

Cast Tec

High Efficiency Manual

Inset Live Fuel Effect Gas Fire



Installation and Users Instructions

These instructions should be read by the installer before installation and then should be handed to the end user when the installation is complete.

This is an official requirement and is the responsibility of the fitter of this appliance.

Having installed the appliance, the installer should take the necessary steps to ensure that the user fully understands how to operate the appliance and is also made aware of the fire's basic cleaning and maintenance requirements.



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This appliance has been designed, tested and manufactured to the British Standard BS 7977-1:2002 relating to Radiant Convect Gas Appliances and **must** be installed by a qualified Gas Safe Registered Installer in accordance with the Gas Safety (Installation and use) regulations 1994 and all other relevant standards.

This appliance must be connected in accordance with the National Regulations. The appliance must be sealed into a non-combustible fireplace (Fig. 2) whose only opening must be through a Class I (7" or 175mm diameter) or Class II (5" or 125mm diameter) chimney / flue of at least three metres in height.

Before installation, ensure that the local conditions, (identification of gas type and pressure) and the adjustment of the appliance are compatible. Never place combustible material directly in front of this appliance. Floor covering such as carpet is acceptable but must be a minimum of 300mm from the incandescent flame.

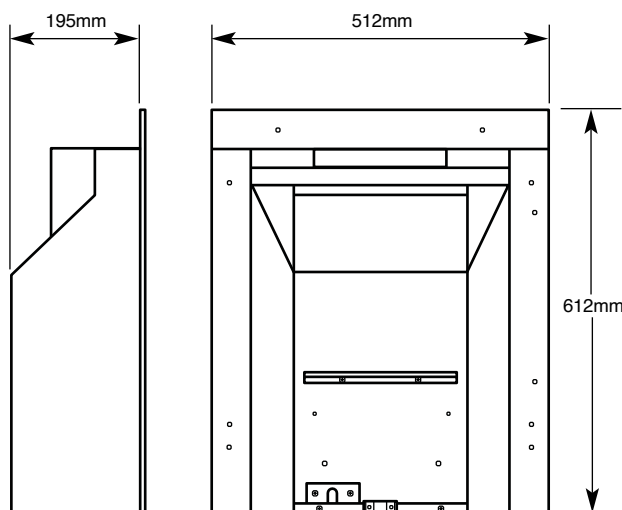


Fig. 1

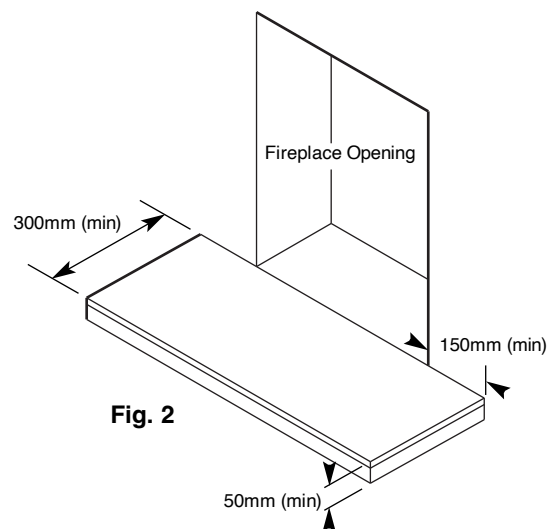


Fig. 2

This fire is a very effective heating appliance and must be fitted against a wall of non-combustible material as classified in BS 476-4:1970 (2007).

An air vent is not normally required for this application because its input does not exceed 7kW. We recommend that the chimney/flue is swept prior to installation of this appliance and that any flue restrictor or damper plate should be removed or fixed in the open position. The chimney/flue must always generate a positive up draught to ensure safe operation.

The installer must then establish that all the products of combustion are entering the flue within ten minutes of lighting from cold. This can be verified by inserting a lit smoke match into the left and right hand ducts immediately above the glass retaining strip. It should NOT be inserted into the central convect duct. This operation should be carried out before fitting the trim and louvred panel (see 'Spillage Test' page 5).

An isolation valve must be fitted adjacent to the appliance. When closed, this will allow the complete burner and control assembly to be disconnected for maintenance or repair in accordance with national regulations.

The gas supply should be provided by a semi rigid pipe with an 8mm diameter and should be no longer than 1.5 metres in length.

NOTE: When the gas supply pipe is passed through masonry or other brickwork always ensure that the end of the pipe is covered to avoid any debris passing through into the appliance controls.

The appliance is fitted with an Oxygen Depletion Sensor (ODS) that monitors the room for products of combustion. If products are detected, the ODS will automatically shut down the appliance. If this situation arises, re-light the appliance, referring to the user instructions (page 9). If shut down re-occurs, a qualified person must be called to thoroughly check the appliance. The spillage monitoring system (ODS pilot) must not be put out of operation or be tampered with or adjusted by either the installer or the user. If the unit is found to be at fault it should be replaced with the manufacturers original replacement parts.

INSTALLATION REQUIREMENTS



This appliance must only be installed in Great Britain or Ireland.

1. This fire is a natural gas appliance and has been designed for use with the following applications:

a) **Class I** - Conventional brick or stone chimney as used for a solid fuel fire with a cross sectional dimension of 225mm x 225mm (9" x 9") or a lined flue with a minimum diameter of 175mm (7"), with the fireplace components conforming to BS1251, or a builders opening a minimum of 560mm high and 406mm wide with a minimum depth of 230mm to allow sufficient volume for debris collection (unlined chimney 12 dm³ and lined 2 dm³). To obtain this depth it would not normally be necessary to remove the chair brick. Any permanent flue restrictions or variable dampers are to be removed or locked in the fully open position. The chimney should also be swept prior to installation.

b) **Oversized Void** - Where an oversized void is encountered it must be reduced in size by lining with bricks or blocks or alternatively inserting a metal flue box. The nominal dimensions of the void should not exceed 650mm wide x 475mm deep x 800mm high BS5871-2.

c) **Class II** - A double walled or insulated metal flue box built to the requirements of BS715 with an insulated flue having a minimum diameter of 125mm (5") and a minimum effective overall height of 3 metres (10').

NOTE: If the flue box is to be used with an existing brick or stone chimney, a 125mm (5") minimum diameter flue liner conforming to BS715 may be used.

2. A non-combustible hearth must be provided to comply with current building regulations. Care should be taken to prevent any damage being caused to surrounding soft furnishings or decoration, e.g. many embossed vinyl wall coverings may become discoloured if placed too close to the appliance.

3. A suitable proprietary fire surround with 100°C rating may be used with a minimum clearance from hearth to underside of shelf of 830mm, providing that the depth of shelf is 150mm or less.

4. Where the shelf depth is greater than 150mm, the minimum height clearance should be increased by 25mm increments for each additional 12.5mm of shelf depth.

5. Minimum width between vertical sides of combustible surround should not be less than 800mm provided the appliance is central to the surround and the surround legs do not exceed a 150mm profile.

6. If the 150mm profile is exceeded, the width of the surround (and the back panel) should be increased by 25mm for each additional 12.5mm of profile depth.

d) **Pre-cast Flue** conforming to BS 1289 Part 1 (It may be necessary to use a surround with a deeper rebate than usual to accommodate a flush fit with certain starter blocks. Check the appliance dimensions against individual applications.

FLUE FLOW TEST

A flue flow test (smoke test) is carried out to check the effectiveness of the flue and to ensure that there is no leakage into another part of the premises (including any loft), or as appropriate other adjoining premises (this is particularly important where a number of chimneys combine into a multiple stack).

The flue flow test should be carried out using a suitable smoke pellet which the pellet manufacturer claims to generate 5m³ of smoke in 30 seconds burn time.

These gas fires should have the flue flow test carried out with the appliance in position but not connected to the gas supply so that the smoke test can be carried out with representative flue flow conditions.

A warm flue will be more effective than a cold flue. If the flue is reluctant to draw, which can be initially assessed by lighting a smoke match at the intended position of the appliance flue connection, introduce some heat into the flue for a minimum of 10 minutes using a blow torch or other means.

Other factors, such as weather conditions and a combination of materials used to construct the flue can all influence the flue draught. The pre-heating process may require as much as half an hour before the flue behaves satisfactory as a blow torch does not represent the volume of heat consistent with the normal appliance operation.

A Flue Flow Test should be checked as follows:

1. Carry out those visual checks as indicated previously, and continue only if satisfactory.
2. Establish that an adequate air supply is available for the combustion of the appliance
3. Close all doors and windows in the room that the appliance is to be installed.
4. Light a smoke pellet at the intended position for the appliance. Place the inset fire case into position.
5. The test is satisfactory if
 - there is no significant escape of smoke from the appliance position.
 - there is no seepage of smoke over the length of the flue.
 - smoke is discharged only from the correct terminal.

VENTILATION

No special ventilation bricks or vents are required in the room containing the appliance, providing that normal adventitious room ventilation exists. The installer must determine this by carrying out a spillage test.

SPILLAGE TEST

To check for satisfactory clearance of products of combustion, close all doors and windows and leave the fire burning for ten minutes. Insert a lit smoke match into the left and right hand ducts immediately above the glass retaining strip. It should NOT be inserted into the central duct. This operation should be carried out before fitting the trim and louvred panel. All the smoke must be drawn into the flue. If spillage occurs, allow a further ten minutes and repeat the test. Should spillage still occur turn the appliance off and seek expert advice. To continue the test: If an extractor fan is situated in the room the test should be repeated with the fan running. If there is a connecting room with an extractor fan the test should be repeated with all the doors to that room open and the extractor fan running.

INSTALLATION PROCEDURE FOR STANDARD 22" X 16" OPENING



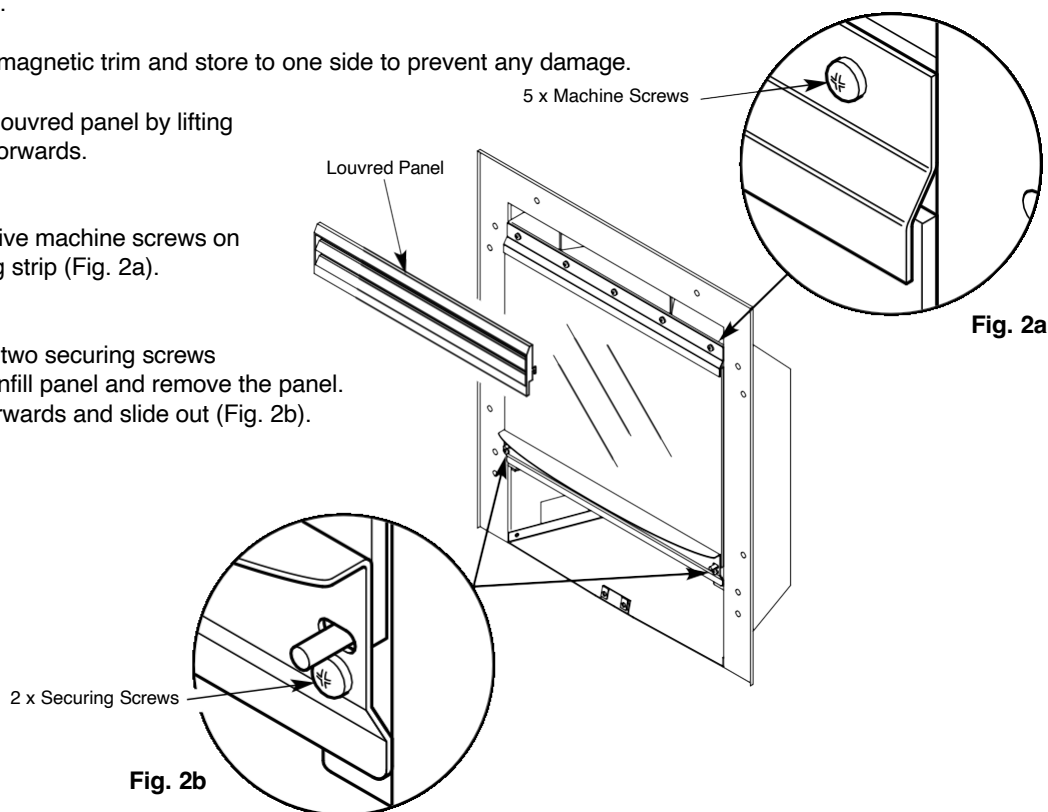
1. Carefully lift the appliance out of the packaging taking care not to damage the ceramic components in the separate carton.

2. Remove the magnetic trim and store to one side to prevent any damage.

3. Remove the louvred panel by lifting up and pulling forwards.

4. Slacken the five machine screws on the top retaining strip (Fig. 2a).

5. Unscrew the two securing screws from the lower infill panel and remove the panel. Tilt the glass forwards and slide out (Fig. 2b).

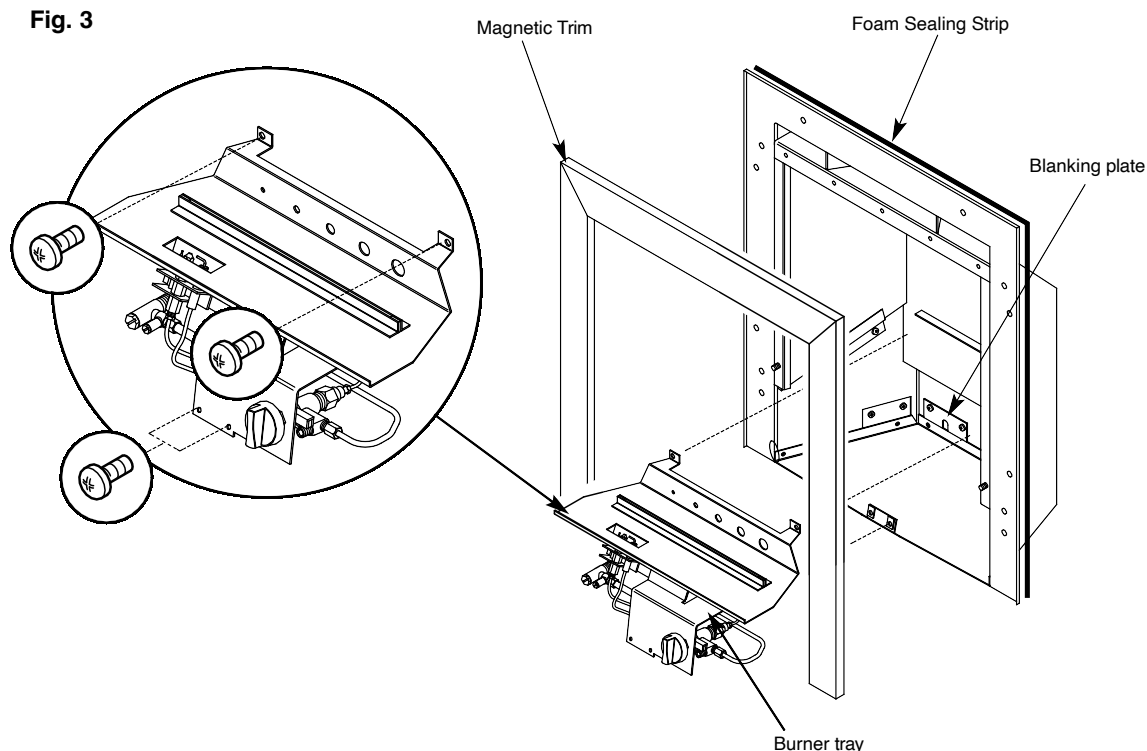


6. Cut the foam sealing strip (in plastic bag supplied) to length and stick a continuous strip down the two sides and across the top of the radiant box. When the box is placed against a flat surface the foam strip will form a seal around the boxes flange.

7. Carefully lift the appliance into position in the fireplace opening and check that the flange of the radiant box fits flush against the sealing face with no gaps present.

8. Remove the four screws that secure the burner tray to the box, two on the front leg and two at the rear of the tray. Remove the burner tray and place to one side (Fig. 3).

Fig. 3

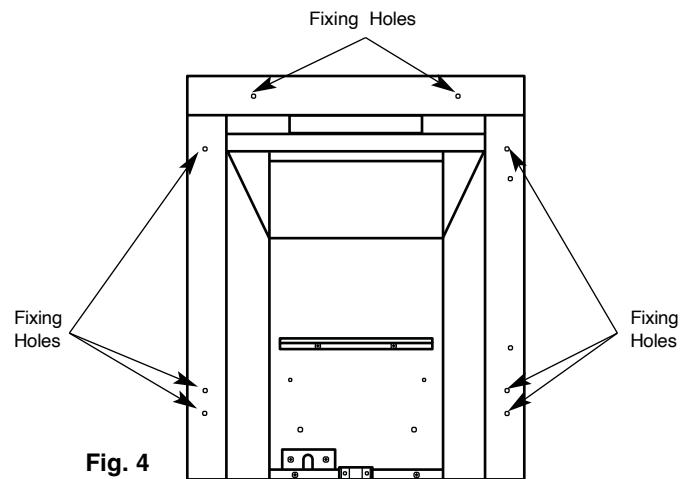




9. When the burner tray has been removed, decide which side of the appliance the gas supply will be entering the radiant box and remove the relevant blanking plate. The gas supply should be concealed as much as possible. Both blanking plates **MUST** be re-fitted or this could seriously impair performance.

10. With the radiant box placed in the opening, mark out four of the eight fixing holes. Remove the box and carefully drill and fit rawl plugs.

11. Pass the 8mm gas connection through the back of the box and secure the box into place using four screws (straight shank screws are recommended for marble). Check that the outer flange of the appliance is completely sealed against the back panel.



ALTERNATIVE FIXING METHOD

Where the drilling of the back panel is not practical, an alternative fixing method may be employed using the **optional** cable fixing kit provided. Drill four holes in the rear of the fireplace opening (Fig. 5). Securely fix the four eye bolts provided using suitable rawl plugs. Feed one cable through each of the top holes in the rear of the fire box.

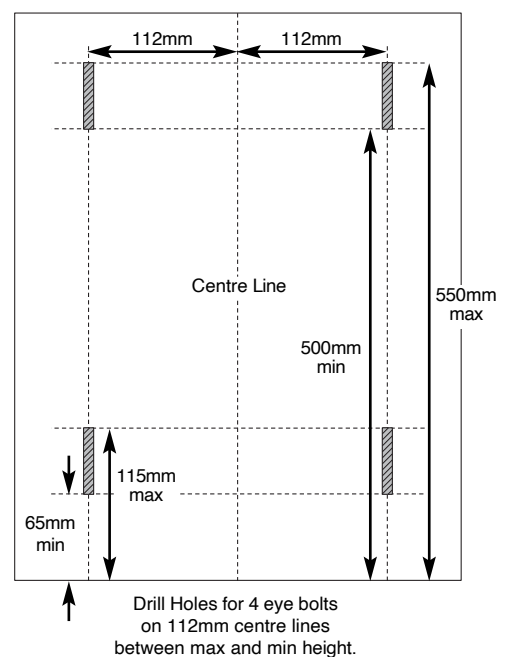
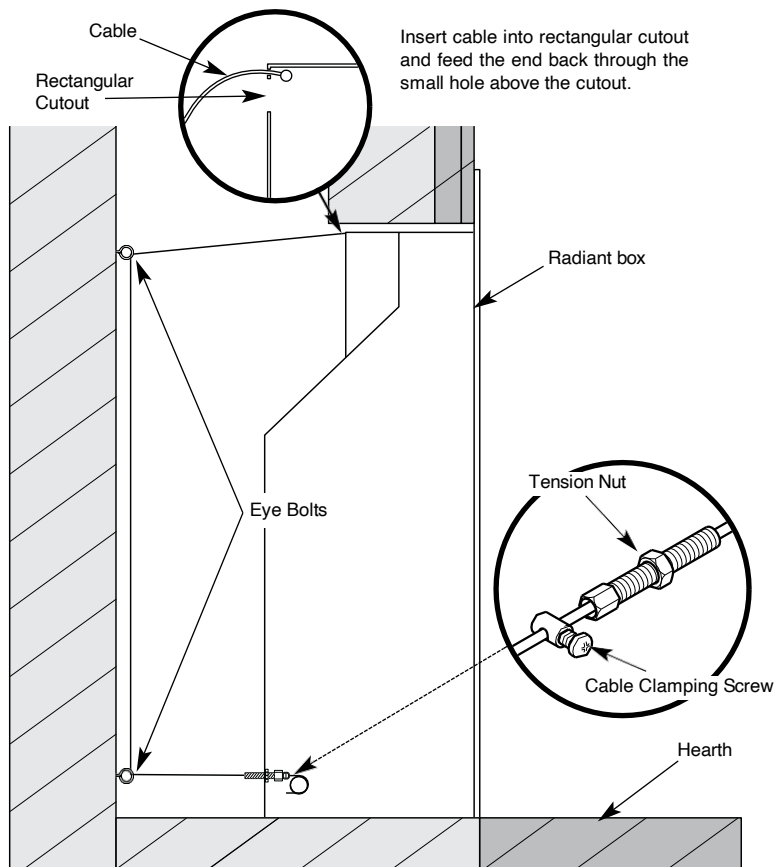


Fig. 5

Fig. 6

Fix the radiant box into the opening, securing into position using the cable fixing kit (Fig. 6). Do not cut off the loose ends as the full length is required should the radiant box need refitting at any time. Coil up and securely store underneath the burner tray.

1. Position the burner tray into the box in order to determine the length of 8mm gas supply needed and cut to length.
2. Before making the final connection, thoroughly purge the supply pipe to clear any foreign matter, i.e. masonry dust etc, as this could lead to blockages in the control valve and/or pilot assemblies.
3. Fix the burner in place using the four screws and make the gas connection. Carry out a gas soundness test.

INSTALLATION PROCEDURE FOR DECORATIVE CAST SURROUND



1. Install the decorative cast surround into the fireplace opening and ensure it is fully sealed including the open area above the fire (see Fig. 7).
2. Carefully lift the fire box out of the packaging taking care not to damage the ceramic components in the separate carton.
3. Cut the foam sealing strip (in plastic bag supplied) to length and stick a continuous strip up one side, across the top and down the other side of the rear of the radiant box. When the box is placed against the cast surround the foam strip will form a seal around the boxes flange.
4. Lift the fire box on to the two studs at the top of the surround and check that the flange of the radiant box fits flush against the sealing face with no gaps present.
5. Locate the decorative frame on to the studs and secure with the two nuts provided.
6. Insert the two screws into the lower holes in the decorative frame and carefully tighten ensuring the fire box is securely clamped between the frame and the surround.

NOTE: The louvre trim is not used on this fire option.

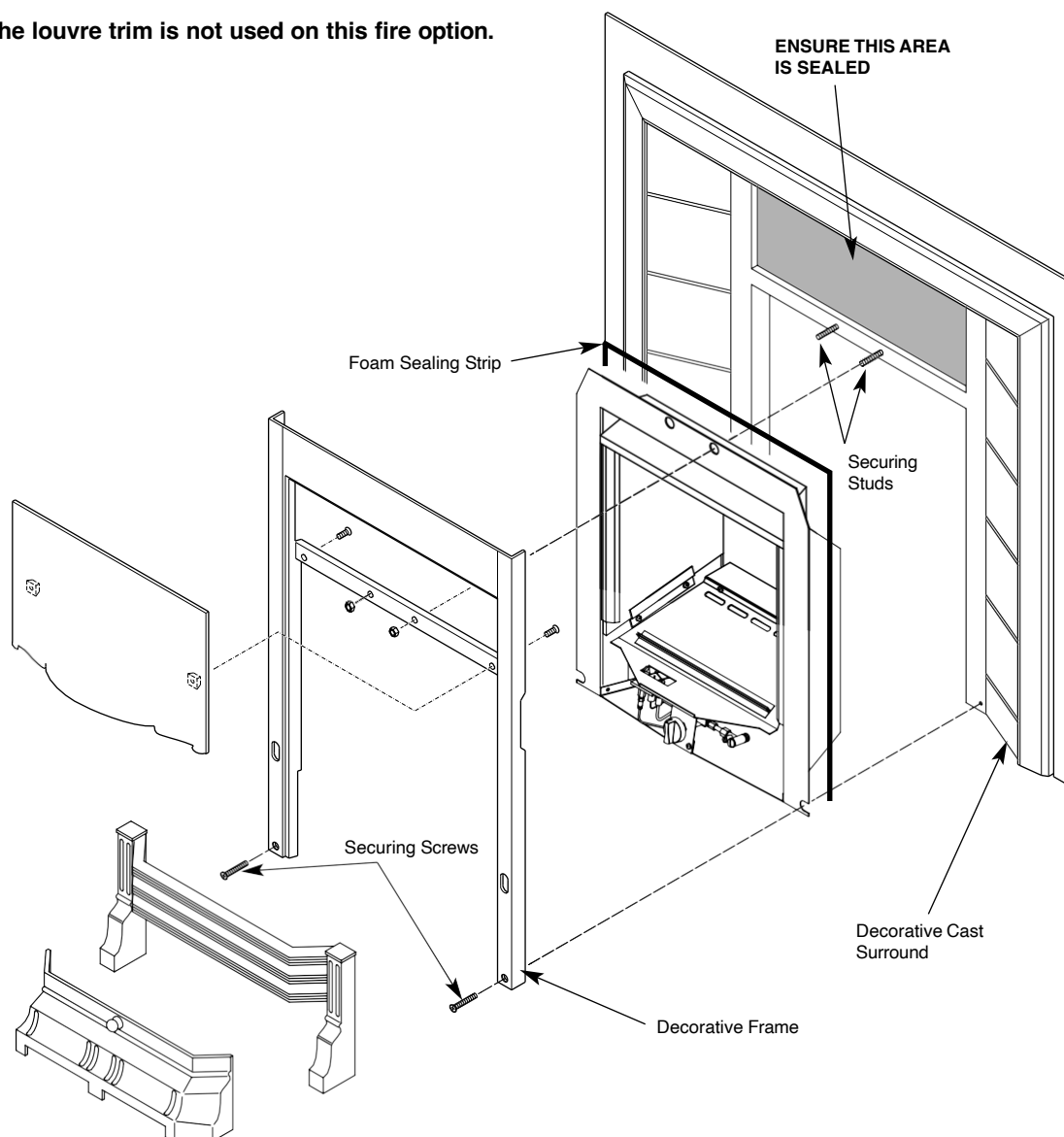


Fig. 7

COMMISSIONING



1. Unscrew the inlet pressure test point sealing screw (Fig. 8) and fit a manometer. Consult the user instructions (page 11). Ignite the appliance and turn to the high position.

2. Take a pressure reading and consult the technical data (below) to establish the correct working pressure. The burner pressure can be tested at the point shown in Fig.9.

3. Once the pressure has been checked and verified, turn off the appliance. Consult the ceramic component set up diagrams (pages 14-15) and fit the ceramics as per the instructions.

4. Re-install glass panel. The glass should be positioned centrally to ensure the decorative trim will fit over it.

5. Carry out a Spillage Test (page 5).

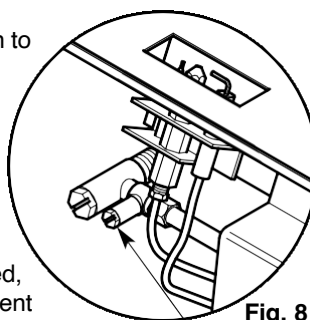


Fig. 8
Inlet Pressure
Test Point

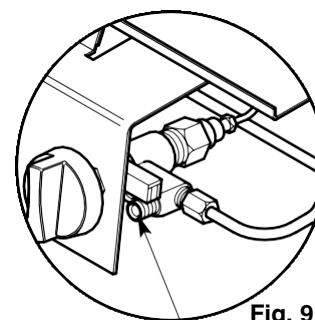


Fig. 9
Burner Pressure
Test Point

TECHNICAL DATA

Gas Type	Natural Gas (G20) Cat I _{2H}	
Gas Connection	8mm	
Number of Injectors	One	
Injector size	Stereomatic 1.85mm	
Control Max Operating Temperature	80°C	
Inlet Pressure Cold	20 mbar	
Heat Input (Gross)	4.6 kW (Full)	3.0 kW (Reduced)
Weight	10.4 kg	
NOx Level	Class 5	

REPLACEMENT PARTS

1. **Modular Coal Set** - The ceramic coals supplied with this appliance can be replaced at service intervals depending on their condition. If the coals do require replacement, the consumer can do so provided that the Ceramic Component Layout Instructions (pages 14-15) are adhered to. Under no circumstances should additional/extra coals be added. Only genuine Legend replacement parts should be used.
Order Ref: **EVCS01**

2. **Oxygen Depletion Sensing Pilot** - In the unlikely event of a pilot failure, the pilot assembly should only be replaced by a **Gas Safe Registered Engineer**. The user must not carry out this work.
Order Ref: **LEG62**

3. **Control Tap** - In the unlikely event of control tap failure, the assembly should only be replaced by a **Gas Safe Registered Engineer**. The user must not carry out this work.
Order Ref: **LEG60**

4. **Glass Panel** - Should the glass become cracked or broken, the fire should not be used under any circumstance.
Order Ref: **LEG59**

5. **Glass Rope Seal** - The integrity of the glass rope seal should be checked on service and replaced if necessary by a **Gas Safe Registered Engineer**.
Order Ref: **LEG58**



1. The Piezo will not spark.

Check: If the electrode is cracked or broken - Replace pilot assembly.
If the HT lead is shorting out on the burner body - Locate where the short is occurring, isolate and/or re-route the lead.
If the HT unit/lead is faulty - Replace as necessary.

2. The Pilot will not light (but the Piezo is sparking).

Check: If the gas is reaching the pilot - check joints and connections.
If the pilot jet is blocked - Inspect and clean.
If the pilot is still not passing gas - Replace the pilot assembly.

3. The Pilot lights but goes out when the control knob is released.

Check: If the Thermocouple is loose/disconnected at the control valve - remake the connection.
If the Thermocouple is faulty - Replace.
If the Electro magnetic valve is faulty - replace valve.

4. The Burner will not light readily from the pilot.

Check: If the coals are obstructing the pilot to burner path ie. Are the coals blocking the opportunity for the pilot to light the burner - Relay the coal set as per Ceramic Component Layout Instructions. (pages 14-15).

5. The fire makes a roaring noise when lit.

Check: That the front coal is seated correctly and the pilot hole is positioned correctly over the pilot assembly.

IF ANY PART OF THE PILOT ASSEMBLY IS SUSPECTED AS BEING FAULTY THE COMPONENT MUST BE REPLACED.

6. The flames appear blue (after the fire has fully warmed up). The coals/ceramic liners have soot deposits.

Check: That the coals have not moved from the original setting - Relay the coals as per the Ceramic Component Layout Instructions (pages 14-15).
There may be too little/much ventilation into the room. Identify and then take steps to rectify.

7. The flame picture is low on the high setting.

Check: For any partial blockages - Check all obvious locations for debris in pipe work and fittings.
Inlet gas pressure, both standing and working gas pressure - Identify problem and take necessary steps to rectify. **Note:** Flame pattern improves with use.

8. Fumes enter the room when the fire is operating.

Check: Why the chimney is not drawing all the products of combustion up the flue, identify where the problem lies and rectify, otherwise disconnect the fire and seek professional guidance.



Please also familiarise yourself with the **Notes for the Installer and End User** on page 4.

Never place combustible material directly in front of this appliance. Floor covering such as carpet is acceptable but must be a minimum of 300mm from the incandescent flame. Any combustible shelf must be at least 215mm above the fire trim, providing the shelf depth is 150mm or less.

OPERATION AND CONTROLS

It is most important that the operator of this gas appliance has fully read and understood all the operating, cleaning and maintenance procedures as laid out in these instructions.

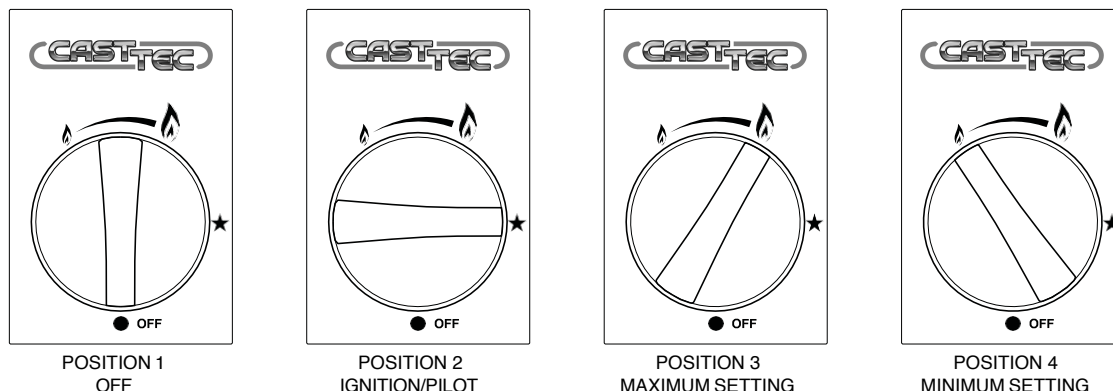


Fig. 10

Lighting Procedure

1. To light the fire, remove the ash pan cover.
2. Control knob to be in POSITION 1 at commencement of the ignition sequence.
3. Fully depress control knob and turn anticlockwise to POSITION 2 where it reaches a natural restriction (allow a couple of seconds for the pilot gas to purge through the pipe). A sparking click is heard/felt and the pilot flame is then lit (the fire can safely be left on permanent pilot at this stage for future lighting if preferred or can be ignited every time the fire is lit). The pilot assembly is located at the front lefthand side of the fire, and when ignited (this can take two or three 'clicks') it can be seen through the front coal set. Keep the knob depressed for 10/15 seconds to allow the thermocouple to establish the pilot flame. The knob can then be released.
4. The operating level of the burner is now set by turning the control knob from the pilot POSITION 2 through the maximum setting POSITION 3 to the minimum POSITION 4. The control knob is adjustable between these two positions.
5. To turn off the appliance, depress the control knob and turn clockwise until the POSITION 2 is reached. The main burner will go out but the pilot light will still be lit. The pilot can then be extinguished by depressing the control knob and then turning to the off POSITION 1.

In the event of failure of the normal means of ignition, Fully depress control knob and turn anticlockwise to POSITION 2 and light the pilot with a naked flame from beneath the burner tray.

The fire is a very efficient heating appliance and therefore care must be taken not to touch working surfaces including the glass when operating. This particularly applies around the periphery of the glass and louvre outlet. Other areas considered to be working surfaces are everything except the control handles and fret knob.

WARNINGS:

Never throw any type of rubbish on or otherwise disturb the fuel bed.

Any alteration to this appliance including its ceramic components may render it inoperable and unsafe.

ALWAYS run this appliance on the high setting for the first 30 minutes (minimum) - Failure to do this may result in poor combustion and excessive sooting.

Never use this appliance if the glass panel is broken, removed or is open.



CAST TEC Fires recommend that this appliance is serviced at regular 12 monthly intervals. The chimney or flue should also be checked regularly to ensure that all products of combustion are entering the flue and there is no excessive build up of soot.

It is the users responsibility to ensure that the appliance is kept in a clean serviceable condition.

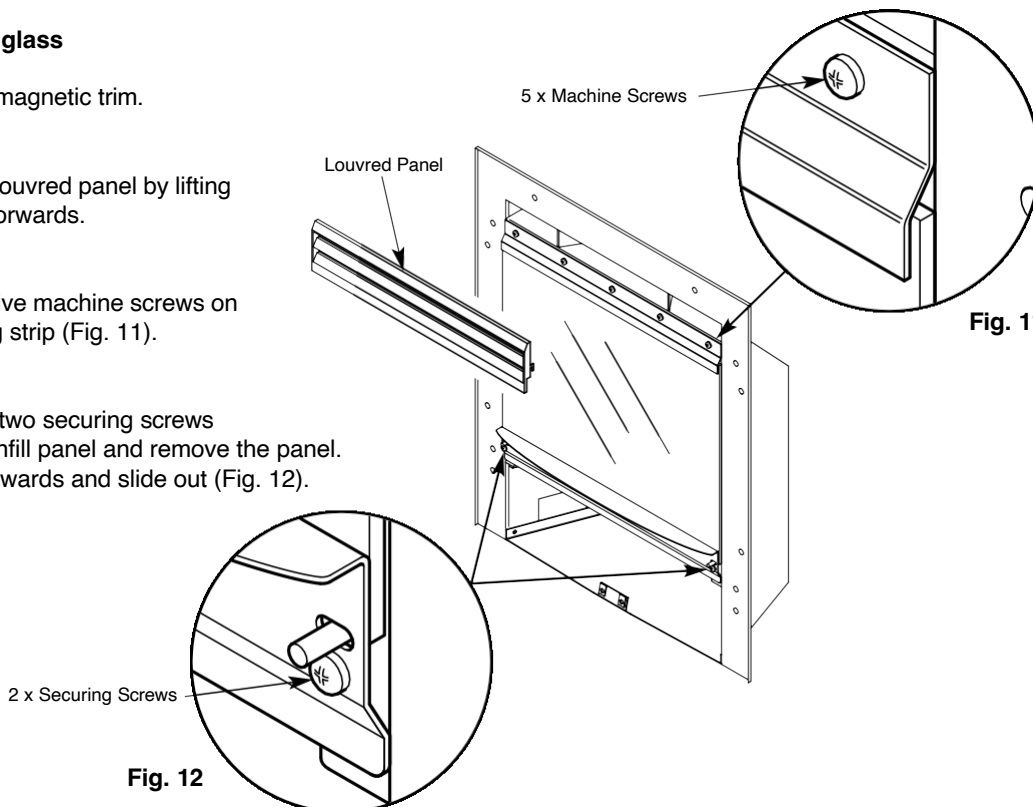
To remove the glass

1. Remove the magnetic trim.

2. Remove the louvred panel by lifting up and pulling forwards.

3. Slacken the five machine screws on the top retaining strip (Fig. 11).

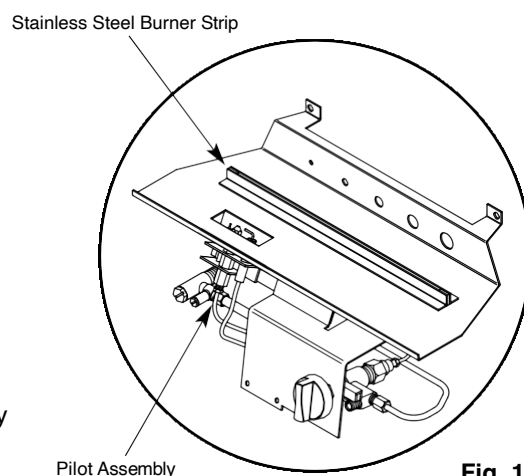
4. Unscrew the two securing screws from the lower infill panel and remove the panel. Tilt the glass forwards and slide out (Fig. 12).



5. Clean the glass with a damp cloth. For stubborn stains use a proprietary cream cleaner or ceramic hob cleaner.

Ceramic Components and Fuel Bed

Debris from any source should be removed with a soft brush. Please ensure that any debris including soot deposits are removed from the appliance and not left on the fuel bed. It is recommended that the user should, on a regular quarterly basis, carefully remove all ceramic components and thoroughly clean the stainless steel burner strip and the pilot assembly. Any build up of debris in this area could affect the operation of the appliance (Fig. 13).



NOTE: It is common to find surface cracks in the ceramic components. This is due to the expansion and contraction of the ceramic fibres caused by the intense heat that the burner generates. The cracks will not affect the safe operation of this appliance. However great care must be taken when handling the ceramic components as they will break if handled incorrectly. Do not use a vacuum cleaner to clean the ceramics.

Radiant Box Ceramic Liners - Use only a soft brush to remove any soot deposits from the ceramic liners during cleaning as this is the only method that can be used to remove deposits. The ceramic liners are very delicate and should be treated accordingly.

6. Reassemble in reverse order. The screws should be tightened enough to ensure the glass is sealed. The glass should be positioned centrally to ensure the decorative trim will fit over it.

Trims and Frets - The trim and fret should be removed from the appliance for cleaning, please ensure that the appliance has cooled thoroughly. Metal trims and frets maybe lacquer coated and therefore do not require polishing.

FIRE FRONT SPECIFICATIONS



Fire fronts are now available in many different designs and finishes. The user can now choose their own particular style of fire front to suit their individual fireplace setting, providing the fire front complies with the following dimensions -

Fire Front -	(X) Max: 210mm	Min: 190mm
Ash Pan Cover -	(W) Max: 90mm	Min: 65mm
	(Y) Max: 345mm	Min: 320mm

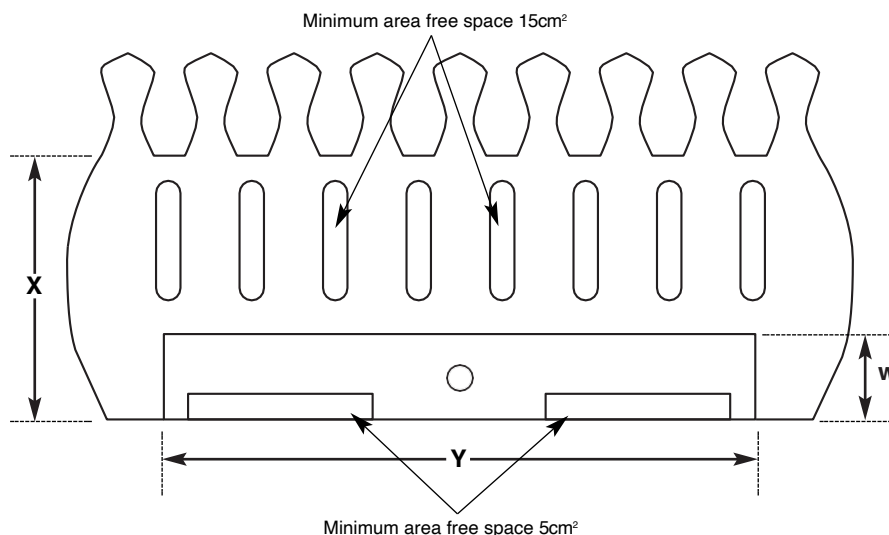


Fig. 14

SAFETY WARNING - This appliance has a naked flame and as with all heating appliances a fireguard should be used for the protection of children, the elderly and infirm. Fireguards should conform to BS 6539 (1984 Fireguards for use with solid fuel appliances). This fire is not fitted with an integral guard. In normal use consideration may be given to the use of a fireguard confirming to BS 6539, such that the approach to the naked flame is minimised.



CAUTION: The coals are extremely fragile and must be handled accordingly. Gloves should be worn and any inhalation of dust should be avoided. The coals must be kept away from children at all times. Never put additional coals on the fire. Never use coals other than those originally supplied, or genuine Legend Spare Parts.

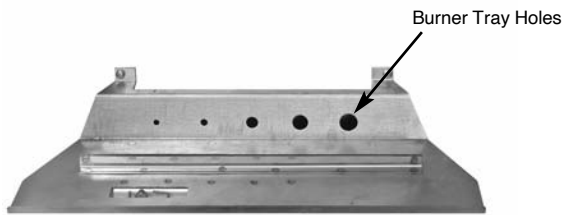


Fig. 15

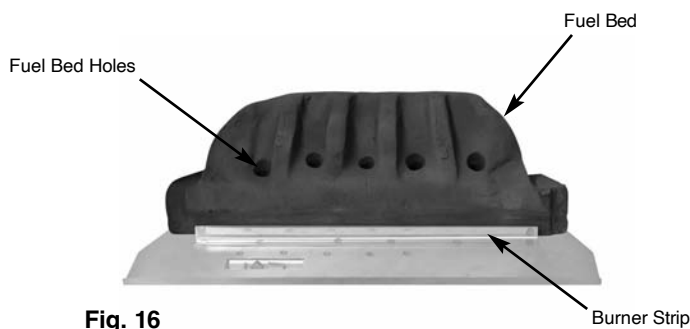


Fig. 16

1. Place the main fuel bed on to the back section of the metal burner tray. It is important that the front edge of the fuel bed is located behind the burner strip, and the holes in the fuel bed line up with the holes in the Burner tray (Fig. 16).



Fig. 17

3. Position the front coal piece on the front coal retainer, making sure that the back edge is pushed up against the front of the burner strip (Fig. 17).

4. Locate the remaining coal pieces in order as shown in Figs. 18 & 19.



Fig. 18



Fig. 19



5. Finally check that all the coal pieces are 'nested' together correctly (Fig. 20) and a close fit is achieved on the middle joint (this will stop gas surge through the gap).



Fig. 20

It is very important that all the coals are used and arranged as shown in order to achieve the desired flame picture.

It may be necessary to remove some or all of the coals to clean them at some time.
Cleaning must only be done using a soft brush.



Your appliance is guaranteed for one year from proof of purchase. Should the appliance prove defective within that period we agree to repair or replace (at our discretion) the component or appliance provided that:

1. The user can produce a receipt for proof of purchase/installation.
2. The appliance has been supplied by an authorised stockist and has been installed by a qualified installer, all installation and operating instructions have been strictly adhered to.
3. No alterations have been carried out on the appliance or component parts without our written consent.
4. The appliance has not been used for any purpose other than those intended.
5. The appliance has not been damaged accidentally or due to fair wear and tear.

Guarantee claims should be made through your appliance supplier. The Guarantee is restricted to UK Mainland and is additional to your statutory rights.

TROUBLE SHOOTING (USER)

1. The Fire will not light.

Remove the decorative fret and ash pan door and check the pilot area for soot.
If soot is present remove all the loose coals and the front coal and thoroughly clean any debris in and around the pilot area.
If the fire will still not light contact your installer.

2. The flames appear blue - excessive soot deposits.

The ceramic components including the coal need relaying (pages 14-15).
Too much or too little room ventilation. Seek professional advice.

3. Roaring noise coming from the pilot.

The front coal is not seated correctly. Turn the appliance off and allow to cool down. Re-seat front coal, ensuring it is flat to the base of the front coal retainer (page 14).

4. All the Ceramic Components are discolouring.

The ceramic sets and liners are all manufactured from ceramic fibre. As these fibres are naturally white, dyes are used to give a realistic appearance. These dyes discolour after they have been subjected to intense heat. However the discolouration does not affect the operation of the appliance. The realistic appearance can be restored with the use of a good replacement dye that can be purchased from most good fireplace showrooms.

