REAL FIRES NERO

INSTALLATION INTO TIMBER FRAMING
AND NEW MASONRY BLOCK CONSTRUCTION

New Masonry Block The following instructions are for installation into timber frame. The method of installation is the same for New Masonry Block.
See Masonry Block Drawing

Ventilation
Ventilation to the room that houses the fire must meet the requirements of NZ5261

Framing Details
Prior to installation, timber framing needs to be provided to suit the Real Fire Nero.
See installation drawing

Hearth
A non combustible Hearth must be provided in front of the Real Fire Nero unless the flooring in front of the fire is non combustible. The minimum size is 300mm out from the fire and 150mm each side wider than the fire. (300 x 1800mm)

Height of fire from floor
It is important to confirm the height the fire is to be installed from the floor level. This is usually the hearth height. For example if the hearth is 100mm high then the fire needs to be installed 100mm high. (**note-** some elevated installations specify the fire higher than the hearth). Once the height is confirmed a platform needs to be built to support the firebox. The platform can be of timber construction. It needs to be sturdy and level.

Gas Supply
A suitable gas supply needs to be provided at the right hand rear corner of the timber frame cavity. The pipe sizing should be calculated to supply gas to suit the megajoule rating of the fire. See rating chart. The gas supply should be reduced down to 10mm copper pipe at the fireplace location and left with a coil of approx 1 metre to feed into the firebox.

Gas Rate Chart

Natural Gas	L.P.G.
75 Mj/Hr	64 Mj/Hr

Electrical supply
An electrical supply will be required. This should be by means of an isolating wall switch provided by an electrician, located preferably at the left side of the fireplace. Not inside the framing cavity. **See installation drawing for preferred location of switch.**

Insulation Kit & Timber Clearance
The Real Fire Nero must be installed with an insulation kit. This must be ordered with the fire and fitted in the factory by Real Fires.
The insulation kit allows the firebox to be installed with minimal timber clearances: 10mm clearance on sides of firebox, 25mm clearance from rear and top of firebox
The timber clearance from the twin wall flue is also 25mm.There is no requirement for any additional fireproof materials within the fireplace cavity providing minimum clearances are allowed.

Recessed firebox installation
Standard wall linings are not suitable for recessed installation. Please contact Real Fires for advice prior to installation

Flue requirements
The minimum flue height is 2.4 metres
The flue cowl should be no lower than 900mm vertically from the roof line and a 2 metre horizontal clearance from any part of the building. **see cowl clearance drawing**

Flue and Cowl Size The Real Fires Nero has two flues

There are two flue spigots on top of the insulation kit.
Two 150mm/200mm x 1200mm long sections of flue are connected to the spigots.
The two flues are then connected to a special Y piece, this is a transition to join the two flues into one.
From the Y piece a single 250/300mm flue kit is used with a 250/300mm cowl.

Installation instructions
Firstly the firebox and flue are installed and then the burner is installed. The burner may be installed at a later date when all the construction work is complete and the hearth is in place.

The firebox is placed on the platform provided and the gas pipe is pushed through the hole at the right hand rear of the firebox (RH from the front of the fire).
This pipe is to be connected to the burner but may be left sealed if the burner is to be installed later. Leave enough pipe to connect the burner.

Once the firebox is in place ensure it is level. Usually the firebox is positioned centrally and so that the flange around the firebox opening is left forward of the timber framing by 10mm, this is to allow for giboard to be fixed behind the flange.

From the positioned firebox the flue can be assembled. The flue is in 1200mm lengths with both inner and outer flue. Each flue length has a crimped end to join tightly to the next length. Each joint must be securely fixed by at least three stainless steel rivets. The firebox has a spigot for the flue to locate over.
The flue lengths should be installed with the crimped end facing up.

The Firebox and flue should be secured by fixing with seismic strapping and/or brackets to framing.
Flue bends are available from Real Fires if the flue needs to be offset.
Appropriate weatherproof roof flashing/ chimney capping must be used to comply with NZS 5261

Once the installation of the firebox and flue is complete, the building work around the fireplace can continue. A timber cross frame is usually fixed above the firebox for gib fixing. This must be at least 25mm from the firebox.

The firebox has an electrical cable from the rear left hand side. The cable is approximately 1.2 metre long, it is intended to be connected by an electrician to an isolating switch positioned facing the room preferably on the left hand side of the fireplace cavity. See diagram---
(Please ensure the cable is not left behind the firebox and overlooked. It is difficult to gain access once the giboard is fixed)

Timber surround
If a timber surround is to be fitted, ensure it complies with Real Fires minimum clearance dimensions. **See installation drawing**

Installation of Real Fires burner into firebox
The electronic controlled burner is supplied assembled and boxed complete with, reflectors, front panel vermiculite, logs, & coals.

To make the gas connection, place the burner in the firebox with the bottom tray fitting into the cut outs in the bottom of the firebox and it is positioned central. The gas pipe should be bent into position & marked for cutting. Remove the burner, cut the pipe and make a flare connection.
Replace the burner into the firebox.

Plug in electrical connectors
Line in 3 pin socket connects to 3 pin plug to control box
4 pin socket from control box connects to 4 pin plug to fan

The lead with small jack plug connects to the remote control receiver board on the back of the front fascia. The fascia panel will need to be left off until the fire has been connected and tested.

Connect the gas pipe. Test for soundness.

Natural Gas Burner
Fill the burner tray with the vermiculite supplied ensuring the burner tube is completely covered.
Lay logs and coals on top of the vermiculite as shown in the **Log/Coal layout drawing.** Note that the shelf at the back of the burner is also used. **Do not place logs or coals close to the pilot.** It important that the coals are not too tightly placed as this will affect the heat output. The flame picture and radiant glow is better when there is good spacing between the coals.

L.P.G. Burner
The L.P.G. burner is a flat steel burner**.** This burner is supplied with a bag of coarse vermiculite, spread this thinly (5 to 10mm) over the surface of the burner.
Follow instructions for coal placement as with Natural Gas burner.

Commissioning of the Burner

The mains power supply needs to be connected and turned on. See instructions for remote control. Press the power on at the remote. The pilot should ignite, it may take several attempts until air has been purged out and gas is through. Once the pilot has ignited the burner will light. Check that the flame travels easily across the burner and that coal placement does not affect ignition. Re- position coals if required.
Ensure that there is no vermiculite touching the Pilot, ignition electrode, or flame sense electrode. This will cause ignition failure.

Burner Gas pressure

Check burner gas pressure from the test point on the burner supply pipe on the Natural gas model and on the injector elbow on the L.P.G. model.

See appliance data badge for pressure settings.

Adjustment of the Burner Gas pressure

Adjust the pressure at the gas valve if required. **See valve picture**
There are two adjustments, High and low setting. These are located at the front of the valve at the head of the blue solenoid.
High adjustment – This is the outer Brass hexagonal nut
Low Adjustment - This is the inner Red adjustment screw
When adjusting the high setting hold the low adjuster in place otherwise both may turn.

Fit the front fascia panel

Fit front fascia panel correctly onto fixing screws

Fit side reflectors

Fit side reflectors by tilting on an angle locating base onto fascia panel and then placing vertical. The return on the reflector then hooks over a securing screw in the side of the firebox.

Fitting Trim to Firebox

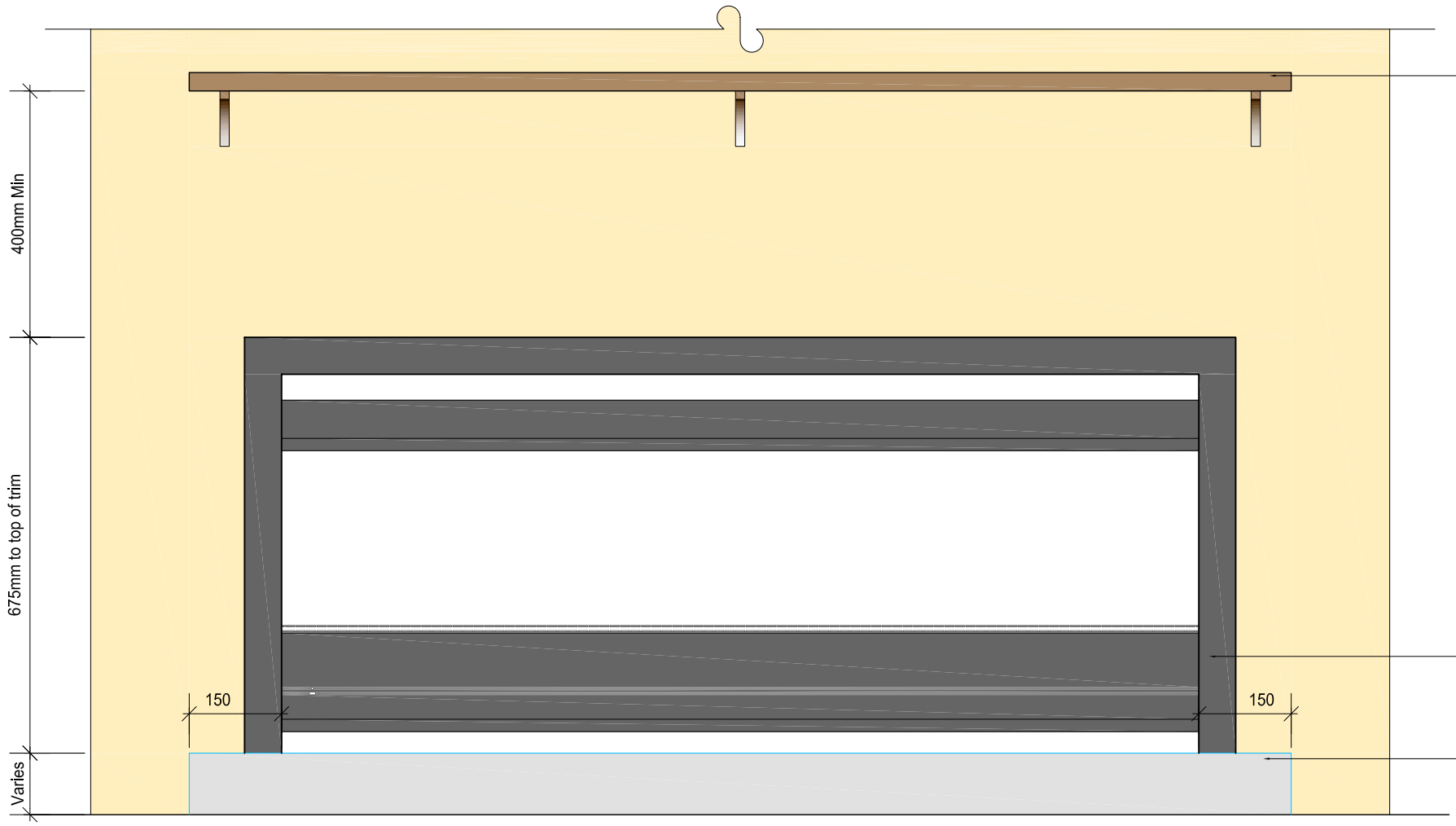
Fit the trim to the firebox. The trim brackets are designed to hang over the flange on the front of the firebox. The flange has provision to be moved slightly in or out to allow the bracket to fit. The flange on each side of the firebox has a raised square near the base of the fire. The Velcro pad is fixed to this, by removing the backing from one side of the pad and pushing firmly in place. Then remove backing from other side. Repeat on opposite side. Hang trim on brackets and check for level then push firmly onto Velcro pad.

Check that the fire is operating correctly and test for spillage of products of combustion.

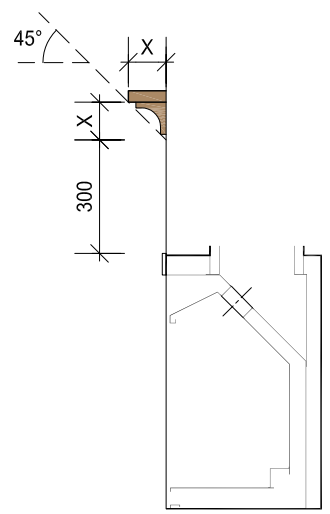
Instruct user
Once the installation is complete, instruct the user on the operation of the fire and complete commissioning details in Real Fires user manual.

All installations must be Certified

Installation must meet requirements of NZS5261.



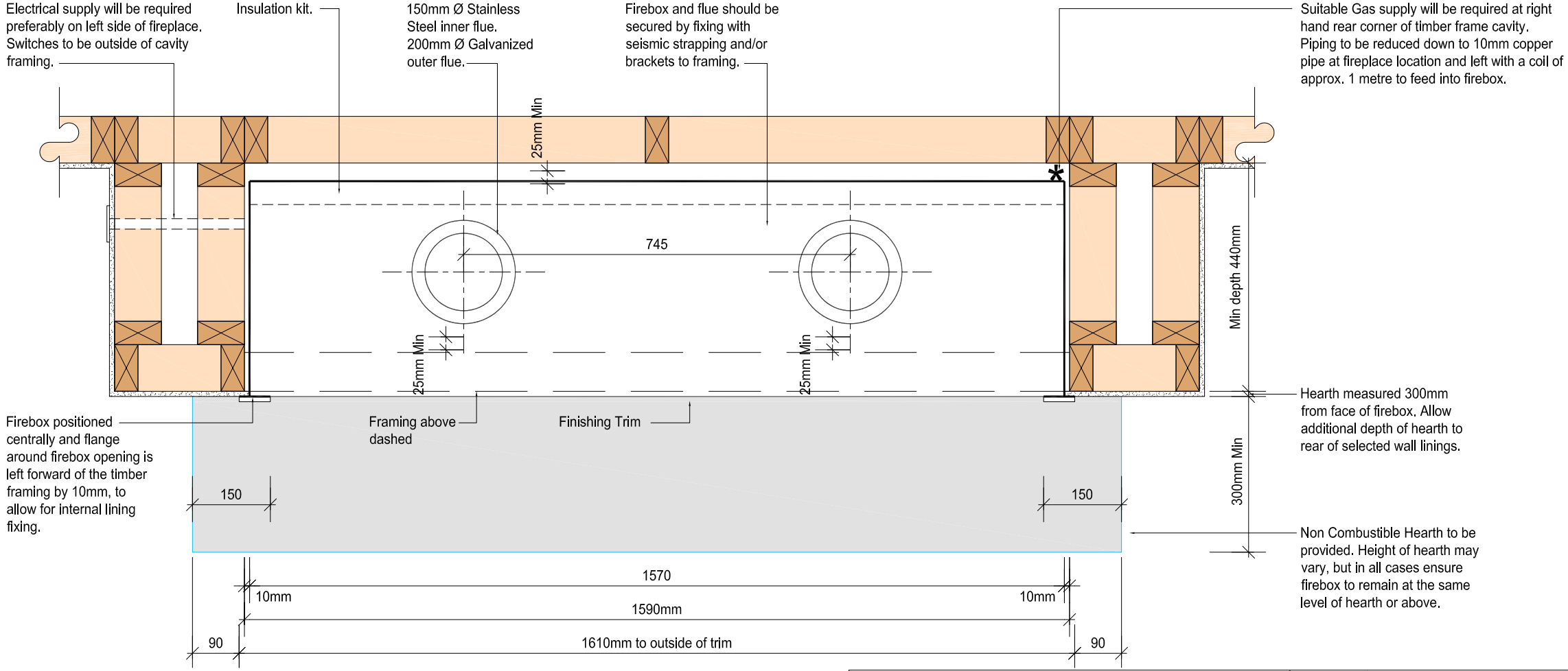
Selected mantle piece. Refer to mantle clearances for more information.



Mantle Clearances

Finishing Trim.

Non Combustible Hearth to be provided. Height of hearth may vary, but in all cases ensure firebox to remain at the same level of hearth or above.



Title: Real Fires Nero into Timber Framing				Dwg No:	REAL FIRES
Scale: 1:10 @ A3	Date: 01.05.06	Drawn: ARCAD	Rev: -		

Installation must meet requirements of NZS5261.

25mm Min

25mm Min

250mm Ø Stainless Steel inner flue.

300mm Ø Galvanized outer flue.

Y piece

Timber lintel fixed at 1200mm min height to allow for installation of firebox.

150mm Ø Stainless Steel inner flue.

25mm Min

25mm Min

200mm Ø Galvanized outer flue.

240

Timber cross frame to be fixed above after installation of firebox for internal lining fixing.

25mm Min

Finishing Trim.

1200mm Min

Convected Heat

Radiant Heat

Air

Fan

Varies

300mm Min

440mm Min Platform

Non Combustible Hearth to be provided. Height of hearth may vary, but in all cases ensure firebox to remain at the same level of hearth or above.

Hearth measured 300mm from face of firebox. Allow additional depth of hearth to rear of selected wall linings.

Firebox and flue should be secured by fixing with seismic strapping and/or brackets to framing.

Insulation kit.

25mm Min

Suitable Gas supply will be required at right hand rear corner of timber frame cavity. Piping to be reduced down to 10mm copper pipe at fireplace location and left with a coil of approx. 1 metre to feed into firebox.

*

Electrical supply will be required preferably on left side of fireplace. Switch to be outside of cavity framing.

Raised level platform.

25mm Min

25mm Min

Timber lintel fixed at 1200mm min height to allow for installation of firebox.

745

300

1200

25mm Min

25mm Min

150mm Ø Stainless Steel inner flue.

200mm Ø Galvanized outer flue.

1200mm Min

Insulation kit.

Suitable Gas supply will be required at right hand rear corner of timber frame cavity. Piping to be reduced down to 10mm copper pipe at fireplace location and left with a coil of approx. 1 metre to feed into firebox.

*

Varies

Raised level platform.

1570

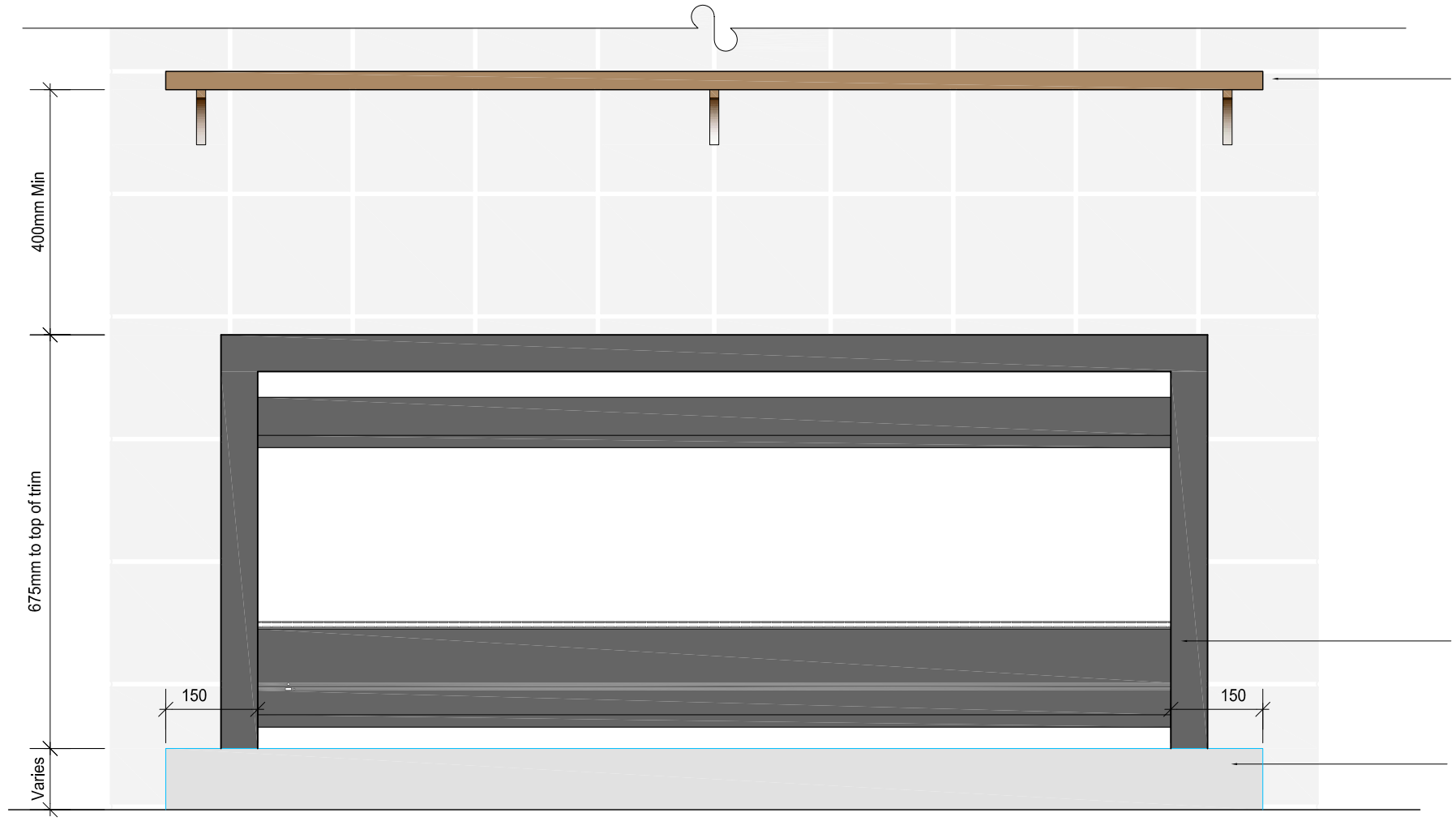
10mm

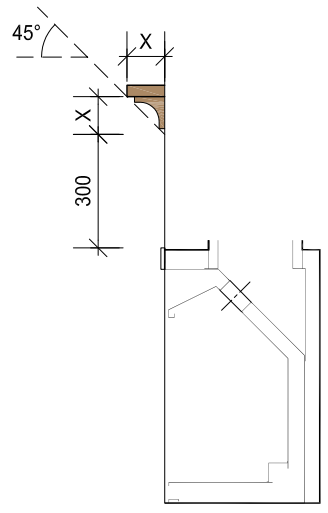
10mm

1590mm

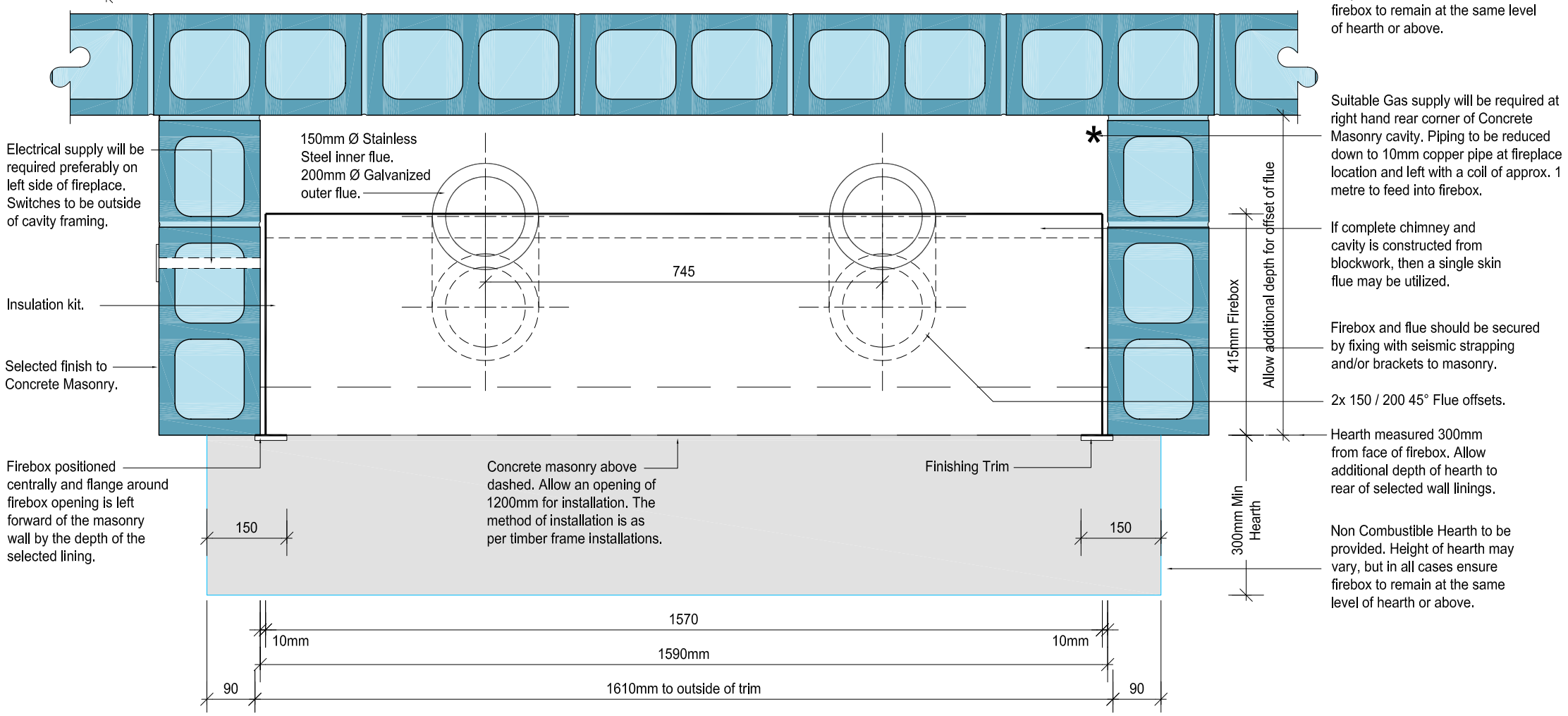
Title: Real Fires Nero into Timber Framing				Dwg No:	REAL FIRES
Scale: 1:10 @ A3	Date: 01.05.06	Drawn: ARCAD	Rev: -		

Installation must meet requirements of NZS5261.





Mantle Clearances



Title: Real Fires Nero into New Masonry Block				Dwg No:	REAL FIRES
Scale: 1:10 @ A3	Date: 01.05.06	Drawn: ARCAD	Rev: -		

Installation must meet requirements of NZS5261.

250mm Ø Stainless Steel inner flue.

300mm Ø Galvanized outer flue.

Y piece

150mm Ø Stainless Steel inner flue.

200mm Ø Galvanized outer flue.

Timber lintel fixed at 1200mm min height to allow for installation of firebox.

Allow an opening of 1200mm for installation. The method of installation is as per timber frame installations.

240

170

Selected finish to Concrete Masonry.

2x 150 / 200 45° Flue offsets.

Firebox positioned centrally and flange around firebox opening is left forward of the masonry wall by the depth of the selected lining.

Firebox and flue should be secured by fixing with seismic strapping and/or brackets to masonry.

1200mm Min if using a flue kit

Convected Heat

Radiant Heat

Insulation kit.

Non Combustible Hearth to be provided. Height of hearth may vary, but in all cases ensure firebox to remain at the same level of hearth or above.

Air

Fan

Suitable Gas supply will be required at right hand rear corner of Concrete Masonry cavity. Piping to be reduced down to 10mm copper pipe at fireplace location and left with a coil of approx. 1 metre to feed into firebox.

*

Electrical supply will be required preferably on left side of fireplace. Switch to be outside of cavity.

Varies

Raised level platform.

Hearth measured 300mm from face of firebox. Allow additional depth of hearth to rear of selected wall linings.

300mm Min Hearth

415mm Firebox

Allow additional depth for offset of flue

300

745

1200

25mm Min

25mm Min

150mm Ø Stainless Steel inner flue.

200mm Ø Galvanized outer flue.

2x 150 / 200 45° Flue offsets.

Insulation kit.

Suitable Gas supply will be required at right hand rear corner of Concrete Masonry cavity. Piping to be reduced down to 10mm copper pipe at fireplace location and left with a coil of approx. 1 metre to feed into firebox.

*

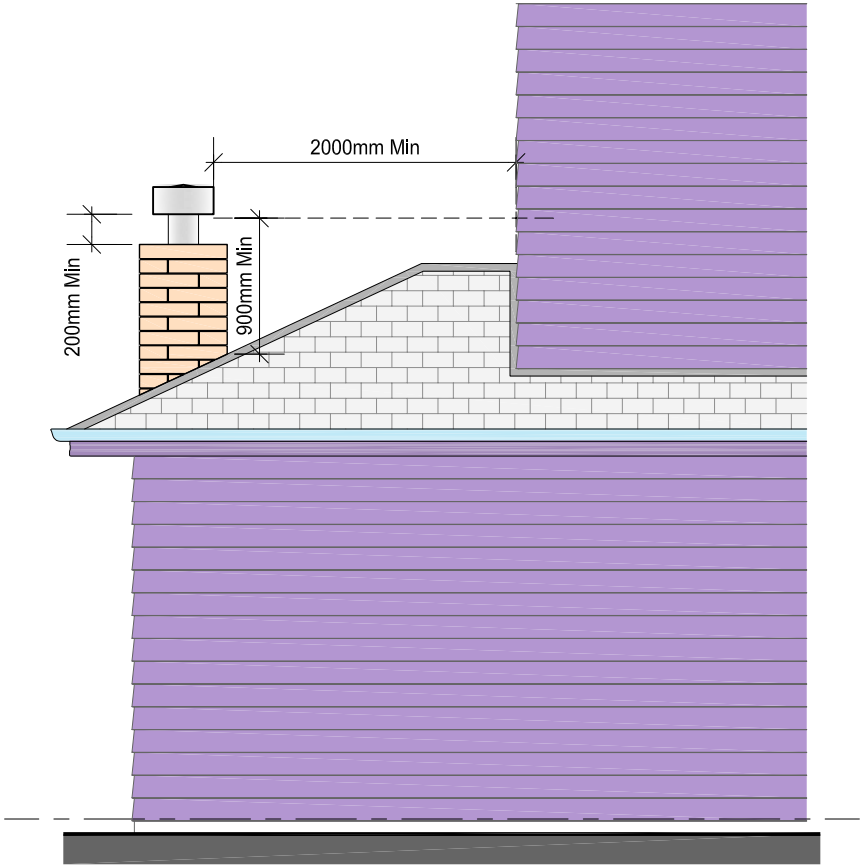
1570

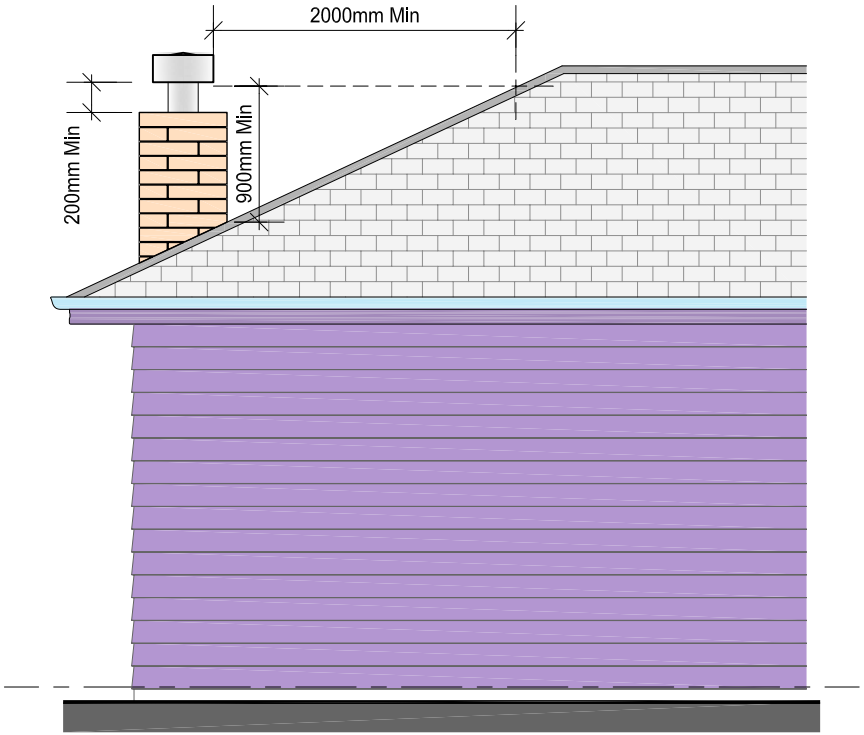
10mm

10mm

1590mm

Title: Real Fires Nero into New Masonry Block				Dwg No:	REAL FIRES
Scale: 1:10 @ A3	Date: 01.05.06	Drawn: ARCAD	Rev: -		





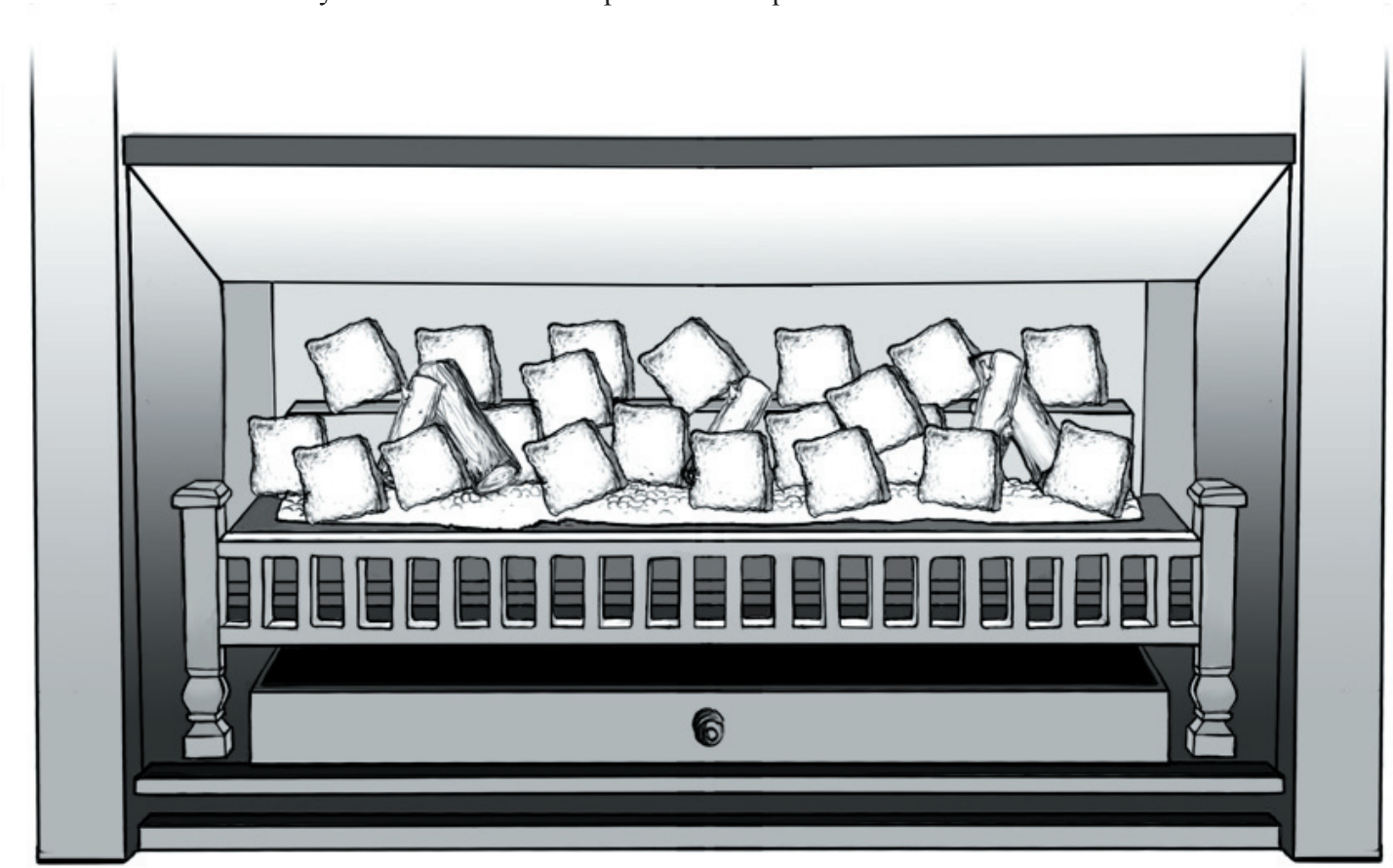
NOTE: The Real Fire gas fireplace flue is required to be 900mm minimum above the roof line and the cowl requires a clearance of 2000mm minimum to all sides.

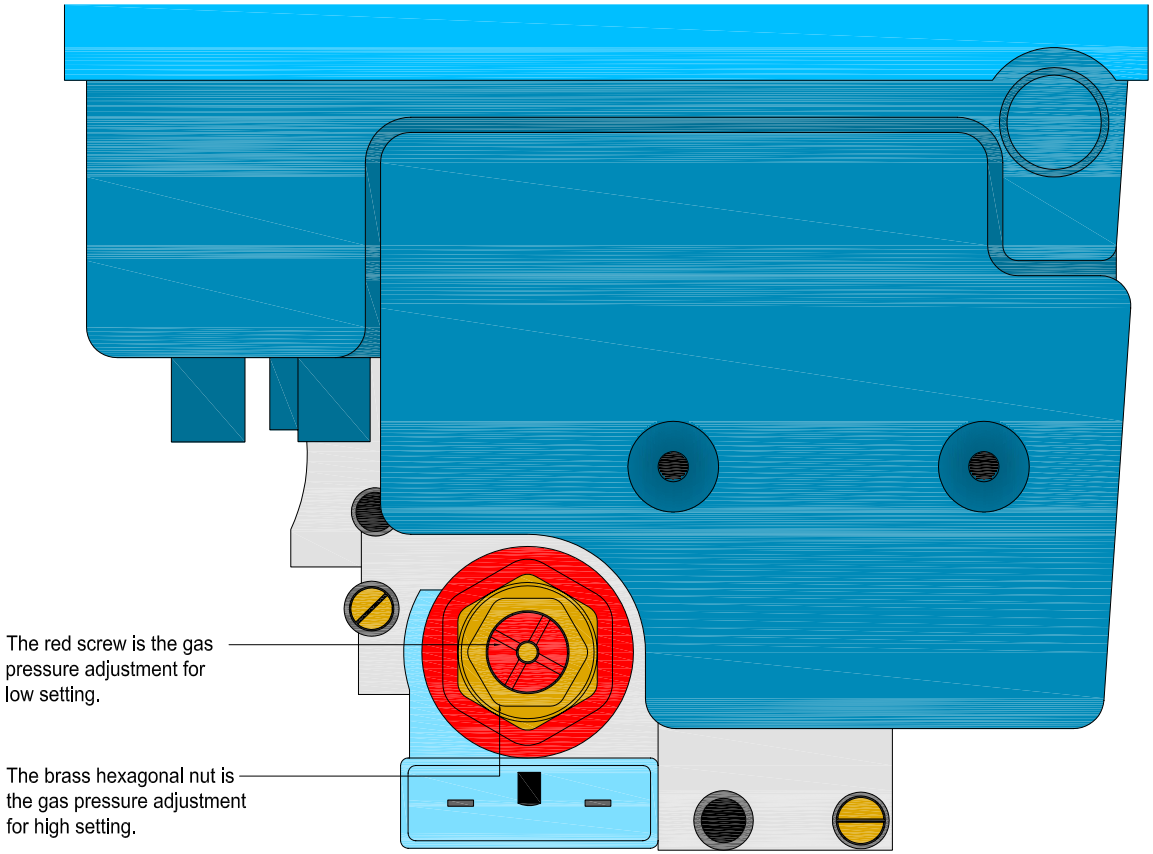
Title: Real Fires Flue Termination Requirements				Dwg No:	REAL FIRES
Scale: N.T.S	Date: 01.05.06	Drawn: ARCAD	Rev: -		

Real Fires Log and Coal Layout

This drawing is a typical example of the log and coal layout on a Real Fire 800
The layout is basically the same for all models with logs and coals decreased or increased in width to suit the size of fire. (The pilot ignition assembly has been omitted from the drawing).

It is important to ensure that the logs and coals are not too tightly placed as this will affect heat output. Do not place Logs and Coals close to the pilot and ensure that the burner lights easily and flame travels easily across the burner. Reposition if required.





Title: Minimal range gas control valve				Dwg No:	REAL FIRES
Scale: N.T.S	Date: 01.05.06	Drawn: ARCAD	Rev: -		