



Fitting Instructions Sorrento & Flamevector Fireplace Boilers

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10.1 Positioning the Boiler

Ensure that the site provides sufficient access for installation and maintenance. As the heat exchanger is a totally water enclosed fabrication there is always a waterway beneath the boiler body which ensures that the water temperature is below 100°C and a constructional hearth is not, therefore, required. Sorrento should be installed on a non-combustionable base AND CARE SHOULD BE TAKEN TO ENSURE THAT THE HEAT EXCHANGER IS POSITIONED DEAD CENTRE AND ON THE SAME LEVEL BASE AS THE FASCIA ASSEMBLY.

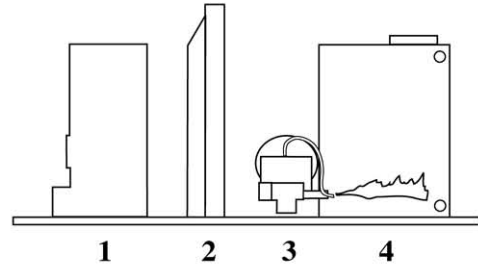
The heat exchanger measures 385mm wide x 515mm high x 300mm deep and sufficient additional space around the heat exchanger will be needed to allow access for pipe and flue connections and general installation. Sorrento can be introduced into a standard 16" x 22" fireplace opening. Ensure that an opening not less than 16" x 22" remains for access of fascia assembly, for commissioning and taking flue gas samples.

With conventional flue models, especially if located in a confined space, ensure that adequate ventilation is provided for efficient combustion. Refer to manufacturer for 'balanced flue' room-sealed options.

Once installed it is not necessary to provide access from the top of the boiler as all routine servicing and maintenance can be conducted from the front of the appliance. It is advisable to leave a space for ventilation around the unit and to gain access to the flue for cleaning if necessary. It is also for the checking of flue gas temperatures etc, when serviced and commissioned.

Ensure that you comply with the Building Regulations and Codes of Good Practice in the installation of the Sorrento appliance, e.g., flue terminals should not be discharged within 1 metre of an opening window or door. It is also advisable to seek permission from your local Building Inspector before installation of balanced flue models. It is unlikely that any difficulties will be presented. You are advised to install according to O.F.T.E.C. recommendations.

Sorrento is a fully automatic boiler, comprising four principal sections:



1. The Fascia Assembly
2. The Decorative Surround
3. The Burner
4. The Heat Exchanger

Diagram A.

This diagram shows the Sorrento Boiler with a flush-fitting fireplace front.

To achieve a flush fit, there needs to be a minimum of 18" depth (458mm) to the fireplace.

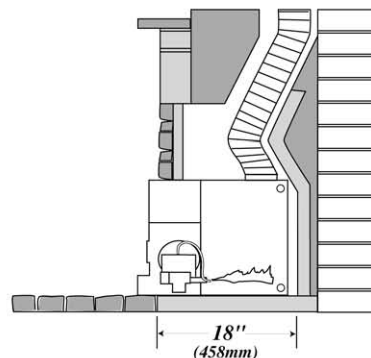
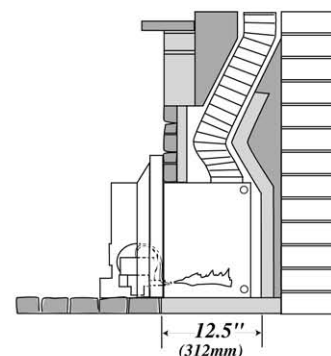


Diagram B.

This diagram shows the Sorrento Boiler with the Fascia Assembly at maximum protrusion. If the fire needs to protrude because of space restriction behind the fireplace, then a decorative surround (2) can be used to enhance its appearance.

Fig 78



Sorrento 'Flamevector'

Diagram C.

This shows the overall dimensions of the Sorrento Flamevector fascia.

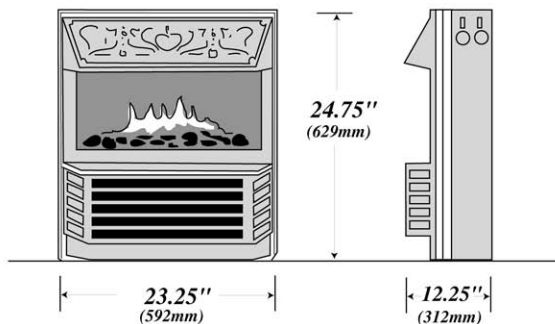


Diagram D.

This shows the Sorrento Flamevector and Heat Exchanger in position.

To achieve the best fit, there needs to be a minimum of 18" depth (458mm) to the fireplace.

To see the effect, look at the photo on page five of the Sorrento brochure.

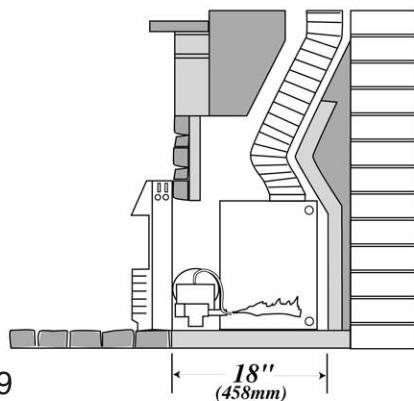


Fig 79

Simplest Example of Installing Sorrento

Make sure hearth is suitably level throughout and level with the position where the fascia assembly will eventually stand. Place the heat exchanger dead centre, as far back as possible and connect water pipework and flue as previously detailed.

Fit burner into the burner port making sure that it is in the 'UPSIDE DOWN' attitude. Push up tightly against the gasket on the heat exchanger to avoid the escape of flue gases which could cause pollution. Tighten securing nuts.

The surround should be positioned and fixed prior to sliding in the fascia assembly.

Plug burner control socket to the appropriate connection on the electrical control box situated on the right hand, inside of the fascia assembly. The sockets are deliberately different from each other to ensure that no plug can be mistakenly inserted into the wrong socket.

Additional Information for Flamevector & Variations

The thermostatic knob, amber operating light and red high limit warning light are mounted top left hand side externally.

A 3 core cable is fitted for connection to programmer/time clock. The pre-wired plug and socket to connect the burner are situated behind the front panel. To remove front panel from the Flamevector, remove 4 screws from base and lift forward and upwards.

The control box/lock out button is remotely situated at the middle bottom front of the Flamevector. It must be fitted to the purpose built bracket by the installer. A separate lead and 13 amp plug fitted with a 5 amp fuse is factory fitted for the operation of the living fire flame effect. Two switches and controls are on the right hand side externally and adjust brightness of coal effect and output of fan convector.

The water connections to the fan convector are situated at the bottom right hand side of the Flamevector. Ball or fix type valves with suitable flexible connections to the flow and return pipes of the central heating system are recommended so that simple access is available for service and maintenance of burner/heat exchanger.

The 10mm flow and return pipes may be trimmed back on the Flamevector to conceal flexible pipework and valves if required. A Flamevector has keyhole slots on the rear plate for securing to the fireplace.

It is advisable to supply suitable insulation around the heat exchanger once installed.

Use kerosene (28 sec. Viscosity) oil not gas oil (35 sec. Viscosity) as burner operation is quieter using this fuel. Remove fascia assembly panel and check the burner control box for lockout. If reset button on the control is illuminated - press to restart. If the burner does not fire and again goes to lock out, wait for 3 to 4 minutes and press reset button again. Where electric fan unit is fitted to Sorrento simply remove to gain access to reset button.



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10.2 Ventilation

A grille should be provided at high level in the room with a free inlet area the same as that shown in the table for combustion air.

Conventional Flue Models

a. The flue should be arranged to sweep vertically, if possible, free from right angle bends and horizontal runs.

b. The flue should have a cross sectional area not less than that of the boiler flue outlet. If the flue height is in excess of 25 feet the flue diameter should be increased by 25mm (1 inch) to avoid back pressure on start-up.

c. If the connection is to be made to an existing chimney, it may be necessary for a flexible flue line to be fitted for the whole length of the chimney.

d. Condensation may occur if the chimney is inadequately constructed. Provision should be made for draining if condensation is likely. Sorrento is highly efficient, more than 90% and a first class insulated flue should be installed if condensation is to be avoided.

e. It is necessary to provide access for cleaning should this be necessary.

f. If an external flue is used it should be of the twin insulated type. With such high efficiency boilers as Sorrento it is essential to fit insulated flues to avoid condensation.

g. Flue should be sealed into the boiler socket with flue cement or a suitable sealant to ensure safety and the prevention of pollution to the burner.

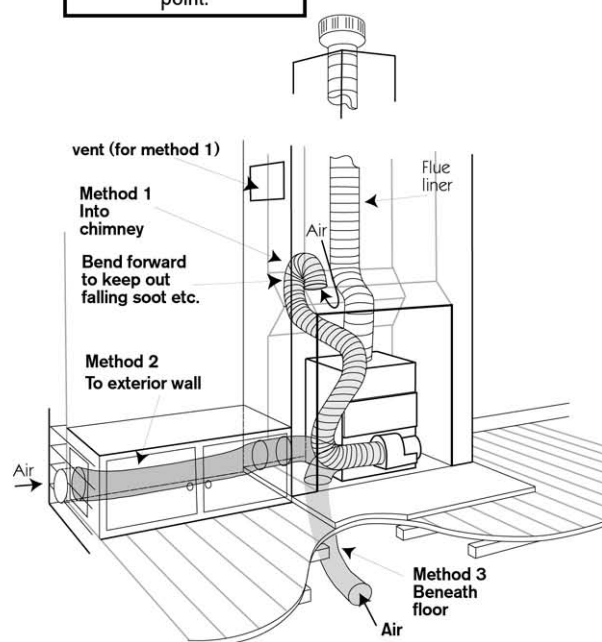
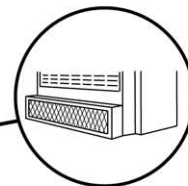
Balanced Flue Systems

The boiler range can be supplied for room-sealed applications where the air for combustion is taken from the outside. Further details are available from the manufacturer. However, it is important that care is taken in choosing the location which should comply with the relevant Building Regulations. With low level flues a copy of Building Regulations should be obtained from the Local Authority.

Air intake routing

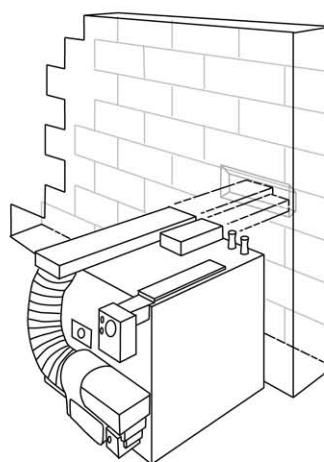
NOTE:

On Sorrento models: If air can be drawn from elsewhere the intake brass grill (bottom front) can be blocked off internally, thus reducing noise further from focal point.



Note to method 1:

It is essential to keep the air flow to ducting by use of vent in side wall or by removing rear base blanking plate of Flamevector unit, it is preferable to draw the air from elsewhere rather than remove the blanking plate.



Balanced flue version available for installation on exterior wall.

Fig 80



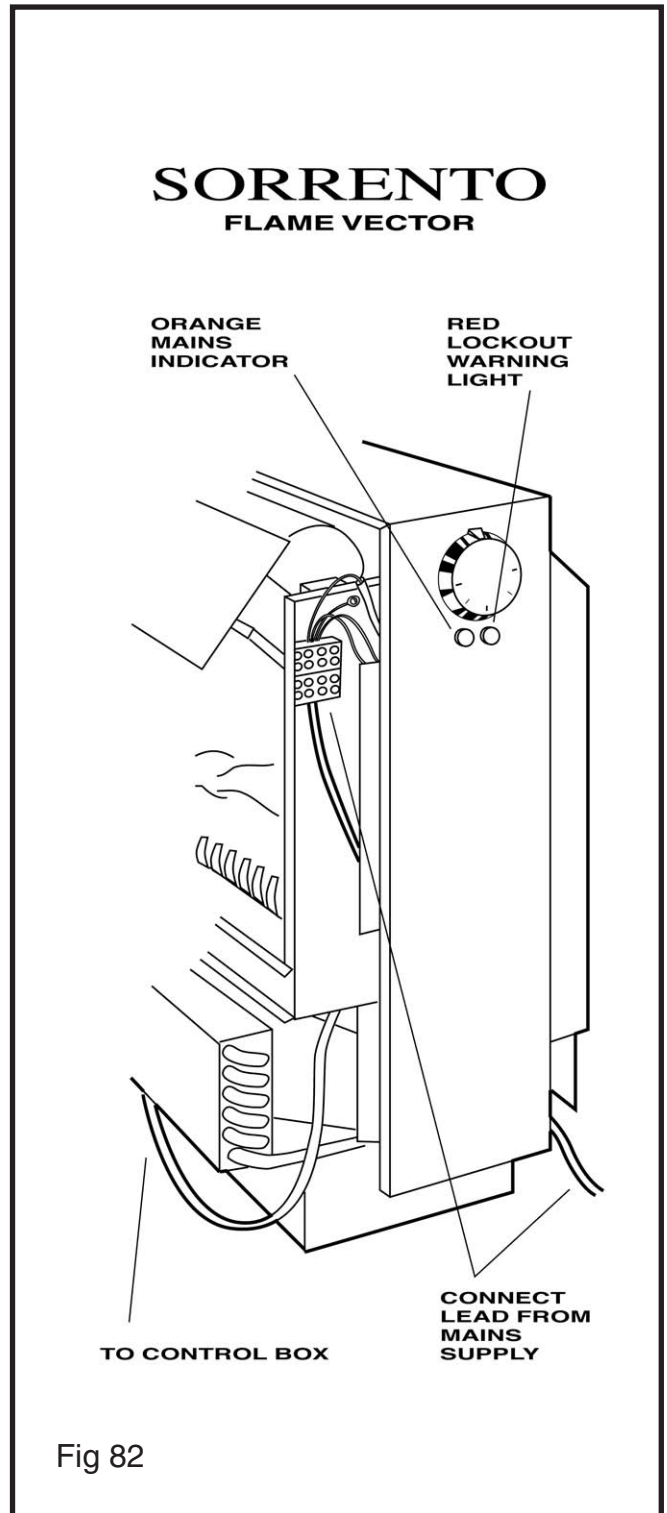
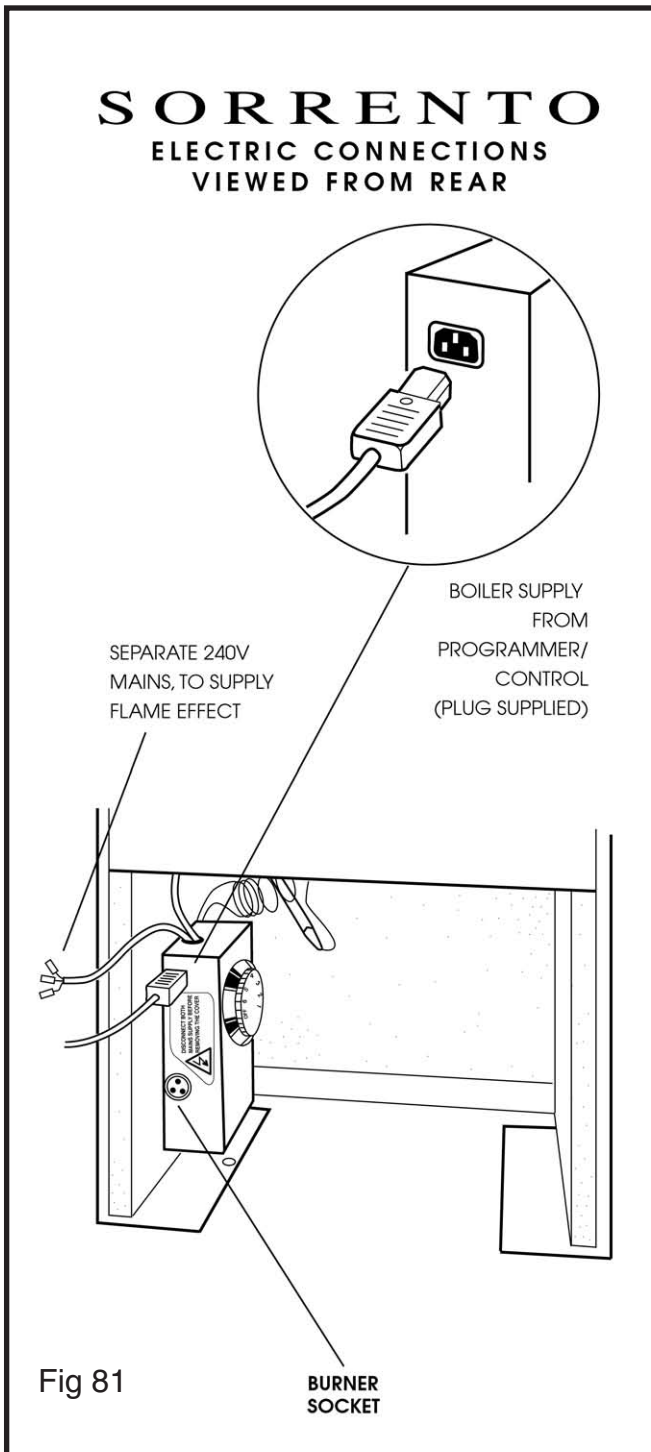
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10.3 Electrical

All electrical connections and wiring should be performed by a qualified electrician in accordance with current Electrical an IEE Regulations.

Disconnect main supply before attempting any electrical connections.

The electrical supply must be 220 volts A/C single phase 50Hz protected by a 5 amp fuse.



The boiler is provided with a pre-wired plug and socket to connect the burner to the fascia assembly. A plug and socket are provided to bring the mains supply to the panel.

Please note that a constant live supply has to be made to the 'Sorrento' boiler to ensure that the illuminated coal flame arrangement may be operated even when the boiler is switched off. An auxiliary line feed which is clearly marked 'constant live' is fitted for this purpose.



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10.4 Combustion Air (Conventional Flue Models)

To provide fresh air for combustion a low level unobstructed inlet should be made approximately 3mm from the ground adjacent to the boiler.

Recommended minimum free inlet area for air:

Model	Sq cm	Sq Inches
12/15H	162	25
15/18H	220	34
18/21H	290	45

An adequate air supply must be delivered to the room in which Sorrento is sited in accordance with BS5410 part 1 section 23. An air brick may have to be installed to permit sufficient ingress of air combustion.

Minimising Noise Level

Whilst 'Sorrento' is exceptionally quiet, by modern oil boiler standards, it still has an operational noise level. The site conditions and method of flueing can influence this noise level considerably.

The following points are made to assist with the reduction of the noise level.

1. Most noise emission from the burner, if applicable, will escape from the front of the appliance through the air intake grille beneath the front fascia assembly. However, the front air intake grille has built in silencing materials.

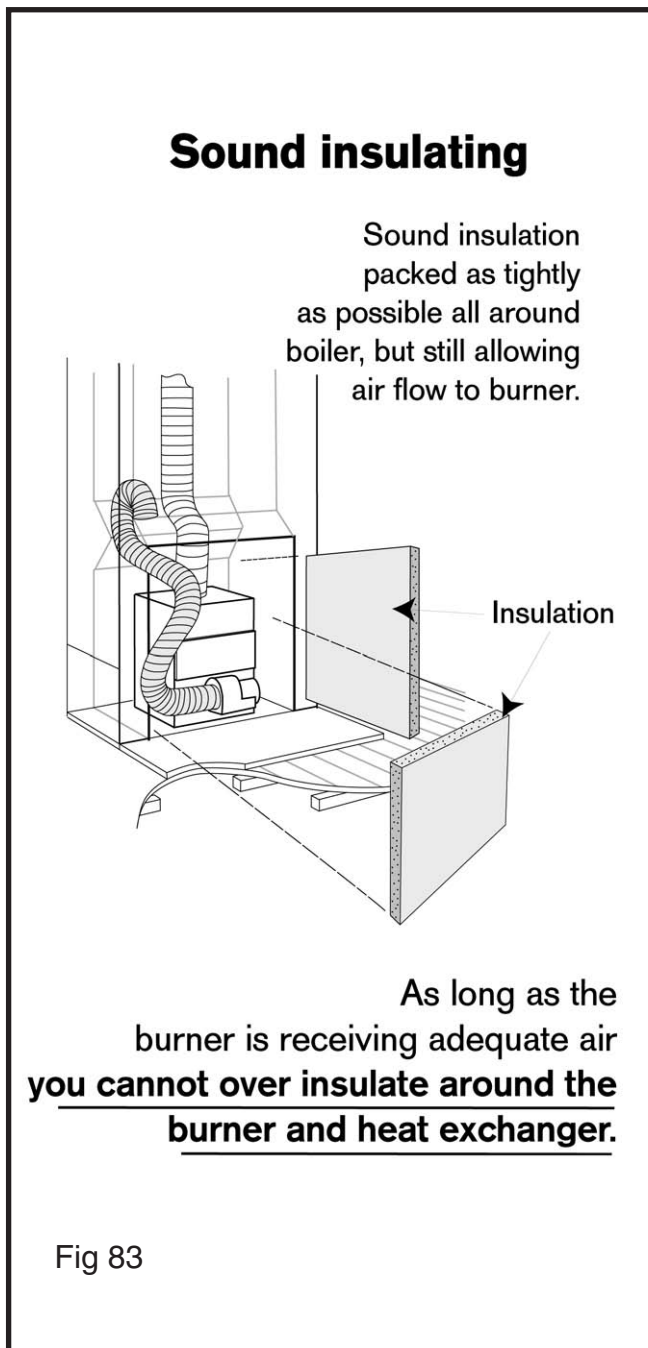
With 'inset' models it is not acceptable, for the purpose of minimising noise to install the appliance in and open hearth allowing the excessive escape of burner noise. Instead you are strongly advised to make up the fire place around the fascia assembly leaving only sufficient space to permit the fascia assembly to be pulled forward and away from the burner for routine servicing. The general intention is to contain and seal in as much noise as possible. Sloppy workmanship and gaps left around the boiler fascia assembly will only allow noise to escape.

2. If it is possible to use 'balanced flue' arrangement then, likewise, the front fascia assembly can be 'sealed' to the fire-surround thus containing more of the noise.

3. Proper commissioning and regular servicing will ensure the smoothest and efficient operation of the burner thereby minimising sound.

4. Sealant tape is factory fitted between the front fascia sections. Ensure that this sealant is not damaged or removed during installation or servicing. Additional acoustic

insulation may be added as appropriate.



10.5 Water Connections

British Standard Codes of Practice must be used to provide correct water connections. For single flow and return systems, diagonally opposite sockets should be used, or if preferred top and bottom socket same side.

All spare sockets should be blanked before filling the system.

10.6 Air Inlet Diverter Box

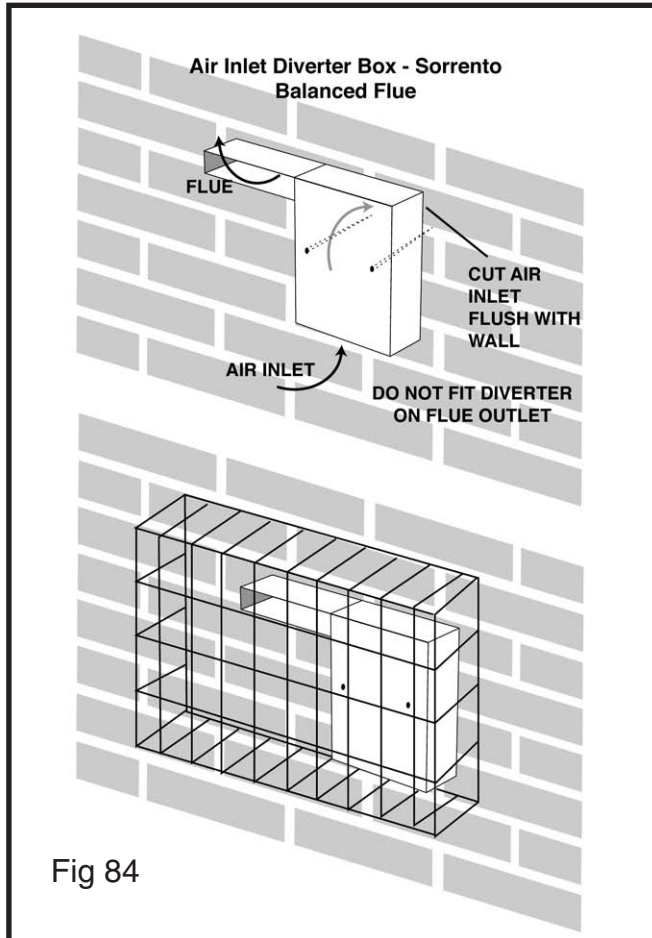


Fig 84

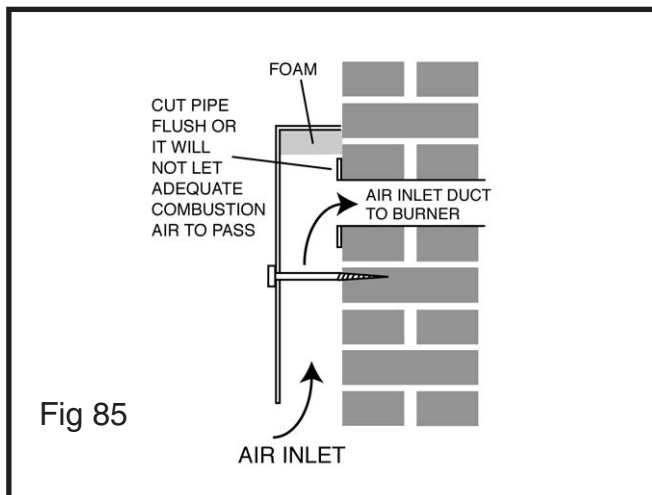


Fig 85

10.7 Fuel

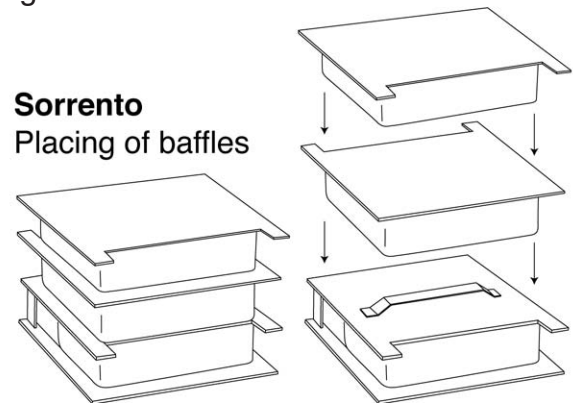
The recommended fuel for your Sorrento is Class 2 (BS 2869 - 7) known as Kerosene which has a viscosity of 28 seconds (Redwood Number 1). Each burner is accordingly electronically set-up at the factory to ensure maximum efficiency. A test badge is affixed to the electrical control box inside the fascia assembly giving details of correct nozzle size and appropriate oil pump pressure.

A filter must be fitted to the oil supply line which, if omitted, could cause failure to the burner or damage to the nozzle, the responsibility for which will not be accepted by Heating World Ltd.

It is essential that a fire valve is fitted in the oil line to the burner so that, in the unlikely event of fire the oil supply is isolated.

10.8 Baffles

Fig 86



10.9 Lock Out Button

Remove front panel of fascia assembly door by pulling forwards to release from latches. The lock out button, if illuminated, is visible and accessible and may be pressed if necessary. Replace the panel ensuring that it is properly resealed.

Allow 3 to 4 minutes before each attempt at pressing lock-out button to allow the control box to complete its full sequence of operation. Failure to allow adequate delay could cause further component failure.

10.10 Simple Fault Finding

In the event of the boiler failing to fire the following checks should be made before calling a Service Engineer.

1. Check for failure of the electricity supply and/or that it is switched ON.
2. Check that there is sufficient oil in the tank and that the valve is open (turned fully counter-clockwise).
3. Check that the programmer or boiler operating switch is set to call for heat.
4. Check boiler thermostat is set to required temperature.
5. Check the fuse on the mains supply to the programmer of boiler operating switch.