

Trimless Inset Gas Fire

DECORATIVE FUEL EFFECT GAS FIRE

Installation and Maintenance Instructions

Hand these instructions to the user

Model No. KRTC00MN is for use on Natural Gas (G20) at a supply pressure of 20 mbar in G.B. / I.E.

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This appliance has been manufactured by:-

CFM Europe Ltd, Trentham Lakes, Stoke-on-Trent, ST4 4TJ

SECTION 1 INFORMATION AND REQUIREMENTS

1.0 APPLIANCE INFORMATION

Model Gas Type	KRTC00MN G20
Main injectors (2 off)	Size 340
Pilot Type	Copreci Single Flame 21100 / 141
Max. Gross Heat Input : Min. Gross Heat Input :	8.5 kW 4.1 kW
Cold Pressure :	20.0 +/-1.0 mbar NG
Ignition :	Push-button Piezo
Electrode Spark Gap	4.5mm
Packed Weight	19 kg

Fire box Dimensions (with trim fitted)

Width :		428mm
Height :		586mm (610mm with efficiency baffle fitted)
Depth :	(overall-without fret)	275mm

NOTE : ADDITIONAL VENTILATION OF A MINIMUM 100 cm^2 IS REQUIRED FOR THIS PRODUCT

INSTALLATION REQUIREMENTS

1.1 CONDITIONS OF INSTALLATION

It is the law that all gas appliances are installed only by a CORGI Registered Installer, 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. 1289 Clay Flue Blocks and Terminals
- 8. I.S. 813 : 1996 Domestic Gas Installation (Republic of Ireland)

Additional Ventilation of a minimum 100cm² is required when installing this product 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 / metal flue boxes conforming to BS 715. All flues must conform to the following minimum dimensions.

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

The efficiency baffle must be fitted when installing this product into a conventional brick built chimney, to prevent debris falling onto the fuelbed. If fitting into a class 1 (175mm) metal flue box and liner, it is desirable to leave the baffle in place to reduce the flue flow and thus increase the heat output from the appliance. Safe clearance of products must always be checked by carrying out a smoke match test as described on page 21.

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 fire surround. 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 (e.g. wooden) 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 it's length and check that there is no leakage of smoke through the structure of the chimney during and after the smoke pellet test.
- 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.

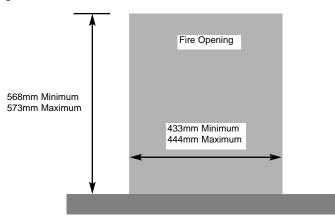
There must be no leakage of smoke through the structure of the chimney during or after the smoke pellet test and it is important to check inside upstairs rooms adjacent to the chimney / flue. Check the chimney pot / terminal and general condition of the brickwork or masonry. If the chimney or flue is 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 433mm and 444 mm wide, and between 568 to 573mm 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





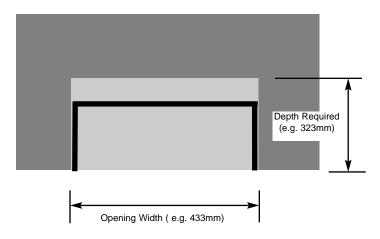
When installing into a brick built chimney, you must ensure that there is sufficient depth to accomodate any debris which may fall from the chimney. This depth must be sufficient to accomodate 12 litres of volumetric space.

<u>Fig. 2 - Installation Depth Requirements for a Kinder Trimless Inset Gas Fire</u> being installed into a brick built chimney, requiring 12.0 litres of debris <u>collection volume</u>.

When installing this product into a builders opening / brick-built chimney, the depth required is a minimum of 323mm. This fire is not suitable for use in fireplaces fitted with an existing chairbrick. The chairbrick must be removed to give the required clearances. The fireplace must be checked to ensure that no rear part of the fireplace opening is within 50mm of the flue outlet of the fire when installed.

For example, if the appliance was to be fitted into a 433mm wide opening, the depth required would be 323mm. See fig. 2 below for explanatory diagram.

Fig. 2



1.7 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 323mm deep by 680mm high by 435mm 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.

1.8 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.

1.9 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 fuelbed base, ceramic front rail, overlays and 24 coals
- 1off Loose items bag.
- 1off Cable Fixing Kit
- 1off each User instruction book and Installation book
- 1off Length Aluminimum foil tape
- 2off Fixing Brackets & Wingnuts

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 B.S. 715. - When fitting this appliance to a Class 1 brick chimney with no flue liner, the efficiency baffle <u>must</u> be left in place.

When installing into 125mm (5 inch) diameter lined flues, or insulated prefabricated metal flue box to B.S. 715, the restrictor baffle must be removed.

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.

Proceed as follows :-

a)

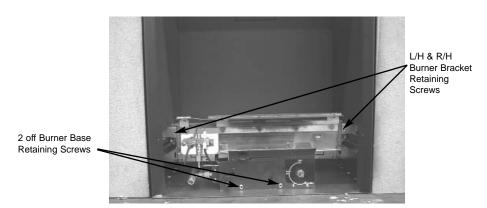
Fig. 3

access to the burner. See fig. 3 below.

Remove the burner heat shield from the front of the fire box to allow

- 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.
- 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



d) 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 or rear 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. 5 & 6 below for suggested concealed pipe layouts.

Fig. 5

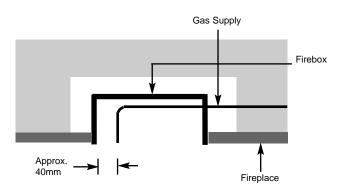
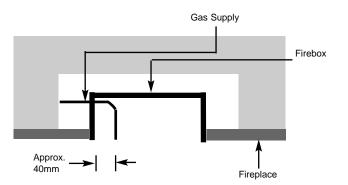


Fig. 6



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.

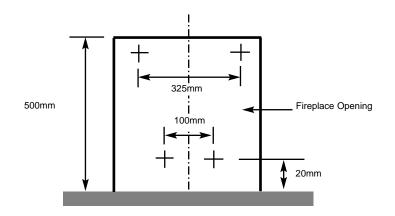
The preferred method of fixing which is suitable for almost all situations is the cable fixing method which is described in the following section in detail.

The fire may be secured using the cable method as described below, if the masonary in the rear of the fireplace opening is loose, it must be repaired prior to the installation of the product.

To fit using the preferred cable method proceed as follows-

e) Mark out and drill 4 off No 14 (7mm) holes in the back face of the fire opening in the positions shown below in fig. 7

Fig. 7



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

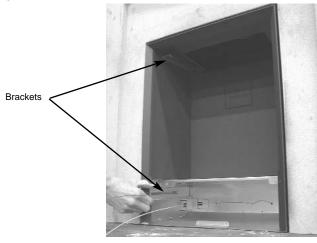
- f) Uncoil the two fire fixing cables and thread one end of each of the cables through one of the holes on each side of the rear of firebox lid.
- g) Position the fire carefully on the (protected) surface of the hearth and reach into the fire opening. Thread each of the cables vertically downwards through 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. Tilt the firebox and slide carefully into the opening, taking care not to damage the hearth panel.

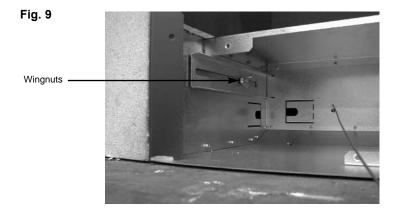
Slide the four fixing brackets through the cut outs in the firebox, (2 off top, 2 off bottom) until they come into contact with the back of the fire place opening. (See fig. 8 below) If, at this points the brackets are too long, these will be required to be removed and cut to length.



i)



Align the firebox so it is square and flush with the fire surround, then when the brackets are in contact with the back face of the fireplace opening, lock in place with the wingnuts supplied. (See Fig. 9 below)



- Pull the cables tight and remove any slack. Lock the cables in place using the tensioning bolts to secure as described in section I) & m) below.
- k) 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).
- 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.
- m) With the fire securely in place, if a concealed gas connection has been made through either of the access holes in the sides or rear 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 aluminimum foil tape supplied.
- n) Refit the burner. Fit the four retaining screws and check that the burner is correctly locked into position.
- o) Refit the front burner heat shield to the sides of the fire box (2 Screws)
- p) 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.

2.3 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 20.0 mbar (+/- 1.0mbar) 8.0 in w.g.(+/- 0.4 in w.g.) for Natural Gas 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.

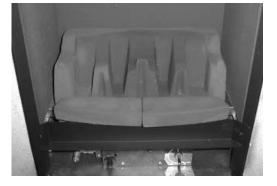
SECTION 3 ASSEMBLING FUEL BED AND COMMISSIONING

3.1 ASSEMBLING THE CERAMICS AND FUEL BED

a) Place the ribbed ceramic fuelbed base on top of the fuelbed support and pull fully forwards to the burner, Position the two halves of the front ceramic (L/H & R/H) on the locating channel in the front ceramic support ensuring it is located onto the lip on the burner front ceramic support.

> Make sure that the fuelbed base is located centrally in the fire box. Ensure that the fuelbed base fits fully down onto the fuel bed support and is not lodged on the burner. See Fig. 10 below.

Fig. 10



b) Fit the two ceramic overlays (L/H & R/H) onto the fuelbed base as shown. (See fig. 11 below)

Fig. 11



c) Select four of the coals marked "O" and place behind the rear of the fuelbed overlays, as shown below in Fig. 12
 NOTE : Coals are stamped with the relevant no's on their base

Fig. 12



d) Select coals No. 1 to No. 5 and arrange along the front fuelbed ceramic rails, from left to right (See fig. 13 below) NOTE : Coals are stamped with the relevant no's on their base





Select coals No. 6 to No. 11 and arrange from left to right along the fuelbed, behind the front row of coals. See fig. 14 below **NOTE : Coals are stamped with the relevant no's on their base**

Fig. 14

e)



f) Select coals No. 12 to No. 16 and arrange from left to right along the fuelbed, behind the second row of coals. See fig. 15 below
 NOTE : Coals are stamped with the relevant no's on their base

Fig. 15



Select coals No. 17 to No. 20 and arrange from left to right along the fuelbed, behind the third row of coals. See fig. 16 below **NOTE : Coals are stamped with the relevant no's on their base**

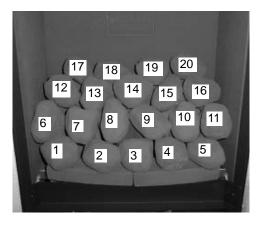
Fig. 16

g)



When the fuelbed is fully assembled, make a final check that the coal positions are as shown below in Fig. 17
 NOTE : Coals are stamped with the relevant no's on their base

Fig. 17



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.

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

3.2 LIGHTING THE APPLIANCE

- a) Turn on the gas isolation tap.
- 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.

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 75mm down and 25mm 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 left in position, it can be removed, but only if the chimney is lined.

If the chimney is not lined, the ventilation to the room should be increased until the smoke test is passed satisfactorily. If the chimney is lined, the efficiency baffle can be removed.

- 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 any where 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 pebbles 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.

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.

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 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 layout. The fender and ash pan cover can now be re-positioned.

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. Re-assemble 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.

PARTS SHORTLIST

Replacement of 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 below on the CFM Europe website, address as below.

Fuelbed Base	B-74460
Fuelbed L/H/S Overlay	B-74470
Fuelbed R/H/S Overlay	B-74480
Replacement Coal Set	B-74490
Replacement Front Ceramic Rail Set (L/H & R/H)	B-56330
Complete Fuelbed Set (Coals & Ceramics)	B-74500
Side Fibre Board (Universal Fit)	B-73230
Rear Fibre Board	B-82980
Piezo Igniter	B-1320
Ignition Wire	B-39030
Gas Valve (NG & LPG)	B-36990

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

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