as shown in section 3, refit the fender / ashpan cover and trim.

## **4.6 Removal of the battery ignitor**

4.6.1 Remove the burner assembly as above.

4.6.2 Disconnect the ignition lead and 2 off microswitch leads 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 tightness test.

## **4.7 Replacing the battery**

4.7.1 Unscrew Battery retaining cap situated at the front right of the fire and remove the battery

4.7.2 Replace in the reverse order using a 1.5V AA Alkaline Battery.

## 4.8 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.

4.8.1 Remove the burner assembly as in section 4.1

4.8.2 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 in-line leads from the microswitch.

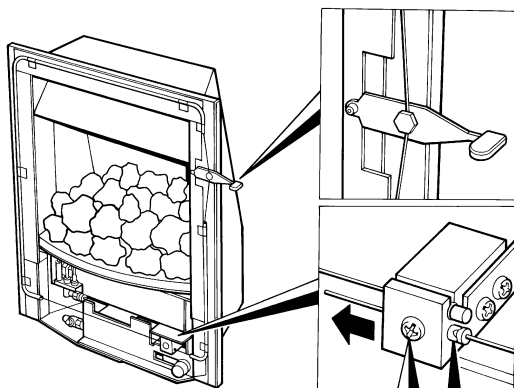
4.8.3 Unscrew and remove the two pozi-drive screws which secure the pilot assembly to the burner. Remove the pilot.

4.8.4 Re-assemble in reverse order and carry out a gas tightness test.

## 4.9 Replacing the Control Cable

4.9.1 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. 20 below.

Fig. 20



- 4.9.2 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.
- 4.9.3 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.
- 4.9.4 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.
- 4.9.5 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.
- 4.9.6 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).
- 4.9.7 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 user replaceable parts are as follows, these are available from BFM Europe Ltd. who may be contacted at the address shown on the rear cover.

Fuelbed Matrix (Base)	B-55650
Replacement Coal Set	B-55630
Front Ceramic Rail	B-55640
Slide Valve (SC models)	B-40890
Ignition Wire (SC models)	750-14340
Spark Generator (SC models)	B-13540
Microswitch (SC models)	750-15600
Piezo Igniter (MC models)	B-1320
Ignition Wire (MC models)	B-14340
Gas Valve (MC models)	B-102880

**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-103790  
Issue 2**



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