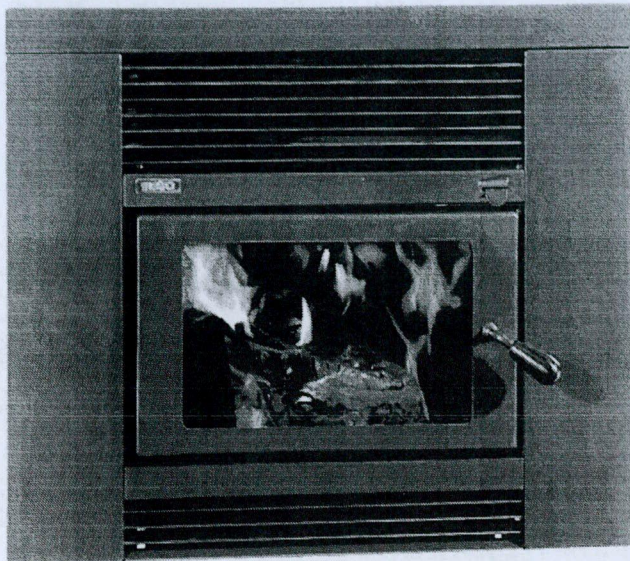
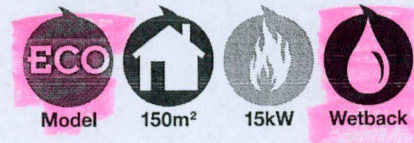


Insert & Built-In Series



METRO INSERT SMART

ECO Model finished in metallic black high temperature paint, matt black or dark charcoal vitreous enamel or silver.



ECO Model - Suitable for any size property. Can be installed into Clean Air Zones.



m² - The floor area the Metro wood fire is capable of heating. (Estimated on 2.4m stud height in an average NZ climate/insulation)



Kilowatt Output - The heat output with a Metro ECO Flue System fitted.

(A Metro ECO Flue System will increase the overall heat efficiency in your home)



Wetback - Can be fitted with an energy saving wetback.

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Model Dimensions (mm)	Width	Depth	Height
ECO Insert Smart Fascia	890	30	672
ECO Insert Firebox	560	500	550

Assembling your Metro wood fire

Pre Installation

Prior to installing your Metro fireplace insert into a fireplace cavity, it is important that certain clearances and other requirements are complied with as detailed below :-

Fireplace Cavity

The chimney must be swept. Also: -

- Check for cracks and general overall condition. If repairs are necessary, they must be carried out by a suitably qualified person.
- Check the cavity dimensions to ensure the fireplace insert will fit. It is usually necessary to remove the fire bricks from the lower fireplace cavity.

- The base of the fireplace cavity on which the Metro fireplace insert will rest must be level. If it is not, it should be levelled using mortar.
- If a timber or combustible mantelshelf exists above the fireplace opening, it should be a minimum distance above the top of the Metro's fascia. Minimum distance is 475mm.

If less than the above minimum specified, a deflector or heat shield will be required to be fitted under the mantelshelf.

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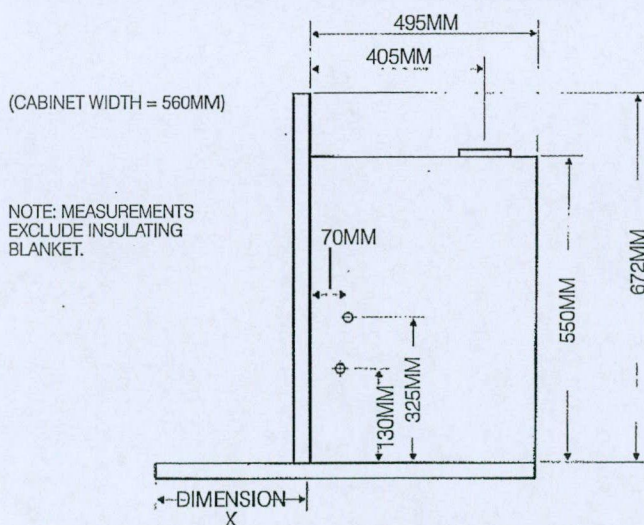
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Floor Protector Requirements

Metro fireplace inserts are designed to be installed directly onto a concrete base. An insulating floor protector is required to project in front of the Metro and must extend a minimum of 200mm to each side of the door opening making the minimum floor protector width 825mm. The minimum floor protector projection forward of the cavity wall is illustrated in the key below. The floor protector construction must be a minimum thickness of 26mm Eterpan, or alternative insulating material of equivalent insulation properties, to achieve the minimum insulation required. Finish with a non combustible tile or similar.

insert assembly is bolted to the wooden pallet through its base panel at two points being each front corner. Remove both screws and slide the insert into the fireplace cavity taking care not to mark the floor protector. Discard the pallet.

1. Attach the fascia with the four longer screws that were supplied in the plastic bag taking care that the air control lever passes through the slot provided in the fascia. Centralise and level the fascia on the fireplace insert door and secure the four screws.
2. Applying pressure to the door or inside the fireplace firebox (not the fascia) carefully manoeuvre the Metro until the rear of the fascia is just touching the front face of the fireplace surround. Taking care not to move the fireplace insert, remove the fascia and mark the position of the fireplace insert onto the fireplace base.
3. Using a masonry drill, drill into the chimney base through the two slots which the fireplace insert was secured to the pallet through, check to ensure the fireplace insert hasn't moved and secure using suitable masonry anchors to comply with the seismic restraint provisions of the standard.
4. Remove the top baffle from inside the fireplace insert and the removable cabinet top. Check that the flue stub of the fireplace insert is in line by looking down the chimney, if not a stainless steel offset or flexi flue will be required.
5. Following the instruction sheet supplied with the flue system, proceed and fit the flue with all joints sealed and riveted with a minimum of three stainless steel or monel rivets on each joint.
6. With the flue pipe in position and sealed with a high temperature fire cement into the flue stub, drill through the hole provided in the front of the flue stub into the stainless steel flue pipe and secure with the 6mm bolt and nut supplied in the plastic bag.
7. Refit the top baffle into the firebox's upper chamber. Reposition the removable cabinet top ensuring it is correctly fitting as detailed on page A and secure in its upper position if possible. Note, if the adjustable height top can be raised slightly but not fully to its upper position, additional holes should be drilled to enable the top to be raised to this level.



Floor Protector Requirements

Height (Floor Protector)	0mm	10mm	20mm	30mm	40mm
Dimension X	395mm	371mm	353mm	332mm	312mm

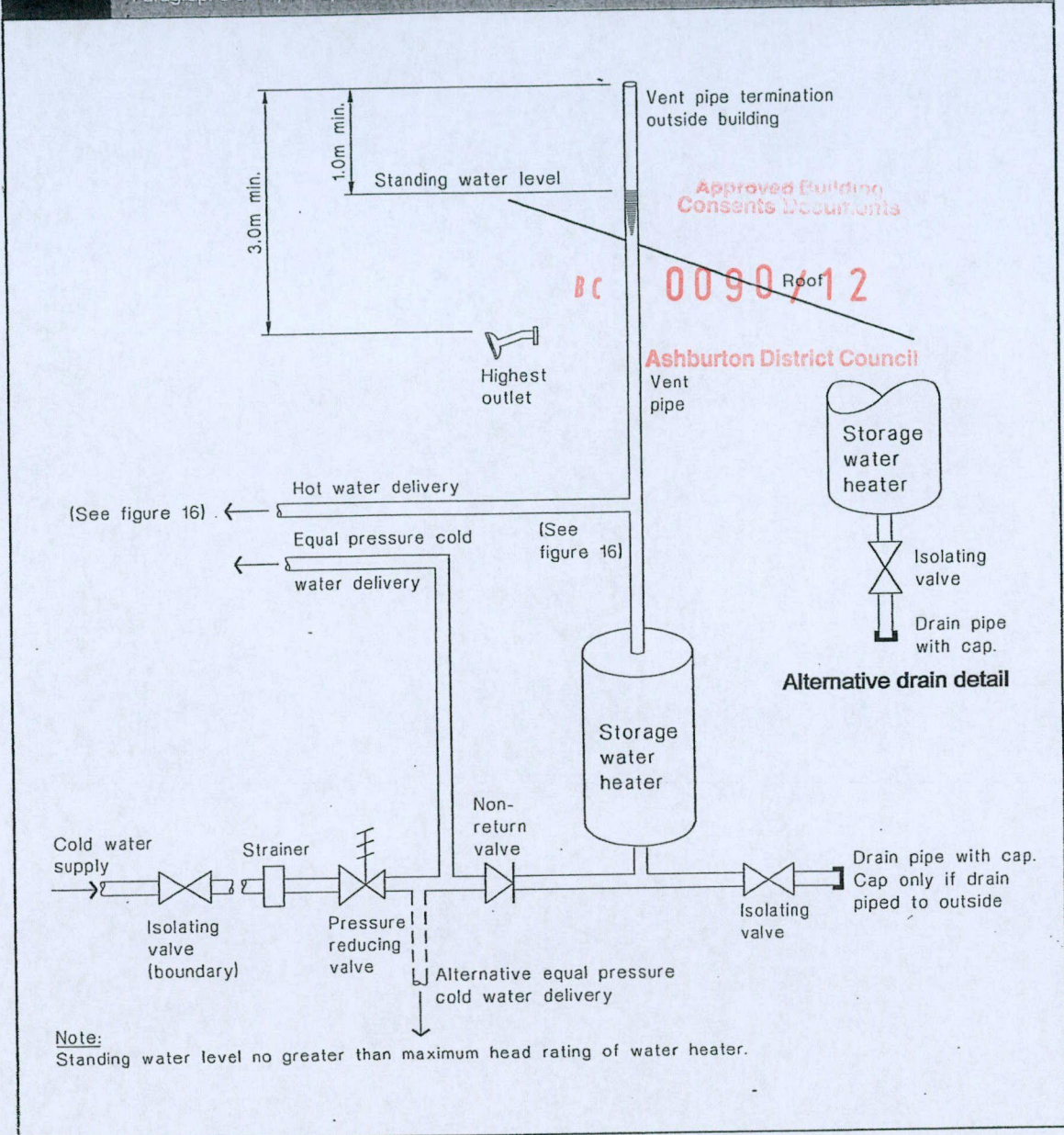
Fascia	Width	Height
ECO Smart Insert Fascia	890mm	672mm

Installation

Position the Metro ECO Smart Insert which is still attached to its wooden pallet directly in front of the fireplace cavity with the rear of the insert facing the fireplace opening. The fireplace

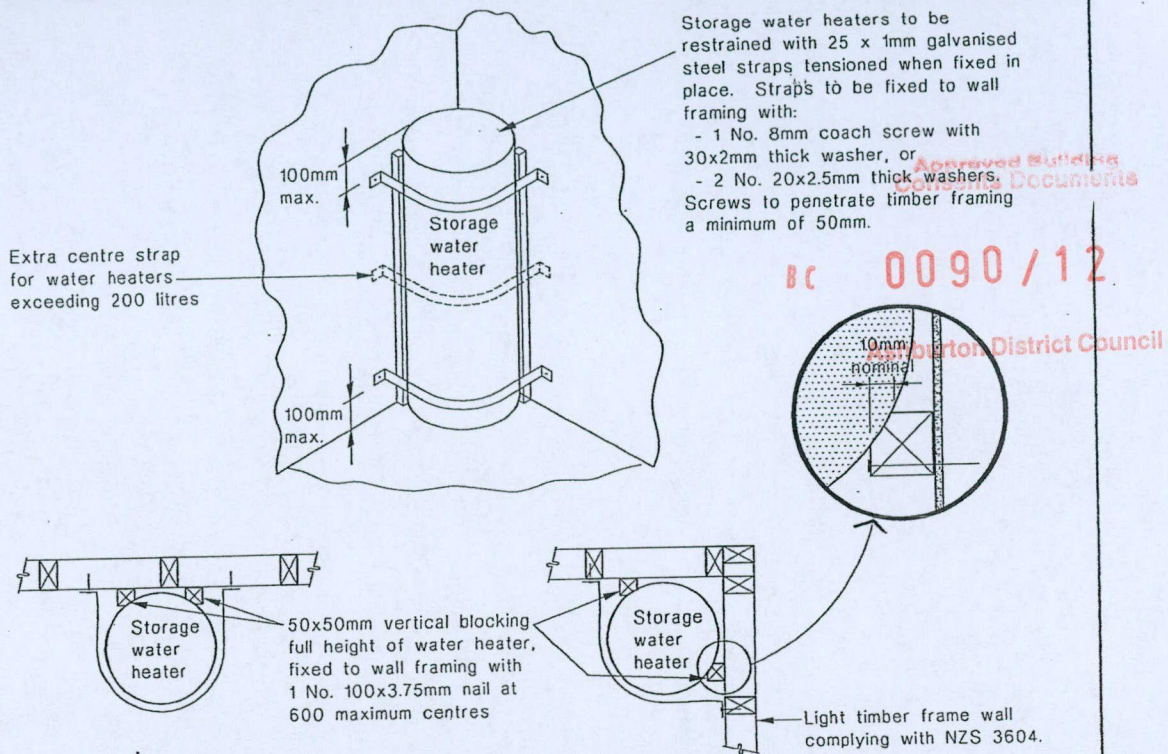
Figure 7: Open Vented Storage Water Heater System – Pressure Reducing Valve
Paragraphs 5.4.3, 6.1.2, 6.2.1 b), 6.8.2 d)

Amend 5
Feb 2004



Amend 5
Feb 2004

Figure 14: Seismic Restraint of Storage Water Heaters 90 – 360 litres
Paragraph 6.11.4



6.11.4 Structural Support

NZBC B1.3.2 requires *building elements* (including *storage water heaters*) to be adequately supported including support against earthquake forces. The method illustrated in Figure 14 is acceptable for *water heaters* up to 360 litre capacity. Where fittings and pipework are attached to the *water heater* through the supporting platform or floor a 50 mm minimum clearance shall be provided between the fitting and the support structure.

6.11.5 Another acceptable solution for securing *storage water heaters* against seismic forces is given in Section 203 of NZS 4603.

6.12 Hot water pipe sizes

6.12.1 The *diameter* of hot water supply pipes from *storage water heaters* and to *sanitary fixtures* shall be no less than those required by Table 4.

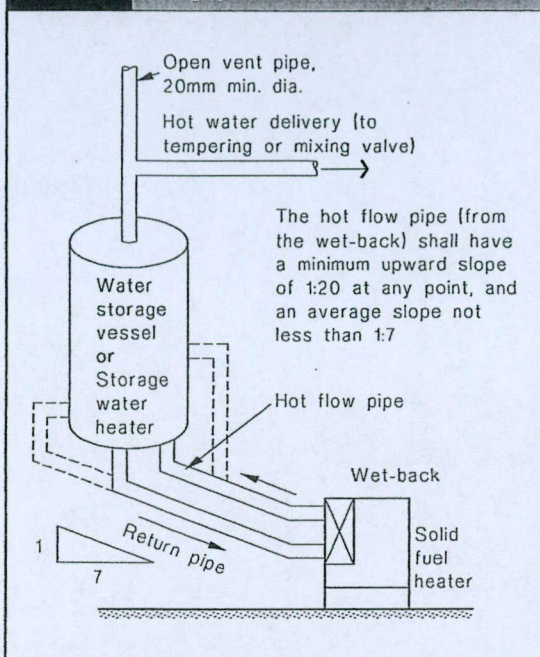
6.13 Wet-back water heaters

6.13.1 Wet-back *water heaters* shall be:

- Connected only to *open vented storage water heaters*, or a water storage vessel (see Figure 15), and
- Made of copper.

6.13.2 Copper pipework shall be used between the wet-back and the *water tank*.

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Dec 2007Amend 5
Feb 2004Amend 5
Feb 2004

Amend 5
Feb 2004**Figure 15: Wet-back Installation – Open Vented System**
Paragraph 6.13.1 a)**6.14 Safe water temperatures****6.14.1 Maximum temperatures**

The delivered hot water temperature at any *sanitary fixture* used for personal hygiene shall not exceed:

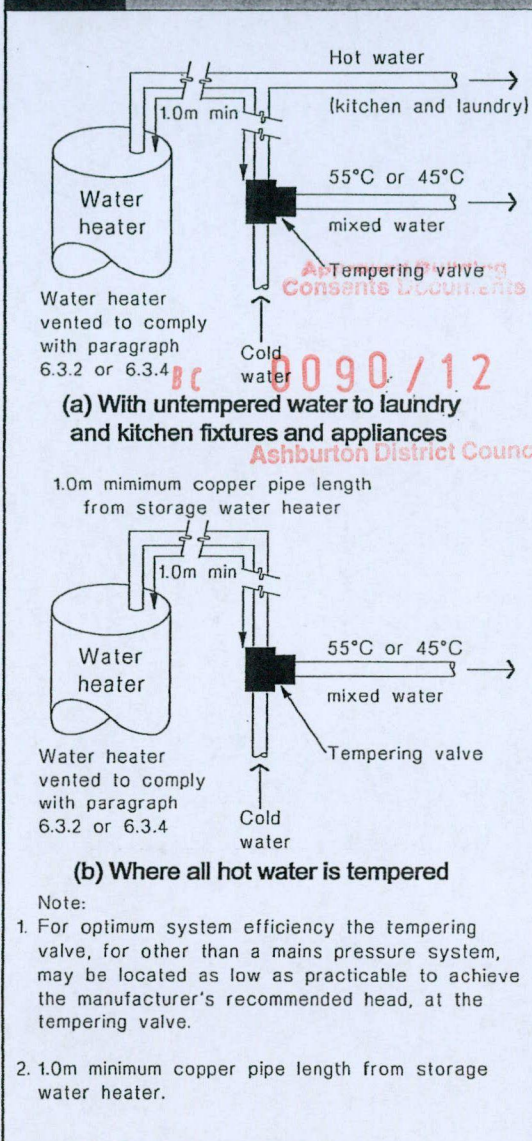
- a) 45°C for early childhood centres, schools, old people's homes, institutions for people with psychiatric or physical disabilities, hospitals, and
- b) 55°C for all other *buildings*.

COMMENT:

1. At greatest risk from scalding are children, the elderly, and people with physical or intellectual disabilities, particularly those in institutional care.
2. *Sanitary fixtures* used for personal hygiene includes showers, baths, hand basins and bidets.

6.14.2 Hot water delivered from storage water heaters

- a) An acceptable method of limiting hot water temperature delivered from *storage water heaters* is to install a mixing device between the outlet of the *water heater* and the *sanitary fixture* (see Figure 16).

Amend 5
Feb 2004**Figure 16: Tempering Valve Installation**
Paragraph 6.14.2 a)Amend 5
Feb 2004

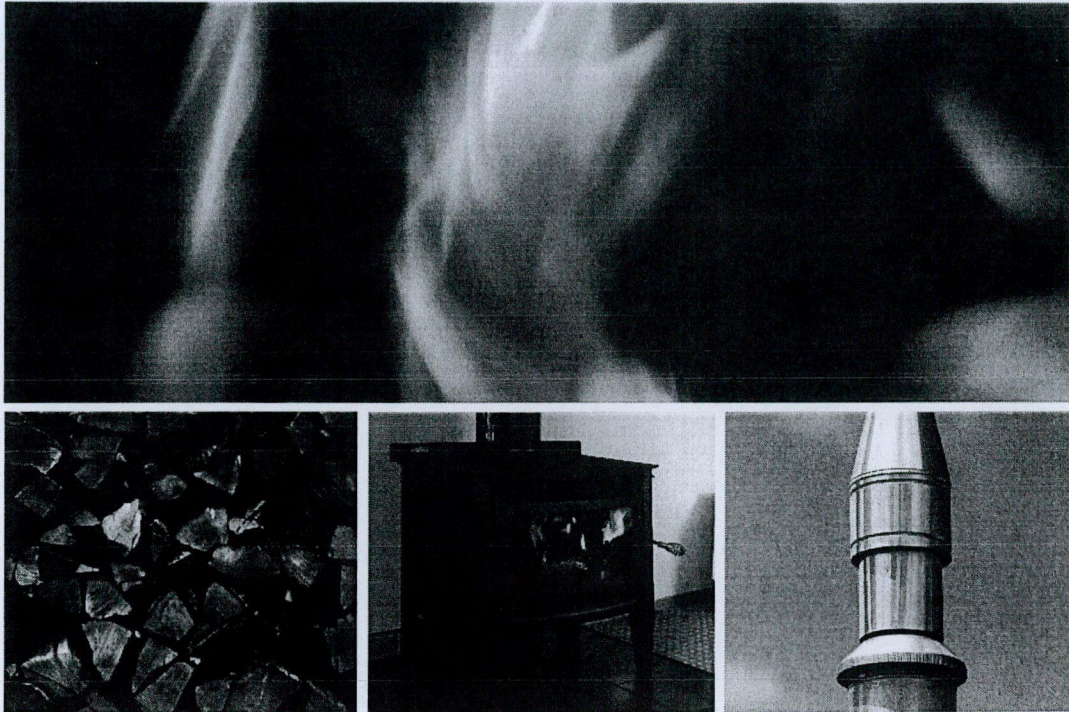
- b) Tempering valves shall comply with NZS 4617 or AS 1357.2.

6.14.3 Legionella bacteria

Irrespective of whether a mixing device is installed, the *storage water heater* control thermostat shall be set at a temperature of not less than 60°C to prevent the growth of *Legionella* bacteria.

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ECO Flue System Installation Manual



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ECO Flue Systems

Freestanding Flue Systems

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Insert Flue Systems

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Installation Instructions ECO Insert Flue System

This flue system has been manufactured and complies with AS/NZS2918:2001. To ensure a safe and efficient installation, this flue system must be installed as detailed below by either a registered installer, or someone competent in installing solid fuel appliances.

1. Check the masonry chimney for structural soundness and make any repairs that are necessary.

Note: Most councils require the masonry chimney to be inspected prior to installation. The masonry chimney cavity must also be swept prior to installation.

2. Once the fireplace insert has been installed correctly as per the manufacturers instructions, look directly down the chimney to ensure the wood fire flue spigot is in line with the masonry chimney. (A torch will be required).
3. If you cannot see the flue spigot, a flue pipe offset will be required. If so, install the flue pipe offset so the top of it can be clearly seen from the top of the masonry chimney.
4. If an offset is required, an adjustable telescopic type is recommended. Measure the amount of offset required and adjust the telescopic offset to suit, after smearing an adequate amount of Pioneer fire cement onto the slip section of the offset to ensure a good seal, then rivet the offset in three locations around its circumference. (If the offset is used in its fully compressed form, it will be necessary to modify the end of the female slip section otherwise it will restrict the internal diameter) Apply a liberal amount of Pioneer fire cement into the flue outlet of the fireplace insert, and fit the lower crimped end of the offset into position inside the flue outlet, and bolt into position.

Note: In some installations where it is not possible to fit offsets or rigid flue pipe due to the shape of the masonry chimney cavity, "Flexi flue" may be used.

5. Secure the flue pipes together and ensure the flue seams are in line. Flue pipe joints must be fully compressed with a considerable amount of fire cement to ensure a good seal, and then riveted together at three even points around the flue join. Prior to installing the assembled flue pipe into the masonry chimney cavity, take careful note to ensure there are no overhead power lines in close proximity.
6. Lower the flue pipe into the masonry chimney, with the crimped end fitting into the fireplace insert flue outlet/offset, and securely attach with three rivets (offset/bend must be riveted to the flue pipe). For installations where extra lengths of flue pipe are required, or when the weather is poor, it will be easier to assemble the flue pipe lengths as they are lowered into the masonry chimney.

7. Secure the outer casing to the masonry chimney with suitable fasteners and weatherproof/seal to the masonry chimney top with mortar or silicone. Note: The top of the outer casing must be "level" (+ or - 10mm) with the top of the 150mm stainless steel flue pipe. An optional masonry chimney flashing plate is available if required.
8. Assemble the ECO vertical discharge cowl as follows;
 - Take the stainless steel weather butterfly (A) so the angled sections are facing up and fold "up" both arms at the slot provided to just over 90 degrees as shown.
 - With both arms and angled sections of the stainless steel weather butterfly (A) facing up, fit it into the stainless steel cowl housing (B), and secure in position through the holes provided with stainless steel rivets.

Note: Once fitted the weather butterfly will be slightly angled within the cowl housing.

- Now fit the base of the cowl housing (B) over the brackets of the outer casing extension (C) ensuring the 3 x prepunched holes punched in its lower skirt align centrally over the three brackets attached to the casing extension as illustrated. Push the cowl housing down fully until its internal swage rests on the casing extension brackets (the brackets should be "just but fully" inside the base of the cowl housing). Drill through the three pre-punched holes in the cowl housing through the three brackets and secure with stainless steel rivets.

The removable section of the ECO cowl is now fully assembled.

9. Making your way back onto the roof, fit the 480mm long flue pipe extension/flashing cone (D), with the flashing cone at the bottom, fit its short flue section inside the top of the already installed 150mm diameter flue pipe. Ensure the three brackets extended below the flashing cone fit "outside" the outer casing slip section. Drill through the pre-punched hole in all three brackets into the outer casing slip and secure with rivets.
10. Taking the "removable section of the ECO cowl" assembled in section (8) above, position it over the top of the stainless steel flue pipe extension, and slide it down fully. This removable section does not require riveting and therefore enables easy removal for future flue cleaning.

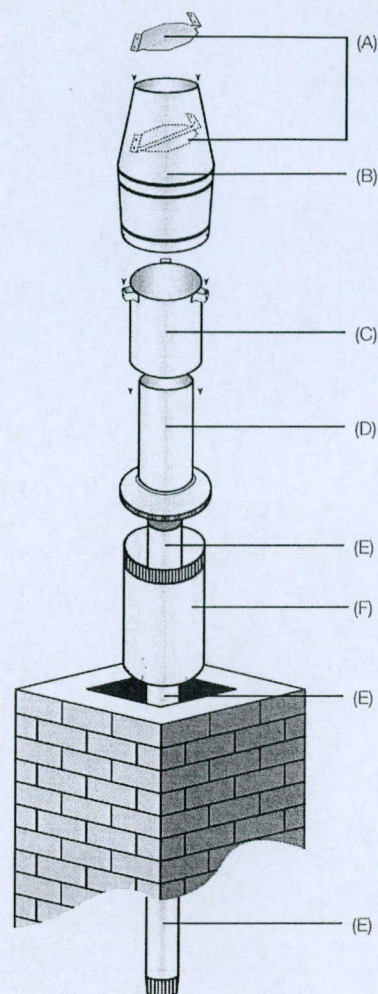
Component Checklist ECO Insert Flue System Kit

Please read these instructions fully prior to installation of the Insert Flue System and familiarise yourself with all the various components as illustrated right and listed below.

Note: Rivets and fire cement are not included as they are supplied by the installer.

ECO INSERT FLUE SYSTEM KIT COMPONENTS

- (A) 1 x Stainless steel weather butterfly
- (B) 1 x Stainless steel ECO cowl housing
- (C) 1 x 225mm x 200mm diameter stainless steel outer casing extension
- (D) 1 x 480mm long stainless steel flue pipe extension with flashing cone
- (E) 3 x 1200mm x 150mm diameter stainless steel flue pipe
- (F) 1 x 600mm x 250mm diameter galvanised outer casing



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Good afternoon Ken,

As briefly discussed I can confirm the side clearances you are looking for are as follows:

1. Standard masonry chimney installation – side fascia panel clearance.
 - If the side combustible surface does not protrude past the fascia panel depth; i.e. not into the room any further, then the only requirement is an air gap which can be as little as 5mm.
 - If the side combustible surface does protrude past the fascia panel depth; i.e. into the room further, then the combustible surface can be affected by the radiant heat which exits through the ceramic door glass. Therefore the clearance requirement will be to the next "as tested" similar model which in this case is the ECO Wee Ped as this appliance utilizes the same firebox. This has a side or "G" clearance measurement of 300mm. This should be applied from the firebox outer cabinet not the fascia panel.
2. Installation using a Vented Zero Clearance Cabinet.
 - If the side combustible surface does not protrude past the fascia panel depth; i.e. not into the room any further, then the combustible surface can be hard up against the fascia.
 - If the side combustible surface does protrude past the fascia panel depth; i.e. into the room further, then the combustible surface can be affected by the radiant heat which exits through the ceramic door glass. Therefore the clearance requirement will be to the next "as tested" similar model which in this case is the ECO Wee Ped as this appliance utilizes the same firebox. This has a side or "G" clearance measurement of 300mm. This should be applied from the firebox outer cabinet not the fascia panel.

Note: The mantle minimum clearances as detailed in our specification sheets apply at all times.

I trust this answers the query you had. If you have any other questions or require any additional information please don't hesitate to contact me or one of our customer service technicians on info@metrofires.co.nz.

Kind Regards,

Neil Tapsell
Production Manager

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MANUFACTURING LIMITED

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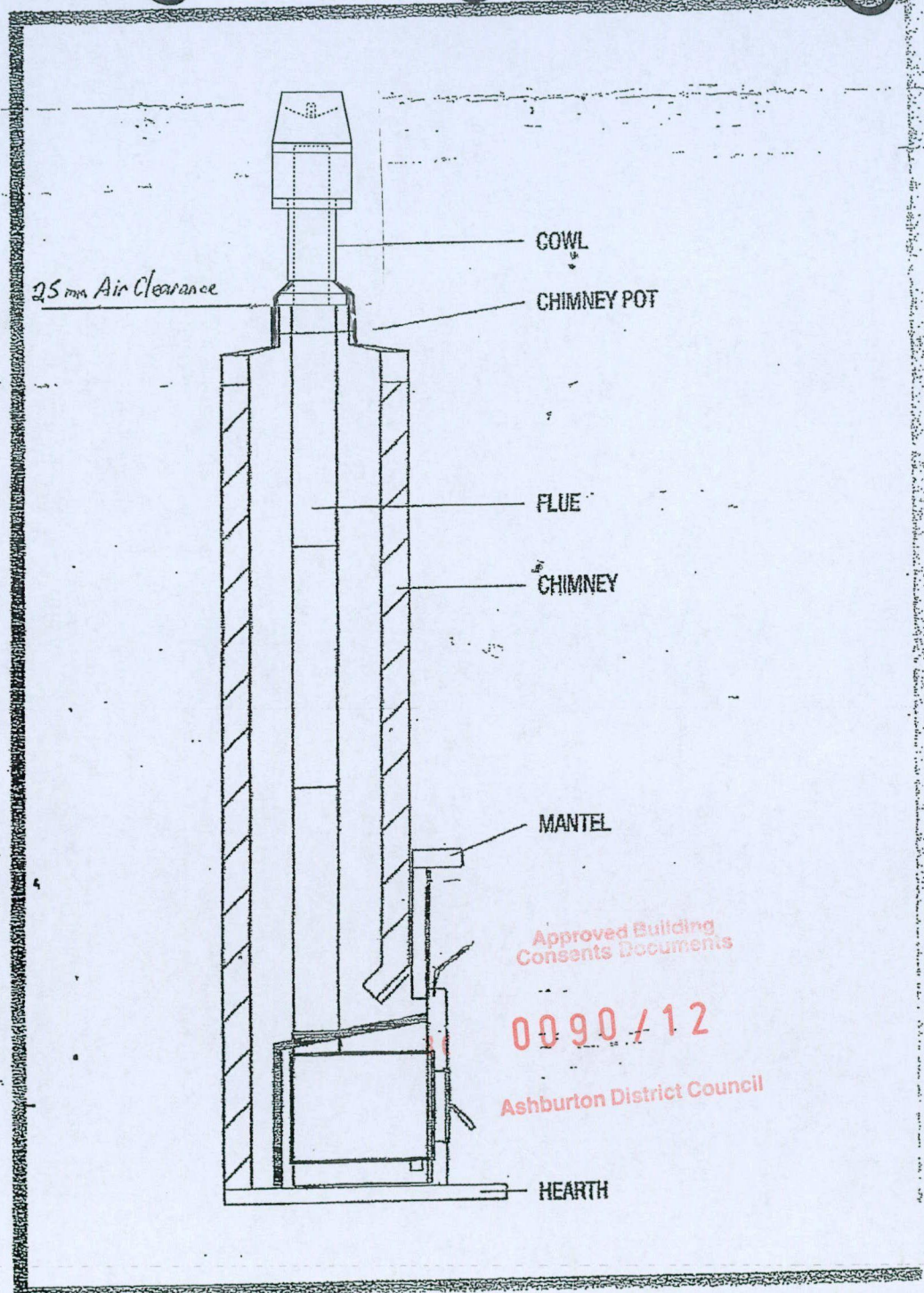


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1etro Ave.

Existing Flashing + Chimney.



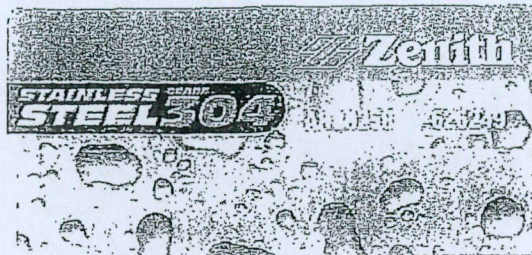
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Log Fire Specialist

Installation / Repairs

Solid Fuel Heating Installation Specialist

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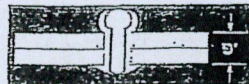


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Recycle

This product is guaranteed against faulty
workmanship and materials. Should it
fail to perform satisfactorily in the intended
application, request to place of purchase
for replacement.

ALUMINUM	FOR ALUMINUM AREAS
STAINLESS	FOR STAINLESS AREAS
COPPER	FOR COPPER AREAS

Grp length - Should be equal or
slightly greater than overall thickness
of materials being fastened.



Insert rivet, activate tool and fasten.

INSTALLATION: Drill hole using No. 30 stub drill.

APPLICATIONS: Use where corrosion is a problem.



**BLIND RIVETS
OPEN STAINLESS 4.2**

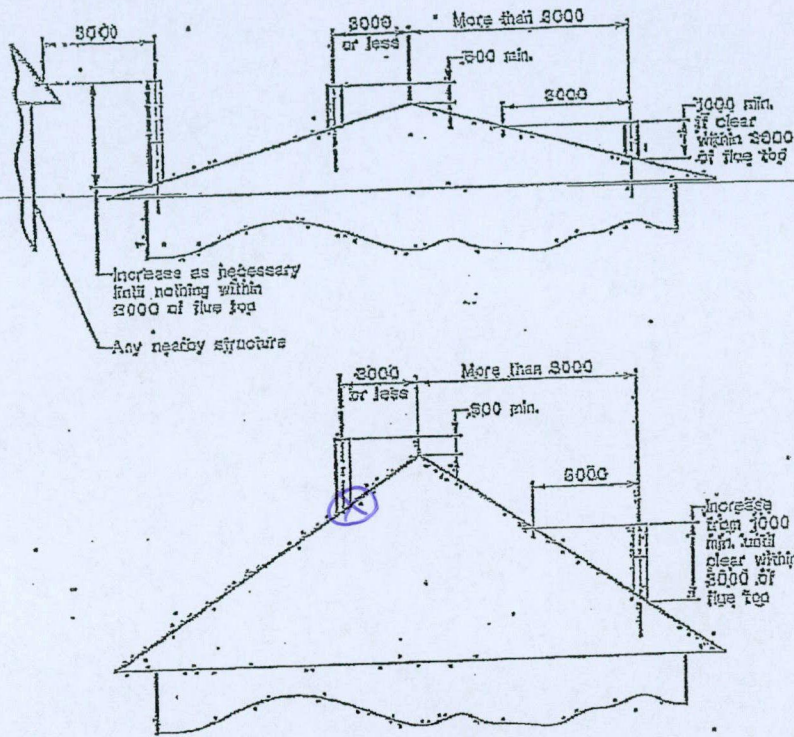


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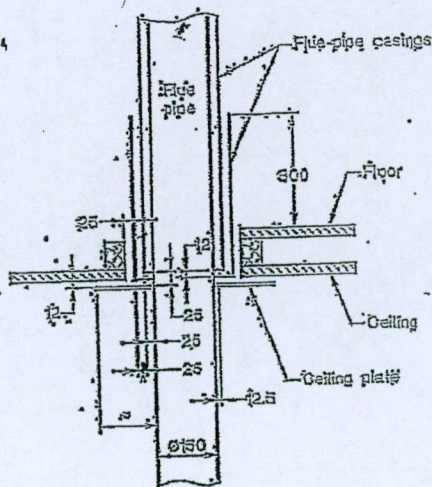
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TYPICAL FLUE INSTALLATION AND POSITIONING
(per AS/NZS 2918:2001)



DIMENSIONS IN MILLIMETRES

FIGURE 4.9 MINIMUM HEIGHT OF FLUE SYSTEM EXIT



* Dimensions as determined by testing

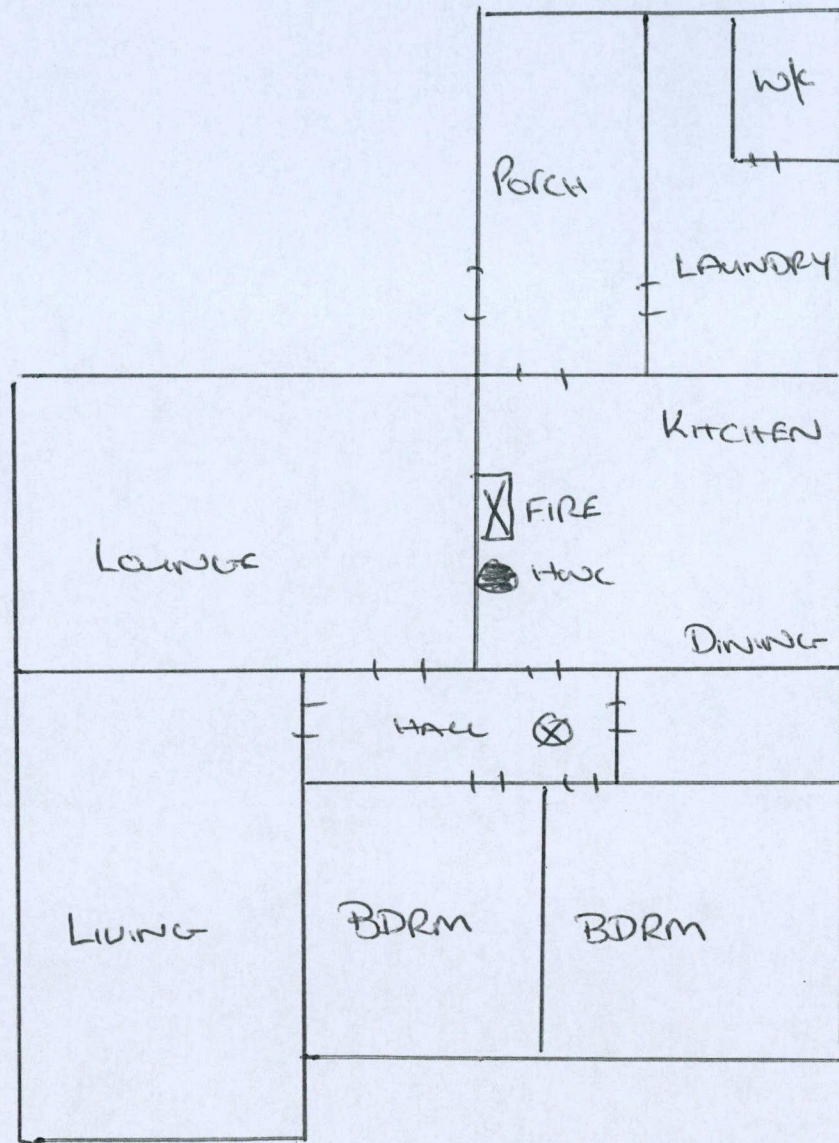
DIMENSIONS IN MILLIMETRES

FIGURE 4.4(b) TYPICAL EXAMPLE OF A CEILING PENETRATION FOR A TESTED FLUE SYSTEM

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