

Design Steps 4 and 5 – Bracing Units Achieved (Wind and Earthquake)

The next step is to place selected wall bracing systems on the bracing lines. A range of Gib® bracing systems have been tested and the specifications and Bracing Unit ratings are listed below. Standard Gib® plasterboard systems often represent the majority of the wall bracing elements. Gib® Braceline or Gib® Toughline systems are used for narrow walls or when high Bracing Unit ratings are required. Gib® Noiseline and Gib® Ultraline Bracing Unit ratings generally fall between Standard Gib® plasterboard and Gib® Braceline.

Wall Heights Other Than 2.4m

The published Bracing Unit ratings are based on a 2.4 metre height. For other heights, the ratings must be multiplied by a factor $f = 2.4$ divided by actual wall height. The Bracing Unit ratings for walls higher than 2.4 metres will reduce, and the Bracing Unit rating for lower walls will increase. Factor f must not be greater than 1.3.

TABLE 1: Bracing Unit ratings for 9.5mm & 12.5mm Standard Gib® plasterboard, 9.5mm Gib® Ultraline, 9.5mm Gib® Aqualine, 9.5mm Gib® Fyrelime, 9.5mm Gib® Noiseline.

Type	Minimum length (m)	Lining Requirement	Additional Requirement	Bracing Units per metre (wind)	Bracing Units per metre (Earthquake)
Standard 9.5mm Gib® plasterboard bracing systems (these ratings also apply to 9.5mm Gib® Aqualine, and 9.5mm Gib® Fyrelime)					
GIB1a	1.8-2.4	Standard 9.5mm Gib® plasterboard one face, fixed horizontal or vertical	diagonal brace	55	50
GIB1b	Over 2.4			75	50
GIB2a	1.8-2.4	Standard 9.5mm Gib® plasterboard both faces, fixed horizontal or vertical	diagonal brace	75	60
GIB2b	Over 2.4			80	70
GIB3	1.2	Standard 9.5mm Gib® plasterboard both faces, fixed horizontal or vertical	N/A	65	60
Standard 12.5mm Gib® plasterboard bracing systems					
GIB10	1.8	Standard 12.5mm Gib® plasterboard one face, fixed horizontal or vertical	N/A	65	60
GIB11	1.2	Standard 12.5mm Gib® plasterboard both faces, fixed horizontal or vertical	N/A	65	65
9.5mm Gib® Ultraline bracing systems (these ratings also apply to 9.5mm Gib® Noiseline)					
UL1	1.2	Gib® Ultraline one face, fixed horizontal or vertical	6kN connections	70	60
UL2	1.2	Gib® Ultraline both faces, fixed horizontal or vertical	6kN connections	100	85

Design Steps 4 and 5 – Bracing Units Achieved (Wind and Earthquake)

TABLE 2: Bracing Unit ratings for 9.5mm Gib® Braceline and 9.5mm or 12.5mm Gib® Toughline.

Type	Minimum length (m)	Lining Requirement	Additional Requirement	Bracing Units per metre (wind)	Bracing Units per metre (Earthquake)
9.5mm Gib® Braceline bracing systems (these ratings also apply to 9.5mm or 12.5mm Gib® Toughline)					
BR1a	1.8-2.4	Gib® Braceline one face, fixed horizontal or vertical	diagonal brace	70	60
BR1b	Over 2.4			90	75
BR2a	1.8-2.4	Gib® Braceline one face, fixed vertical	N/A	75	60
BR2b	Over 2.4			85	60
BR3a	1.8-2.4	Gib® Braceline one face, fixed horizontal	N/A	60	45
BR3b	Over 2.4			95	65
BR4	0.9-1.2	Gib® Braceline one face, fixed vertical or horizontal*.	6kN connections	100	85
BR5	1.2	Gib® Braceline one face, fixed vertical or horizontal*.	6kN connections	115	85
BR6	1.2	Gib® Braceline one face, Standard 9.5mm Gib® plasterboard on the other, fixed vertical or horizontal*.	12kN connections	150	110
BR7	0.9	Gib® Braceline one face, 7.5mm plywood on the other, fixed vertical or horizontal*.	6kN connections	145	145
BR8	0.9	Gib® Braceline one face, 4.75mm hardboard on the other, fixed vertical or horizontal*.	6kN connections	120	95
BR9	0.6	Gib® Braceline one face, fixed vertical or horizontal*.	6kN connections	110	95

- Notes:**
- 1) Where linings are specified on both faces (Systems GIB2, GIB3, GIB11, UL2, BR6, BR7, BR8) each face must be fastened as a braced element. Refer page 12 for fastening systems relating to Plywood and Hardboard.
 - 2) See notes on Hold-Down Strap Placement, Page 12.
 - *3) For horizontal fixing of linings in Systems BR4, BR5, BR6, BR7, BR8, BR9, see page 18.

Construction Details

Framing

General framing requirements such as grade, spacings and installation shall comply with the provisions of NZS 3604. Winstone Wallboards recommends the use of kiln-dried machine stress graded framing (KD MSG). To achieve the published bracing performance the minimum actual framing dimensions are 90 x 35mm for external walls and 70 x 35mm for internal walls. System BR9 always requires a minimum of 90 x 35mm framing.

Wall bracing tests on Gib® Systems were undertaken without nogs. Nogs are not considered to add to the bracing performance of the wall.

Fastening Gib® Plasterboard Linings

Standard 9.5mm and 12.5mm Gib® plasterboard, 9.5mm Gib® Ultraline, 9.5mm Gib® Noiseline and 12.5mm Gib® Toughline may all be fastened using 32mm x 6g Gib® Grabber drywall screws or 30 x 2.8mm Gib® Nails. Gib® Braceline and 9.5mm Gib® Toughline must be fastened with 32mm Gib® Grabber Braceline screws, or 30mm Gib® Braceline nails and washers.

Gib® linings for designated bracing elements are fastened at 150mm centres around the perimeter of the bracing element. **The first fastener is always placed 50mm away from the sheet corner. See detail page 16.**

Fastening in the field of the bracing element is conventional and the screw and glue method is recommended. (See Fastener Layout details, pages 14, 15).

When fixing part sheets of Gib® plasterboard, a minimum width of 300mm is recommended for bracing elements.

Full height sheets shall be used where possible. Where sheet end butt joints are unavoidable they must be formed over nogs (or over the studs where horizontal fixing is permissible) and fastened at 200mm centres. Alternatively, the sheet end butt joints may be back-blocked.

Plywood (BR7) and Hardboard (BR8)

'Plywood' specified in BR7 is a grade C-D 7.5mm construction plywood manufactured to AS/NZS 2269:1994, fixed with 30 x 2.8mm Gib® Nails at 150mm centres around the perimeter of the bracing element and at 300mm centres to intermediate framing.

'Hardboard' specified in BR8 is 4.75mm standard or oil tempered hardboard manufactured by Fletcher Wood Panels Ltd., fixed with 30 x 2.8mm Gib® Nails at 150mm centres around the perimeter of the bracing element and at 300mm centres to intermediate framing.

Fire Resistance Ratings

9.5mm Gib® Braceline, 9.5mm Gib® Aqualine, 9.5mm Gib® Noiseline, 9.5mm Gib® Ultraline and 9.5mm Gib® Toughline may be substituted for 9.5mm Gib® Fyreline in fire rated constructions.

The fastener length for the fire rated system applies. The field of the braced element must also be fastened in accordance with the fire rated specification (adhesive not permitted).

Jointing and Stopping

All sheet joints must be paper tape reinforced and stopped in accordance with the publication entitled, "Gib® Living Solutions Site Guide", April 1999.

Fastening the Bracing Element to Timber Floors

Fastening of the bottom plate of a Gib® wall bracing element to a timber framed floor must be in accordance with NZS3604 with pairs of 100 x 3.75mm nails at 600mm centres. In addition 6 or 12kN connections must be installed when specified for the particular bracing element type.

Fastening the Bracing Element to Concrete Slabs

Fastening of the bottom plate of a Gib® wall bracing element to concrete floors must be in accordance with NZS3604 for external walls, which includes a 12mm bolt (complete with a 50 x 50 x 3mm square washer) or a proprietary fixing with equivalent performance within 150mm (90mm for BR6) from both ends of the wall bracing elements.

On internal bracing lines, the bottom plate of Gib® Bracing elements may be fixed using 3.8mm shot fired fasteners fitted with 16mm discs, spaced at 150mm and 300mm from the end studs and thereafter at 600mm centres. This method only applies to Systems Gib1, 2, 3, 10, 11 and BR1, 2, 3.

Hold-Down Strap Placement (Refer Illustrations Pages 17 and 18)

Where 6kN connections are specified in the 'Additional Requirements' column, they are required only if the bracing element terminates within 1.2 metres from a door or window opening (see illustration, page 18).

Where 12kN connections are specified they must be installed at both ends of the bracing element in all cases.

Openings in Bracing Elements

Openings are allowed within the middle third of a wall bracing element's length and height. Neither opening dimension shall be more than one third of the element height. Wall linings are fixed to opening trimmers at 150mm centres. Small openings (e.g. power outlets) of 90 x 90mm or less may be placed no closer than 90mm to the edge of the braced element.

Angle Braces

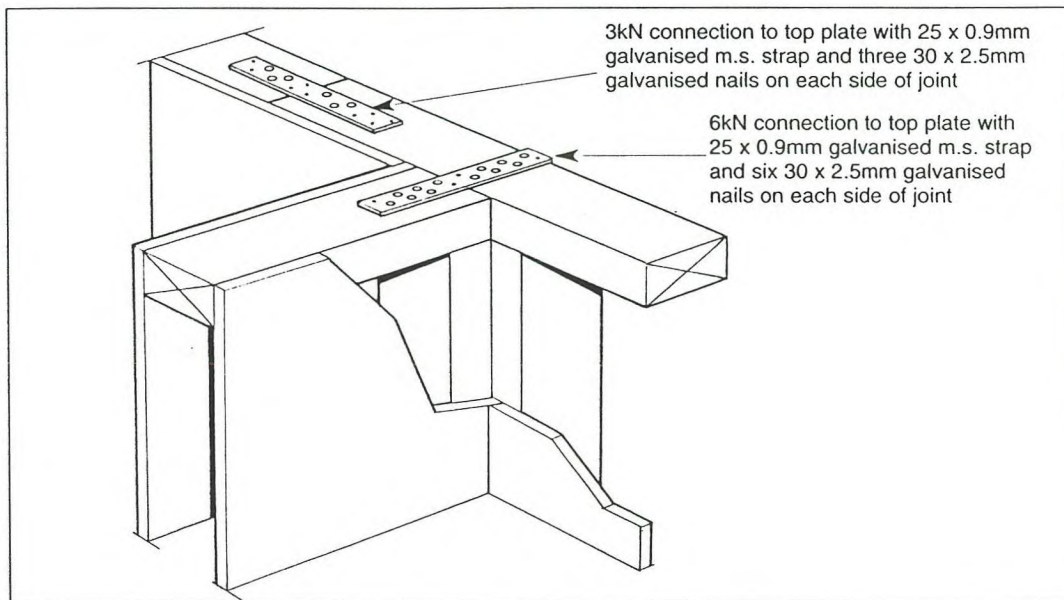
Angle braces serve to keep frames square during transport and construction. They also act as part of the temporary bracing of a building under construction. Angle braces contribute only a fraction to the bracing of a completed structure. The performance of a completed building depends mainly on the wall linings and their fixings.

Where specified, metal angle braces must be placed at an angle no steeper than 55 degrees, and within the designated length of the bracing element. For elements longer than 3.6 metres, pairs of angle braces (in opposite directions) are required. Fixing of angle braces is with three 30 x 2.8mm Gib® nails to top and bottom plates, and two 30 x 2.8mm nails to intermediate framing.

Top Plate Connections

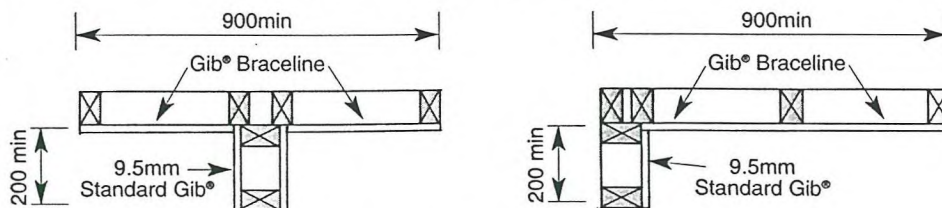
The top plate of a wall that contains one or more wall bracing elements shall be jointed according to the rating of the highest-rated individual wall bracing element as follows:

- (a) Rating not exceeding 100 bracing units: A 3kN connection as shown or by an alternative fixing of 3kN capacity in tension or compression along the plate;
- (b) Rating exceeding 100 bracing units: A 6kN connection as shown or by an alternative fixing of 6kN capacity tension or compression along the plate.



Guidelines for Intersecting Walls (all Gib® Bracing Sheet Types)

Gib® Bracing Elements may have intersecting walls with a minimum length of 200mm. Bracing element sheets shall be fixed and jointed as given on pages 14 and 15. Fasteners are required around the perimeter of the bracing element. Vertical joints at T-junctions (illustrated below) shall be fixed and jointed as specified for intermediate sheet joints. **The bracing element length must be no less than 900mm.**



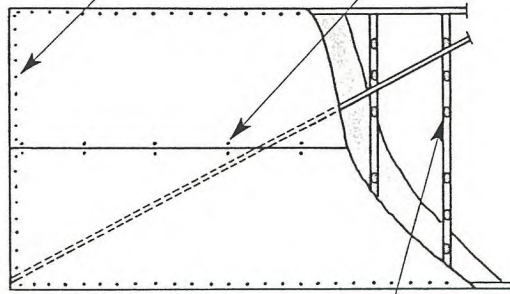
Where Wall Bracing Elements are interrupted by T or L junctions (as illustrated in the 900mm example above) they should be considered as follows:

The bracing element has been cut to accommodate the junction. Nevertheless, in respect of calculating Bracing Units, the Bracing Element is deemed to be continuous for the whole length (900mm in this particular case).

Fastener Layouts

32mm x 6g Gib® Grabber screws or 30mm Gib® Nails at 150mm centres to perimeter of Bracing Element

Single 32mm screws or Gib® Nails where sheets cross studs

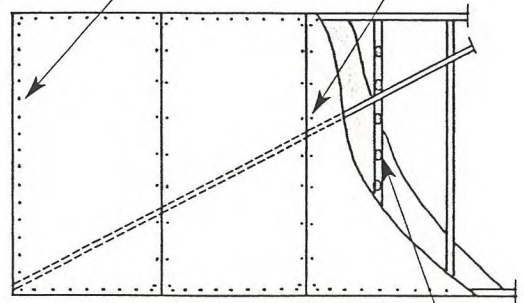


Gib® 1 (lined one side)
Gib® 2 (lined both sides)
(Horizontal Fixing)

Daub of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

32mm x 6g Gib® Grabber or 30mm Gib® Nails at 150mm centres to perimeter of Bracing Element

Single 32mm screws or Gib® Nails at 300mm centres

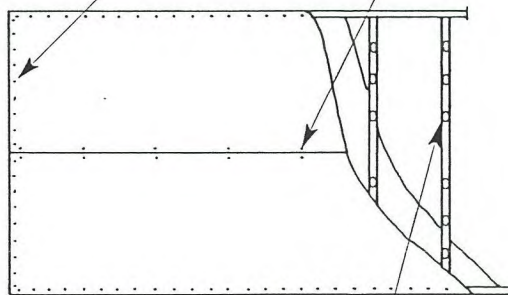


Gib® 1 (lined one side)
Gib® 2 (lined both sides)
(Vertical Fixing)

Daub of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

32mm x 6g Gib® Grabber screws or 30mm Gib® Nails at 150mm centres to perimeter of Bracing Element

Single 32mm screws or Gib® Nails where sheets cross studs

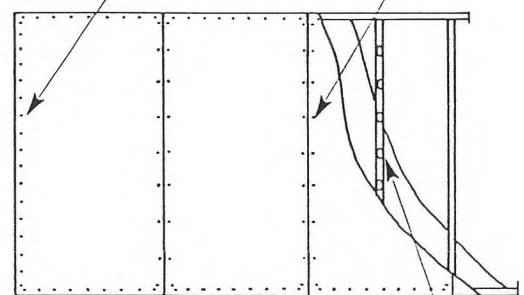


Gib® 3 (lined both sides)
Gib® 10 (lined one side)
Gib® 11 (lined both sides)
(Horizontal Fixing)

Daub of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

32mm x 6g Gib® Grabber screws or 30mm Gib® Nails at 150mm centres to perimeter of Bracing Element

Single 32mm screws or Gib® Nails at 300mm centres

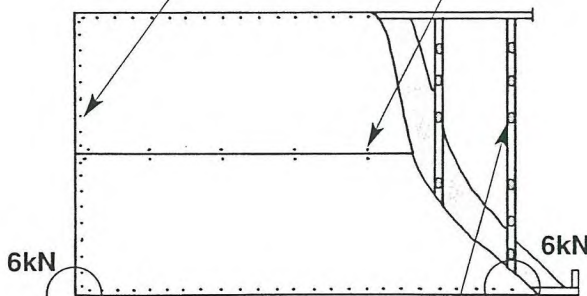


Gib® 3 (lined both sides)
Gib® 10 (lined one side)
Gib® 11 (lined both sides)
(Vertical Fixing)

Daub of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

32mm x 6g Gib® Grabber screws or 30mm Gib® Nails at 150mm centres to perimeter of Bracing Element

Single 32mm screws or Gib® Nails where sheets cross studs

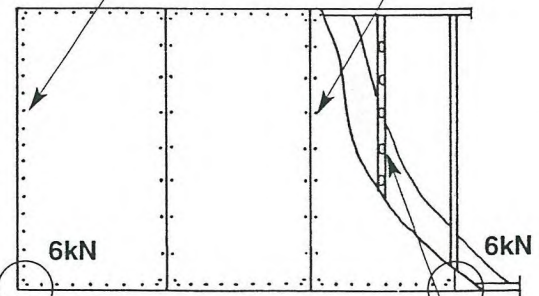


UL1 (lined one side)
UL2 (lined both sides)
(Horizontal Fixing)

Daub of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

32mm x 6g Gib® Grabber screws or 30mm Gib® Nails at 150mm centres to perimeter of Bracing Element

Single 32mm screws or Gib® Nails at 300mm centres



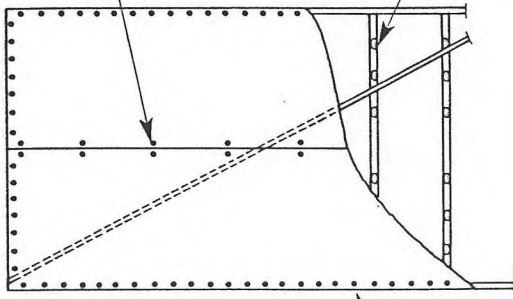
UL1 (lined one side)
UL2 (lined both sides)
(Vertical Fixing)

Daub of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

Fastener Layouts - continued

32mm single screws or Gib® Nails where sheets cross studs

Daub of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

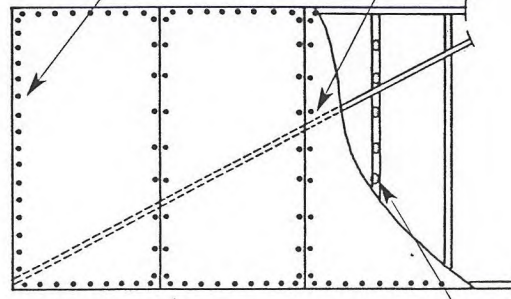


BR1 (lined one side) (Horizontal Fixing)

32mm Gib® Braceline screws or 30mm Gib® Braceline clouts and washers at 150mm centres to perimeter of braced element

32mm Gib® Braceline screws or 30mm Gib® Braceline clouts and washers at 150mm centres to perimeter of braced element

Single 32mm screws or Gib® Nails at 300mm centres

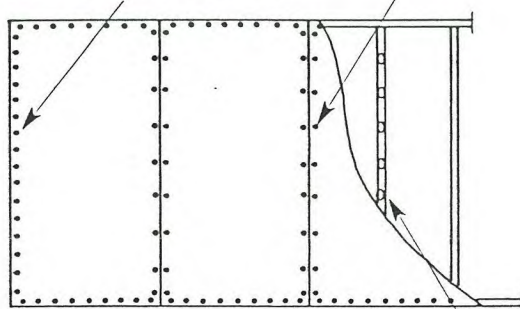


BR1 (lined one side) (Vertical Fixing)

Daub of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

32mm Gib® Braceline screws or 30mm Gib® Braceline clouts and washers at 150mm centres to perimeter of braced element

Single 32mm screws or Gib® Nails at 300mm centres

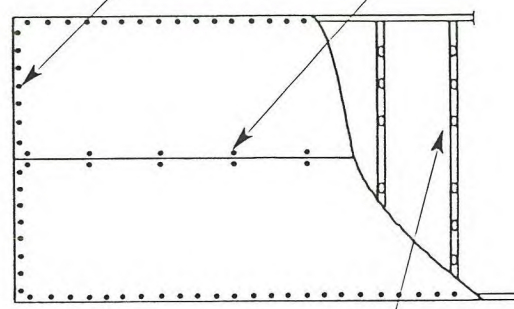


BR2 (lined one side) (Vertical Fixing Only)

Daub of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

32mm Gib® Braceline screws or 30mm Gib® Braceline clouts and washers at 150mm centres to perimeter of braced element

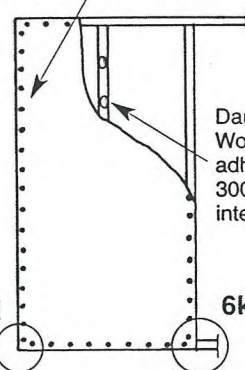
Single 32mm screws or Gib® Nails where sheets cross studs



BR3 (lined one side) (Horizontal Fixing Only)

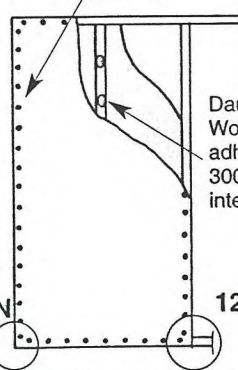
Daub of Gib® Fix Wood Bond adhesive only at 300mm centres to intermediate studs

32mm Gib® Braceline screws or 30mm Gib® Braceline clouts and washers at 150mm centres to perimeter of braced element



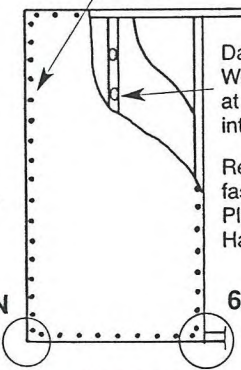
BR4 (lined one side) BR5 (lined one side)

32mm Gib® Braceline screws or 30mm Gib® Braceline clouts and washers at 150mm centres to perimeter of braced element



BR6 (lined both sides)

32mm Gib® Braceline screws or 30mm Gib® Braceline clouts and washers at 150mm centres to perimeter of braced element



BR7 (lined both sides) BR8 (lined both sides)

Daubs of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

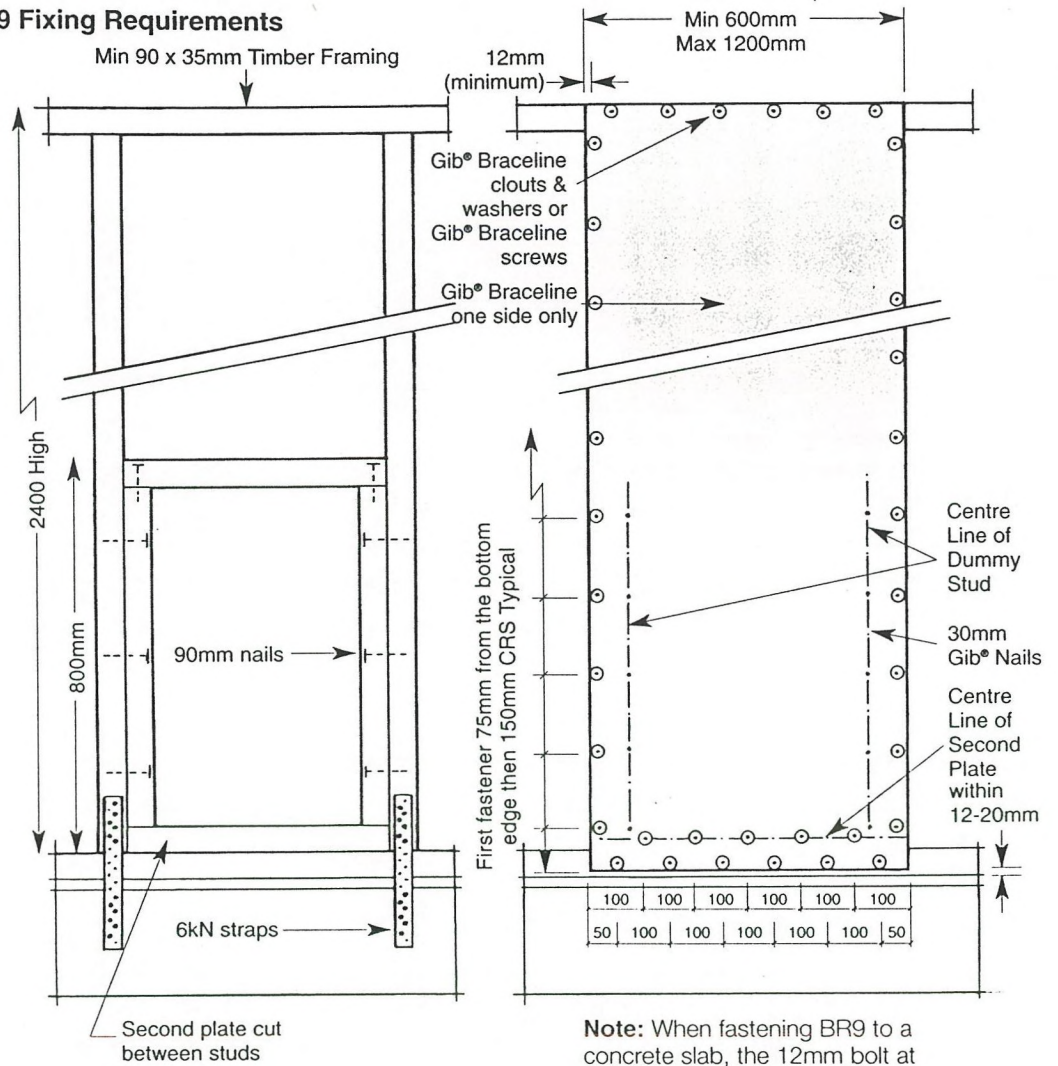
Daubs of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

Daubs of Gib® Fix Wood Bond adhesive at 300mm centres to intermediate studs

Refer page 12 re fastener details for Plywood (BR7) Hardboard (BR8)

Note: If the length of the braced element using systems BR4, BR5, BR6, BR7 and BR8 exceeds 1.2m, then the sheet edges within the element are secured with single screws or nails at 300mm centres.

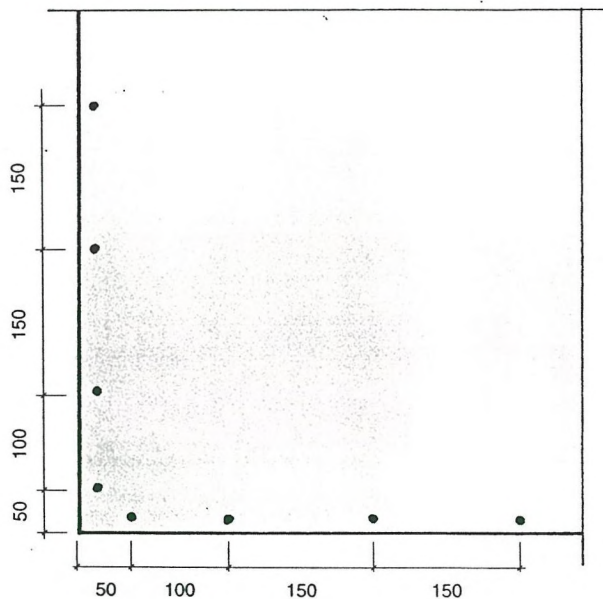
BR9 Fixing Requirements



Note: When fastening BR9 to a concrete slab, the 12mm bolt at each end of the element passes through both bottom plates.

IMPORTANT Corner Fastening Details

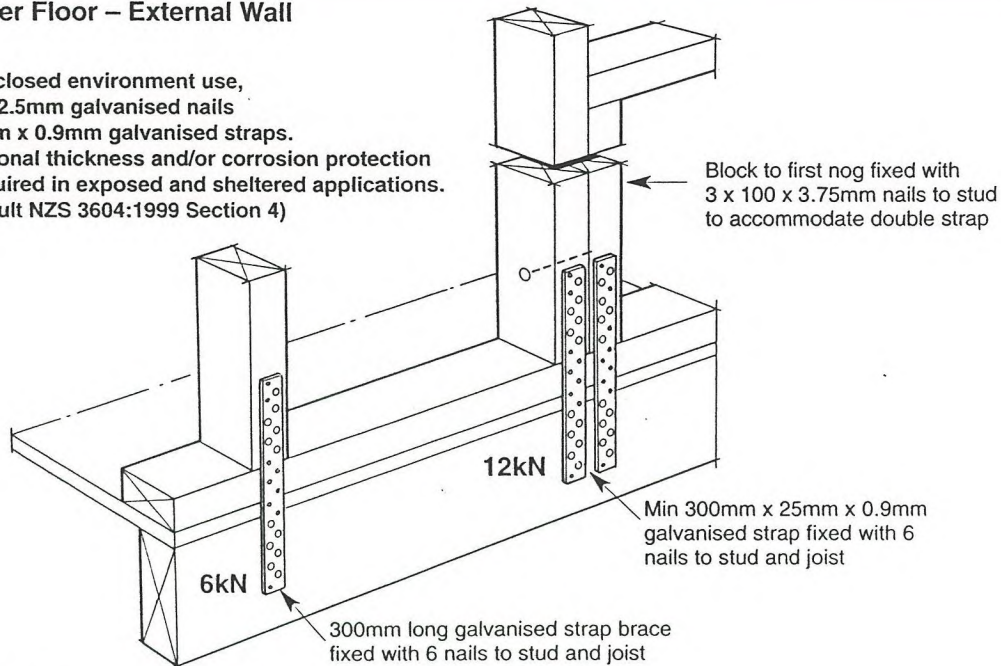
This pattern applies to ceiling diaphragms and to all wall bracing elements except BR9.



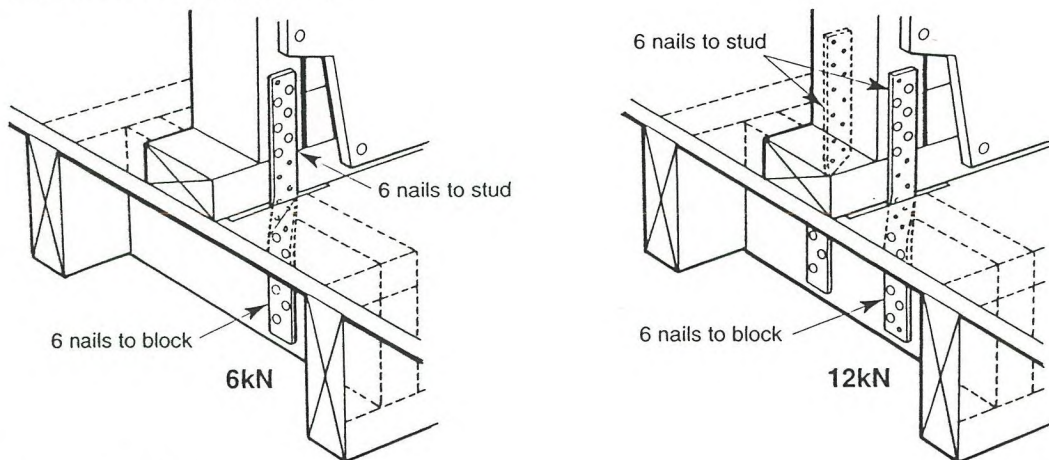
Hold-Down Straps

Timber Floor – External Wall

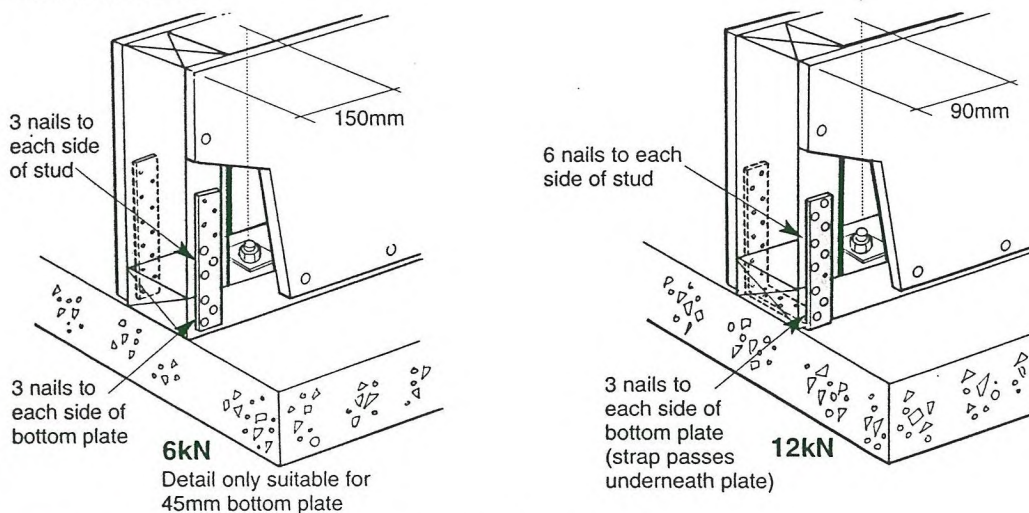
For a closed environment use,
 • 30 x 2.5mm galvanised nails
 • 25mm x 0.9mm galvanised straps.
 Additional thickness and/or corrosion protection
 is required in exposed and sheltered applications.
 (Consult NZS 3604:1999 Section 4)



Timber Floor – Internal Wall



Concrete Floor



6kN Connections – UL1, UL2, BR4, BR5, BR7, BR8 & BR9
 12kN Connections – BR6

Hence plywood bracing may be used as both construction and permanent bracing.

Humidity and condensation: In uses where the moisture content of wood may exceed 18% for prolonged periods, plywood must be H3 treated to resist decay or insect hazard.

Sub-floor sheet bracing: H3 treated plywood can be used unpainted in sub-floor sheet bracing where dampness does not allow the use of untreated plywood or other sheet materials (clause 4.7.8.1 of NZS 3604). Where plywood sub-floor sheet bracing is exposed to both rain and sun, it should be coated as for a cladding to achieve the 50 year durability.

Cladding as bracing: H3 treated plywood can be used as cladding, and bracing. To achieve 50 year structural durability, it should be at least five ply plywood and must be coated with a maintained three coat acrylic paint system, preferably in a light colour.

Soil: Plywood (untreated or H3 treated) must not be allowed to come in contact with soil.

For: Further information, refer to the Carter Holt Harvey Plywood "Durability Statement".

Table 1

Ratings for 2.4m high Plybrace wall bracing elements

These ratings apply to walls detailed in accordance with NZS 3604 and this leaflet. The hold-down value determines which details should be used. The 6kN hold-down is a dropped panel detail with no steel straps or a single strap at each end of the wall. The 12kN hold-down (Type D) is two straps at each end of the wall.

Wall Type	Minimum Wall Length (m)	Minimum Plywood Thickness (mm)	Nail* Spacing (mm)	Hold-down (kN)	Stud Spacing (mm)	Bracing Units/m (20 bracing units = 1kN)	
Ratings for plywood component only							
SP4	0.45	7	75	6	450	70	85
SP2	0.6	7	150	6	600	85	85
SP1	0.9	7	150	6	450 or 600	100	100
SPST1	1.2	7	150	-	600	90	80
SP6	0.9	12	150	6	450 or 600	115	110
SP8D	0.9	7	150	12	450	125	135
SP5D	1.2	7	75	12	600	130	135
SP10	1.8	7	75	6	450	135	135
Ratings for additional sheathing (Gib Board)							
SP2G	0.6	7	150	6	600	95	95
SP1G	0.9	7	150	6	450 or 600	100	100
SP11G	1.8	7	150	6	450 or 600	140	120
BR7**	0.9	7	150	6	450 or 600	145	145
SP6G	0.9	12	150	6	450 or 600	120	110
SP6GD	0.9	12	150	12	450 or 600	145	135

* Use these spacings at all sheet edges. Within the sheet, spacings may be double that specified.

** Braceline

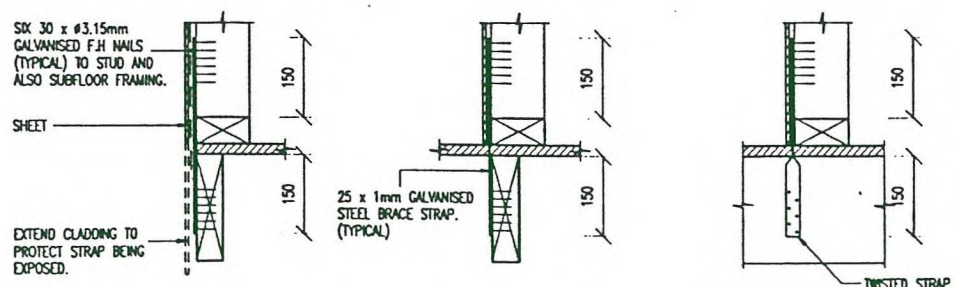
For 7mm plywood use 30mm x 2.5mm galvanised flathead nails.

For 12mm plywood use 50mm x 2.8mm or larger galvanised flathead nails.

For steel framing use SPST1 for plywood on light steel frames. Use button head self drilling, self tapping screws for Plybrace and standard plywood and counter sunk stainless steel self drilling, self tapping screws for cladding applications. Refer Carter Holt Harvey Plywood Technical Note "Plywood on steel frame" for more detail.

Figure 1

6kN strap fixings to each end stud of plywood sheet braces for timber ground floor and upper storey



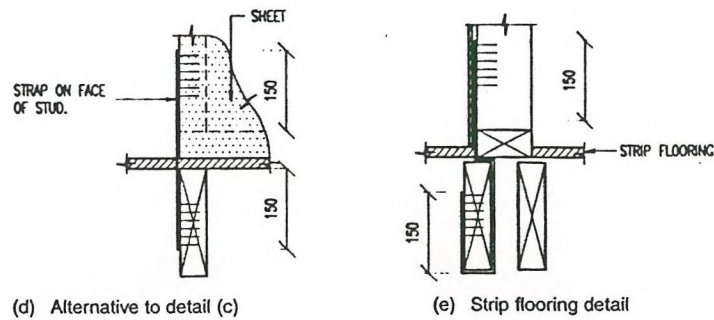
(a) Exterior or edge detail

(b) Internal detail over continuous floor - wall parallel to joists

(c) Internal detail over continuous floor - wall across joists

Figure 1

Continued

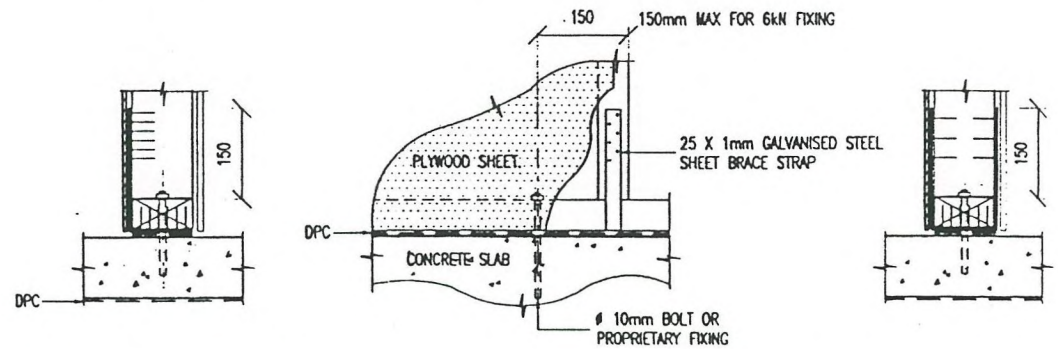


Note

1. Detail (a) can be replaced by a dropped panel fixing with no straps. See Figure 4.
2. Straps may be recessed into framing where a smooth finish is required in linings over straps.

Figure 2

6kN strap fixings and capacities to each end stud of braced panels on concrete



(a) 6kN strap one side and under plate 6
- 30 x 3.15mm dia. Galv. F.H. nails
each end

(b) 6kN strap wrapped under plate
3 - 30 x 3.15mm dia. Galv
F.H.nails each end of stud

Installation

Framing

Framing shall be in accordance with NZS 3604: 1990 or similar standard. Before placing the frame in position, check the hold-down requirements to enable positioning of any straps required. Refer Figure 5 for detailing of expansion gaps and framing alignment.

Hold-down details

6kN hold-down:

For 6kN hold-down; at each end of the wall, use either:

1. A single 25mm x 1.0mm galvanised steel sheet brace strap with 6kN capacity. See:
 - * Figure 1(a) to (e) for timber floors.
 - * Figure 2(a) or (b) for concrete floors.
2. Or the dropped panel detail, requiring no straps. See:
 - * Figure 4(a) where the brace is in a veneer cavity or under cladding.
 - * Figure 4(b) for cladding used as bracing.

12kN hold-down:

Higher wall ratings are possible with double hold-down and or double nailing. For 12kN hold-down use two 25 x 1.0mm. 6kN capacity straps. See:

1. Figure 6(a) to (d) for timber floors.
2. Figure 7 for concrete floors. Detailing in Figure 8 can be used with two straps.

Steel strap:

For details requiring steel straps according to NZS 3604, use only 25mm x 1.0mm galvanised steel sheet brace strap, with 3.15mm nails according to the strap manufacturer's instructions. Strap fixings must be protected from exposure to rain or excessive condensation. One way of doing this is by taking building paper under plywood or other claddings down over the straps. For concrete floors, details in Figure 8 can be modified to the requirements of Figures 2 and 7. All details are available as AUTOCAD files.

Nailing and fixing of sheets

Refer Figure 3. Nail according to the desired bracing rating in Table 1. Standard nailing at edges is 150mm centres and within the panel at no more than 300mm centres. Higher ratings can be obtained simply by double nailing, ie. all edges at 75mm centres and within the panel at 150mm centres.

- Allow a 2 to 3mm wide expansion gap between sheets (Figure 5).
- Use 30 x 2.5mm nails in 7mm plywood.
- Use 50mm x 2.8mm or larger nails for thicker plywood that functions both as cladding and as bracing.
- Use only galvanised flathead nails and drive flush to the surface. Nails must be at least 7mm from the edge of the sheet for square edge sheets and 7mm from the back edge for the shiplap claddings.
- Do not nail in the face and the overlap tongue (Figure 5).
- Nail edges and ends of the sheets used as bracing, including blue tongue or tongue and grooved sheets.
- Do not foul hold-down straps and nails used to fix the plywood. This weakens the strap below specification.
- Do not overdrive gun-nails.

Figure 3

Fixing of plywood bracing sheets

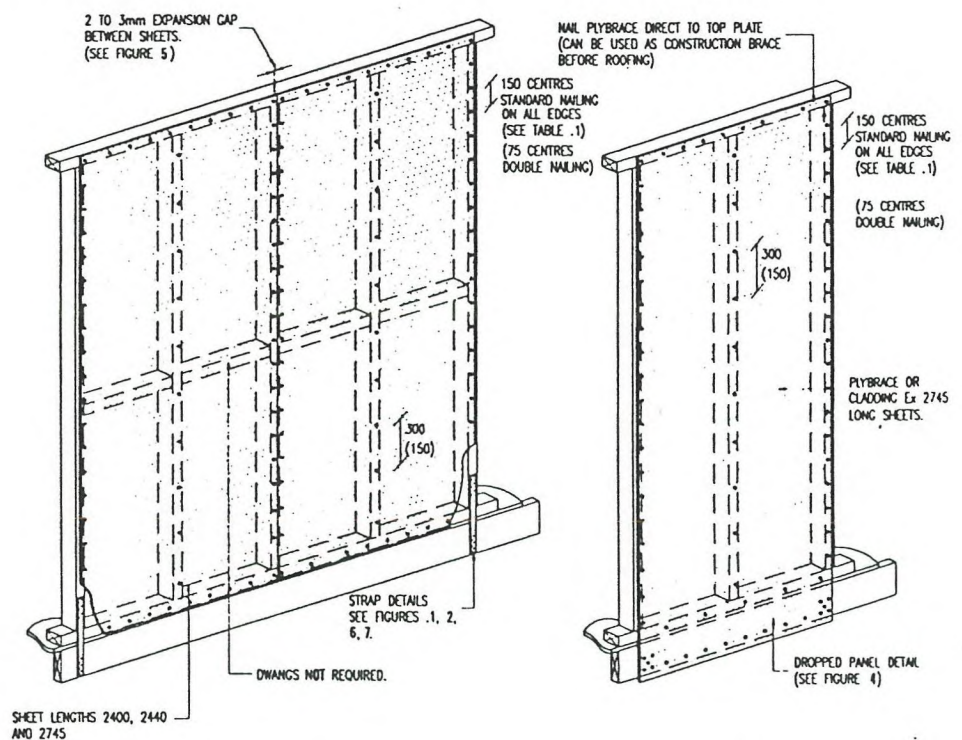
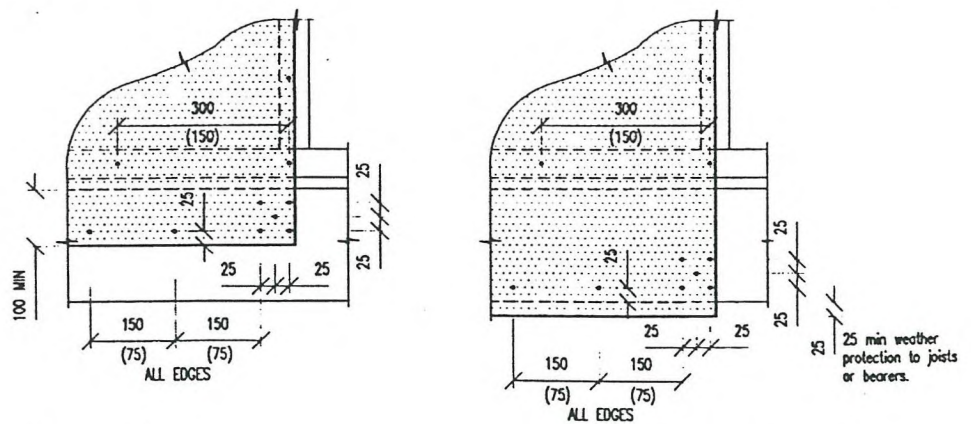


Figure 4

6kN dropped panel fixing for timber frames



(a) Dropped panel for brace under other cladding

(b) Dropped panel for plywood cladding brace

Note:

1. Nails as specified in Table 1.
2. Nail centres given for standard nailing, or in brackets for double nailings.
3. Extra hold-down nails are same size as for rest of sheet.

Figure 5

Typical detailing for expansion gaps

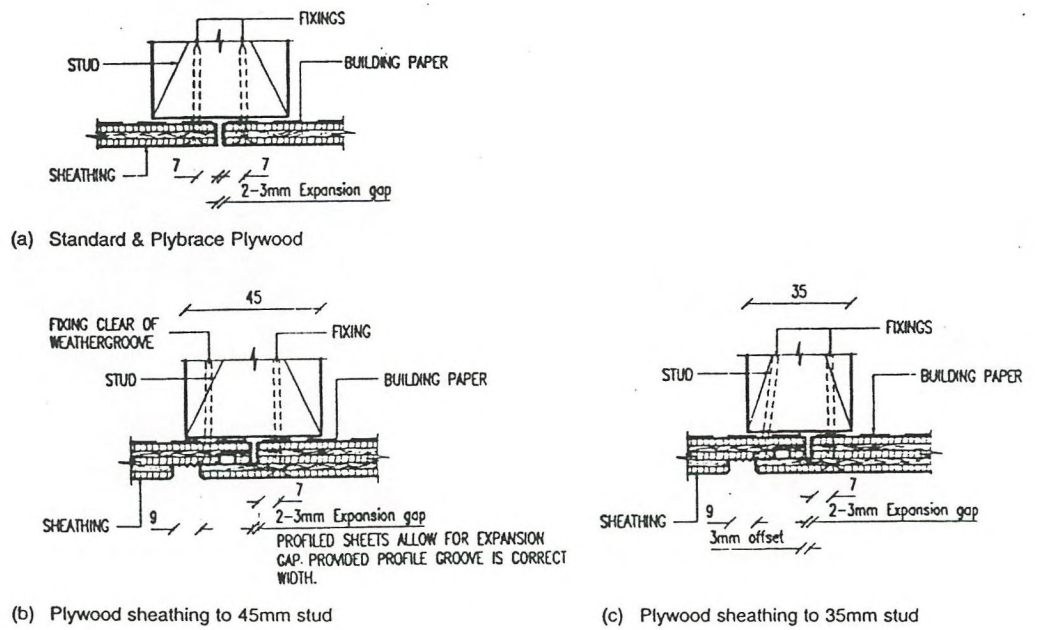


Figure 6

12kN strap fixings to each stud of plywood sheet braces for timber

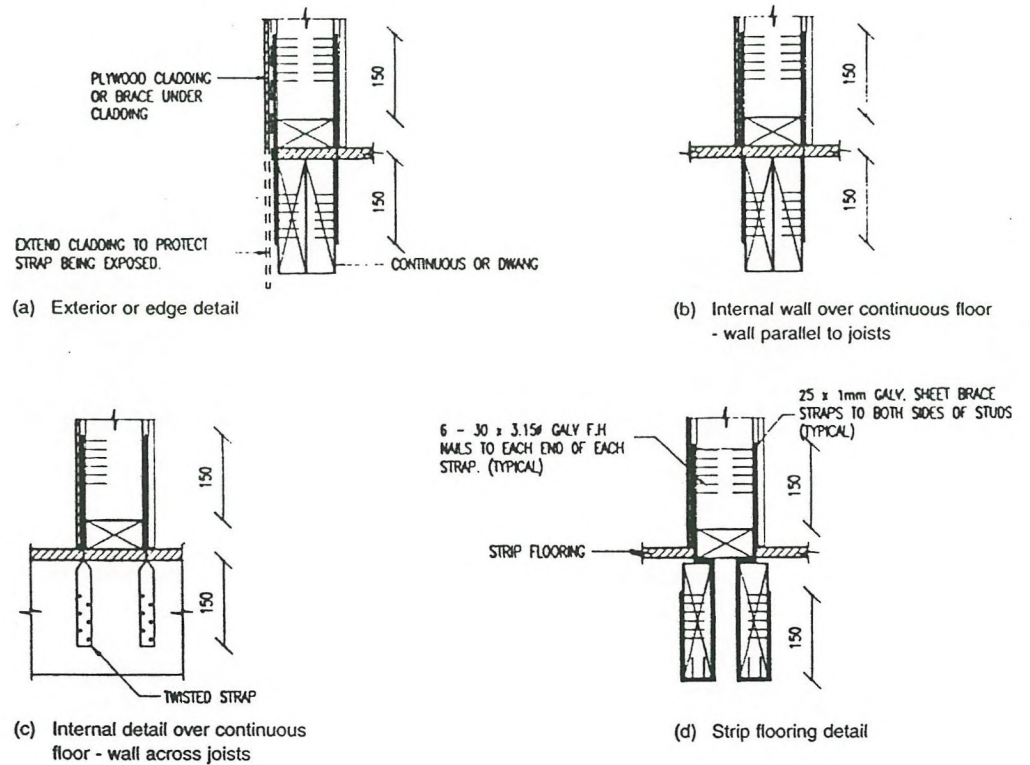


Figure 7

12kN strap fixings to end studs of plywood sheet braces for concrete floors

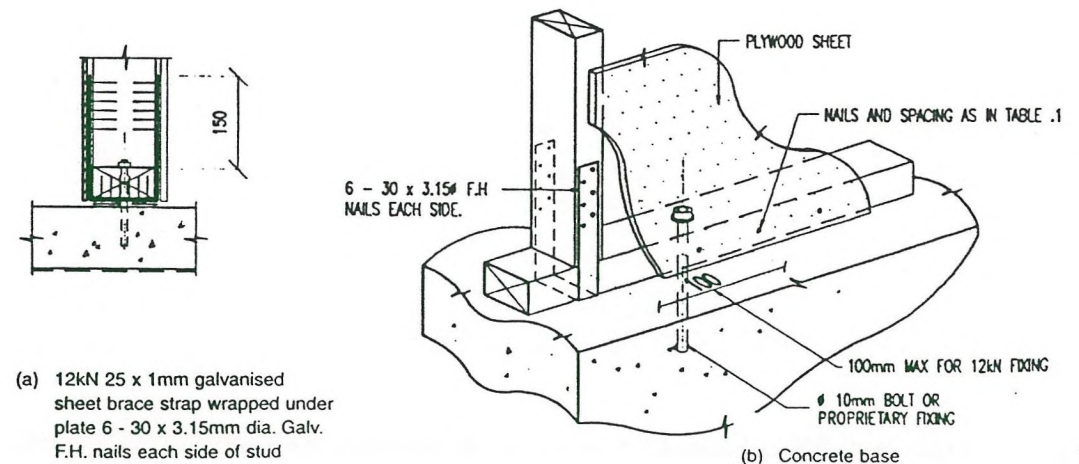
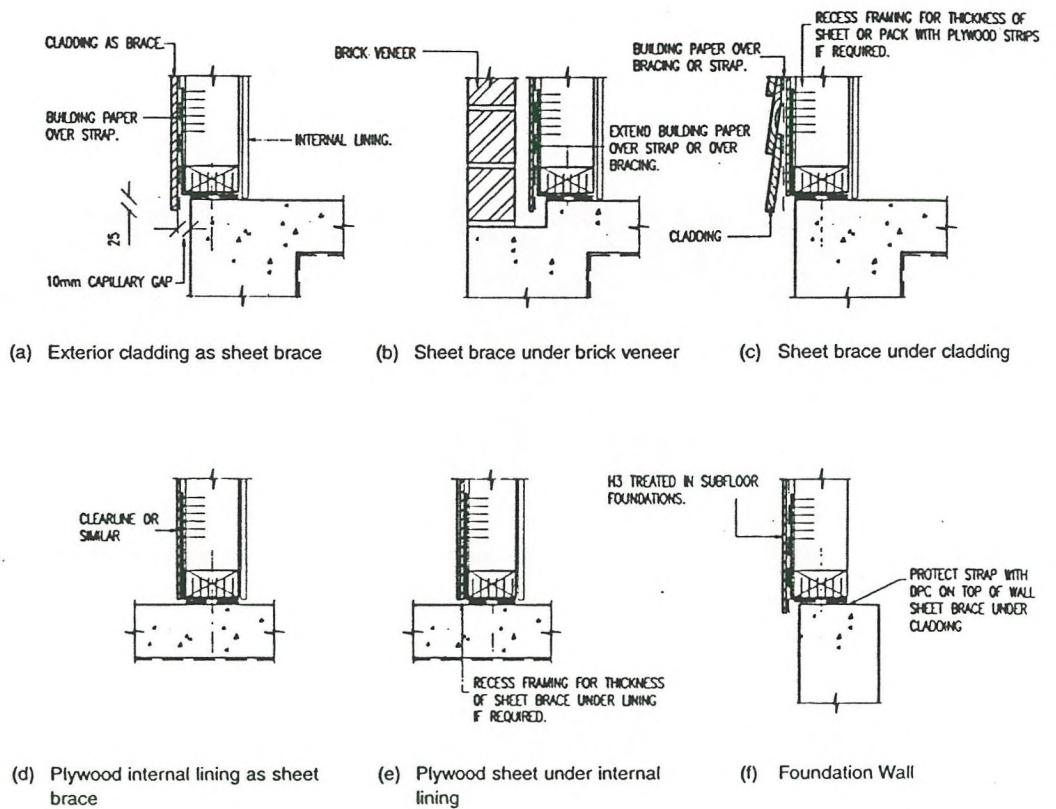


Figure 8

Typical detailing for wall and sub-floor framing on concrete floor and foundations



Note:

Modify these details for either 6kN or 12kN fixings according to Figure 2 or Figure 7.

References

BRANZ Appraisal No. 224 (1992). Construction plywood wall bracing systems.

BRANZ TR 10, Supplement to P21. An evaluation method of P21 test results for use with NZS 3604: 1990. BRANZ P21, A wall bracing test and evaluation procedure. R C Cooney and M J Collins, 1979: Revised 1988.

Carter Holt Harvey Plywood "Durability Statement".

Forest Research Institute (Ltd), Wood Products Division Reports: P21 wall brace tests with Shadowclad plywood. HB94/2/1, FRI 1994. Performance of standard plywood clad wall panels in racking to P21 test WTC 1786/1, WTC 1786/2, WTC 1786/3, FRI 1991.

Carter Holt Harvey Engineered Wood Products

Private Bag, Tokoroa, New Zealand

Tel: 64-7-886 2100 Fax: 64-7-886 0068

(A division of Carter Holt Harvey Limited)

01 July 2019

Kursten Dion Ward and Elke Baumann-ward
117 Barnett Avenue
RD 1
Richmond 7081

Dear Kursten Dion Ward and Elke Baumann-ward

Site Inspection Report

Reference: BC190638

Location: 117 Barnett Avenue, Best Island, Lot 3 DP 533749

Project: Install freestanding Metro wood burner

IR Number: 1

Inspection Results:

FINAL - 01 Jul 2019 @ 14:59 by Julian Malcolm

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: Final CCC inspection for free standing fire and smoke alarms. New Fire type METRO R2 Installed as per the stamped consented plans and specifications. Complies AS/NZS 2918-2018, and F7. Pass, CCC can be issued.

Your next inspection will be: **No further inspection required**

Outstanding Required Documents for this Building

History

Inspection Name

Final

Summary

PASS - 01 Jul 2019

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Julian Malcolm

Building Technical Officer

On behalf of **Tasman District Council**











Code Compliance Certificate

Section 43(3), Building Act 1991

Application

C & L HAWKINS C/- ROB SILCOCK 5 HOLDAWAY GROVE RICHMOND	No. Issue date	011447 28/05/02
--	-------------------	--------------------

Project

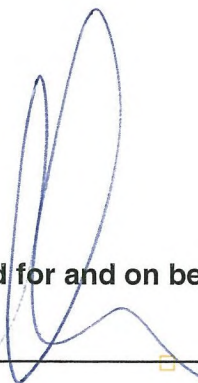
Description	NEW CONSTRUCTION BEING STAGE 1 OF AN INTENDED 1 STAGES ALTERATIONS TO HOUSE, NEW BEDROOM ENSUITE
Intended Life	INDEFINITE, BUT NOT LESS THAN 50 YEARS
Intended Use	BEDROOM ENSUITE FACILITY
Estimated Value	\$43,000
Location	BARNETT AVE, BEST ISLAND
Legal Description	LOT 36 DP5090 BLK II WAIMEA SD
Valuation No.	1938093400

This is a final Code Compliance Certificate issued in respect of all the building work under the above building consent.

FILE

Signed for and on behalf of the Council:

Name:




Date:

28/5/02

□ **Main Office**
189 Queen Street
Private Bag 4,
Richmond 7031 N.Z.
Tel (03) 544-8176
Fax (03) 543-9524

□ **Murchison Service Centre**
92 Fairfax Street
Murchison
Tel (03) 523-1013
Fax (03) 523-1012

□ **Motueka Service Centre**
7 Hickmott Place
P.O. Box 123, Motueka
Tel (03) 528-7700
Fax (03) 528-9751

□ **Golden Bay Service Centre**
78 Commercial Street
P.O. Box 74, Takaka
Tel (03) 525-9516
Fax (03) 525-9972

Project ID: 190638
Date Sent: 2019-06-25 08:20:44
Recipient: jacqui.soffer@therentshop.co.nz
Sender: Krystle Bang
Subject: BC190638: 117 Barnett Avenue, Best Island

Message:

Good Morning Jacqui

Thank you for response, your details have been updated as first point of contact for the inspector. He will be in touch with an inspection time.

Kind regards

Krystle Bang

Customer Service Officer - Takaka

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

=====
Hi Krystle

The owners live over in Europe so access will have to be via me or the tenant. To make it easier it would be best if the inspector can call me a couple of hours prior so I can get there because I wont have time to wait at the house for a long time.

Jacqui 021 02959044

Kind Regards

Jacqui Soffer

Property Manager

The Rent Shop Ltd

Phone: 021 029 59044

[cid:image006.png@01D4D35B.B7743D00]

From: Tasman District Council

Sent: Friday, 21 June 2019 11:20 a.m.

To: Jacqui Soffer

Subject: BC190638: 117 Barnett Avenue, Best Island

Good Morning Jacqui

The final inspection for BC190638 is booked for the earliest date available that being the 1st of July, if you could please pass this email on to the owners as we have no email address listed for them and the agent has asked that they be contacted, They will receive a text message the business day prior with an approximate time to meet with the building inspector.

Kind regards

Krystle Bang

Customer Service Officer - Takaka

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

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This message is for the designated recipient(s) only, and may contain confidential and/or privileged information. If you have received it in error, please delete it and advise the sender immediately. You should not copy or use it for any other purpose, nor disclose its contents to any other person.

Designated Recipient(s): jacqui.soffer@therentshop.co.nz

Sent From: AlphaOne Building Consent System

Sent Date: 21 June 2019 11:19:41 am - Friday

REJECTED ATTACHMENT(S):

Note: The listed file(s) below were rejected because they were not in PDF format.

- image001.png



Tasman District Council

189 Queen Street, Richmond 7020

building.support@tasman.govt.nz

03 543 8400

BC190638

Alpha ID: 190638

Application Type: Building Consent

Site Address: 117 Barnett Avenue, Best Island

Project Description: Install freestanding Metro wood burner

Project Status: Code Compliance Certificate Issued

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Date Submitted: Friday, 24 May 2019



Form 2

Application for project information memorandum and/or building consent

Section 33 or section 45, Building Act 2004

The building

Street address of building: 117 Barnett Avenue
 Best Island
 Best Island
 7081

Legal description of land where building is located: Lot 3 DP 533749

Building name: Main Building

Location of building within site/block number: 117 Barnett Avenue
 Best Island
 Best Island
 7081

Number of levels: No information provided

Level/unit number: No information provided

Area: Total: 100.00 m2, Change: Not provided

Current, lawfully established, use: 2.0 Housing: 2.0.2 Detached Dwelling

Year first constructed: 1950-1960

The owner

Name of owner: Kursten Dion Ward And Elke Baumann-ward

Contact person: Jacqui Soffer (property Manager)

Mailing address: 117 Barnett Avenue
 Best Island
 N/A

Street address/registered office: No information provided

Phone number: Landline: N/A Mobile: 02102959044

Daytime: Landline: N/A Mobile: 02102959044

After hours: Landline: N/A Mobile: 02102959044

Facsimile number: No information provided

Email address: jacqui.soffer@therentshop.co.nz

Website: No information provided

The following evidence of ownership is attached to this application:

No files attached

Agent

Name of agent: MURRAY SINCLAIR LIMITED
Contact person: Haidee Doyle
Mailing address: 128 Tahunanui Drive
Tahunanui
7011
Street address/registered office: 128 Tahunanui Drive
Tahunanui
Phone number: Landline: 5485742 Mobile: 02102959044
Daytime: Landline: 5485742 Mobile: 02102959044
After hours: Landline: 5485742 Mobile: 02102959044
Facsimile number: No information provided
Email address: office@pmfireplaces.co.nz
Website: No information provided
Relationship to owner: Application made on owners behalf
First point of contact for communications with the council/building consent authority:
Full name: MURRAY SINCLAIR LIMITED
Mailing address: 128 Tahunanui Drive
Tahunanui
Nelson 7011
Phone number(s): 5485742
Facsimile number(s): N/A
Email address(es): office@pmfireplaces.co.nz

Application

I request that you issue a building consent for the building work described in this application.

Signature of agent on behalf of and with the authority of the owner:

HAIDEE DOYLE

Date: 24 May 2019

space for council use

Application Type: Building Consent only
Reference Key: 04160194NX
Name: Haidee Doyle
Application Role: Agent

The project

Description of the building work:

Installation of Metro R2 Wood Burner using Standard SFP Flue System.

Will the building work result in a change of use of the building? No

Intended life of the building if less than 50 years: 50 years

List building consents previously issued for this project (if any): No information provided

Estimated value of the building work on which the building \$3,500

levy will be calculated (including goods and services tax):

Restricted building work

Will the building work include any restricted building work? No

Building consent

The following plans and specifications are attached to this application:

No files attached

The building work will comply with the building code as follows:

Main Building

B1 - Structure AS1

B2 - Durability AS1

C1 - C6 - Protection from Fire (current) AS1

E2 - External Moisture AS1

F7 - Warning Systems AS1

Waiver / Modification Required: N/A

Compliance schedule

There are no specified systems associated with this project.

Attachments

The following documents are attached to this application:

No attachments

Date Submitted: Friday, 24 May 2019

FORM PLG 1

National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health

For assistance in answering these questions please refer to (PLG 1A)

Please note that any inaccuracies may result in the applicant being in breach of the Resource Management Act 1991 and/or exposed to liability if the site is subsequently found to be contaminated, including being liable for remedial works.

Is the building work and all associated activities:

Changing the use of the land?

NO

(Please note that "changing the use of the land" includes erecting a dwelling on an area of land which previously had no dwelling erected upon it.)

Disturbing soil?

NO

*(more than 25m³ per 500m² of land) or removing soil? (more than 5m³ per 500m² of land)
 (e.g.: foundations, on-site effluent treatment and disposal systems, wells or bores)*

For more information on this process please contact the Duty Planner on (03) 543 8400 or go the Ministry for the Environment website: <http://www.mfe.govt.nz/laws/standards/contaminants-in-soil/>



Signature

The name below as AGENT has the authority for the application to proceed to processing and accept the associated charges.

Signed By:

Haidee Doyle

24 May 2019

The Agent will be the first point of contact for communications with the Council/Building Consent authority regarding this application / building work and will receive all correspondence including all invoices.



**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy**




 R. W. Muir
 Registrar-General
 of Land

Identifier **882623**
Land Registration District **Nelson**
Date Issued 10 April 2019

Prior References

623343 NL125/115

Estate Fee Simple
Area 920 square metres more or less
Legal Description Lot 3 Deposited Plan 533749 and Lot 36
 Deposited Plan 5090

Registered Owners

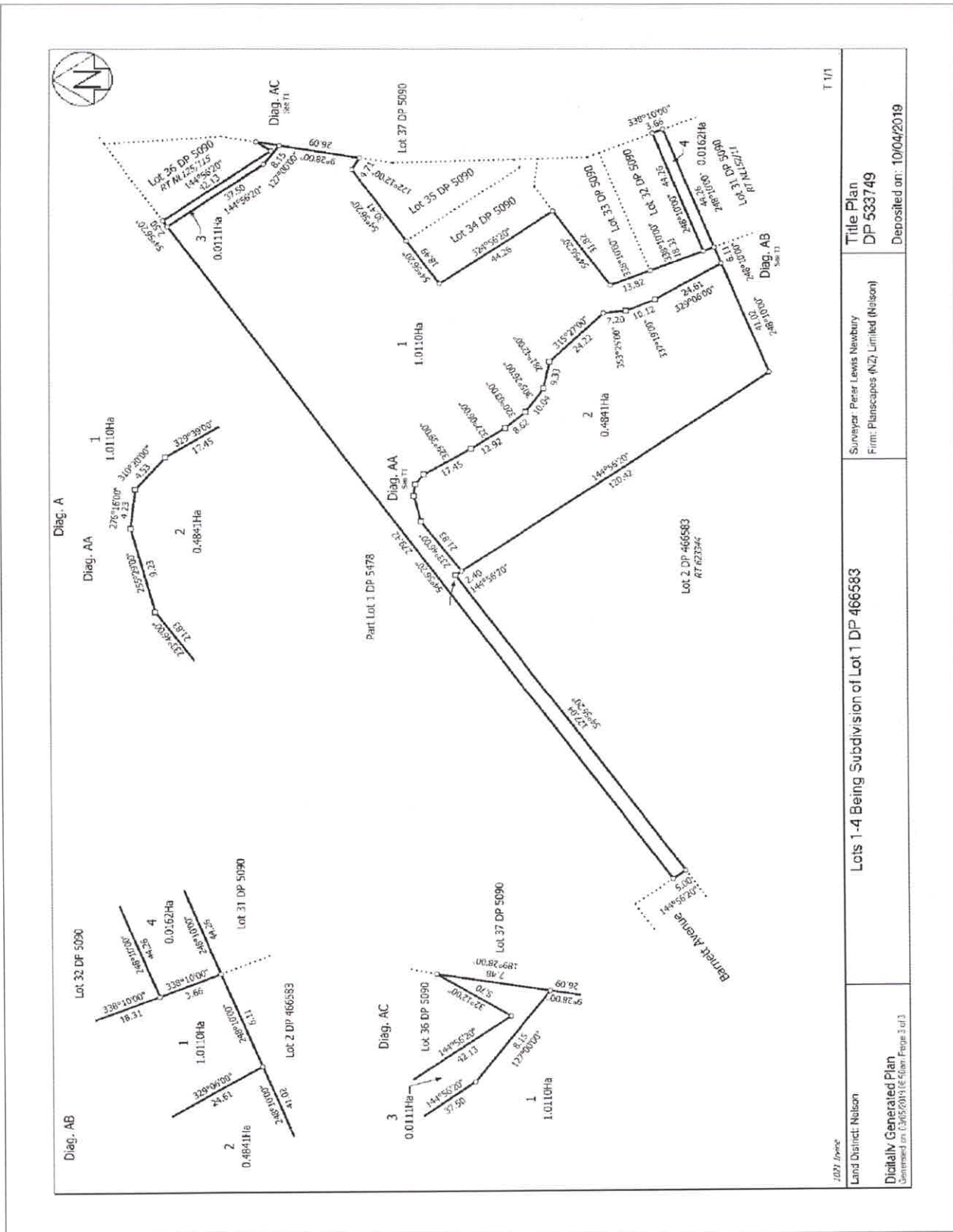
Kursten Dion Ward and Elke Baumann-Ward

Interests

K3023 Building Line Restriction - 21.1.1954 at 3.00 pm (Affects Lot 36 DP 5090)
 10381705.3 Mortgage of Lot 36 DP 5090 to ANZ Bank New Zealand Limited - 22.4.2016 at 1:52 pm
 Subject to Section 241(2) and Sections 242(1) and (2) Resource Management Act 1991 (affects DP 533749)

Identifier

882623



T 1/1

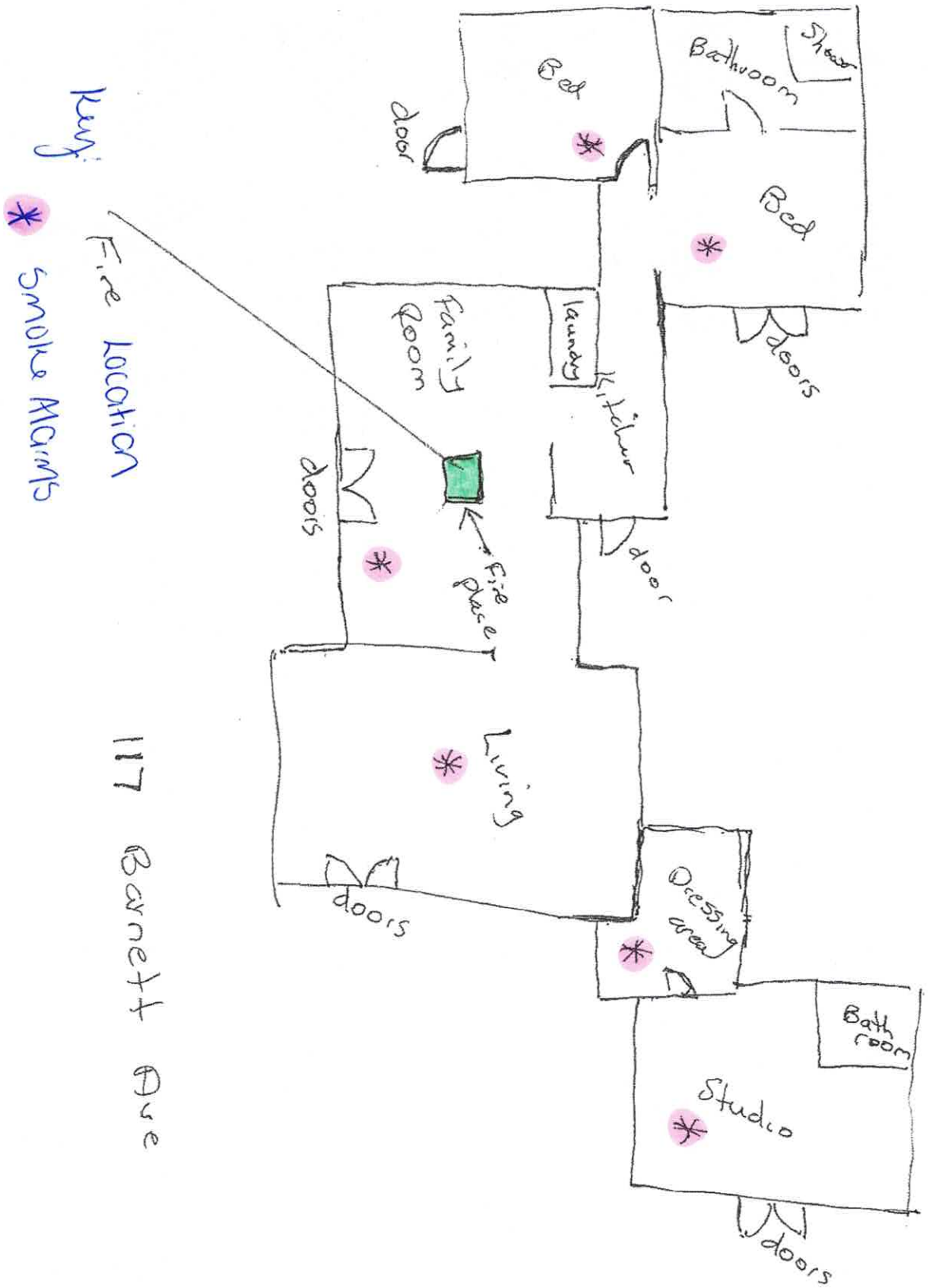
Title Plan
DP 533749

Surveyor: Peter Lewis Newbury
Firm: Planscapes (NZ) Limited (Nelson)

Lots 1-4 Being Subdivision of Lot 1 DP 466583

Digitally Generated Plan
Generated on: 03/05/2019 11:05:49 am Page 3 of 3

Deposited on: 10/04/2019



P & M Fireplaces

128 Tahunanui Drive
Nelson

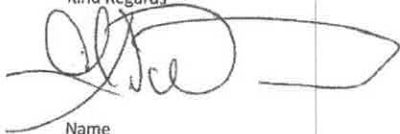
Phone: 03 548 5742 Fax: 03 548 5732

To Whom It May Concern: TDC/~~NE~~

I/We authorise P & M Fireplaces to act as our Agent for a Building Consent Application for a Fireplace.

Korsten Ward

Kind Regards



Name

Date

Korsten Ward

4, 4, 2019

Address of property:

117 Barnett Ave

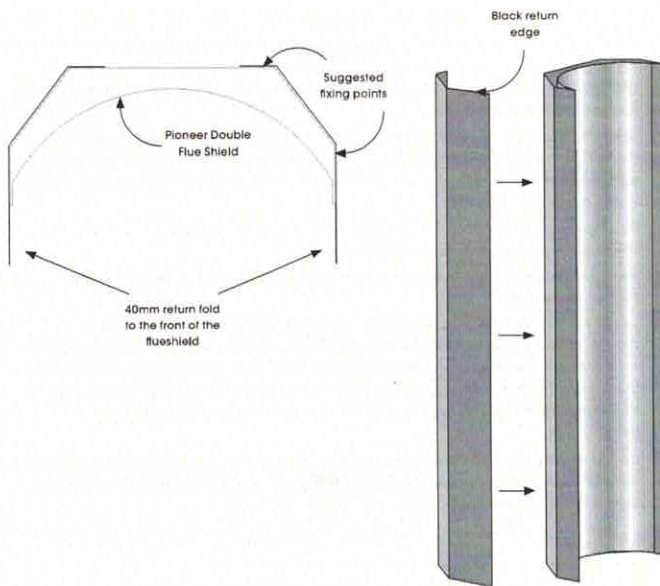
Best Island

Richmond

Pioneer Double Flue Shield - Side extensions

Some Metro models have undergone additional testing which allows for reduced clearances when side extensions are fitted to the Pioneer Double Flue Shield. The Pioneer Flue Shield side extensions are fitted to the Pioneer Double Flue Shield as detailed below.

The side extensions locate on both left and right hand sides of the flueshield. When fixing the side extensions to the Pioneer Double Flue Shield, ensure you have the black face of the side extension facing outwards with the 40mm return edge facing toward the front of the wood fire. Each side extension can be fixed to the outer skin of the Pioneer Double Flue Shield using either stainless steel rivets or a suitable fastening in the suggested fixing points as illustrated.



Pioneer Universal Double Flue Shield



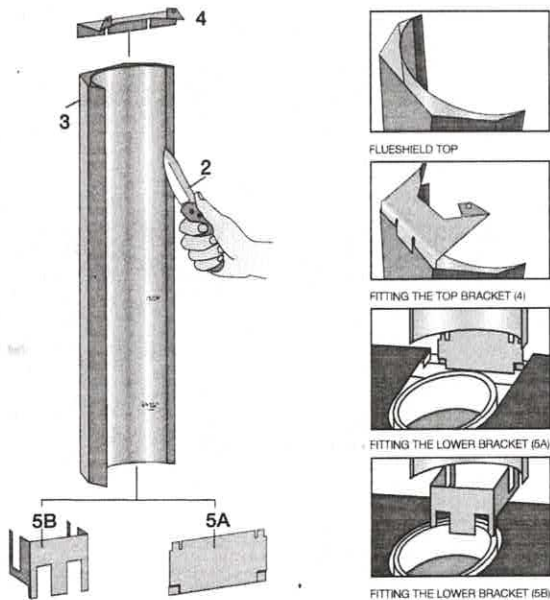
PIONEER

Flue Shield Fitting Instructions

Pioneer Double Flue Shield

This flue mounted shield is a universal design with two alternative lower mounting brackets enabling it to be fitted to any brand wood fire. The highly reflective stainless steel inner shield and vented cavity between rear and inner shields ensures maximum shielding of walls directly behind the installed appliance. Due to its compact design, if minimum side clearances specified with your wood fire are necessary this may require the side depth of the flue mounted shield to be extended with optional side extension panels. Refer to the specifications supplied with your wood fire or consult your wood fire retailer.

Parts and assembly



Double Flue Shield fitting instructions

1. Unpack the Flue Mounted Shield, detach the three brackets and familiarise yourself with the illustrations.
2. Using a sharp knife or razor blade, carefully cut through the plastic film on the "inside face" where it meets the outer shield (refer sketch). Cut along the full length of the flue mounted shield on both sides, then peel off and fully remove the plastic film from the stainless steel inner shield.
3. Peel back and fully remove the plastic film from the outer shield.
4. Fit the top bracket to the flue mounted shield as illustrated ensuring the rear mid section of the bracket fits "outside" while the two outer sections of the bracket fit "inside".
5. Fit the appropriate lower bracket to your wood fire.

Lower bracket "5A" suitable for wood fires with an inner rear heat shield.

Attach bracket "5A" to the inner rear heatshield directly behind the flue outlet as illustrated on the opposite page. The rear/outer face of the flue mounted shield then locates into the bracket "5A".

Lower Bracket "5B" suitable for all other wood fires without an inner rear heat shield. On certain model wood fires without a raised flue spigot it will be necessary to cut off both the lower outer legs from the bracket "5B" leaving the central tongue to locate inside the flue outlet only.

Two tabs are provided and if folded back at 90 degrees the bracket and flue mounted shield will mount lower onto the appliance.

The flue mounted shield then locates into the two notches provided in bracket "5B" as illustrated.

6. Once the Flue Mounted Shield is fitted in position onto either of the two lower mounting brackets, check to ensure a large gap is not present between the top of the wood fire and the base of the Flue Mounted Shield, as this may result in a hot spot on the rear wall directly behind the flue outlet. If your wood fire has a lift off top grill the Flue Mounted Shield should be raised sufficiently to enable the top grill to be removed.
7. Using the pre-punched holes in the two tabs provided on the top bracket as guides, drill into the flue pipe and secure the top bracket to the flue pipe with two Stainless Steel rivets (not supplied).

3.4.2 Built-in appliance installations

3.4.2.1 General

Built-in appliance installations shall be tested in accordance with Appendix B and they shall comply with the temperature limits of Paragraph B10.

3.4.2.2 Built-in appliance mantelshelves

Unless a specific mantelshelf arrangements have been shown to be satisfactory during Appendix B testing, mantelshelf arrangements specified for fireplace insert appliances may be used.

3.4.3 Freestanding installations installed in fireplaces or masonry enclosures

If an appliance intended for freestanding installation is installed in a masonry enclosure the clearance between the appliance and any heat-sensitive material shall be in accordance with the requirements of Clause 3.4, as appropriate.

NOTE: Installers should be aware that in some circumstances heat sensitive materials may be obscured by masonry.

3.5 STABILITY

An appliance shall be installed with sufficient stability so as not to detract from the intended normal operation of the appliance nor to create a hazard for users of the appliance.

3.6 WATER CONNECTIONS

All water connections to an appliance shall be in accordance with the appropriate requirements of AS 3500.4.1 or NZS 4603 and the regulatory authority, as appropriate.

3.7 ELECTRICAL CONNECTIONS

All electrical connections to and within an appliance shall be in accordance with the requirements of AS/NZS 3000, AS/NZS 3100 or ER 93, and the regulatory authority as appropriate.



3.8 SEISMIC RESTRAINT

Where required by the regulatory authority, provision shall be made for seismic restraint of the floor protector and the appliance. Sufficient restraint shall be provided to resist a seismic loading equal to 0.4 times the mass of the appliance. The load shall be applied horizontally in any direction at the mid-height of the combustion chamber. The appliance shall not move, tilt or be dislodged from its installed position during application of the load.

NOTES:

- 1 The seismic loading is to be applied before the flue system is installed.
- 2 Where the appliance is secured to the floor protector the test is to be applied to the combination at a point approximately 100 mm above the top surface of the floor protector.

Tenancy Services

Smoke alarm requirements



Warmer



Drier



Safer



Warmer, drier, safer homes

www.tenancy.govt.nz | 0800 TENANCY (0800 836 262)

What you need to know

New Requirements for Smoke Alarms
in Residential Rental Properties
came into force on 1 July 2016.



First edition, reprinted in 2015 by Ministry of Business, Innovation and Employment

PO Box 10-729
Wellington
New Zealand

This document is also available on our website: www.tenancy.govt.nz

You can copy all or some of this guide only if you are using it for education or public information, and you say it came from us. You cannot copy any of this guide in any way for commercial use, and you cannot keep it in a retrieval system unless you ask us first.

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Printed in New Zealand on paper sourced from well-managed sustainable forests using mineral oil free, soy-based vegetable inks.

L3 (10/16)

MB 13712

Do the new requirements apply to my rental property?

- › If your residential rental property is covered by the Residential Tenancies Act (RTA) the new requirements apply.

Do I have to have smoke alarms in my rental property?

- › Yes, there must be at least one working smoke alarm in within 3 metres of each bedroom door or every room where a person sleeps.
- › In self-contained caravans, sleep outs or similar there must be a minimum of one working smoke alarm.
- › In multi-storey or multi-level homes (including split levels) there must be at least one smoke alarm on each level or storey.

Who's responsible for replacing smoke alarm batteries?

- › Tenants are responsible for changing batteries in smoke alarms that are designed to have the battery changed during their tenancy.
- › Landlords are responsible for ensuring the smoke alarms are working at the beginning of every new tenancy.

What type of smoke alarms are required?

- › From 1 July 2016, if you are installing new smoke alarms or if you are replacing an existing smoke alarm, you must install photoelectric smoke alarms with long life batteries that have a life span of at least 8 years.
- › There are many different brands of smoke alarms that meet the new requirements.
- › The smoke alarms must be photoelectric alarms with long life batteries and this will be displayed on the smoke alarm and its packaging.
- › Smoke alarms must comply with one of the following manufacturing standards: Australian Standard AS3786:1993; or equivalent international standard: UL217 (USA), ULCS531 (Canada), BS5446: Part 1 (United Kingdom), BS EN 14604 (United Kingdom) or ISO12239 (International) – this should be prominently displayed on the packaging and on the alarm.
- › If in doubt ask, the hardware retailer can advise which smoke alarms comply with the required standards.

Where can you purchase long life photoelectric smoke alarms?

- › You can purchase long life photoelectric smoke alarms from any of the national hardware chains or your local hardware store.



There are smoke alarms installed but they are not long life photoelectric smoke alarms, do they need to be replaced?

- › If the alarms are in the required locations you do not have to replace them until they pass their recommended replacement date or they stop operating.
- › In many cases the replacement date will be listed on the alarm. If there is no replacement date on the alarm, the alarm is more than 8 years old, or you don't know how old the alarm is, you will need to replace the alarm to be certain you are complying with the regulations.

There is a hard wired alarm installed in my rental property, is this okay?

- › Yes, hardwired smoke alarms are an acceptable alternative and the same requirements that apply to photoelectric alarms also apply to hardwired alarms.
- › The hardwired system must have sensors in each bedroom (or boarding room) or within 3 metres of each bedroom door and there must also be at least one smoke alarm installed on each storey or level.

When will landlords have to replace long life photoelectric smoke alarms?

- › According to the manufacturing standard long life photoelectric alarms must have a service life of at least 8 years under normal conditions and have the date of manufacture marked – you should replace the smoke alarms within 8 years of the manufacture date or earlier if recommended by the manufacturer or if the low battery warning sounds.

Where should smoke alarms be placed?

- › The illustrations below from New Zealand Standard 4514 provide a guide on where to place smoke alarms
- › The NZ Fire Service's website, www.fire.org also provides helpful information on the placement of smoke alarms
- › The residential tenancies regulations set out the minimum requirements for smoke alarms. The NZ Fire Service's recommendation to place smoke alarms in each bedroom and within 3 metres of each bedroom door is not a regulatory requirement, but you may wish to consider following this recommendation.



What requirements apply to boarding houses?

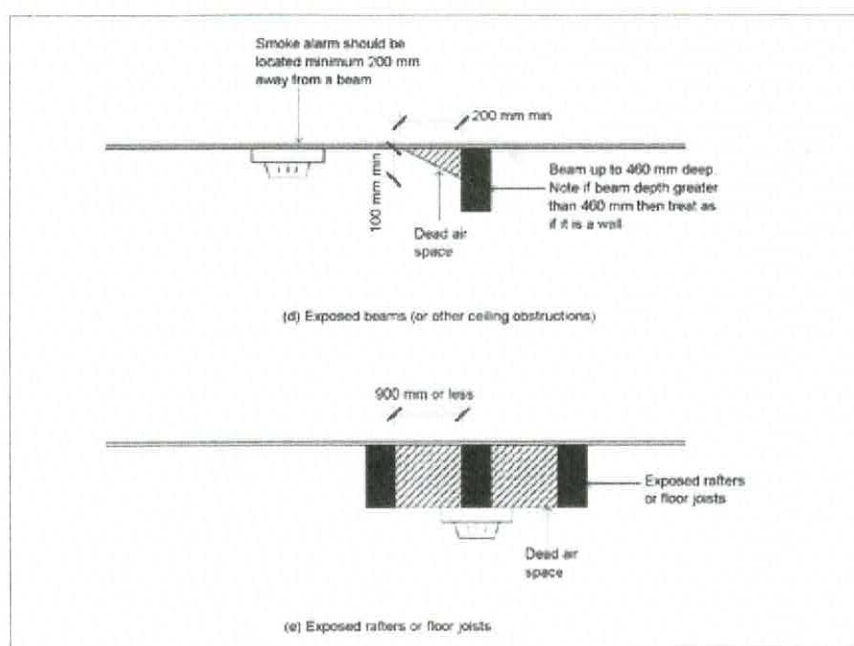
There must be at least one smoke alarm installed in each tenant's boarding room or within 3 metres of the entrance (or main entrance) to each tenant's boarding room.

In addition, a smoke alarm must be installed on each storey or level of the boarding house, even if there isn't a boarding room on that level.

Tenants are responsible for replacing smoke alarm batteries in their rooms.

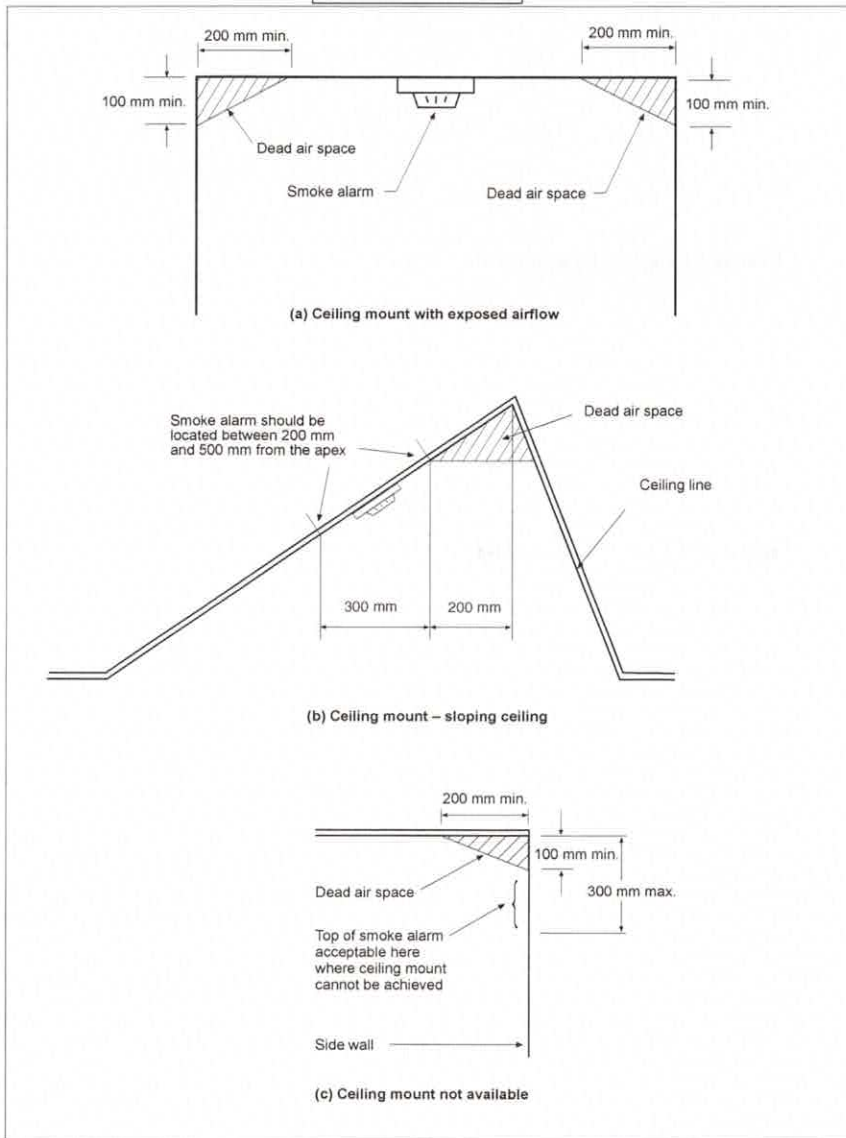
Landlords are responsible for replacing smoke alarm batteries in common areas like hallways and the kitchen.

Illustrations highlighting best practice for installing smoke alarms in homes with particular construction styles



NZS 4514:2009 *Interconnected smoke alarms for houses* © Ministry of Business, Innovation and Employment, administered by the New Zealand Standards Executive. Published with permission from the New Zealand Standards Executive under copyright licence LN001217.

Figure 5.1 Dead air spaces



Tenancy Services



Warmer, drier, safer homes

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MB13712 (13 OCT16)



design features



Dektite®

First and the Best!

To develop a product that is universally accepted as the best on the market Dek's consider every aspect of the Dektite® design: installation, functionality and materials.

Success in this is proven by the performance of the Dektite®. The ingenious shoulder moulding, results in less distortion, which reduces stress on the material, and eliminates ponding with complete water run-off in every situation. The low profile not only looks good but provides a generous internal clearance, so even the steepest roofs are handled with ease.

Installation is easier with the Dektite®.

- The large base area provides more coverage and greater latitude in cut-out size.
- The cone has clearly marked cut lines for different pipe diameters.
- Around the base of the cone a flexible bead reduces stress on the flashing membrane (to which an aluminium flange is bonded), as it is formed over the roof profile.
- Underneath, moulded ribbing increases sealant retention to ensure an effective, weatherproof seal.

FLEXIBLE CONE SLEEVE

Dektite® cone shape eliminates seal breakdown due to vibration or expansion and contraction, while isolation of pipe from sheeting dampens noise levels.

EASILY IDENTIFIED SIZING

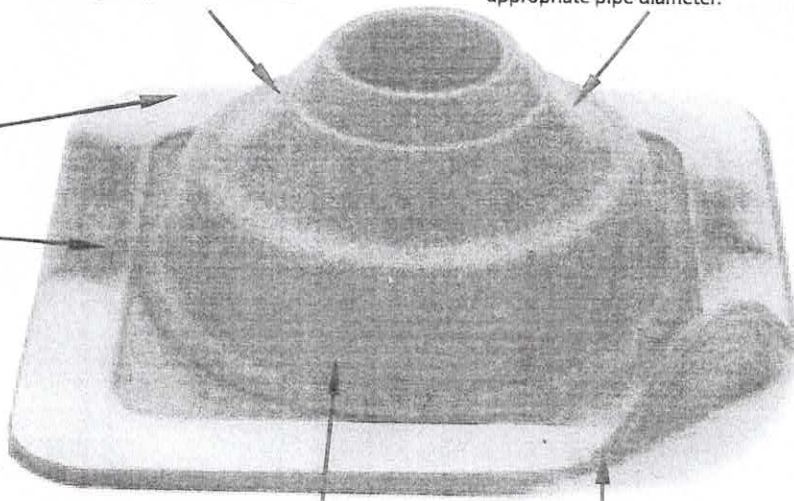
Pipe diameter rings are clearly marked on the cone sleeve (metric and imperial) for cutting to match the appropriate pipe diameter.

LOW PROFILE DESIGN

Sleek, unobtrusive shape is designed to minimise silhouette on roofline, while managing to provide generous internal clearance for steep, angular installations.

STRESS ISOLATION POINTS

Unique to Dektite® two flexible shoulders absorb distortion and stop transfer of stresses from base to cone, as unit is formed over roofing profile.



BONDED ALUMINIUM FLANGE

Corrosion-resistant, malleable flange, evenly distributes fastening pressure and allows ease of hand-shaping on most sheet profiles.

INTEGRITY OF FLASHING SHAPE

Minimal distortion after installation, maintains natural flashing shape and seal around pipe, while water run-off is improved and 'ponding' eliminated.

LARGE BASE AREA

For better coverage of penetration cut-out and improved performance over steep roof pitches and a wider variety of cladding profiles.

IMPROVED WATERPROOFING

Designed to strengthen sealant bond and improve waterproofing, the ribbed base has an angled skirting edge to help shed moisture and contribute to a superior waterproof seal. For even more efficient water run off the Dektite® can be fitted on the Diamond.

NEW ZEALAND HOME HEATING ASSOCIATION (INC)
 P O Box 302-486 North Harbour, Auckland 1330
 Ground Floor, 2/106 Bush Road, North Harbour, Auckland
 Phone: 64-09-414-4300 0800 866 667
 Fax: 64-09-414-4593
 E-Mail: nzhha@tradesec.co.nz

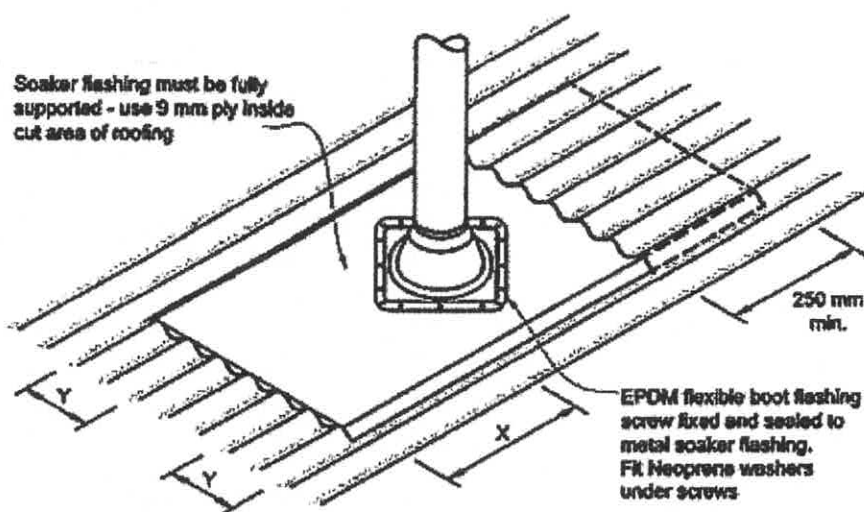


MEMO

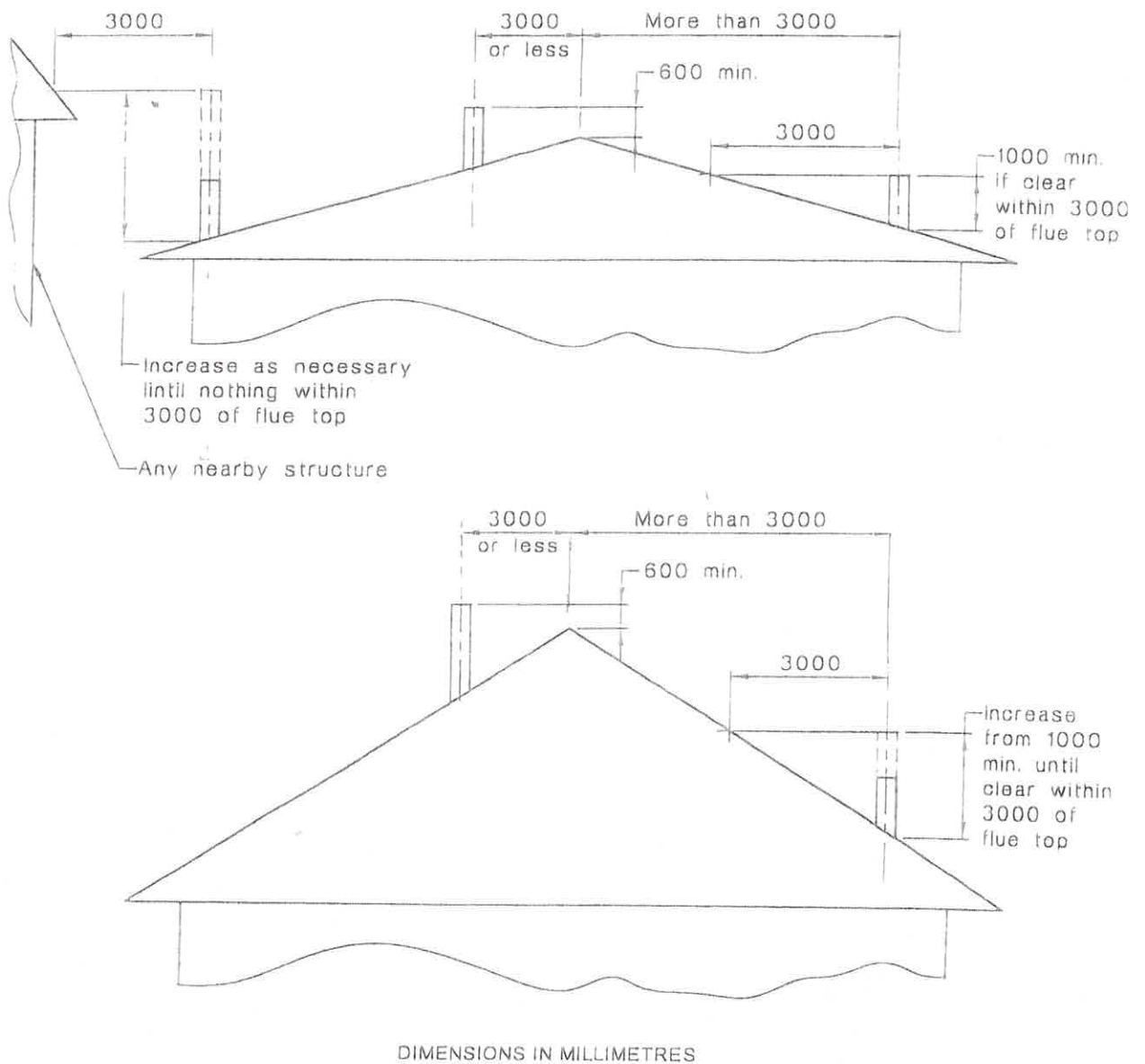
TO: All Members
FROM: Ed Hawkes National Secretary
SUBJECT: Soaker Flashings
DATE: 3RD May 2005

Department of Building and Housing (DBH) have adjusted Fig 54 (below) to accommodate pipe penetrations up to 500mm diameter. They will also show the roofing sheet above the flat flashing to be a separate sheet rather than a 'slit' sheet as implied in the document to date. This will be published in the reprint of the Building Code June/July, 2005.

(4) Suitable only for roof pitches of 10° or higher.



MINIMUM HEIGHT OF FLUE SYSTEM OUTLET



NOTES:

1. The flue pipe shall extend not less than 4.6m above the top of the floor protector.
2. The flue cowl must be at least 600mm above the highest point of the roof if within 3 metres of it, or 1 metre above the roof penetration if more than 3 metres from the ridge.
3. No part of the building, or any adjacent building may be in or above a circular area of a horizontal radius of 3 metres from the flue exit.



Sheetmetal Fabricated Products Ltd.

150 MM FREE STANDING WOODFIRE FLUE KIT INSTALLATION INSTRUCTIONS

WARNING: THIS FLUE KIT HAS BEEN MANUFACTURED IN ACCORDANCE WITH AS/NZS 2918:2001 AND TESTED TO APPENDIX F. TO ENSURE SAFETY THIS FLUE KIT MUST BE INSTALLED AS OUTLINED IN THESE INSTRUCTIONS AND THE APPROPRIATE REQUIREMENTS OF THE RELEVANT BUILDING CODE OR CODES. WOOD FIRE AND FLUE CLEARANCES FROM COMBUSTIBLE WALLS MUST BE IN ACCORDANCE WITH WOOD FIRE MANUFACTURER'S SPECIFICATIONS AND AS/NZS 2918:2001. THESE INSTALLATION INSTRUCTIONS ARE FOR TESTED APPLIANCES ONLY.

CAUTION: MIXING FLUE SYSTEM COMPONENTS FROM DIFFERENT SOURCES OR MODIFYING THE DIMENSIONAL SPECIFICATION OF COMPONENTS MAY RESULT IN HAZARDOUS CONDITIONS. WHERE SUCH ACTION IS CONSIDERED, THE MANUFACTURER SHOULD BE CONSULTED IN THE FIRST INSTANCE.

CAUTION: IT IS THE RESPONSIBILITY OF THE INSTALLER TO ENSURE THAT THE INSTALLATION OF THIS FLUE KIT COMPLIES WITH AS/NZS 2918:2001, THE APPLIANCE MANUFACTURERS SPECIFICATIONS FOR FLUE PIPE SHIELD AND CEILING PLATE AND THAT THE RELEVANT BUILDING CODES ARE ADHERED TO.

BENDS AND EXTENSIONS TO THE LENGTH OF A FLUE SYSTEM ARE PERMITTED (AS/NZS 2918 2001 4.1)

- 1) Locate Wood Fire in its proposed position and mark a point on the ceiling that is directly above the centre of the Wood Fire's Flue Spigot. Check that the Wood Fire's location allows the OUTER CASING to clear all structural roof timbers.
- 2) Cut a 250mm square hole in ceiling. Directly above cut a hole in roof to accommodate OUTER CASING.
- 3) Fit timber nogs around ceiling. i.e. Nogs form a 250mm square aperture that allows air to circulate freely over the OUTER CASING surface.
- 4) Position the OUTER CASING so that it is flush with the underneath of the ceiling and protrudes through the roof the required height. Note that AS/NZS 2918:2001 4.9.1(a) states, "the FLUE PIPE shall extend not less than 4.6m above the top of the floor protector". Refer to diagram B.
 - a) If the FLUE PIPE is within 3 metres of the ridge, the FLUE PIPE must protrude at least 600mm above the ridge of the roof.
 - b) If the distance from the ridge is more than 3 metres, the FLUE PIPE must protrude at least 1000mm above roof penetration.
 - c) The FLUE PIPE must be more than 3 metres from any nearby structure. (Refer diagram C).

Additional FLUE PIPE, OUTER CASING and/or INNER CASING may have to be added to ensure the following:

- I) The correct minimum roof penetration height.
- II) Sufficient overall height to encase the FLUE PIPE which must extend a minimum of 4.6 metres from the floor protector. Refer diagram B.

Note that the INNER CASING should extend 200mm above roof penetration.

NB: Do not secure the OUTER CASING SLIP EXTENSION onto the OUTER CASING, as final adjustment will be required when fitting cowl assembly. See Paragraph 11.

- 5) Fix an appropriate flashing around the OUTER CASING to seal onto the roofing material. Refer to the manufacturer's recommendations for correct fitting. NB: On iron roofs, fixings such as metal angle brackets (approximately 25mm x 25mm) can be fitted under the flashing to securely fix the roof to OUTER CASING.
- 6) Drill holes in ceiling plate for the fixing screws. Place CEILING PLATE over Wood Fire's Flue Spigot, ensuring the folded edges are facing the ceiling.
- 7) Position bottom length of FLUE PIPE (crimped end downwards) into Wood Fire Flue Spigot.

Refer to the supplier of the Wood Fire and use flue pipe sealant if recommended.

- 8) Assemble FLUE PIPES together ensuring seams are straight, offsetting the seams will ensure a neat fit. FLUE PIPES **must** be assembled with crimped ends down (towards Wood Fire). Secure each joint with a minimum of three Monel Steel rivets equally spaced around the joint. If using HI-THERM FLUE PIPE the protective wrapping should be left on the FLUE PIPE during installation.
- 9) From the roof lower FLUE PIPE through OUTER CASING into the bottom FLUE PIPE securing with three monel rivets.
- 10) Check that the FLUE PIPE SPACING BRACKETS inside the INNER CASING are correctly positioned and then from the roof slide the INNER CASING into the OUTER CASING until the brackets rest on to the internal swage ring of the OUTER CASING, this will ensure the INNER CASING is the correct 12mm above ceiling level.

Check the INNER CASING when correctly positioned extends a minimum of 200mm above the roof penetration.

- 11) Before securing the OUTER CASING SLIP EXTENSION to the OUTER CASING with 3 rivets, ensure the FLUE PIPE extends above the top of the OUTER CASING SLIP EXTENSION 145mm. Adjust SLIP EXTENSION to obtain this measurement.
- 12) Fit TOP SPACER BRACKET to the FLUE PIPE making sure the lugs fit snugly inside OUTER CASING SLIP EXTENSION. Make sure TOP SPACER BRACKET fits hard down onto OUTER CASING SLIP EXTENSION.
- 13) Fit CASING COVER over the FLUE PIPE and push down firmly onto TOP SPACER BRACKET.
- 14) Fit COWL but do not secure, as removal for flue cleaning will be necessary. Deform or ovalise the stub of the COWL to ensure it is a tight friction fit.
- 15) Fasten CEILING PLATE to ceiling using screws and ceramic spacers provided. Ensure an even air gap around FLUE PIPE when fixing. Remove protective plastic from CEILING PLATE. N.B. 12mm air gap between ceiling plate and ceiling must be maintained.
- 16) Leave all installation and operating instructions with the owner.

Cleaning of Flue Pipes before lighting the fire.

Stainless Steel pipe should be wiped clean using a soft cloth and methylated spirits to remove finger marks and oils used to manufacture the flue pipe.

Hi-Therm flue pipe can be touched up using only STOVE BRIGHT aerosol paint.



Sheetmetal Fabricated Products Ltd.

150mm Free Standing Wood Fire Flue Kit Installation Instructions Complies with AS/NZS 2918:2001

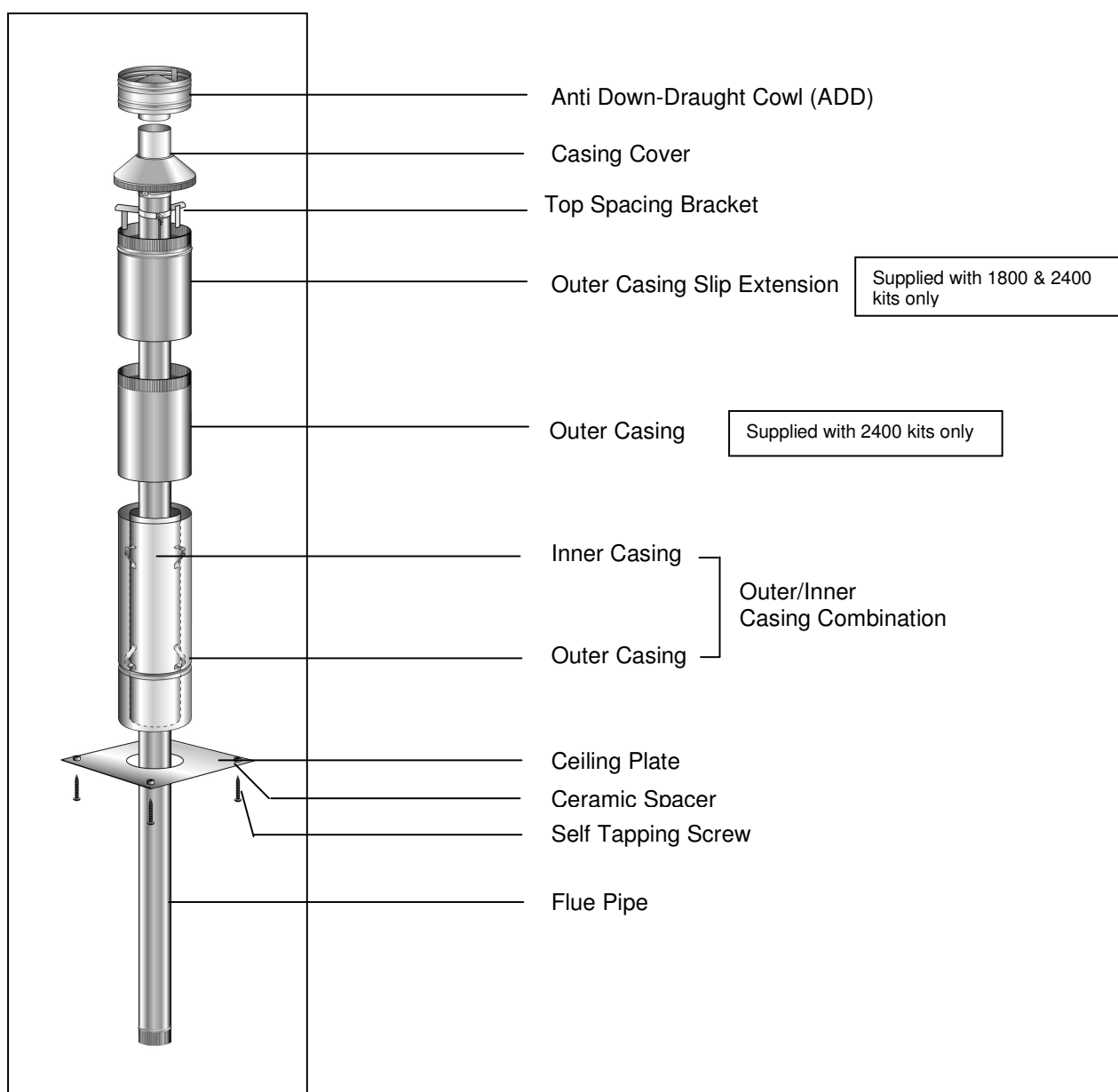


Diagram C AS/NZS 2918:2001 pg 37

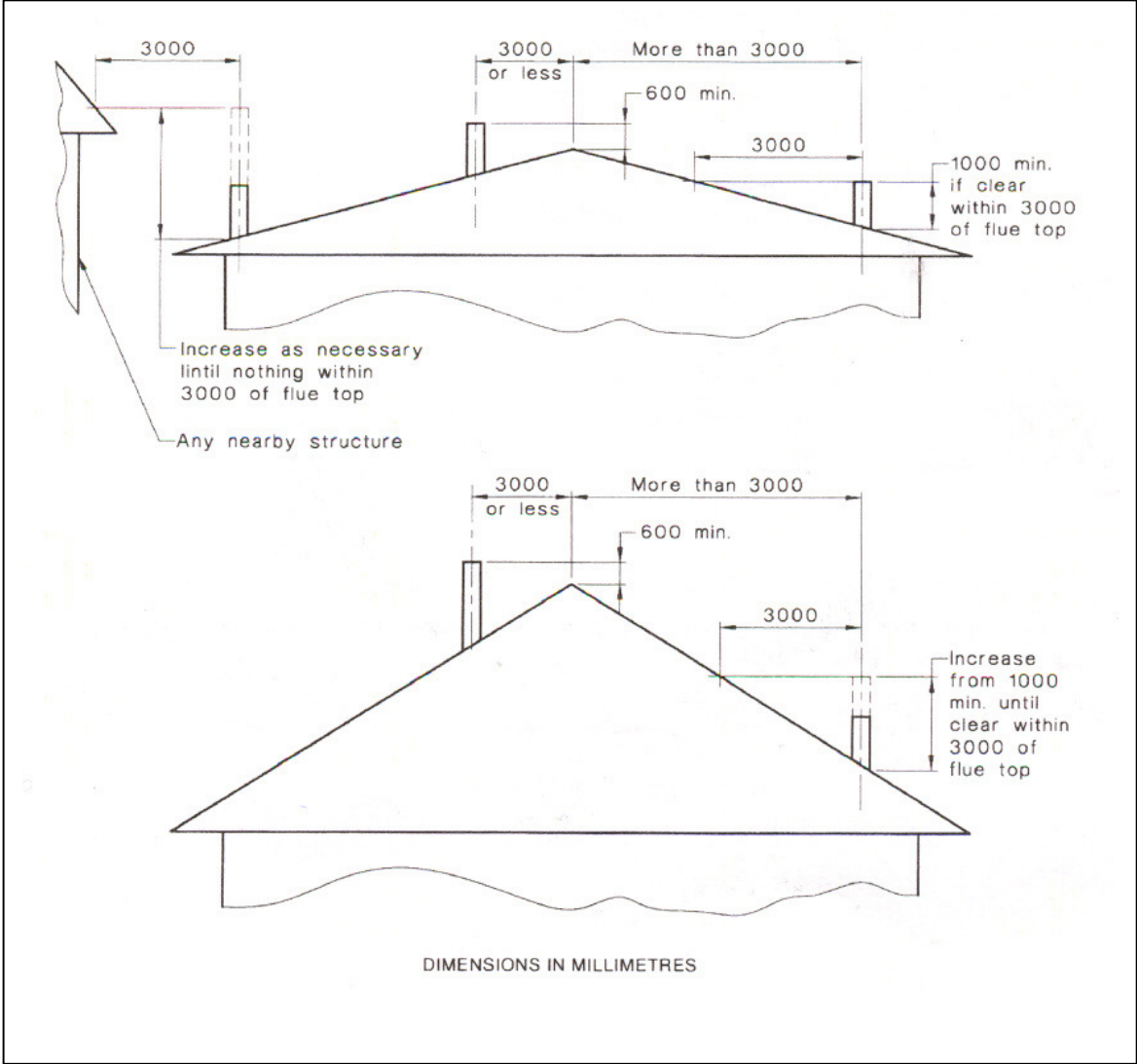
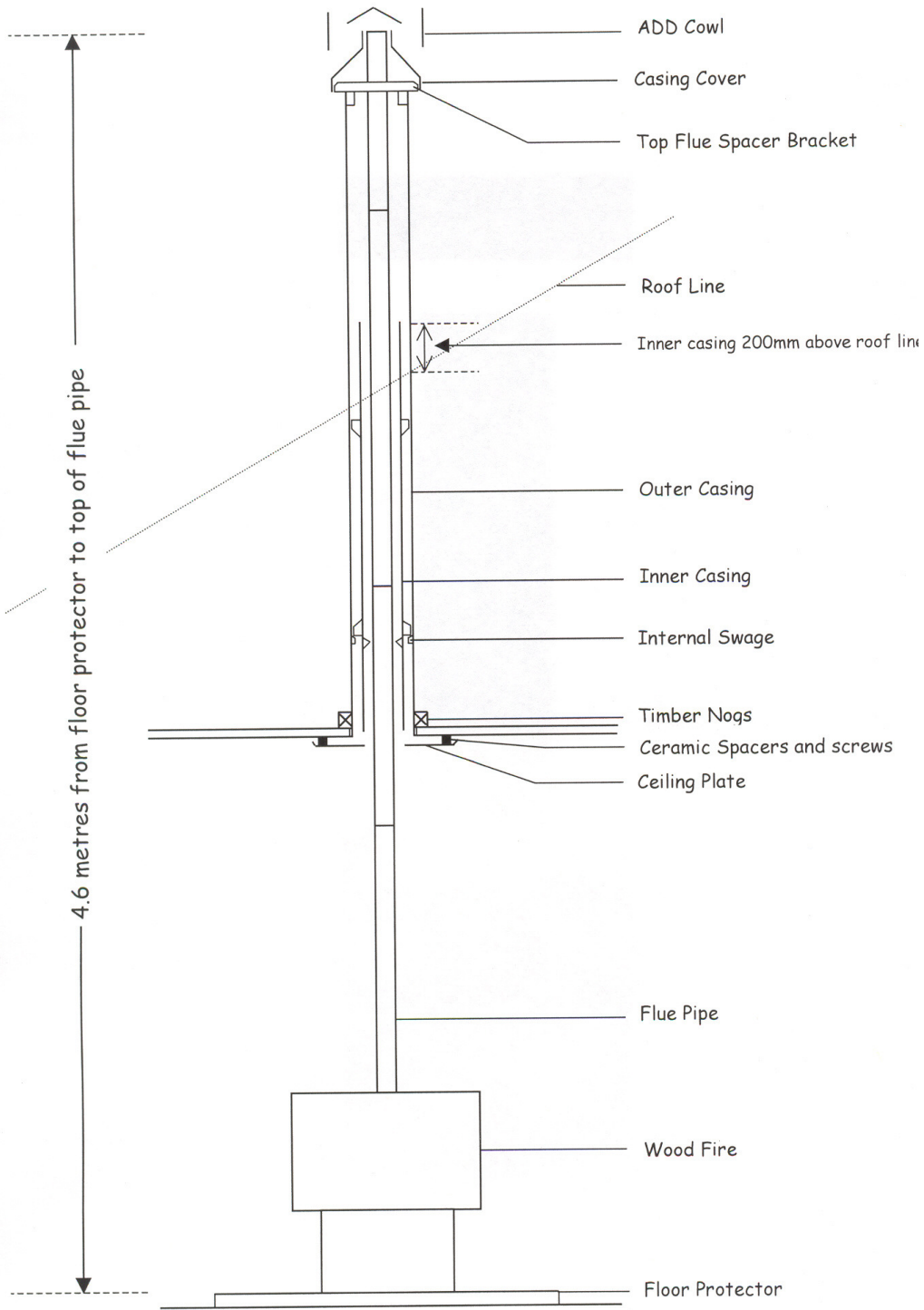


Diagram B



HI-THERM STAINLESS STEEL FLUE PIPES

HI-THERM Flue Pipe is a high temperature, matt finish Flue Pipe designed for use on slow combustion, solid fuel heaters.

HI-THERM Flue Pipe is ideal for heaters that have high flue temperatures and that also can be operated under circumstances that may produce creosoting of Flue Pipes for short periods of time, ie, on refuelling and with air control in shut or low position. Clean air guidelines must be observed.

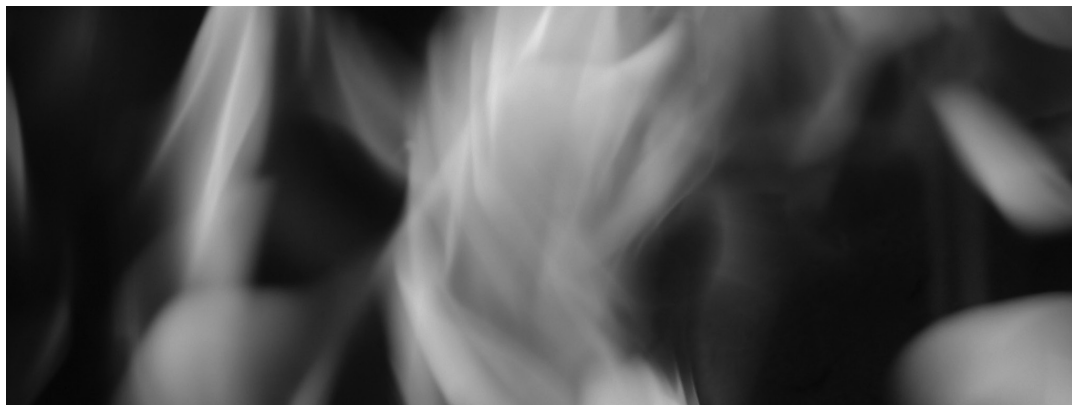
- HI-THERM Flue Pipe is a **maintainable** product.

CONDITIONS OF USE

- *The Wood Fire must be operated in accordance with the manufacturer's instructions. Clean air guidelines and regulations must be observed.*
- *HI-THERM Flue Pipe must be swept by mechanical means only. (We recommend mixed head or polypropylene brushes). Under NO circumstances should chemical flue cleaners, (soot destroyers) or steel chimney brushes be used.*
- *HI-THERM Flue Pipe should not be used on a Wood Fire burning treated or wet (unseasoned) wood. **Only use newspaper when lighting the fire; never burn colour printed brochures or junk mail.***
- *HI-THERM Flue Pipes **must** be secured together with a minimum of three Monel Steel rivets equally spaced around the joint.*
- *The paint finish appearance may change, depending on Wood Fire operation and is designed to be a MAINTAINABLE finish. To maintain paint finish or touch up use only genuine STOVE BRIGHT Aerosol. (Refer label on packaging).*
- *HI-THERM Flue Pipe must be installed in accordance with SFP installation instructions, using flue componentry supplied by SFP. It is the responsibility of the installer to ensure no water leaks into the Hi-Therm Flue System.*
- *The Stainless Steel Flue Pipe used in "Hi-Therm Stainless Steel Flue Pipe" is warrantied for five years, providing the above conditions are met.*

**FAILURE TO OBSERVE THESE CONDITIONS
MAY NEGATE WARRANTIES**

Wood Fire Installation & Owner's Operation Manual



metrofires

Freestanding Wood Fires

Important information.....	2	Optional wetbacks.....	9
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Flue installation.....	5	Cleaning and maintenance	11
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Clearances and specifications	7	Metro Fires warranty	13
Important operation information	8	Replacement parts	14-15
Where to install a Metro fire in your home.....	9	Heating accessories.....	16

⚠️ WARNING! Important Information

- **WE HIGHLY RECOMMEND YOU READ THIS ENTIRE MANUAL AS INCORRECT OPERATION, MISUSE AND/OR LACK OF MAINTENANCE WILL VOID THE WARRANTY**
- The appliance and flue-system shall be installed in accordance with AS/NZS2918 and the appropriate requirements of the relevant building code or codes
- Any modification of the appliance that has not been approved in writing by the testing authority is considered to be in breach of the approval granted for compliance with AS/NZS4013 and will void the warranty
- The appliance must be installed correctly. We recommend a competent and suitably qualified NZHHA installer

All Metro wood fires comply with AS/NZS2918:2001 when installed in accordance with this manual. Please ensure you are fully conversant with the relevant standard and the contents of this manual. Correct installation is critical to the safe operation and performance of this wood fire.

Please take particular note of the following:

- It is recommended that Metro fires be installed with a Metro ECO flue system which has been developed to enhance the performance of Metro wood fires. Any alternative flue system must have a minimum flue pipe length of 4.2 metres of 150mm diameter flue pipe & have been tested to AS/NZS2918:2001
- The 150mm active flue pipe must be fully encased from the ceiling to the underside of the flashing cone at the top of the flue system, (i.e. there must not be any 150mm flue pipe exposed)

⚠️ CAUTION! Important Information

- Mixing of appliance or flue-system components from different sources or modifying the dimensional specification or components may result in hazardous conditions. Where such action is considered, the manufacturer should be consulted in the first instance
- Do not install a Metro fire if there is any sign of visible damage to the product
- This appliance must be regularly maintained.
- Use authorised Metro replacement parts only. The use of unauthorised parts may void the warranty
- This manual **MUST** be left with the home owner

- All flue pipe joints must be sealed and riveted. The bottom of the flue pipe in particular **MUST** be fully sealed into the flue outlet of the Metro fire
- In New Zealand, the Metro fire must be bolted through the floor protector into the floor to comply with the seismic restraint provisions of AS/NZS2918:2001
- All Metro's are extremely heavy, varying in weight from 75kgs up to 185kgs. During the installation process do not lift the appliance by yourself, and take care not to damage the panel coating
- Please take care when lifting the Metro fire into place onto the hearth or floor protector as point loading may break tiles and/or scratch surfaces.

Assembling your Metro wood fire

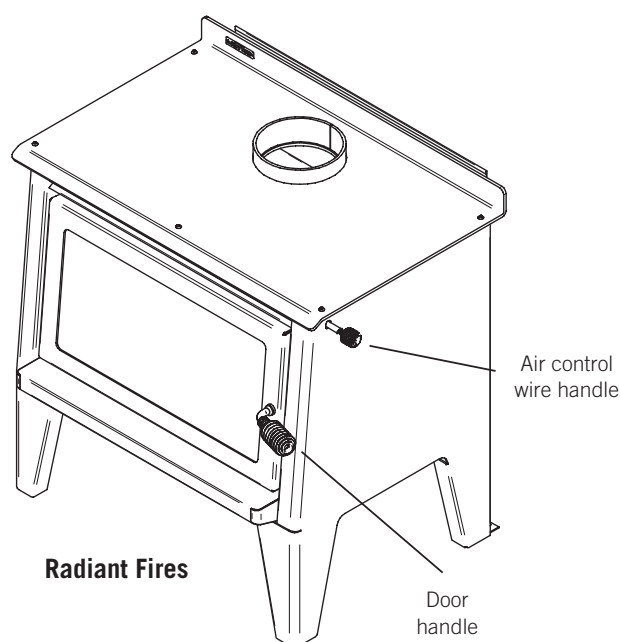
Please note: You should only assemble this wood fire if you are suitably experienced in wood fire assembly and installation. The Metro carton shows the model Metro you are about to install, enabling you to select the appropriate model's assembly instructions.

All Metro wood fires are packed in a single heavy-duty carton, and tek screwed to a wooden pallet. Having removed the packaging and located this manual, familiarise yourself with the illustrations on pages 2 & 3, and proceed as follows.

Metro radiant fires

These Metro's are supplied virtually fully assembled. Packed inside the firebox you will find bricks in a cardboard wrapper, a wire door handle and the air control wire handle.

- Remove the two tek screws located at the base of each rear leg which secure the Metro to the wooden pallet, and carefully 'walk' the Metro off the pallet
- Open the door fully and fit the side bricks to each side of the firebox. Location lugs are fitted to the base and rear wall of the firebox to retain the side bricks in position. Refer to Diagram 2
- Attach the door handle to the door latch assembly by screwing it on clockwise
- Attach the air control wire handle by screwing it on clockwise.



Assembling your Metro wood fire

Please note: You should only assemble this wood fire if you are suitably experienced in wood fire assembly and installation.

Metro pedestal and base model fires

To eliminate freight damage, the pedestal base has been packaged inside the firebox. To safely assemble your Metro, please proceed as follows:

- Lift off the top grill (convection models only) and place somewhere safe. Be careful not to chip the enamel coating or damage paint
- Open the door 45 degrees and lift the door off the hinge and place somewhere safe. Be careful not to damage the finish
- Remove the pedestal packed in a cardboard wrap
- Remove, rotate and re-fix the mount plate to the pedestal.

Note: The pedestal mount plate is fixed to the back of the pedestal base with 4x screws. This mounting plate must be removed, rotated and re-fixed to the pedestal as detailed on page 4 in diagrams 3 and 3A. The return fold must face back the opposite way to create the mount plate and fixing points for seismic restraint of the wood fire.

- Remove the pedestal heat shield

Note: For some models the pedestal heat shield may be taped to the rear heat shield. The ECO Tiny Ped's pedestal heat shield is pre-fitted.

- Remove the side bricks, door handle and the bolt bag
- Remove the 2 tek screws at the base of the inside of the firebox that fix the wood fire to the pallet.

It is recommended that 2 people work together with the next step:

- Grab the underneath top of the firebox door opening with one hand, holding the flue spigot with the other, slowly lift the front of the wood fire all the way back and rest the wood fire on its rear heat shield on the floor. Remove the packaging pallet.
- Fit the pedestal heat shield over the 4 bolts as shown in Diagram 1, with the open edge facing the front of the Metro (up)
- Position the pedestal with its front facing over the 4 bolts and fit the washers and nuts supplied, check to ensure the pedestal is correctly aligned and securely tighten the nuts.

It is recommended that 2 people work together with the next step:

- Grab the flue spigot with one hand and the other hand underneath the top of the firebox door opening, lift upwards standing the wood fire onto its pedestal
- Fit the side bricks to each side of the fire box. Location lugs are fitted to the base and rear wall of the firebox to retain the side bricks in position. Refer to Diagram 2. (Classic Rad also features two side rear bricks).
- Re-fit the door and top grill (Convection models only)

All Metro models

Check to ensure the top baffle is in its correct position in the top chamber of the firebox. It should be resting on four support lugs (two on each side of the firebox). The baffle must be hard back against the rear of the firebox with the "promet extension" (white board) or return front steel edge of the baffle facing forward as illustrated in Diagram 2.

Note: Some models feature a two-piece top baffle.

Diagram 1

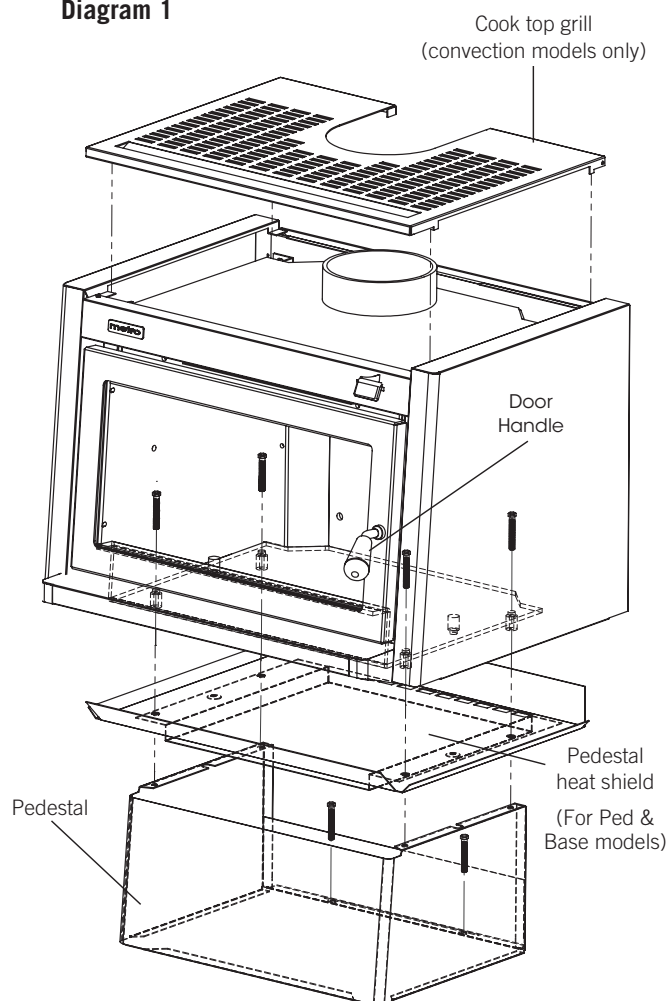
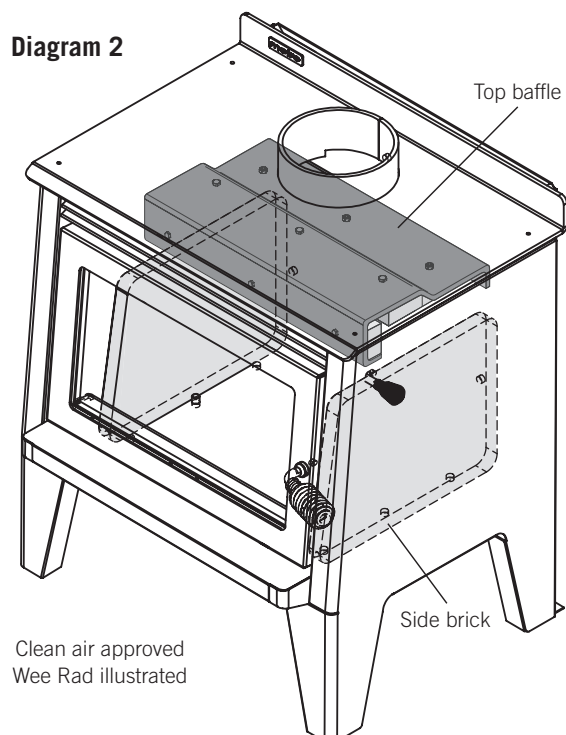


Diagram 2



Floor protector size, construction and fitting

Pioneer manufacture an extensive range of Pioneer 'Ash Floor Protectors' which comply with the minimum floor protector requirements of AS/NZS2918:2001, and can be installed with any freestanding Metro wood fire. Metro freestanding wood fires do not require an insulated floor protector as they comply with the minimum floor protector requirements of AS/NZS2918:2001. These minimum floor protector requirements are;

- They must be of adequate size to give appropriate wall, rear and front clearances/projections as detailed below and in the chart illustrated on page 7. Note;
- The floor protector must extend 200mm horizontally to the rear and each side directly below the door opening, and 300mm forward of the door opening
- The upper surface of the floor protector must be made of non-combustible material.

A suitable floor protector for a Metro freestanding wood fire is therefore any non-combustible material which could include;

- Ceramic tiles with grouted joints fixed directly to a hard base over timber flooring
- A sheet of toughened glass, panel steel etc. laid directly onto a wooden or other combustible floor.

Metro radiant fires

Lift the Metro fire onto the floor protector and using a suitable measuring device, ensure that the minimum wall clearances and front floor protector projections as detailed in the chart on page 7 are met or exceeded. Once the Metro's location on the floor protector is established and if the installation is within New Zealand, seismic restraint is required.

Using masonry anchors if the floor protector is on a concrete floor or coach bolts if a wooden floor, secure through the holes provided at the base, behind both rear legs.

Note: The anchors must pass through the floor protector and securely anchor the Metro to the floor.

Metro pedestal and base model fires

Prior to lifting the Metro fire onto the floor protector, ensure you have removed, rotated and re-assembled the mount plate from the back of the pedestal base as detailed in diagrams 3 & 3A above. This rear panel must be rotated with the return fold facing back the opposite way to create the mount plate and fixing points for seismic restraint of the wood fire.

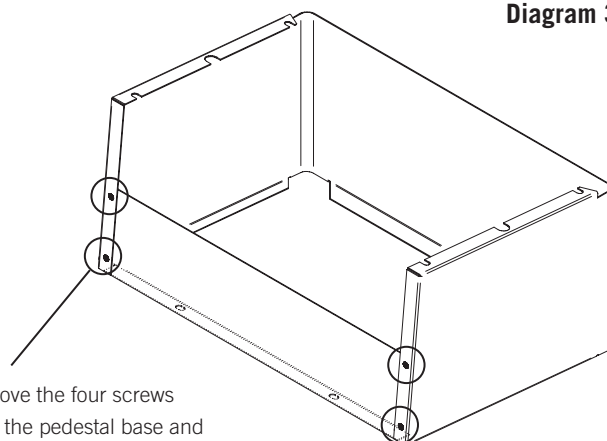
Lift the Metro fire onto the floor protector and using a suitable measuring device, ensure that the minimum wall clearances and front floor protector projections as detailed in the chart on page 7 are met or exceeded.

Once the location of the fire is established, you can then secure the Metro through the floor protector into the floor using the two seismic restraint holes in the rear edge of the mount plate. Use masonry anchors if the floor protector is on a concrete floor or coach bolts if a wooden floor

Note: The anchors must pass through the floor protector and securely anchor the Metro to the floor.

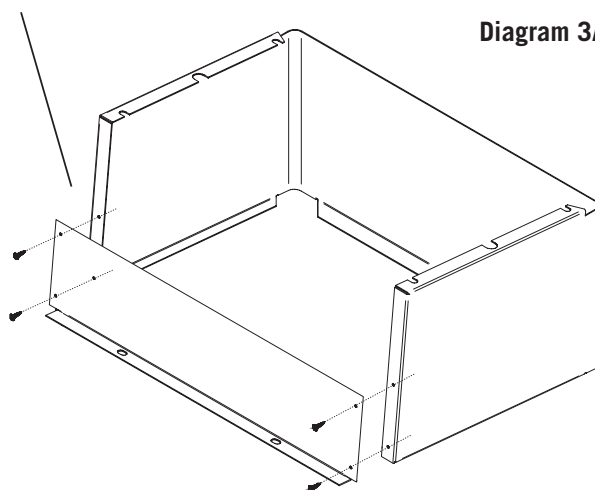
Preparing the mount plate

Diagram 3

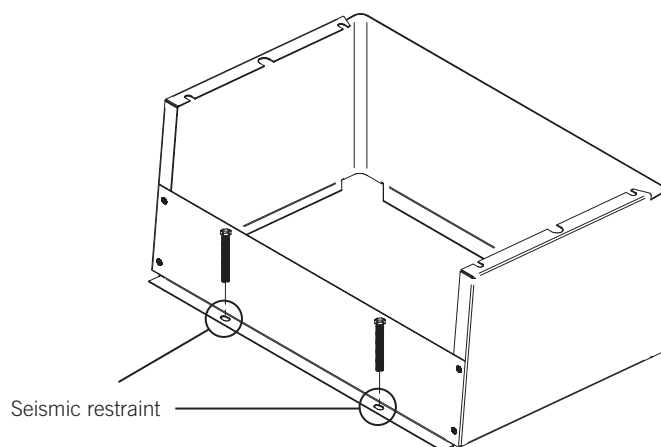


Remove the four screws from the pedestal base and rotate the mount plate so the return fold faces back the other way. Refix in place.

Diagram 3A



Correct mount plate position



Seismic restraint

Flue installation

It is recommended that all Metro freestanding wood fires be installed with the energy efficient ECO Flue System which comes complete with a detailed installation manual. This installation manual must be presented with your application to gain consent with your local council.

A copy of the ECO Flue System installation manual can be downloaded from metrofires.co.nz, or a copy can be obtained from your Metro retailer. Any alternative flue system must comply with and be installed as detailed in AS/NZS2918:2001, and a copy of the installation manual must also be presented with your application to gain consent with your local council.

All Metro fires require a 150mm diameter flue. Please note:

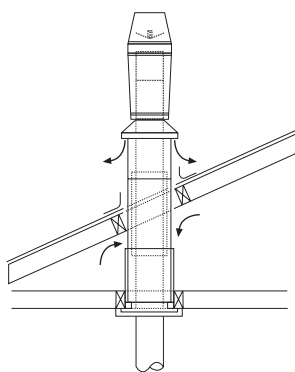
- Metro ECO flue systems must be installed to allow unrestricted air supply from either the ceiling cavity for an ECO Flue Kit, or above the roof line if the ECO Flue Kit and ECO Option Kits are both installed
- The ECO Flue system must be installed into a 'vented' flat ceiling cavity, or have an ECO Option Kit added to the flue system to provide an external air supply

- ECO Flue systems shall be installed in accordance with AS/NZS2918:2001 and the appropriate requirements of the relevant building codes
- Any modification to this flue system that has not been approved in writing by the testing authority is considered to be in breach of all approvals granted
- The flue systems 150mm diameter flue pipe must terminate a minimum of 4.6 metres above the top surface of the floor protector
- All joints in the flue pipe must be sealed with Pioneer fire cement (or similar) and riveted. The base of the flue pipe must also be sealed into the Metro fires flue outlet. This is critical for optimum operation.

All Metro fires have been tested with a Pioneer double flue shield. For the Metro fire to be installed with minimal clearances as the clearance table on page 7 states, only the Pioneer double flue shield can be used. All other flue shields will invalidate the installation.

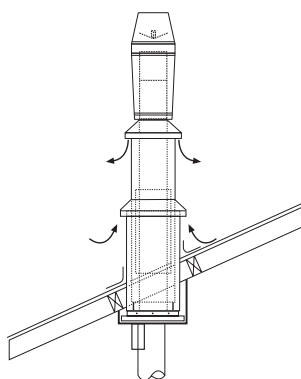
Detailed below are the more common installation methods for installing Metro ECO Flue Systems. To ensure a safe and efficient installation, this flue system must be installed as detailed below by either a registered installer, or someone competent in installing solid fuel appliances.

Single Storey Installations



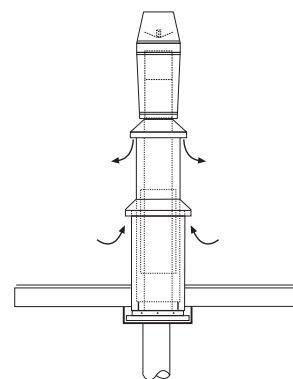
Flat Cavity Ceiling

ECO Flue Kit only required as air is drawn into the flue system direct from the ceiling cavity.



Sloping Ceiling

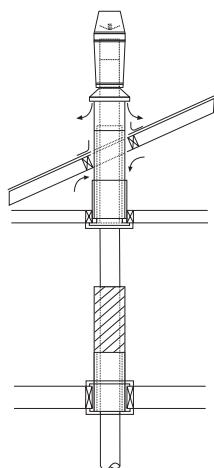
Both the ECO Flue Kit and ECO Option Kit are required to enable air to be drawn from outside the home.



Flat Ceiling/Roof

Requires both ECO Flue Kit and ECO Option Kit as per sloping ceiling unless a vented ceiling cavity exists.

Two Storey Installations



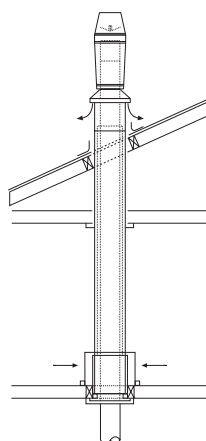
2nd Floor - Exposed Flue pipe

Requires an ECO Flue Kit only with additional lengths of flue pipe.

Additional components below are not supplied by Metrofires but are also required for this installation*

- A floor penetration kit
- 1x 1200mm long mesh/screen

*In accordance with AS/NZS2918:2001



2nd Floor - Enclosed Flue pipe

Requires an ECO Flue Kit only with additional lengths of flue pipe.

Additional components below are not supplied by Metrofires but are also required for this installation*

- 200mm & 250mm inner/outer combination liners.
- 2nd floor vent cover and an additional ceiling plate with a 250mm diameter hole

*In accordance with AS/NZS2918:2001

Wetback installation

WARNING! Important Information

- **DO NOT** connect to an unvented hot water system
- Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.

CAUTION! Important Information

- Wetbacks must be connected with water before operating the fire and available to the wetback while the fire is in operation
- Wetback systems are not suitable for use in locations where the water supply has lime content. Lime build up inside the coil will eventually block the coil causing the wetback to fail
- Rainwater collection tanks installed lower than the wetback that use a water pump to supply the home, can cause problems if the pump is not operational. In these situations either the type of wetback or a roof header tank should be considered

Wetback	Suitable for models:
2kW Wetback 	<ul style="list-style-type: none"> • ECO Tiny Rad • ECO Tiny Ped
Side Wetback 	<ul style="list-style-type: none"> • Tiny Rad Woody • Wee Rad & Wee Rad Base • Wee Rad Woody • Wee Ped • Classic Rad
3kW Wetback 	<ul style="list-style-type: none"> • Xtreme Rad & Xtreme Rad Base • Xtreme Rad Woody • Xtreme Ped • Mega Rad • All LTD rural models
4kW Wetback 	<ul style="list-style-type: none"> • All LTD rural models

The R1 and R2 models cannot be fitted with a wetback.

Water heating is another key feature of your Metro wood fire; nearly all Metro models can be fitted with a wetback, which are designed to give maximum output with minimal effect on the operation of the fire. Only the Pioneer cast jacket wetback system should be fitted to your Metro; alternative wetbacks will void the Metro's emission approvals and may seriously affect the performance of the appliance and void its warranty.

Wetback connections are as follows, taken facing the Metro/wall; the return pipe connection is directly above the inlet connection. Heights for all models are illustrated and detailed opposite on page 7.

- ECO Tiny Ped and ECO Tiny Rad models are 92mm left of the flue centre
- The Tiny Rad Woody model is 184mm left of the flue centre
- Wee Series models are 226mm left of the flue centre
- The Classic Rad model is 184mm left of the flue centre
- All other models are 140mm left of the flue centre

All wetbacks are fitted to the inside rear wall of the firebox, with the exception of the Tiny Rad Woody, clean air Wee Series models and the Classic Rad model. Side wetback position for these models is to the outside left hand firebox wall. Please see the specific installation instructions in the 'Side Wetback' box for installation of a wetback into these appliances.

It is recommended the return pipe has a minimum rise of 1 in 12; performance will reduce as the distance to the storage cylinder increases.

To fit the wetback proceed as follows

1. Remove the rear panel of the Metro by removing the four pozi drive screws. Remove the two pre-punched knockouts from this panel.
 2. Two further knockouts will be visible on the inner rear heatshield, remove these also. Once these are removed 6mm nuts will be visible through the knockout holes.
 3. Open the Metro's door and locate two bolts securing the pressed washers which are visible on the left hand side of the firebox for both inlet and outlet connection points.
 4. A further three bolt heads will also be visible on the inside rear wall of the firebox; these are threaded into the 6mm thick firebox. Remove all three.
 5. Using the tube of sealant supplied with the wetback, apply a liberal bead of sealant around both the two connection pipes and also the outer circumference of the wetback which will face and press against the inside rear wall of the firebox. This will completely seal the wetback to the inside rear wall of the fire on installation.
- Ensure there is no gap between pipe and rear wall access holes. This cement must fully cure before appliance use.
6. Fit the wetback into the firebox and carefully pass the connection pipes through the holes in the rear of the firebox. Securely attach the wetback using the three bolts previously removed from the rear face of the firebox, fitting them through the slots provided in the wetback's jacket.
 7. The wetback is now ready for connection to the storage cylinder by a registered plumber.

Metro clearances and specifications (Minimum clearances shown are in mm, with a Pioneer double flue shield fitted)

Minimum clearances

All Metro wood fires comply with AS/NZS2918:2001. Minimum clearances shown below are detailed in millimetres, with a Pioneer double flue shield fitted to the appliance. Measurements are taken from the following reference points as illustrated:

- From the nearest combustible wall or surface (A, B, D, E, G, H)
- From the Metro's flue centre (A, B, C, D)
- From the Metro's cabinet/heatshield outermost point (E, F, G, H)
- To the edge of the ash floor protectors non-combustible surface (C, F, I, J, K, L, M)

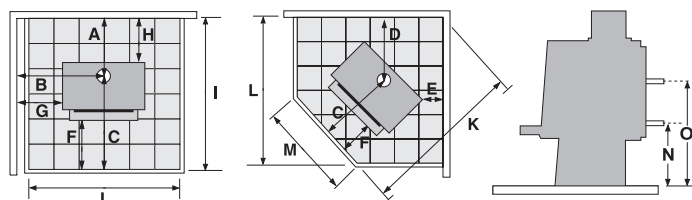
AS/NZS2918:2001 allows for a reduction in minimum clearances as detailed in Section 3, tables 3.1 and 3.2 of the standard.

Some Metro models have undergone additional testing which allows for reduced clearances. Please see the footnotes below the clearance table for the applicable models.

Wetback connections (taken facing the Metro/wall)

- ECO Tiny Ped and ECO Tiny Rad models are 92mm left of the flue centre
- The Tiny Rad Woody model is 184mm left of the flue centre
- Wee Series models are 226mm left of the flue centre
- The Classic Rad model is 184mm left of the flue centre
- All other models are 140mm left of the flue centre

Specifications were correct at the time of printing, but may alter and those detailed within should be used only as a guide. If in doubt, please consult your Metro retailer or metrofires.co.nz.



Clean air models	Minimum installation clearances with a Pioneer double flueshield fitted (mm)													Wetback		Dimensions		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Width	Depth	Height
ECO Tiny Ped	210	430	580	290	25	200	185	60	790	650	990	875	250	280	470	490	530	665
ECO Tiny Rad	225	552	580	420	150	200	300	75	805	650	1165	925	250	280	470	505	530	665
Tiny Rad Woody	251	568	580	382	110	230	310	100	831	650	1120	880	250	365	555	515	498	758
R1	243	774	586	554	280	244	530	100	829	825	1370	1118	425	N/A	N/A	488	485	668
R2	246	858	626	582	275	235	570	100	872	905	1449	1203	505	N/A	N/A	575	537	690
Wee Rad ¹	251	568	580	455	150	230	260	100	831	825	1224	1015	425	295	485	615	501	688
Wee Rad Base	271	678	580	489	180	230	370	120	851	825	1270	1049	425	295	485	615	501	691
Wee Rad Woody	271	708	580	509	200	230	400	120	851	825	1285	1069	425	365	555	615	501	758
Wee Ped ²	263	651	580	490	170	230	350	110	843	825	1274	1050	425	295	485	602	503	665
Classic Rad ³	257	695	780	500	220	229	430	100	1037	728	1487	1168	328	393	583	530	707	680
Xtreme Ped	251	624	630	441	110	227	280	100	881	907	1254	1065	507	312	502	688	554	721
Xtreme Rad	251	650	630	458	100	227	280	100	881	907	1277	1077	507	312	502	740	554	743
Xtreme Rad Base	251	650	630	458	100	227	280	100	881	907	1277	1077	507	312	502	740	554	743
Xtreme Rad Woody	251	680	630	478	120	227	310	100	881	907	1292	1097	507	382	572	740	554	813
Mega Rad	285	720	728	497	100	224	300	130	1013	1006	1431	1227	606	300	490	840	659	744
LTD rural models	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Width	Depth	Height
LTD Wee Rad	251	548	580	425	120	230	240	100	831	825	1180	985	425	295	485	615	501	688
LTD Wee Rad Base	251	658	580	489	180	230	350	100	831	825	1270	1049	425	300	490	615	501	691
LTD Wee Rad Woody	271	708	580	509	200	230	400	120	851	825	1285	1069	425	360	550	615	501	758
LTD Xtreme Rad	251	650	630	458	100	227	280	100	881	907	1277	1081	507	350	540	740	554	743
LTD Xtreme Rad Base	251	650	630	458	100	227	280	100	881	907	1277	1081	507	350	540	740	554	743
LTD Xtreme Rad Woody	251	680	630	478	120	227	310	100	881	907	1292	1097	507	420	610	740	554	813
LTD Mega Rad	285	720	728	497	100	224	300	130	1013	1006	1431	1227	606	300	490	840	659	744

The Wee Rad installed with a Pioneer double flue shield with the Wee Rad corner wing shields fitted allows for reduced clearances as follows:

¹ Wee Rad corner clearance (E) can be reduced to 120mm. This in turn also reduces clearances (D) to 425mm, (K) to 1180mm and (L) to 985mm. When fitting the corner wing shields, the Wee Rad itself must be installed to a corner clearance (E) of 120mm. The corner wing shields are then fitted which gives a wall to shield corner clearance of 100mm.

The following models installed with a Pioneer double flue shield with the side extensions fitted allows for reduced clearances as follows:

² Wee Ped corner clearance (E) can be reduced to 115mm. This in turn also reduces clearances (D) to 436mm, (K) to 1197mm and (L) to 996mm.

³ Classic Rad corner clearance (E) can be reduced to 180mm. This in turn also reduces clearances (D) to 460mm, (K) to 1430mm and (L) to 1127mm.

WARNING! Important Information

• **WE HIGHLY RECOMMEND YOU READ THIS ENTIRE MANUAL AS INCORRECT OPERATION, MISUSE AND/OR LACK OF MAINTENANCE WILL VOID THE WARRANTY**

- Any modification of the appliance that has not been approved in writing by the testing authority is considered as breaching AS/NZS 4013 and will void the warranty
- Do not use flammable liquids or aerosols in the vicinity of this appliance when it is operating
- Never operate your Metro with the top grill removed
- Do not dry clothes on or near this appliance
- Do not use flammable liquids or aerosols to start or rekindle the fire OR store fuel within the Metro's specified installation clearances
- Never operate your Metro with the door ajar, except on initial start up
- Open the air control fully before opening the Metro's door.

CAUTION! Important Information

- This appliance should be maintained & operated at all times in accordance with this instruction manual
- This appliance should not be operated with cracked door glass, over worn, faulty or missing door seals
- Do not use driftwood, treated or unseasoned (wet) fuel, the use of most types of preservative treated wood as fuel can be hazardous and will damage your appliance
- Burning unseasoned (wet) fuel or incorrect operation on extended low burn cycles will cause excessive creosote to form. Creosote is very corrosive and excessive buildups will result in the flue pipe, flue spigot and upper burn chamber failing. Failure of the appliance and/or flue system due to creosote damage is not covered under warranty. The formation of such is not an appliance issue it is a fuel and operational issue
- This appliance must be regularly maintained and replacement parts must be authorised Metro parts only
- Do not empty ash into a combustible container.

Congratulations on the purchase of your Metro wood fire

This slow combustion appliance is designed to give you many years of warmth and service, subject to the following key factors. These key factors, if not adhered to are the major causes of unsafe installation, poor performance and flue blockages and potential product failure.

1. Your Metro wood fire must be installed correctly. Metro recommend a competent and suitably qualified NZHHA installer.
2. The only fuel to be used in this appliance shall be wood that meets the following criteria.
 - Less than 25% moisture content
 - Has not been treated with preservatives or impregnated with chemicals or glue,
 - Is not chipboard, particle board, or laminated board,
 - Is not painted, stained or oiled
 - Is not driftwood or other salt impregnated wood
3. The appliance shall be operated at all times in accordance with the "Installation and Operating Instructions" supplied with each appliance.
4. It is preferable that Metro wood fires should be installed with a Metro ECO Flue System.
5. Coal must not be used as a fuel.

Please also note the following important points:

- In New Zealand a building consent is required from your local building authority. The homeowner is responsible for obtaining this consent
- As correct installation is critical to the performance and safe operation of your Metro, it is recommended your Metro be installed by a NZHHA registered installer or a person suitably qualified in the installation of wood fires. Your Metro retailer will be able to arrange professional installation for you
- During the very first fire your Metro will give off an odour and fumes as the firebox paint cures. Do not be alarmed; open all windows and externally opening doors in that room and close any internally opening doors. This curing process will last for approximately one hour and is likely to happen this one time

- Properly seasoned (dry) timber is necessary for the Metro to operate efficiently; firewood that contains a high moisture content will result in flue pipe blockages, reduce heat output and create other issues.

Note: Once split, Softwood usually takes 12 months to season - Hardwood can take up to 24 months to season - Wood must be stored in a location that enables air circulation. Unseasoned wood stored in a closed woodshed without air circulation will still be unseasoned 12 months later.

- It is critical that the fire not be operated with over worn, faulty or missing door seals. Door seals will harden over time and become over-worn (3-4 year's) this will cause air to leak into the fire, causing the appliance to 'over fire'
- It is critical that the fire not be operated with over worn, faulty or missing bricks, baffle plate, promet extension (white board on the baffle plate)
- It is critical that the fire not be operated with cracked or broken door glass.

Please note, the above 3 points require regular inspection/maintenance (every time the ash bed is cleaned out, generally 3-5 times a season) and if not maintained will void the firebox warranty. A glowing firebox or lower fluepipe is just one sign you are over firing your appliance. Please ensure you keep your proof of purchase/receipt on any parts you purchase.

- For optimum performance fuel must be loaded so the logs lay "front to rear" in preference to laying across the width of the firebox. Spaces should be left between the logs to enable oxygen to get to as much of the surface of the fuel as possible
- A small hot fire loaded frequently is more efficient than a large fire burning on a low setting
- Your Metro is covered by a full unconditional 12 month warranty on replacement parts, and a 10 year firebox warranty.

Where to install a Metro wood fire in your home

Wood fires are usually installed in the main living area, which is the section of the home that is usually kept the warmest, being the area in the home most frequently occupied. However, before deciding on the best location for your Metro wood fire you may wish to consider:

- Water heating. If you are intending to have a wetback it is important that the wood fire is as close as practically possible to the water storage cylinder
- Split level homes are best heated when the wood fire is installed on the lower level, as the heated air will rise to the higher levels
- Building construction is another consideration. Specified clearances from walls, curtains etc must be maintained and you need to ensure no structural beams or internal gutters etc are directly above your preferred site. If you have a two storey dwelling you need to consider the second storey to ensure you don't have the flue directly outside a second storey window.

Generally, you can install your Metro in your home anywhere that suits you; Pioneer offer various fan systems to transfer heat to other sections of the home that are not heated sufficiently. It is necessary if using a fan system that the Metro you have purchased has sufficient output to heat the total area you wish to heat. Your Metro retailer or installer will be able to advise if you are uncertain.

Optional wetbacks

Water heating is another key feature of your Metro wood fire; nearly all Metro models can be fitted with a wetback, which are designed to give maximum output with minimal effect on the operation of the fire. Only the Pioneer cast jacket wetback system should be fitted to your Metro; alternative wetbacks will void the Metro's emission approvals and may seriously affect the performance of the appliance and void its warranty.

Other considerations are:

- Distance from your Metro to the storage cylinder will affect the amount of hot water produced
- Your climate & the manner in which you will 'fire' your Metro will determine the amount of hot water produced.

Note: Wetbacks are not suitable for use in locations where the water supply has lime content. Lime build up inside the coil will eventually block the coil causing the wetback to fail.

Cost Savings

Wetbacks can enable substantial power savings, dependent on the climate in the area in which you live. If you live in a cold climate you are likely to use your Metro for many months of the year, in which case a Pioneer wetback will reduce or even eliminate your water heating costs over those months. If however you live in a warmer climate and use your Metro for only a few hours a day over the colder months, electricity savings will be considerably less.

Water Pressure

A common misconception is that you must have a low-pressure system to have a wetback; this is not true. You must have a 'vented' system and high-pressure cylinders are usually not vented. However you can install an 'indirect' cylinder which contains a secondary coil inside the storage cylinder, enabling you to have a wetback while retaining a high-pressure system.

Wetback	Suitable for models:
2kW Wetback 	<ul style="list-style-type: none"> • ECO Tiny Rad • ECO Tiny Ped
Side Wetback 	<ul style="list-style-type: none"> • Tiny Rad Woody • Wee Rad & Wee Rad Base • Wee Rad Woody • Wee Ped • Classic Rad
3kW Wetback 	<ul style="list-style-type: none"> • Xtreme Rad & Xtreme Rad Base • Xtreme Rad Woody • Xtreme Ped • Mega Rad • All LTD rural models
4kW Wetback 	<ul style="list-style-type: none"> • All LTD rural models

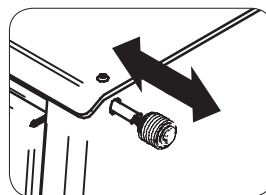
The R1 and R2 models cannot be fitted with a wetback.

Getting to know your Metro wood fire

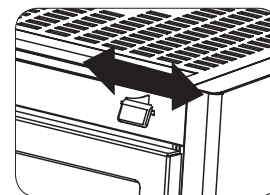
Operating your Metro fire is simple and you will quickly learn how to get the best from it. First take a minute to familiarise yourself with your new Metro.

- Raise the door handle anti-clockwise until the latch releases, and then slowly pull the door open. You will note that if you let the door go before it is at 90° to the appliance, it will fall closed. This is a safety feature that ensures the door cannot fall open if it is not latched securely. For the door to remain open, you must open it fully
- There is a single air control making your Metro fire easy to adjust. This control moves from left to right, which is 'low to high'.

All Metro radiant fires have a wire air control handle located at the upper right hand side of the appliance. Simply pull out to increase burn rate or push in to reduce burn rate.



Radiant fires air control



All other fires air control

All other Metro fires have an air control knob located on the upper front panel of the appliance.

Slide this control knob gently from right to left until you reach a stop. This is a pre-set 'low' position. Your Metro fire must not be operated at a lower burn rate than this pre-set low allows.

Operating your Metro wood fire

If your Metro has only been installed within the past few days, the fire cement seal at the base of the flue will not be fully cured. To ensure the cement sets without blistering it is recommended you burn 2-3 sheets of loosely crumpled newspaper at a time, approximately once every hour over a 6-8 hour period.

During the very first fire your Metro will give off an odour and fumes as the firebox paint cures. Do not be alarmed. Open all windows and externally opening doors in that room and close any internally opening doors. This curing process will last for approximately one hour and is likely to happen this one time.

Start up

Place a quantity of loosely crumpled newspaper on the base of the firebox until it is approximately half full of paper, or place firelighters on the base of the firebox. Add dry kindling and move the air control knob fully to the right, being the 'full open' position.

Light the paper at two or three locations across the front of the door opening and leave the door slightly ajar resting on the latch pin if necessary for a few minutes while the fire establishes. Once the kindling is burning well, open the door and add 2-3 small logs at a time until you have a well-established fire. Usually this will take approximately 30 minutes, during which time the air control should be set on "high" and the door should be closed, except for the initial few minutes and when fuel is being added.

Normal operation

Once the fire is well established, regulate the air control to achieve the desired burn rate and heat output. As you move the air control to the right, burn rate, firebox temperature and heat output will increase, if you move the control to the left they will decrease. Please note:

- Always open the air control fully prior to opening the door, then open the door slowly. Every time you refuel, leave the air control on 'high' for a minimum of 20-25 minutes
- When loading logs, place them end-on, 'front to back'; air spaces should be left between the logs to enable oxygen to get to as much of the surface of the fuel as possible
- Never use the door to force wood into the firebox, as this is likely to break the glass.

Extended burning (rural models only)

It is most important if your Metro is to be refuelled and turned down for an extended period, such as an overnight burn that you operate it correctly:

- The wood used as fuel for extended burning **MUST BE FULLY SEASONED (DRY)**. Once the fuel is loaded, the appliance must be operated on high for a period of at least 20 minutes to drive out residual moisture from the fuel (dry wood is usually 20% water content) and ensure surface area combustion.
- Do not turn the air control down lower than you need to, if you want the Metro to burn overnight, endeavour to obtain an 8 hour burn time, not 12 hours. It will take a few burns to find the correct location of your Metro's air control setting to achieve the length of burn cycle you desire as this setting is affected by several variables including fuel density, flue length and outside wind velocity.
- A smouldering fire over a long time frame is likely to deposit corrosive elements into your system which could be detrimental to your Metro.

⚠ CAUTION! Important Information

- If not operated correctly on extended burn cycles, your Metro is likely to incur flue blockages, corrosion of the upper baffle, lower flue pipe and firebox flue spigot. As these are not covered under warranty if they fail through improper use, it is important you operate your Metro correctly.

Cooking

All Metro's are designed to enable cooking of soups, stews and casseroles etc, and your Metro will easily boil a flat bottom stainless steel kettle. The Radiant Series have a dedicated cooking top enabling large pots to be placed on the cook top, while all other models have a lift-off grill.

Note: Metro's supplied with a lift-off top grill have this feature to enable the grill to be removed for cleaning if you have a spill. The lift-off top grill must be left on when cooking, because if removed the wall temperatures next to the appliance may become excessive and the top of the firebox is generally too hot to cook on directly.

Cleaning and maintenance for your Metro wood fire

Your Metro fire will give you many years of efficient service with minimal maintenance if operated correctly using seasoned fuel. Your Metro fire must be regularly maintained and replacement parts must be authorised Metro fires parts only.

The Metro radiant fires are painted wood fires and coated with 'Pioneer Metallic Black' high temperature paint and will require periodic repainting to keep them looking their best.

All other Metro fires are coated with vitreous enamel. Vitreous enamel is extremely durable and designed to last the life of the appliance. As vitreous enamel is glass, a solid or heavy object dropped or banged against a panel could chip the enamel surface.

All model Metro fires can be cleaned with a soft cloth when the appliance is not in operation.

Door glass

Providing your fuel is properly seasoned, under normal operating conditions the air-wash design of the Metro's firebox will keep the door glass clear. If the glass requires cleaning you may use either a razor blade scraper or crumpled wetted newspaper dipped in wood ash rubbed over the glass.

If your door glass breaks it must be replaced with 5mm thick ceramic glass which is available from your local Metro retailer.

Door seals

Over time, usually 3-4 years, the door and glass seals will become hard and cause air to leak into the firebox, causing the appliance to 'over fire'. Your Metro retailer stocks replacement woven fibreglass door and glass seals, which need replacing when they become hard and over worn.

The door of your Metro is easily removed. Hold it in both hands and lift the hinge end of the door up and over the top hinge pin, then lower the door from the bottom hinge pin.

Side bricks

Hair-line cracks are not uncommon and are a result of the intense heat within the Metro's firebox, coupled with mechanical damage caused by accidental impact when fuel is being loaded. However if the side bricks become cracked to the extent that they start to break up, they must be replaced.

Door adjustment

Provision is available on both sides of the door for adjustment.

To adjust the hinge end of the door, open the door fully, loosen the top hinge nut and slightly lift the latch end of the door; you will see the hinge assembly move back 1-2mm which will usually be sufficient. Retighten, then repeat by loosening the lower hinge nut, this time applying a slight downwards pressure onto the door to move the lower hinge assembly back a similar distance, then retighten.

The door latch is also adjustable, as the latch pin on the right side of the firebox is fitted through a slot which enables the latch pin to be loosened, moved back and re-tightened.

Ash removal

Over a period of time ash will build up in the base of the Metro's firebox and require removal. The time this build-up takes depends on the density and cleanliness of your fuel.

To remove the excess ash your Metro should not be operating.

- Open the door, and using a hearth shovel or similar, empty the excess ash directly into a steel or non-combustible container.
- If the ash is not disposed of immediately, be careful where you store it, as the ash can retain heat for many days and become a fire hazard.
- You must leave a bed of ash in the base of the firebox approximately 10mm deep; this insulates the base of the firebox and improves combustion.

Top baffle

This is a 'sacrificial' wear part of the firebox and should be checked monthly. Usually only the promet (white board) front/underneath section needs to be replaced when it starts to disintegrate.

Note: Cracks in the promet are not uncommon and have no adverse effect on the operation of your Metro. These cracks are the result of intense heat coupled with expansion and contraction. Burning wood which is not properly seasoned, i.e. 25% moisture content or more, will over time cause the promet to disintegrate and require replacement.

Flue systems

Should be checked annually, particularly the bottom end of the lower flue section at its rear lock formed joint. If deterioration is noticed contact your Metro retailer or installer.

The flue pipe should also be swept a minimum of once a year, or as required during the winter season. If smoke enters the room when you open the Metro's door this usually indicates the flue pipe is becoming restricted and needs cleaning. The frequency of flue pipe cleans depends on many factors, with the main variables being:

- The seasoning of the wood. If not properly seasoned you will require frequent flue pipe cleans.
- The density of the wood. Softwoods generally result in more deposits building up in the flue pipe.

To clean the flue pipe of your Metro, proceed as follows:-

- Open the Metro's door fully, reach inside with the palm of your hand face-up and extended, lift the top baffle approximately 20mm, then lift it forward out through the door opening, placing it on a sheet of newspaper you have placed on the front of the floor protector. To prevent jamming, removal and replacement of the top baffle is best performed using both hands.

Note: Some appliances have a two piece top baffle.

- Close the door and slide the air control to the left.
- Once on the roof, remove the cowl from the top of flue system and sweep the flue pipe using a 150mm-diameter flue pipe brush as detailed in the instructions provided with the fluebrush.
- Once the flue pipe is clear, clean and refit the cowl. Remove the excess soot which has fallen into the firebox, leaving a layer of ash 10mm deep on the base of the firebox, then refit the top baffle.

Note: The baffle must be fitted so its rear is touching the back of the firebox; if uncertain refer to page 3 in the installation section at the front of this manual, which shows illustrations of the baffle location.

Troubleshooting your Metro wood fire

If your Metro is installed correctly, your fuel is dry and you operate your fire correctly, you will find it to be a pleasure to use. Metro's many years of experience within the wood heating industry has shown that dissatisfaction is mainly due to:

- unseasoned fuel
- faulty installation
- operational error
- or a combination of the above 3 points.

Correct operation

Modern day wood fires need to be operated hard and fast, more so than low and lazy to ensure the firebox and flue pipe runs hot and efficiently. If the fire and flue pipe is up to temperature it will perform extremely well, the smoke will draw up the flue pipe with ease, and the fire will produce good amounts of heat.

If the fire is operated on low a lot of the time, the door glass will run black, the flue pipe will tend to block up more frequently and the fire will end up smoking into the room when reloading. It's better to have a small fire running hard and fast, rather than a big fire running low and lazy.

The following may be of assistance if you are experiencing any problems with the operation of your Metro Fire.

Smoke enters the room when the Metro's door is ajar

(possible reasons and solutions)

Check flue pipe joins

If the flue pipe joins are not sealed correctly, the flue pipe will not draw as well as it should. The flue pipe join connecting into the flue spigot on top of the Metro is most critical, if this is not sealed correctly, smoke will enter the room when the door is ajar. To check this join is sealed correctly, run a match or lighter flame around the join. If the flame is sucked into the spigot then it is not sealed correctly. This check needs to be done when the fire is not going. Ensure you check the rear of the flue pipe/spigot join, as due to the seam in the flue pipe, this is the most common area for not being sealed correctly.

Ensure the fuel you are using is correctly seasoned

If you are burning unseasoned fuel (wet), the fire will cause nothing but problems. The Metro won't deliver much heat, it will be lazy, smoke will enter the room when the door is ajar, and the door glass will run black. Unseasoned fuel is the main contributor to excessive creosote deposits which can be corrosive to your appliance and flue system.

Flue pipe length is too short

Add more flue pipe as the longer the flue system, the better the draw of the flue pipe. Please note, if you did not purchase the Metro ECO Flue System, you will not have the ECO Cowl which increases draw. We highly recommend the Metro ECO Cowl is fitted as this will increase the draw. If you already have an ECO Cowl and smoke is still entering the room, please add another 600mm length of flue pipe.

Downdraft/Turbulence blockage

If you have checked all of the previous factors and the fire is still smoking into the room, it's possible there may be a down draft issue. Down draft is environmental and can be caused by many variables, and it is purely trial and error to ascertain the cause.

Air turbulence and/or negative air pressure influences around the flue termination can be caused by too close or overhanging trees or natural/artificial ridges etc. Address these where possible or look to extend the flue above the roofline.

Other options may be:

- 'H' Cowl, designed purely for downdraft issues, but if you have an ECO Cowl fitted as standard, you will also need to add another 600mm of flue pipe to compensate as the H Cowl is shorter in length
- Directional Cowl, designed for high wind areas.

Air control setting

Ensure the air control setting is on high before opening the door to reload, as this increases the draw up the flue pipe. Open the door slowly.

If your Metro did not smoke, but its starting too and is getting worse:

The flue pipe is in need of a clean. It is recommended that the flue pipe be cleaned every season, however if you are burning the fire on low a lot, or are using unseasoned fuel, flue pipe cleans will be required more frequently.

Other issues you may experience

I can smell smoke in the room after a low burn cycle

The smell is creosote that will be seeping through the flue pipe join or out of the flue spigot onto an external surface, thus creating the smell in your room. The cause will be either unseasoned fuel, fuel mass too large, incorrect operation on low burn cycles or a combination. Creosote is very corrosive and excessive buildups will result in the flue pipe and potentially the flue spigot and upper burn chamber failing. The formation of excessive creosote is not an appliance issue, it is a fuel and operational issue. Failure of flue pipe or firebox due to creosote build up is not covered under warranty as excessive creosote build up is only possible from either unseasoned fuel or incorrect operation.

The Metro is noisy as it heats up and cools down

There will always be some expansion and contraction noise as the Metro heats and cools. This can usually be reduced by loosening three nuts at the rear of the appliance. To remedy, locate the 25mm deep cavity at the rear of your Metro between the 'rear panel' and the 'inner rear heat shield'. You will see a 6mm nut and two 6mm bolt heads in this cavity. Using a 10mm ring or open ended spanner, loosen all three so they are finger tight only.

On all Metro freestanding fires the air channel that allows the combustion air to enter the fire is fitted to the top underneath of the door opening. It is fitted with two M6 bolts. Slightly loosen both of these bolts.

The Metro won't turn down as much as it did

The door itself may need readjusting, the hinge and latch is slotted and allows for movement. Loosening the hinge and moving it back a few mm will make the door seal tighter and stop air leaking into the fire. The door and glass seals may be in need of replacing, which is generally required every 3-4 years.

Familiarise yourself with the instructions on page 10 before proceeding with this maintenance.

Warranty details for your Metro wood fire

Metro wood fires are manufactured in New Zealand, using the highest quality of materials, workmanship and the latest manufacturing techniques, which is why we offer a full 10 year firebox warranty and a 1 year parts warranty for your peace of mind.

Metro Warranty

(NZ Consumer laws apply to this warranty)

Pioneer Manufacturing Limited (Pioneer) warrants the steel firebox against defective materials and workmanship which would render it unfit for normal domestic use, from the date of purchase by the original consumer, for a period of 10 years.

Components including panel coating, door retainers, door seals, glass, trim, baffle & bricks are warranted for a period of 1 year from the date of original purchase for normal domestic use against defective materials and workmanship.

All associated accessories including, but not limited to, fans, flue systems, flue shields, wetbacks, tool sets, ash pots etc, are covered by a 1 year warranty against defective materials and workmanship.

It is recommended, but not a condition of this warranty, that a full service/inspection of the Metro fire be carried out at the end of each winter season.

Warranty Conditions

- The Metro fire must be installed, operated and maintained strictly in accordance with the building code and this installation and operation manual
- The Metro fire must be installed and used in a domestic application
- This warranty covers appliance like for like replacement or repair at the manufacturer's discretion but excludes freight, travel, installation, labour and/or any other associated costs
- Pioneer or their agents are not liable for any loss or expense direct or indirect arising from the failure of any part or operation of the appliance
- Operation of this appliance in violation of the warnings in this operation and installation manual will void this warranty
- Your Metro fire must be regularly maintained and we recommended it is also serviced annually. Proof of servicing may be required. If a wood fire is not regularly maintained and serviced, the life span will be reduced. If your Metro wood fire has been neglected, by not being regularly maintained and serviced, warranty may be declined

CAUTION! Important Information

Note: The following 3 points require regular inspection/maintenance (every time the ash bed is cleaned out, generally 3-5 times a season) and if not maintained will void the firebox warranty. Please ensure you keep your proof of purchase/receipt on any parts you buy.

- It is critical the fire not be operated with over worn, faulty or missing door seals. Door seals will harden over time and become over-worn (3-4 year's) and will cause air to leak into the fire, causing the appliance to 'over fire'. Do not operate the fire with cracked, or broken door glass
- It is critical the fire not be operated with over worn, faulty or missing bricks, baffle plate or baffle extension (white board on or under the baffle plate)
- A claim under this warranty should be directed to the retailer who supplied the Metro fire. If this is not possible write directly to the manufacturer stating details of fault, model, serial number of your Metro, dated proof of purchase and name of retailer purchased from.

Warranty Exclusions

(This manufacturer's warranty does not cover)

- Service calls which are not related to any defect in the product (i.e. operational, installation or fuel issues). The cost of a service call will be charged if the problem is not found to be a product fault
- Defects caused by factors other than normal domestic use or use in accordance with the product's operation manual
- Defects caused through the product being operated in an 'over-fired' manner resulting in sections of the firebox operating excessively hot to the point that sections glow red. (Note – This will result in distortion of the firebox)
- Defects to the product caused by accident, neglect, misuse or act of God
- The cost of repairs carried out by non-authorized repairers or the cost of correcting such unauthorised repairs
- Required maintenance as set out in this manual.

Service under this manufacturer's warranty must be provided by a repairer authorised by Pioneer Manufacturing Ltd. Such service shall be provided during normal business hours.

IMPORTANT! Complete and retain these details at time of purchase:

Purchase Date

Serial Number

Model

Colour

Retailer



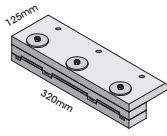
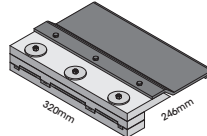

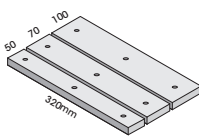
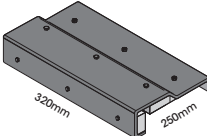

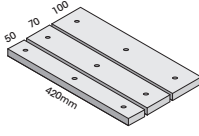
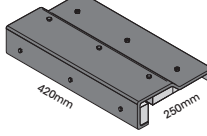
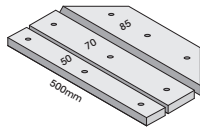
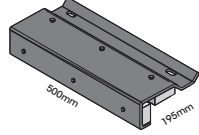
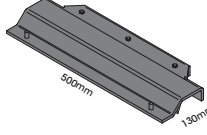
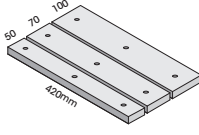
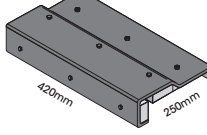

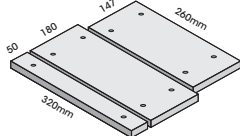
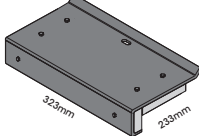
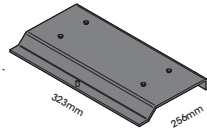

Parts guide for your Metro – Promet, baffles and wetback options

Your Metro wood fire must be regularly maintained and we recommended it is also serviced annually. If a wood fire is not regularly maintained and serviced, the life span will be reduced.

If your Metro wood fire has been neglected, by not being regularly maintained and serviced, with authorised Metro parts replaced as required, your warranty may be declined.

Listed below are the parts and product codes for your Metro wood fire. The promet/baffle should be regularly checked and must always be in place during the operation of your fire.

The baffle should be resting on four support lugs (two on each side of the firebox). It must be hard back against the rear of the firebox with the 'promet extension' (white board) or return front steel edge of the baffle facing forward.

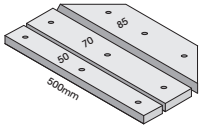
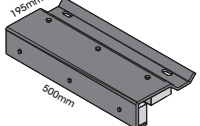
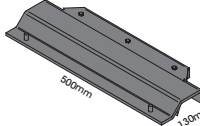

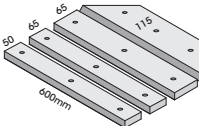
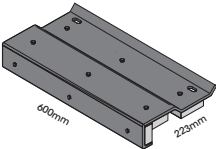
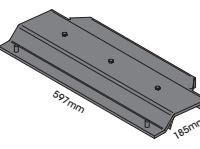

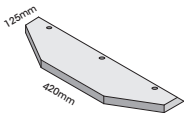
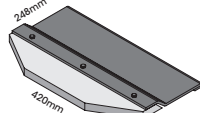

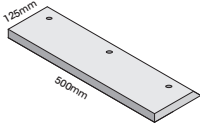
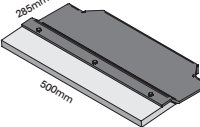

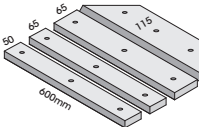
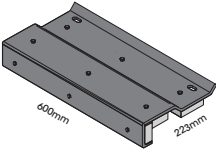
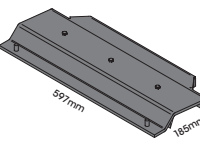

Model	Type of promet required / Type of steel baffle(s) required			Wetback options
<ul style="list-style-type: none"> • ECO Tiny Ped • ECO Tiny Rad 	ECO Tiny Promet 500-1550 	ECO Tiny Baffle 500-2050 	ECO 2kW Booster 450-0050 	
<ul style="list-style-type: none"> • Tiny Rad Woody 	Tiny Woody Promet Set 500-2004 	Tiny Woody Baffle 500-2504 	Side Wetback 450-0275 	
<ul style="list-style-type: none"> • R1 	Wee/R1 Promet Set 500-2005 	Wee/R1 Baffle 500-2505 	No wetback can be fitted to this appliance	
<ul style="list-style-type: none"> • R2 	Xtreme/R2 Promet Set 500-2010 	Xtreme/R2 Front Baffle 500-2510 	Xtreme/R2 Rear Baffle 500-2515 	No wetback can be fitted to this appliance
<ul style="list-style-type: none"> • Wee Rad • Wee Rad Base • Wee Rad Woody • Wee Ped 	Wee/R1 Promet Set 500-2005 	Wee/R1 Baffle 500-2505 	Side Wetback 450-0275 	
<ul style="list-style-type: none"> • Classic Rad 	Classic Rad Promet Set 500-2015 	Classic Rad Front Baffle 500-2520 	Classic Rad Rear Baffle 500-2525 	Side Wetback 450-0275 

Parts guide for your Metro – Promet, baffles and wetback options

Hairline cracks in the promet extension are not uncommon and will have no adverse effect on the operation and performance of your Metro wood fire. These cracks are the result of intense heat coupled with expansion and contraction and is normal wear and tear.

If the promet extension starts to break up and pieces fall into the firebox it must be replaced.

Note: Impact damage when loading wood and burning wood which is not properly seasoned, i.e. 25% moisture content or more, will cause the promet to disintegrate and require replacement. Always burn dry well seasoned wood and take care when loading wood into the firebox.

Model	Type of promet required / Type of steel baffle(s) required			Wetback options
<ul style="list-style-type: none"> • Xtreme Rad • Xtreme Rad Base • Xtreme Rad Woody • Xtreme Ped 	Xtreme/R2 Promet Set 500-2010 	Xtreme/R2 Front Baffle 500-2510 	Xtreme/R2 Rear Baffle 500-2515 	3kW Wetback 450-0100 
<ul style="list-style-type: none"> • Mega Rad 	Mega Rad Promet Set 500-2020 	Mega Rad Front Baffle 500-2530 	Mega Rad Rear Baffle 500-2535 	3kW Wetback 450-0100 
<ul style="list-style-type: none"> • LTD Wee Rad • LTD Wee Rad Base • LTD Wee Rad Woody 		LTD Small Promet 500-1700 	LTD Small Baffle 500-2600 	3kW Wetback 450-0100 or 4kW Wetback 450-0150 
<ul style="list-style-type: none"> • LTD Xtreme Rad • LTD Xtreme Rad Base • LTD Xtreme Rad Woody 		LTD Large Promet 500-1850 	LTD Large Baffle 500-2650 	3kW Wetback 450-0100 or 4kW Wetback 450-0150 
<ul style="list-style-type: none"> • LTD Mega Rad 	Mega Rad Promet Set 500-2020 	Mega Rad Front Baffle 500-2530 	Mega Rad Rear Baffle 500-2535 	3kW Wetback 450-0100 or 4kW Wetback 450-0150 

Metro - Visit us online today www.metrofires.co.nz

Metro wood fire specifications

Metro have a Specifications Brochure available which details relevant compliance data for every model. This brochure is updated annually and details the minimum clearances and specifications for all models, which is generally required when applying for a building consent. See your Metro retailer to obtain a copy, or visit www.metrofires.co.nz

metrofires.co.nz

Visit the Metro website: metrofires.co.nz to view Metro's 'video demos' showing the latest in wood fire technology energy saving options. You can view the entire Metro product range, find out where your nearest Metro retailer is located or simply check out the latest specifications, installation requirements and emission and efficiency data for the Metro of your choice.



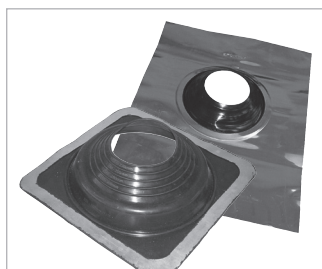
Pioneer heating accessories

Pioneer/Metro Fires offer a range of heating accessories designed to compliment your Metro wood fire. See below for some of the products within our heating accessory range. The range of accessories includes floor

protectors, heat transfer systems, child guards, baffles, bricks and more. For further details ask your Metro retailer for a copy of the Pioneer/Metro Fires heating accessories brochure, or visit www.metrofires.co.nz



ECO Flue Systems



Flashrites and Versatiles



Wetbacks



High Temperature Paint



Child Guards



Heat Transfer Systems



Universal Door Seal Kits



Fire Cement And Silicone



Corner and Wall Floor Protectors



Glass Tape



Door Seal Rope



Chubb Smoke Detectors

BC190638 | 21 Sep 2022

Vetting Started Date: 24/05/2019 08:06 am

Vetting Completed Date: 24/05/2019 08:16 am

VETTING CHECKLIST - AUDIT	Y/N	User	Date	Notes
Application Form : Has the application form been properly completed?	Y	Kle	24/05/2019 08:16 am	Application form is correct.
Deposit / Fee: Has the appropriate deposit / fee been paid?	N/A	Kle	24/05/2019 08:16 am	Unable to determine
Evidence of Ownership / Owner's Permission: Is a current Certificate of Title / Record of Title or evidence of ownership provided that is in the owner's name; and if the application has been submitted by an agent is owner's permission provided? If Title is not yet available a subdivision scheme plan is required. If the legal description for subdivision is not available please ensure that the parent title is recorded on the application.	Y	Kle	24/05/2019 08:16 am	Current evidence of ownership and owner's permission is provided.
Approvals from Other Authorities: Does this application involve approvals from other Authorities; and if so have these been provided?	N/A	Kle	24/05/2019 08:16 am	This question does not apply to this project.
Solid Fuel Appliance: Is adequate documentation provided?	Y	Kle	24/05/2019 08:16 am	Information is provided.

MAIN BUILDING - R1 - SOLID FUEL BURNING APPLIANCE ONLY - Processing - AUDIT				
Y/N	User	Date	Notes	
HEATING APPLIANCES				
Solid Fuel Burner				
Heater - BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Has the correct building complexity been allocated to this project and is it within the scope of your assessed competence? Do not select X or N/A. If complexity is incorrect please rectify by selecting the correct checklist (under Manage Buildings). If processing of this project is to be undertaken under supervision then ensure that this is recorded here.	Y	SK	13/06/2019 08:32 am	Complexity is correctly assigned. I have the appropriate level of competence
Heater - F5: Construction and Demolition Hazards: Does the proposal confirm that provisions will be initiated on site to safeguard people from injury and other property from damage caused by construction activity? Selecting the Tick will apply Advice Note AN01 which advises the owner of their on-site obligations under F5.	Y	SK	13/06/2019 08:32 am	Advice Note AN01 - Site Safety has been applied. This advises the building consent applicant of their obligation to comply with F5 and Worksafe requirements.
Heater - Act Provisions: Are all Building Act legislative requirements satisfied?				
Heater - Act Provisions - Prompt List:	Y	SK	13/06/2019 08:32 am	
1. s26 -28: Does the work exclude use of a building method or product that may result in breach of a ban under BA 26?	Y	SK	13/06/2019 08:32 am	There are no known warnings or bans.
2. s112: If the proposal involves alteration to an existing building, does it demonstrate on reasonable grounds that after alteration the building will:(a) Comply, as nearly as reasonably practicable, with provisions that relate to means of escape from fire, and access & facilities for people with disabilities (if required by Section 118), and(b) Continue to comply with the other provisions of the building code to at least the same extent as before alteration?	Y	SK	13/06/2019 08:32 am	Satisfied on reasonable grounds that compliance with Section 112 a) and b) has been achieved.
Domestic Solid Fuelburning Appliances: Does the design demonstrate compliance with C/VM1 or C/AS1 and comply with AS/NZS 2918 as modified by Para 7.1.2 of the relevant Fire Code Acceptable Solution for the risk group in which the appliance is to be installed? If this application is for a free standing fire then please turn off the Chimney - Inbuilt Inspection before granting building consent.				
Domestic Solid Fuelburning Appliances - Prompt List:		SK	13/06/2019 08:34 am	
1. In-built Appliance: If the appliance / flue system is being installed within an existing fire place or chimney; then is confirmation provided that this is clean, structurally sound and satisfies building code provisions for B1 - Structure and B2 - Durability? Select N/A if this application for a free standing appliance or an inbuilt heater that is not being installed in an existing chimney..	N/A	SK	13/06/2019 08:34 am	This question does not apply to this Project.
2. Location: Does documentation show the proposed location of the appliance? Information should include scale floor plan with rooms labelled and show the location of appliance in relation to windows, doors, curtains and walls etc.	Y	SK	13/06/2019 08:34 am	Documentation shows the proposed location of the appliance - lounge on floor plan.
3. Documentation: Do plans, specifications and installation instructions demonstrate compliance with C2.1 and AS/NZS 2918 as modified by Para 7.1.2? Information should include: appliance testing and approval details, specific installation information including permitted clearances to heat sensitive materials, floor protector (hearth) installation and seismic restraint details, flue installation details identifying location/ height / bracing above roof level, flue penetration details through walls / ceilings/ floors / roofs etc.	Y	SK	13/06/2019 08:34 am	Plans, specifications and installation instructions demonstrate compliance C2.1, and with AS/ NZS 2918 as modified by Para 7.1.2. Metro R2 (tested) - specs provided - NZS2918 (clearances / distances). Flu spec included - SFP freestanding 150mm flue kit. Flue penetration / plate fishing. Type 1 smoke alarms detailed on plans - F7/AS1.
4. Structure (B1 & B2): Do details demonstrate that structural stability will not be compromised where flues penetrate structural elements (walls / ceilings / roofs etc), and confirm compliance with B2 - Durability and identify maintenance requirements?	Y	SK	13/06/2019 08:34 am	
5. External Moisture (E2): Do building envelope penetration flashing details demonstrate compliance with AS/NZS 2918 & E2?				
6. Ventilation (G4): Do ventilation details demonstrate compliance with G4/AS1 (this includes ventilation to false chimneys)?				
7. Emissions: Is confirmation is provided that the system satisfies National / Regional Emission Standards?				

MAIN BUILDING - R1 - SOLID FUEL BURNING APPLIANCE ONLY - Processing - AUDIT	Y/N	User	Date	Notes
8. Smoke Detectors (C): Has the designer specified a complying Type 1 smoke alarm system and correctly identified the location of the smoke detectors?				
Domestic Solid Fuelburning Appliances - Prompt List:		SK	13/06/2019 08:47 am	
1. In-built Appliance: If the appliance / flue system is being installed within an existing fire place or chimney; then is confirmation provided that this is clean, structurally sound and satisfies building code provisions for B1 - Structure and B2 - Durability? Select N/A if this application for a free standing appliance or an inbuilt heater that is not being installed in an existing chimney..	N/A	SK	13/06/2019 08:47 am	This question does not apply to this Project.
2. Location: Does documentation show the proposed location of the appliance? Information should include scale floor plan with rooms labelled and show the location of appliance in relation to windows, doors, curtains and walls etc.	Y	SK	13/06/2019 08:47 am	Documentation shows the proposed location of the appliance - lounge on floor plan.
3. Documentation: Do plans, specifications and installation instructions demonstrate compliance with C2.1 and AS/NZS 2918 as modified by Para 7.1.2? Information should include: appliance testing and approval details, specific installation information including permitted clearances to heat sensitive materials, floor protector (hearth) installation and seismic restraint details, flue installation details identifying location/ height / bracing above roof level, flue penetration details through walls / ceilings/ floors / roofs etc.	Y	SK	13/06/2019 08:47 am	Plans, specifications and installation instructions demonstrate compliance C2.1, and with AS/ NZS 2918 as modified by Para 7.1.2. Metro R2 (tested) - specs provided - NZS2918 (clearances / distances). Flu spec included - SFP freestanding 150mm flue kit. Flue penetration / plate flashing. Type 1 smoke alarms detailed on plans - F7/AS1.
4. Structure (B1 & B2): Do details demonstrate that structural stability will not be compromised where flues penetrate structural elements (walls / ceilings / roofs etc), and confirm compliance with B2 - Durability and identify maintenance requirements?	Y	SK	13/06/2019 08:47 am	Complying details are provided and demonstrate that structural stability will not be compromised where flues penetrate walls / ceilings / roofs / insulation etc. Confirmation of compliance with B2 - Durability and maintenance requirements is provided.
5. External Moisture (E2): Do building envelope penetration flashing details demonstrate compliance with AS/NZS 2918 & E2?	Y	SK	13/06/2019 08:47 am	Compliance with E2 is satisfied. Chimney plate / flue flashing roof detailing provided.
6. Ventilation (G4): Do ventilation details demonstrate compliance with G4/AS1 (this includes ventilation to false chimneys)?	Y	SK	13/06/2019 08:47 am	Ventilation: Details demonstrate compliance with G4/AS1 - Existing natural ventilation provided for previous space - no worse than before.
7. Emissions: Is confirmation is provided that the system satisfies National / Regional Emission Standards?	Y	SK	13/06/2019 08:47 am	Emissions: Information provided confirms that the system satisfies National / Regional Emission Standards. Checked NCC clean air list - number
8. Smoke Detectors (C): Has the designer specified a complying Type 1 smoke alarm system and correctly identified the location of the smoke detectors?				
Domestic Solid Fuelburning Appliances - Prompt List:	Y	SK	13/06/2019 09:05 am	
1. In-built Appliance: If the appliance / flue system is being installed within an existing fire place or chimney; then is confirmation provided that this is clean, structurally sound and satisfies building code provisions for B1 - Structure and B2 - Durability? Select N/A if this application for a free standing appliance or an inbuilt heater that is not being installed in an existing chimney..	N/A	SK	13/06/2019 09:05 am	This question does not apply to this Project.
2. Location: Does documentation show the proposed location of the appliance? Information should include scale floor plan with rooms labelled and show the location of appliance in relation to windows, doors, curtains and walls etc.	Y	SK	13/06/2019 09:05 am	Documentation shows the proposed location of the appliance - lounge on floor plan.
3. Documentation: Do plans, specifications and installation instructions demonstrate compliance with C2.1 and AS/NZS 2918 as modified by Para 7.1.2? Information should include: appliance testing and approval details, specific installation information including permitted clearances to heat sensitive materials, floor protector (hearth) installation and seismic restraint details, flue installation details identifying location/ height / bracing above roof level, flue penetration details through walls / ceilings/ floors / roofs etc.	Y	SK	13/06/2019 09:05 am	Plans, specifications and installation instructions demonstrate compliance C2.1, and with AS/ NZS 2918 as modified by Para 7.1.2. Metro R2 (tested) - specs provided - NZS2918 (clearances / distances). Flu spec included - SFP freestanding 150mm flue kit. Flue penetration / plate flashing. Type 1 smoke alarms detailed on plans - F7/AS1.
4. Structure (B1 & B2): Do details demonstrate that structural stability will not be compromised where flues penetrate structural elements (walls / ceilings / roofs etc), and confirm compliance with B2 - Durability and identify maintenance requirements?	Y	SK	13/06/2019 09:05 am	Complying details are provided and demonstrate that structural stability will not be compromised where flues penetrate walls / ceilings / roofs / insulation etc. Confirmation of compliance with B2 - Durability and maintenance requirements is provided.
5. External Moisture (E2): Do building envelope penetration flashing details demonstrate compliance with AS/NZS 2918 & E2?	Y	SK	13/06/2019 09:05 am	Compliance with E2 is satisfied. Chimney plate / flue flashing roof detailing provided.

MAIN BUILDING - R1 - SOLID FUEL BURNING APPLIANCE ONLY - Processing - AUDIT	Y/N	User	Date	Notes
6. Ventilation (G4): Do ventilation details demonstrate compliance with G4/AS1 (this includes ventilation to false chimneys)?	Y	SK	13/06/2019 09:05 am	Ventilation: Details demonstrate compliance with G4/AS1 - Existing natural ventilation provided for previous space - no worse than before.
7. Emissions: Is confirmation is provided that the system satisfies National / Regional Emission Standards?	Y	SK	13/06/2019 09:05 am	Emissions: Information provided confirms that the system satisfies National / Regional Emission Standards. Checked NCC clean air list - number 134104
8. Smoke Detectors (C): Has the designer specified a complying Type 1 smoke alarm system and correctly identified the location of the smoke detectors?	Y	SK	13/06/2019 09:05 am	Smoke detectors are correctly located. Position of smoke detectors are within three metres of the door to all sleeping areas-dead end path is less than 25m SORG's
Solid Fuel Burner - G12: Wet back / Water Booster: Does the proposal for the installation of the wet back / water booster system demonstrate compliance with G12 & H1.2b)?				
Solid Fuel Burner - G12: Wet back / Water Booster - Prompt List:	N/A	SK	13/06/2019 09:06 am	This question does not apply to this application.
1. Design: Does the plumbing design / schematic demonstrate compliance with provisions of G12 & H1?				
2. Specification: Is the system correctly specified and identify - complying materials, open vented cylinder, copper pipework, that the storage vessel is of appropriate size, pipe work is correctly sized, length of runs comply, provision for expansion to non-vented systems without discharge of hot water, insulation of pipe runs, support for the system and seismic restraint?				
3. Venting: Is venting compliant?				
4. Temperature Control: Is temperature control compliant and identify that it is adequate to avoid growth of legionella bacteria & to avoid scalding?				
5. Drainage & Pressure Relief: Is a compliant solution provided for drainage and pressure relief?				
6. B2: Is compliance with durability provisions demonstrated and is complying access available to enable service and maintenance?				
7. Protection: Is the provision for protection of the water supply compliant?				
8. H1 - Energy: Does the design facilitate the efficient use of hot water, and limit heat loss?				
Solid Fuel Burning Appliance - Miscellaneous: Please select the cross if you wish to raise an RFI for an item that may not clearly fit into any other category.	Y	SK	13/06/2019 09:06 am	(No Comments)

Processing Time Clock Start Date: 24/05/2019 02:52 am

Decision To Grant: BC190638 by Shane Kelly @ 13/06/2019 09:40 am

Documentation demonstrates compliance with the Building Code and Building Act 2004. Requests for further information have been addressed and reasons for these have been recorded in each instance. Building Consent can be granted and issued on payment of the appropriate fees and levies.

Form 5

Building consent - BC190638

Section 51, Building Act 2004

The building

Street address of building: 117 Barnett Avenue, Best Island
 Legal description of land where building is located: Lot 3 DP 533749
 Building name:
 Location of building within site/block number: 117 Barnett Avenue, Best Island
 Level/unit number:

The owner

Name of owner: Kursten Dion Ward and Elke Baumann-ward
 Contact person: Jacqui Soffer (property Manager)
 Mailing address: 117 Barnett Avenue
 RD 1
 Richmond 7081

Street address/registered office:

Phone number: Landline: Mobile: 02102959044

Daytime: No information provided

After hours: No information provided

Facsimile number: No information provided

Email address: jacqui.soffer@therentshop.co.nz

Website: No information provided

First point of contact for communications with the building consent authority:

Haidee Doyle (MURRAY SINCLAIR LIMITED); Mailing Address: 128 Tahunanui Drive
 Tahunanui

Nelson 7011; Phone: 035485742; Email: office@pmfireplaces.co.nz

Building work

The following building work is authorised by this building consent:

Install freestanding Metro wood burner

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building). This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

This building consent is subject to the following conditions:

Section 90 - Inspections by Building Consent Authorities: (1) Every building consent is subject to the condition that agents authorised by the building consent authority for the purposes of this section are entitled, at all times during normal working hours or while building work is being done, to inspect-

- (a) land on which building work is being or is proposed to be carried out; and
- (b) building work that has been or is being carried out on or off the building site; and
- (c) any building.

(2) The provisions (if any) that are endorsed on a building consent in relation to inspection during the carrying out of building work must be taken to include the provisions of this section.

(3) In this section, inspection means the taking of all reasonable steps to ensure that building work is being carried out in accordance with a building consent.

Compliance schedule

A compliance schedule is not required for this building.

Inspections

The following inspections are required:

- Final

Documents required

Final

- C: Solid fuel heater - Installers Declaration

Copies of all site reports/records must be provided to the BCA as work proceeds for their records, please upload these to the correct building consent via the AlphaOne portal.

Attachments

Copies of the following documents are attached to this building consent:

- Advice notes / Endorsements

Matt Feely

Position: Interim Building Assurance Manager

On behalf of: Tasman District Council

Issue Date: 13 June 2019

Advice notes / Endorsements

Site Safety - Please ensure all appropriate site safety measures are provided throughout the contract works to comply with NZ Building Code Clause F5 and all occupational safety and health requirements.

Solid Fuel Burning Appliance - It is the owners responsibility to ensure any curtains, drapes or other such combustibles which would present risk of fire are kept tied back so as not to encroach within the safety clearance of the appliance.



Key:

Fire Location

* Smoke Alarms

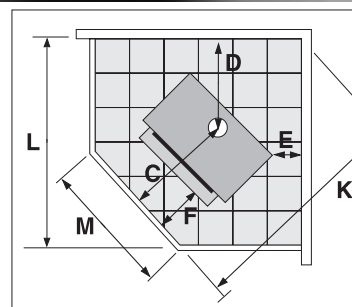
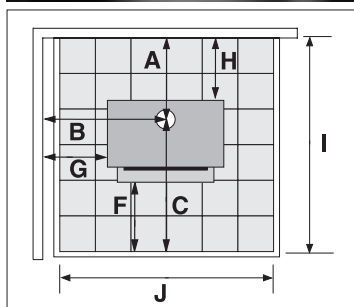
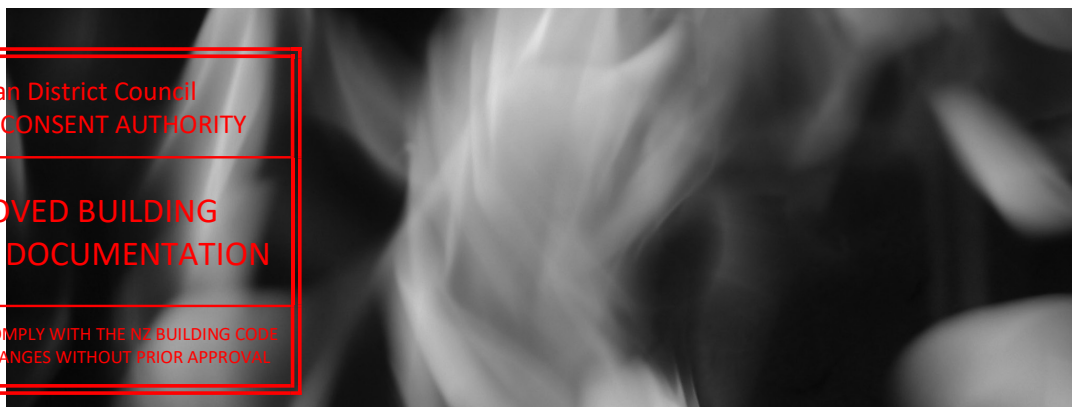
117 Barnett Ave

Wood Fire Installation & Owner's Operation Manual

Tasman District Council
BUILDING CONSENT AUTHORITY

APPROVED BUILDING
CONSENT DOCUMENTATION

ALL WORK IS TO COMPLY WITH THE NZ BUILDING CODE
DO NOT MAKE CHANGES WITHOUT PRIOR APPROVAL



metrofires

Freestanding Wood Fires

Important information.....	2	Optional wetbacks.....	9
Assembling your Metro fire.....	2	Getting to know your Metro fire.....	10
Floor protector	4	Operating your Metro fire.....	10
Flue installation.....	5	Cleaning and maintenance	11
Wetback installation	6	Troubleshooting	12
Clearances and specifications	7	Metro Fires warranty	13
Important operation information	8	Replacement parts	14-15
Where to install a Metro fire in your home.....	9	Heating accessories.....	16



19 Oropuriri Road // New Plymouth 4312
 info@metrofires.co.nz // www.metrofires.co.nz

WARNING! Important Information

- **WE HIGHLY RECOMMEND YOU READ THIS ENTIRE MANUAL AS INCORRECT OPERATION, MISUSE AND/OR LACK OF MAINTENANCE WILL VOID THE WARRANTY**
- The appliance and flue-system shall be installed in accordance with AS/NZS2918 and the appropriate requirements of the relevant building code or codes
- Any modification of the appliance that has not been approved in writing by the testing authority is considered to be in breach of the approval granted for compliance with AS/NZS4013 and will void the warranty
- The appliance must be installed correctly. We recommend a competent and suitably qualified NZHHA installer

CAUTION! Important Information

- Mixing of appliance or flue-system components from different sources or modifying the dimensional specification or components may result in hazardous conditions. Where such action is considered, the manufacturer should be consulted in the first instance
- Do not install a Metro fire if there is any sign of visible damage to the product
- This appliance must be regularly maintained.
- Use authorised Metro replacement parts only. The use of unauthorised parts may void the warranty
- This manual **MUST** be left with the home owner

All Metro wood fires comply with AS/NZS2918:2001 when installed in accordance with this manual. Please ensure you are fully conversant with the relevant standard and the contents of this manual. Correct installation is critical to the safe operation and performance of this wood fire.

Please take particular note of the following:

- It is recommended that Metro fires be installed with a Metro ECO flue system which has been developed to enhance the performance of Metro wood fires. Any alternative flue system must have a minimum flue pipe length of 4.2 metres of 150mm diameter flue pipe & have been tested to AS/NZS2918:2001
- The 150mm active flue pipe must be fully encased from the ceiling to the underside of the flashing cone at the top of the flue system, (i.e. there must not be any 150mm flue pipe exposed)

- All flue pipe joints must be sealed and riveted. The bottom of the flue pipe in particular **MUST** be fully sealed into the flue outlet of the Metro fire
- In New Zealand, the Metro fire must be bolted through the floor protector into the floor to comply with the seismic restraint provisions of AS/NZS2918:2001
- All Metro's are extremely heavy, varying in weight from 75kgs up to 185kgs. During the installation process do not lift the appliance by yourself, and take care not to damage the panel coating
- Please take care when lifting the Metro fire into place onto the hearth or floor protector as point loading may break tiles and/or scratch surfaces.

Assembling your Metro wood fire

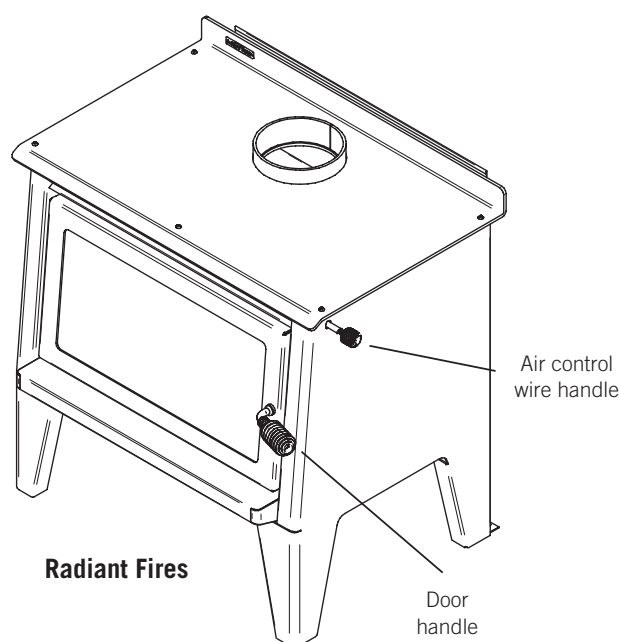
Please note: You should only assemble this wood fire if you are suitably experienced in wood fire assembly and installation. The Metro carton shows the model Metro you are about to install, enabling you to select the appropriate model's assembly instructions.

All Metro wood fires are packed in a single heavy-duty carton, and tek screwed to a wooden pallet. Having removed the packaging and located this manual, familiarise yourself with the illustrations on pages 2 & 3, and proceed as follows.

Metro radiant fires

These Metro's are supplied virtually fully assembled. Packed inside the firebox you will find bricks in a cardboard wrapper, a wire door handle and the air control wire handle.

- Remove the two tek screws located at the base of each rear leg which secure the Metro to the wooden pallet, and carefully 'walk' the Metro off the pallet
- Open the door fully and fit the side bricks to each side of the firebox. Location lugs are fitted to the base and rear wall of the firebox to retain the side bricks in position. Refer to Diagram 2
- Attach the door handle to the door latch assembly by screwing it on clockwise
- Attach the air control wire handle by screwing it on clockwise.



Radiant Fires

Assembling your Metro wood fire

Please note: You should only assemble this wood fire if you are suitably experienced in wood fire assembly and installation.

Metro pedestal and base model fires

To eliminate freight damage, the pedestal base has been packaged inside the firebox. To safely assemble your Metro, please proceed as follows:

- Lift off the top grill (convection models only) and place somewhere safe. Be careful not to chip the enamel coating or damage paint
- Open the door 45 degrees and lift the door off the hinge and place somewhere safe. Be careful not to damage the finish
- Remove the pedestal packed in a cardboard wrap
- Remove, rotate and re-fix the mount plate to the pedestal.

Note: The pedestal mount plate is fixed to the back of the pedestal base with 4x screws. This mounting plate must be removed, rotated and re-fixed to the pedestal as detailed on page 4 in diagrams 3 and 3A. The return fold must face back the opposite way to create the mount plate and fixing points for seismic restraint of the wood fire.

- Remove the pedestal heat shield

Note: For some models the pedestal heat shield may be taped to the rear heat shield. The ECO Tiny Ped's pedestal heat shield is pre-fitted.

- Remove the side bricks, door handle and the bolt bag
- Remove the 2 tek screws at the base of the inside of the firebox that fix the wood fire to the pallet.

It is recommended that 2 people work together with the next step:

- Grab the underneath top of the firebox door opening with one hand, holding the flue spigot with the other, slowly lift the front of the wood fire all the way back and rest the wood fire on its rear heat shield on the floor. Remove the packaging pallet.
- Fit the pedestal heat shield over the 4 bolts as shown in Diagram 1, with the open edge facing the front of the Metro (up)
- Position the pedestal with its front facing over the 4 bolts and fit the washers and nuts supplied, check to ensure the pedestal is correctly aligned and securely tighten the nuts.

It is recommended that 2 people work together with the next step:

- Grab the flue spigot with one hand and the other hand underneath the top of the firebox door opening, lift upwards standing the wood fire onto its pedestal
- Fit the side bricks to each side of the fire box. Location lugs are fitted to the base and rear wall of the firebox to retain the side bricks in position. Refer to Diagram 2. (Classic Rad also features two side rear bricks).
- Re-fit the door and top grill (Convection models only)

All Metro models

Check to ensure the top baffle is in its correct position in the top chamber of the firebox. It should be resting on four support lugs (two on each side of the firebox). The baffle must be hard back against the rear of the firebox with the "promet extension" (white board) or return front steel edge of the baffle facing forward as illustrated in Diagram 2.

Note: Some models feature a two-piece top baffle.

Diagram 1

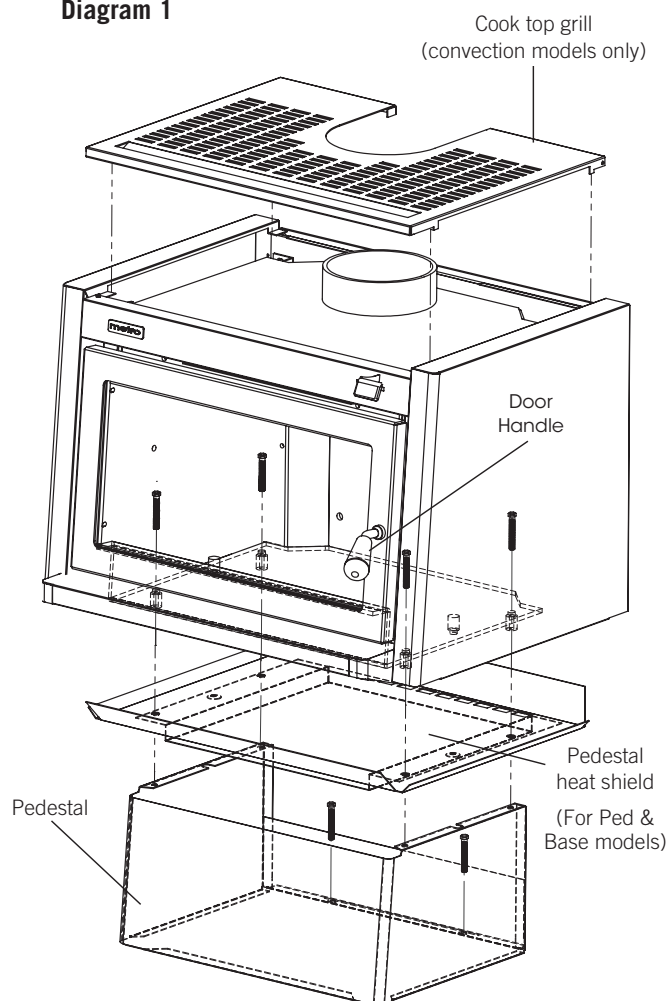
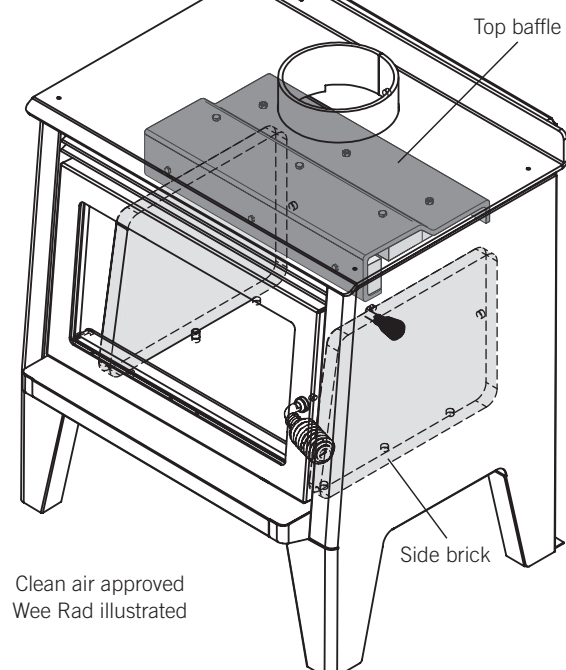


Diagram 2



Floor protector size, construction and fitting

Pioneer manufacture an extensive range of Pioneer 'Ash Floor Protectors' which comply with the minimum floor protector requirements of AS/NZS2918:2001, and can be installed with any freestanding Metro wood fire. Metro freestanding wood fires do not require an insulated floor protector as they comply with the minimum floor protector requirements of AS/NZS2918:2001. These minimum floor protector requirements are;

- They must be of adequate size to give appropriate wall, rear and front clearances/projections as detailed below and in the chart illustrated on page 7. Note;
- The floor protector must extend 200mm horizontally to the rear and each side directly below the door opening, and 300mm forward of the door opening
- The upper surface of the floor protector must be made of non-combustible material.

A suitable floor protector for a Metro freestanding wood fire is therefore any non-combustible material which could include;

- Ceramic tiles with grouted joints fixed directly to a hard base over timber flooring
- A sheet of toughened glass, panel steel etc. laid directly onto a wooden or other combustible floor.

Metro radiant fires

Lift the Metro fire onto the floor protector and using a suitable measuring device, ensure that the minimum wall clearances and front floor protector projections as detailed in the chart on page 7 are met or exceeded. Once the Metro's location on the floor protector is established and if the installation is within New Zealand, seismic restraint is required.

Using masonry anchors if the floor protector is on a concrete floor or coach bolts if a wooden floor, secure through the holes provided at the base, behind both rear legs.

Note: The anchors must pass through the floor protector and securely anchor the Metro to the floor.

Metro pedestal and base model fires

Prior to lifting the Metro fire onto the floor protector, ensure you have removed, rotated and re-assembled the mount plate from the back of the pedestal base as detailed in diagrams 3 & 3A above. This rear panel must be rotated with the return fold facing back the opposite way to create the mount plate and fixing points for seismic restraint of the wood fire.

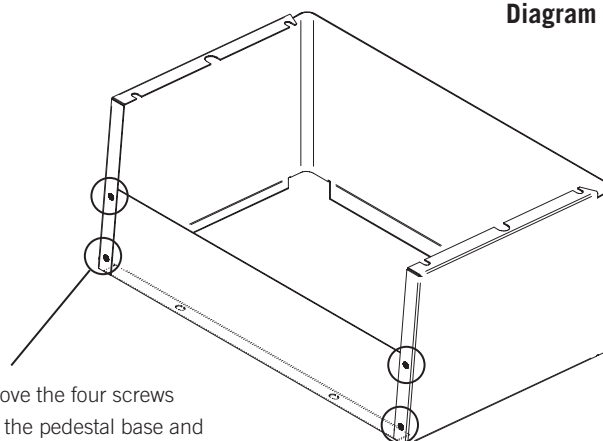
Lift the Metro fire onto the floor protector and using a suitable measuring device, ensure that the minimum wall clearances and front floor protector projections as detailed in the chart on page 7 are met or exceeded.

Once the location of the fire is established, you can then secure the Metro through the floor protector into the floor using the two seismic restraint holes in the rear edge of the mount plate. Use masonry anchors if the floor protector is on a concrete floor or coach bolts if a wooden floor

Note: The anchors must pass through the floor protector and securely anchor the Metro to the floor.

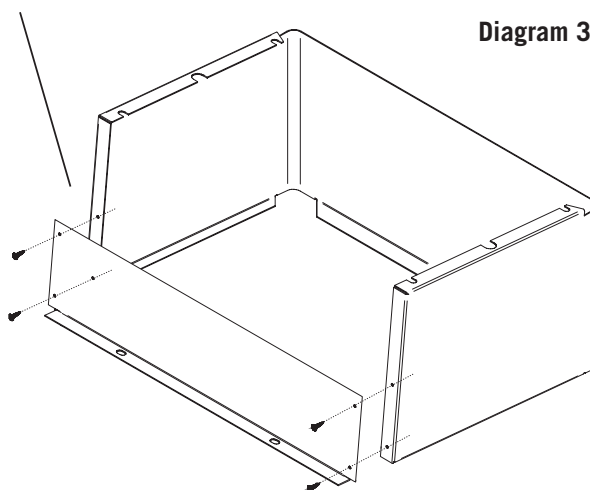
Preparing the mount plate

Diagram 3

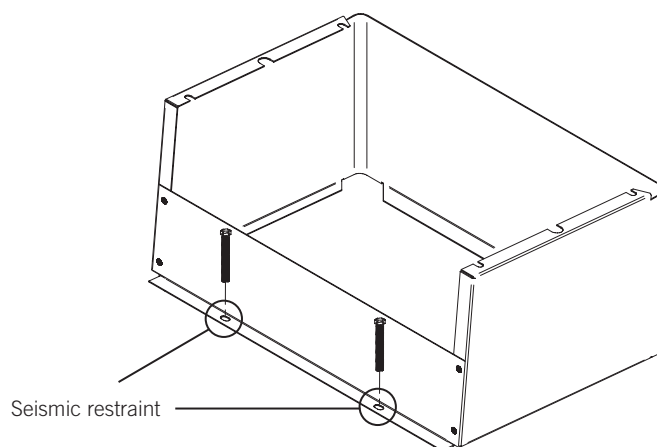


Remove the four screws from the pedestal base and rotate the mount plate so the return fold faces back the other way. Refix in place.

Diagram 3A



Correct mount plate position



Seismic restraint

Flue installation

It is recommended that all Metro freestanding wood fires be installed with the energy efficient ECO Flue System which comes complete with a detailed installation manual. This installation manual must be presented with your application to gain consent with your local council.

A copy of the ECO Flue System installation manual can be downloaded from metrofires.co.nz, or a copy can be obtained from your Metro retailer. Any alternative flue system must comply with and be installed as detailed in AS/NZS2918:2001, and a copy of the installation manual must also be presented with your application to gain consent with your local council.

All Metro fires require a 150mm diameter flue. Please note:

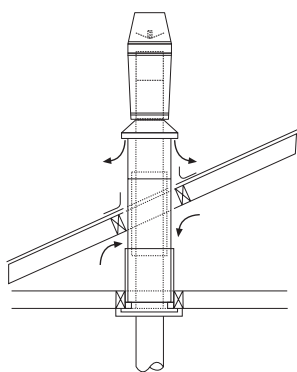
- Metro ECO flue systems must be installed to allow unrestricted air supply from either the ceiling cavity for an ECO Flue Kit, or above the roof line if the ECO Flue Kit and ECO Option Kits are both installed
- The ECO Flue system must be installed into a 'vented' flat ceiling cavity, or have an ECO Option Kit added to the flue system to provide an external air supply

- ECO Flue systems shall be installed in accordance with AS/NZS2918:2001 and the appropriate requirements of the relevant building codes
- Any modification to this flue system that has not been approved in writing by the testing authority is considered to be in breach of all approvals granted
- The flue systems 150mm diameter flue pipe must terminate a minimum of 4.6 metres above the top surface of the floor protector
- All joints in the flue pipe must be sealed with Pioneer fire cement (or similar) and riveted. The base of the flue pipe must also be sealed into the Metro fires flue outlet. This is critical for optimum operation.

All Metro fires have been tested with a Pioneer double flue shield. For the Metro fire to be installed with minimal clearances as the clearance table on page 7 states, only the Pioneer double flue shield can be used. All other flue shields will invalidate the installation.

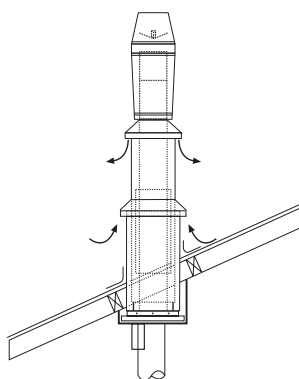
Detailed below are the more common installation methods for installing Metro ECO Flue Systems. To ensure a safe and efficient installation, this flue system must be installed as detailed below by either a registered installer, or someone competent in installing solid fuel appliances.

Single Storey Installations



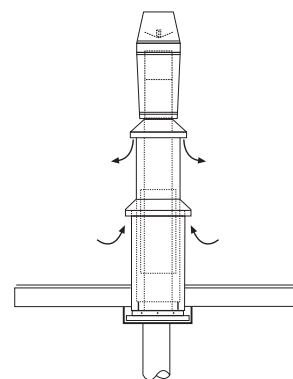
Flat Cavity Ceiling

ECO Flue Kit only required as air is drawn into the flue system direct from the ceiling cavity.



Sloping Ceiling

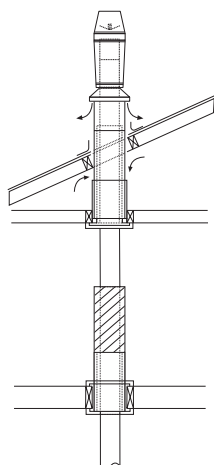
Both the ECO Flue Kit and ECO Option Kit are required to enable air to be drawn from outside the home.



Flat Ceiling/Roof

Requires both ECO Flue Kit and ECO Option Kit as per sloping ceiling unless a vented ceiling cavity exists.

Two Storey Installations



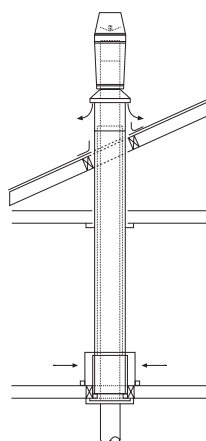
2nd Floor - Exposed Flue pipe

Requires an ECO Flue Kit only with additional lengths of flue pipe.

Additional components below are not supplied by Metrofires but are also required for this installation*

- A floor penetration kit
- 1x 1200mm long mesh/screen

*In accordance with AS/NZS2918:2001



2nd Floor - Enclosed Flue pipe

Requires an ECO Flue Kit only with additional lengths of flue pipe.

Additional components below are not supplied by Metrofires but are also required for this installation*

- 200mm & 250mm inner/outer combination liners.
- 2nd floor vent cover and an additional ceiling plate with a 250mm diameter hole

*In accordance with AS/NZS2918:2001

Wetback installation

WARNING! Important Information

- **DO NOT** connect to an unvented hot water system
- Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.

CAUTION! Important Information

- Wetbacks must be connected with water before operating the fire and available to the wetback while the fire is in operation
- Wetback systems are not suitable for use in locations where the water supply has lime content. Lime build up inside the coil will eventually block the coil causing the wetback to fail
- Rainwater collection tanks installed lower than the wetback that use a water pump to supply the home, can cause problems if the pump is not operational. In these situations either the type of wetback or a roof header tank should be considered

Wetback	Suitable for models:
2kW Wetback 	<ul style="list-style-type: none"> • ECO Tiny Rad • ECO Tiny Ped
Side Wetback 	<ul style="list-style-type: none"> • Tiny Rad Woody • Wee Rad & Wee Rad Base • Wee Rad Woody • Wee Ped • Classic Rad
3kW Wetback 	<ul style="list-style-type: none"> • Xtreme Rad & Xtreme Rad Base • Xtreme Rad Woody • Xtreme Ped • Mega Rad • All LTD rural models
4kW Wetback 	<ul style="list-style-type: none"> • All LTD rural models

The R1 and R2 models cannot be fitted with a wetback.

Water heating is another key feature of your Metro wood fire; nearly all Metro models can be fitted with a wetback, which are designed to give maximum output with minimal effect on the operation of the fire. Only the Pioneer cast jacket wetback system should be fitted to your Metro; alternative wetbacks will void the Metro's emission approvals and may seriously affect the performance of the appliance and void its warranty.

Wetback connections are as follows, taken facing the Metro/wall; the return pipe connection is directly above the inlet connection. Heights for all models are illustrated and detailed opposite on page 7.

- ECO Tiny Ped and ECO Tiny Rad models are 92mm left of the flue centre
- The Tiny Rad Woody model is 184mm left of the flue centre
- Wee Series models are 226mm left of the flue centre
- The Classic Rad model is 184mm left of the flue centre
- All other models are 140mm left of the flue centre

All wetbacks are fitted to the inside rear wall of the firebox, with the exception of the Tiny Rad Woody, clean air Wee Series models and the Classic Rad model. Side wetback position for these models is to the outside left hand firebox wall. Please see the specific installation instructions in the 'Side Wetback' box for installation of a wetback into these appliances.

It is recommended the return pipe has a minimum rise of 1 in 12; performance will reduce as the distance to the storage cylinder increases.

To fit the wetback proceed as follows

1. Remove the rear panel of the Metro by removing the four pozi drive screws. Remove the two pre-punched knockouts from this panel.
 2. Two further knockouts will be visible on the inner rear heatshield, remove these also. Once these are removed 6mm nuts will be visible through the knockout holes.
 3. Open the Metro's door and locate two bolts securing the pressed washers which are visible on the left hand side of the firebox for both inlet and outlet connection points.
 4. A further three bolt heads will also be visible on the inside rear wall of the firebox; these are threaded into the 6mm thick firebox. Remove all three.
 5. Using the tube of sealant supplied with the wetback, apply a liberal bead of sealant around both the two connection pipes and also the outer circumference of the wetback which will face and press against the inside rear wall of the firebox. This will completely seal the wetback to the inside rear wall of the fire on installation.
- Ensure there is no gap between pipe and rear wall access holes. This cement must fully cure before appliance use.
6. Fit the wetback into the firebox and carefully pass the connection pipes through the holes in the rear of the firebox. Securely attach the wetback using the three bolts previously removed from the rear face of the firebox, fitting them through the slots provided in the wetback's jacket.
 7. The wetback is now ready for connection to the storage cylinder by a registered plumber.

Metro clearances and specifications

(Minimum clearances shown are in mm, with a Pioneer double flue shield fitted)

Minimum clearances

All Metro wood fires comply with AS/NZS2918:2001. Minimum clearances shown below are detailed in millimetres, with a Pioneer double flue shield fitted to the appliance. Measurements are taken from the following reference points as illustrated:

- From the nearest combustible wall or surface (A, B, D, E, G, H)
- From the Metro's flue centre (A, B, C, D)
- From the Metro's cabinet/heatshield outermost point (E, F, G, H)
- To the edge of the ash floor protectors non-combustible surface (C, F, I, J, K, L, M)

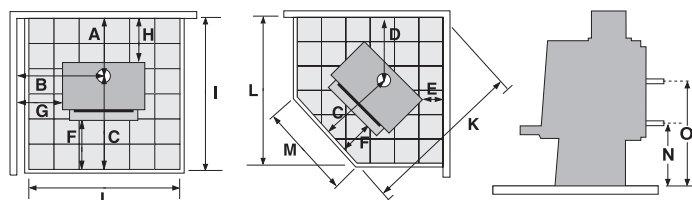
AS/NZS2918:2001 allows for a reduction in minimum clearances as detailed in Section 3, tables 3.1 and 3.2 of the standard.

Some Metro models have undergone additional testing which allows for reduced clearances. Please see the footnotes below the clearance table for the applicable models.

Wetback connections (taken facing the Metro/wall)

- ECO Tiny Ped and ECO Tiny Rad models are 92mm left of the flue centre
- The Tiny Rad Woody model is 184mm left of the flue centre
- Wee Series models are 226mm left of the flue centre
- The Classic Rad model is 184mm left of the flue centre
- All other models are 140mm left of the flue centre

Specifications were correct at the time of printing, but may alter and those detailed within should be used only as a guide. If in doubt, please consult your Metro retailer or metrofires.co.nz.



Clean air models	Minimum installation clearances with a Pioneer double flueshield fitted (mm)													Wetback		Dimensions		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Width	Depth	Height
ECO Tiny Ped	210	430	580	290	25	200	185	60	790	650	990	875	250	280	470	490	530	665
ECO Tiny Rad	225	552	580	420	150	200	300	75	805	650	1165	925	250	280	470	505	530	665
Tiny Rad Woody	251	568	580	382	110	230	310	100	831	650	1120	880	250	365	555	515	498	758
R1	243	774	586	554	280	244	530	100	829	825	1370	1118	425	N/A	N/A	488	485	668
R2	246	858	626	582	275	235	570	100	872	905	1449	1203	505	N/A	N/A	575	537	690
Wee Rad ¹	251	568	580	455	150	230	260	100	831	825	1224	1015	425	295	485	615	501	688
Wee Rad Base	271	678	580	489	180	230	370	120	851	825	1270	1049	425	295	485	615	501	691
Wee Rad Woody	271	708	580	509	200	230	400	120	851	825	1285	1069	425	365	555	615	501	758
Wee Ped ²	263	651	580	490	170	230	350	110	843	825	1274	1050	425	295	485	602	503	665
Classic Rad ³	257	695	780	500	220	229	430	100	1037	728	1487	1168	328	393	583	530	707	680
Xtreme Ped	251	624	630	441	110	227	280	100	881	907	1254	1065	507	312	502	688	554	721
Xtreme Rad	251	650	630	458	100	227	280	100	881	907	1277	1077	507	312	502	740	554	743
Xtreme Rad Base	251	650	630	458	100	227	280	100	881	907	1277	1077	507	312	502	740	554	743
Xtreme Rad Woody	251	680	630	478	120	227	310	100	881	907	1292	1097	507	382	572	740	554	813
Mega Rad	285	720	728	497	100	224	300	130	1013	1006	1431	1227	606	300	490	840	659	744
LTD rural models	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Width	Depth	Height
LTD Wee Rad	251	548	580	425	120	230	240	100	831	825	1180	985	425	295	485	615	501	688
LTD Wee Rad Base	251	658	580	489	180	230	350	100	831	825	1270	1049	425	300	490	615	501	691
LTD Wee Rad Woody	271	708	580	509	200	230	400	120	851	825	1285	1069	425	360	550	615	501	758
LTD Xtreme Rad	251	650	630	458	100	227	280	100	881	907	1277	1081	507	350	540	740	554	743
LTD Xtreme Rad Base	251	650	630	458	100	227	280	100	881	907	1277	1081	507	350	540	740	554	743
LTD Xtreme Rad Woody	251	680	630	478	120	227	310	100	881	907	1292	1097	507	420	610	740	554	813
LTD Mega Rad	285	720	728	497	100	224	300	130	1013	1006	1431	1227	606	300	490	840	659	744

The Wee Rad installed with a Pioneer double flue shield with the Wee Rad corner wing shields fitted allows for reduced clearances as follows:

¹ Wee Rad corner clearance (E) can be reduced to 120mm. This in turn also reduces clearances (D) to 425mm, (K) to 1180mm and (L) to 985mm. When fitting the corner wing shields, the Wee Rad itself must be installed to a corner clearance (E) of 120mm. The corner wing shields are then fitted which gives a wall to shield corner clearance of 100mm.

The following models installed with a Pioneer double flue shield with the side extensions fitted allows for reduced clearances as follows:

² Wee Ped corner clearance (E) can be reduced to 115mm. This in turn also reduces clearances (D) to 436mm, (K) to 1197mm and (L) to 996mm.

³ Classic Rad corner clearance (E) can be reduced to 180mm. This in turn also reduces clearances (D) to 460mm, (K) to 1430mm and (L) to 1127mm.

WARNING! Important Information

• **WE HIGHLY RECOMMEND YOU READ THIS ENTIRE MANUAL AS INCORRECT OPERATION, MISUSE AND/OR LACK OF MAINTENANCE WILL VOID THE WARRANTY**

- Any modification of the appliance that has not been approved in writing by the testing authority is considered as breaching AS/NZS 4013 and will void the warranty
- Do not use flammable liquids or aerosols in the vicinity of this appliance when it is operating
- Never operate your Metro with the top grill removed
- Do not dry clothes on or near this appliance
- Do not use flammable liquids or aerosols to start or rekindle the fire OR store fuel within the Metro's specified installation clearances
- Never operate your Metro with the door ajar, except on initial start up
- Open the air control fully before opening the Metro's door.

CAUTION! Important Information

- This appliance should be maintained & operated at all times in accordance with this instruction manual
- This appliance should not be operated with cracked door glass, over worn, faulty or missing door seals
- Do not use driftwood, treated or unseasoned (wet) fuel, the use of most types of preservative treated wood as fuel can be hazardous and will damage your appliance
- Burning unseasoned (wet) fuel or incorrect operation on extended low burn cycles will cause excessive creosote to form. Creosote is very corrosive and excessive buildups will result in the flue pipe, flue spigot and upper burn chamber failing. Failure of the appliance and/or flue system due to creosote damage is not covered under warranty. The formation of such is not an appliance issue it is a fuel and operational issue
- This appliance must be regularly maintained and replacement parts must be authorised Metro parts only
- Do not empty ash into a combustible container.

Congratulations on the purchase of your Metro wood fire

This slow combustion appliance is designed to give you many years of warmth and service, subject to the following key factors. These key factors, if not adhered to are the major causes of unsafe installation, poor performance and flue blockages and potential product failure.

1. Your Metro wood fire must be installed correctly. Metro recommend a competent and suitably qualified NZHHA installer.
2. The only fuel to be used in this appliance shall be wood that meets the following criteria.
 - Less than 25% moisture content
 - Has not been treated with preservatives or impregnated with chemicals or glue,
 - Is not chipboard, particle board, or laminated board,
 - Is not painted, stained or oiled
 - Is not driftwood or other salt impregnated wood
3. The appliance shall be operated at all times in accordance with the "Installation and Operating Instructions" supplied with each appliance.
4. It is preferable that Metro wood fires should be installed with a Metro ECO Flue System.
5. Coal must not be used as a fuel.

Please also note the following important points:

- In New Zealand a building consent is required from your local building authority. The homeowner is responsible for obtaining this consent
- As correct installation is critical to the performance and safe operation of your Metro, it is recommended your Metro be installed by a NZHHA registered installer or a person suitably qualified in the installation of wood fires. Your Metro retailer will be able to arrange professional installation for you
- During the very first fire your Metro will give off an odour and fumes as the firebox paint cures. Do not be alarmed; open all windows and externally opening doors in that room and close any internally opening doors. This curing process will last for approximately one hour and is likely to happen this one time

- Properly seasoned (dry) timber is necessary for the Metro to operate efficiently; firewood that contains a high moisture content will result in flue pipe blockages, reduce heat output and create other issues.

Note: Once split, Softwood usually takes 12 months to season - Hardwood can take up to 24 months to season - Wood must be stored in a location that enables air circulation. Unseasoned wood stored in a closed woodshed without air circulation will still be unseasoned 12 months later.

- It is critical that the fire not be operated with over worn, faulty or missing door seals. Door seals will harden over time and become over-worn (3-4 year's) this will cause air to leak into the fire, causing the appliance to 'over fire'
- It is critical that the fire not be operated with over worn, faulty or missing bricks, baffle plate, promet extension (white board on the baffle plate)
- It is critical that the fire not be operated with cracked or broken door glass.

Please note, the above 3 points require regular inspection/maintenance (every time the ash bed is cleaned out, generally 3-5 times a season) and if not maintained will void the firebox warranty. A glowing firebox or lower fluepipe is just one sign you are over firing your appliance. Please ensure you keep your proof of purchase/receipt on any parts you purchase.

- For optimum performance fuel must be loaded so the logs lay "front to rear" in preference to laying across the width of the firebox. Spaces should be left between the logs to enable oxygen to get to as much of the surface of the fuel as possible
- A small hot fire loaded frequently is more efficient than a large fire burning on a low setting
- Your Metro is covered by a full unconditional 12 month warranty on replacement parts, and a 10 year firebox warranty.

Where to install a Metro wood fire in your home

Wood fires are usually installed in the main living area, which is the section of the home that is usually kept the warmest, being the area in the home most frequently occupied. However, before deciding on the best location for your Metro wood fire you may wish to consider:

- Water heating. If you are intending to have a wetback it is important that the wood fire is as close as practically possible to the water storage cylinder
- Split level homes are best heated when the wood fire is installed on the lower level, as the heated air will rise to the higher levels
- Building construction is another consideration. Specified clearances from walls, curtains etc must be maintained and you need to ensure no structural beams or internal gutters etc are directly above your preferred site. If you have a two storey dwelling you need to consider the second storey to ensure you don't have the flue directly outside a second storey window.

Generally, you can install your Metro in your home anywhere that suits you; Pioneer offer various fan systems to transfer heat to other sections of the home that are not heated sufficiently. It is necessary if using a fan system that the Metro you have purchased has sufficient output to heat the total area you wish to heat. Your Metro retailer or installer will be able to advise if you are uncertain.

Optional wetbacks

Water heating is another key feature of your Metro wood fire; nearly all Metro models can be fitted with a wetback, which are designed to give maximum output with minimal effect on the operation of the fire. Only the Pioneer cast jacket wetback system should be fitted to your Metro; alternative wetbacks will void the Metro's emission approvals and may seriously affect the performance of the appliance and void its warranty.

Other considerations are:

- Distance from your Metro to the storage cylinder will affect the amount of hot water produced
- Your climate & the manner in which you will 'fire' your Metro will determine the amount of hot water produced.

Note: Wetbacks are not suitable for use in locations where the water supply has lime content. Lime build up inside the coil will eventually block the coil causing the wetback to fail.

Cost Savings

Wetbacks can enable substantial power savings, dependent on the climate in the area in which you live. If you live in a cold climate you are likely to use your Metro for many months of the year, in which case a Pioneer wetback will reduce or even eliminate your water heating costs over those months. If however you live in a warmer climate and use your Metro for only a few hours a day over the colder months, electricity savings will be considerably less.

Water Pressure

A common misconception is that you must have a low-pressure system to have a wetback; this is not true. You must have a 'vented' system and high-pressure cylinders are usually not vented. However you can install an 'indirect' cylinder which contains a secondary coil inside the storage cylinder, enabling you to have a wetback while retaining a high-pressure system.

Wetback	Suitable for models:
2kW Wetback 	<ul style="list-style-type: none"> • ECO Tiny Rad • ECO Tiny Ped
Side Wetback 	<ul style="list-style-type: none"> • Tiny Rad Woody • Wee Rad & Wee Rad Base • Wee Rad Woody • Wee Ped • Classic Rad
3kW Wetback 	<ul style="list-style-type: none"> • Xtreme Rad & Xtreme Rad Base • Xtreme Rad Woody • Xtreme Ped • Mega Rad • All LTD rural models
4kW Wetback 	<ul style="list-style-type: none"> • All LTD rural models

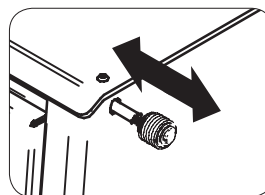
The R1 and R2 models cannot be fitted with a wetback.

Getting to know your Metro wood fire

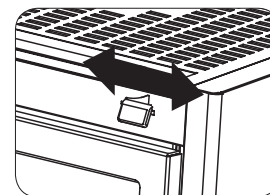
Operating your Metro fire is simple and you will quickly learn how to get the best from it. First take a minute to familiarise yourself with your new Metro.

- Raise the door handle anti-clockwise until the latch releases, and then slowly pull the door open. You will note that if you let the door go before it is at 90° to the appliance, it will fall closed. This is a safety feature that ensures the door cannot fall open if it is not latched securely. For the door to remain open, you must open it fully
- There is a single air control making your Metro fire easy to adjust. This control moves from left to right, which is 'low to high'.

All Metro radiant fires have a wire air control handle located at the upper right hand side of the appliance. Simply pull out to increase burn rate or push in to reduce burn rate.



Radiant fires air control



All other fires air control

All other Metro fires have an air control knob located on the upper front panel of the appliance.

Slide this control knob gently from right to left until you reach a stop. This is a pre-set 'low' position. Your Metro fire must not be operated at a lower burn rate than this pre-set low allows.

Operating your Metro wood fire

If your Metro has only been installed within the past few days, the fire cement seal at the base of the flue will not be fully cured. To ensure the cement sets without blistering it is recommended you burn 2-3 sheets of loosely crumpled newspaper at a time, approximately once every hour over a 6-8 hour period.

During the very first fire your Metro will give off an odour and fumes as the firebox paint cures. Do not be alarmed. Open all windows and externally opening doors in that room and close any internally opening doors. This curing process will last for approximately one hour and is likely to happen this one time.

Start up

Place a quantity of loosely crumpled newspaper on the base of the firebox until it is approximately half full of paper, or place firelighters on the base of the firebox. Add dry kindling and move the air control knob fully to the right, being the 'full open' position.

Light the paper at two or three locations across the front of the door opening and leave the door slightly ajar resting on the latch pin if necessary for a few minutes while the fire establishes. Once the kindling is burning well, open the door and add 2-3 small logs at a time until you have a well-established fire. Usually this will take approximately 30 minutes, during which time the air control should be set on "high" and the door should be closed, except for the initial few minutes and when fuel is being added.

Normal operation

Once the fire is well established, regulate the air control to achieve the desired burn rate and heat output. As you move the air control to the right, burn rate, firebox temperature and heat output will increase, if you move the control to the left they will decrease. Please note:

- Always open the air control fully prior to opening the door, then open the door slowly. Every time you refuel, leave the air control on 'high' for a minimum of 20-25 minutes
- When loading logs, place them end-on, 'front to back'; air spaces should be left between the logs to enable oxygen to get to as much of the surface of the fuel as possible
- Never use the door to force wood into the firebox, as this is likely to break the glass.

Extended burning (rural models only)

It is most important if your Metro is to be refuelled and turned down for an extended period, such as an overnight burn that you operate it correctly:

- The wood used as fuel for extended burning **MUST BE FULLY SEASONED (DRY)**. Once the fuel is loaded, the appliance must be operated on high for a period of at least 20 minutes to drive out residual moisture from the fuel (dry wood is usually 20% water content) and ensure surface area combustion.
- Do not turn the air control down lower than you need to, if you want the Metro to burn overnight, endeavour to obtain an 8 hour burn time, not 12 hours. It will take a few burns to find the correct location of your Metro's air control setting to achieve the length of burn cycle you desire as this setting is affected by several variables including fuel density, flue length and outside wind velocity.
- A smouldering fire over a long time frame is likely to deposit corrosive elements into your system which could be detrimental to your Metro.

⚠ CAUTION! Important Information

- If not operated correctly on extended burn cycles, your Metro is likely to incur flue blockages, corrosion of the upper baffle, lower flue pipe and firebox flue spigot. As these are not covered under warranty if they fail through improper use, it is important you operate your Metro correctly.

Cooking

All Metro's are designed to enable cooking of soups, stews and casseroles etc, and your Metro will easily boil a flat bottom stainless steel kettle. The Radiant Series have a dedicated cooking top enabling large pots to be placed on the cook top, while all other models have a lift-off grill.

Note: Metro's supplied with a lift-off top grill have this feature to enable the grill to be removed for cleaning if you have a spill. The lift-off top grill must be left on when cooking, because if removed the wall temperatures next to the appliance may become excessive and the top of the firebox is generally too hot to cook on directly.

Cleaning and maintenance for your Metro wood fire

Your Metro fire will give you many years of efficient service with minimal maintenance if operated correctly using seasoned fuel. Your Metro fire must be regularly maintained and replacement parts must be authorised Metro fires parts only.

The Metro radiant fires are painted wood fires and coated with 'Pioneer Metallic Black' high temperature paint and will require periodic repainting to keep them looking their best.

All other Metro fires are coated with vitreous enamel. Vitreous enamel is extremely durable and designed to last the life of the appliance. As vitreous enamel is glass, a solid or heavy object dropped or banged against a panel could chip the enamel surface.

All model Metro fires can be cleaned with a soft cloth when the appliance is not in operation.

Door glass

Providing your fuel is properly seasoned, under normal operating conditions the air-wash design of the Metro's firebox will keep the door glass clear. If the glass requires cleaning you may use either a razor blade scraper or crumpled wetted newspaper dipped in wood ash rubbed over the glass.

If your door glass breaks it must be replaced with 5mm thick ceramic glass which is available from your local Metro retailer.

Door seals

Over time, usually 3-4 years, the door and glass seals will become hard and cause air to leak into the firebox, causing the appliance to 'over fire'. Your Metro retailer stocks replacement woven fibreglass door and glass seals, which need replacing when they become hard and over worn.

The door of your Metro is easily removed. Hold it in both hands and lift the hinge end of the door up and over the top hinge pin, then lower the door from the bottom hinge pin.

Side bricks

Hair-line cracks are not uncommon and are a result of the intense heat within the Metro's firebox, coupled with mechanical damage caused by accidental impact when fuel is being loaded. However if the side bricks become cracked to the extent that they start to break up, they must be replaced.

Door adjustment

Provision is available on both sides of the door for adjustment.

To adjust the hinge end of the door, open the door fully, loosen the top hinge nut and slightly lift the latch end of the door; you will see the hinge assembly move back 1-2mm which will usually be sufficient. Retighten, then repeat by loosening the lower hinge nut, this time applying a slight downwards pressure onto the door to move the lower hinge assembly back a similar distance, then retighten.

The door latch is also adjustable, as the latch pin on the right side of the firebox is fitted through a slot which enables the latch pin to be loosened, moved back and re-tightened.

Ash removal

Over a period of time ash will build up in the base of the Metro's firebox and require removal. The time this build-up takes depends on the density and cleanliness of your fuel.

To remove the excess ash your Metro should not be operating.

- Open the door, and using a hearth shovel or similar, empty the excess ash directly into a steel or non-combustible container.
- If the ash is not disposed of immediately, be careful where you store it, as the ash can retain heat for many days and become a fire hazard.
- You must leave a bed of ash in the base of the firebox approximately 10mm deep; this insulates the base of the firebox and improves combustion.

Top baffle

This is a 'sacrificial' wear part of the firebox and should be checked monthly. Usually only the promet (white board) front/underneath section needs to be replaced when it starts to disintegrate.

Note: Cracks in the promet are not uncommon and have no adverse effect on the operation of your Metro. These cracks are the result of intense heat coupled with expansion and contraction. Burning wood which is not properly seasoned, i.e. 25% moisture content or more, will over time cause the promet to disintegrate and require replacement.

Flue systems

Should be checked annually, particularly the bottom end of the lower flue section at its rear lock formed joint. If deterioration is noticed contact your Metro retailer or installer.

The flue pipe should also be swept a minimum of once a year, or as required during the winter season. If smoke enters the room when you open the Metro's door this usually indicates the flue pipe is becoming restricted and needs cleaning. The frequency of flue pipe cleans depends on many factors, with the main variables being:

- The seasoning of the wood. If not properly seasoned you will require frequent flue pipe cleans.
- The density of the wood. Softwoods generally result in more deposits building up in the flue pipe.

To clean the flue pipe of your Metro, proceed as follows:-

- Open the Metro's door fully, reach inside with the palm of your hand face-up and extended, lift the top baffle approximately 20mm, then lift it forward out through the door opening, placing it on a sheet of newspaper you have placed on the front of the floor protector. To prevent jamming, removal and replacement of the top baffle is best performed using both hands.

Note: Some appliances have a two piece top baffle.

- Close the door and slide the air control to the left.
- Once on the roof, remove the cowl from the top of flue system and sweep the flue pipe using a 150mm-diameter flue pipe brush as detailed in the instructions provided with the fluebrush.
- Once the flue pipe is clear, clean and refit the cowl. Remove the excess soot which has fallen into the firebox, leaving a layer of ash 10mm deep on the base of the firebox, then refit the top baffle.

Note: The baffle must be fitted so its rear is touching the back of the firebox; if uncertain refer to page 3 in the installation section at the front of this manual, which shows illustrations of the baffle location.

Troubleshooting your Metro wood fire

If your Metro is installed correctly, your fuel is dry and you operate your fire correctly, you will find it to be a pleasure to use. Metro's many years of experience within the wood heating industry has shown that dissatisfaction is mainly due to:

- unseasoned fuel
- faulty installation
- operational error
- or a combination of the above 3 points.

Correct operation

Modern day wood fires need to be operated hard and fast, more so than low and lazy to ensure the firebox and flue pipe runs hot and efficiently. If the fire and flue pipe is up to temperature it will perform extremely well, the smoke will draw up the flue pipe with ease, and the fire will produce good amounts of heat.

If the fire is operated on low a lot of the time, the door glass will run black, the flue pipe will tend to block up more frequently and the fire will end up smoking into the room when reloading. It's better to have a small fire running hard and fast, rather than a big fire running low and lazy.

The following may be of assistance if you are experiencing any problems with the operation of your Metro Fire.

Smoke enters the room when the Metro's door is ajar

(possible reasons and solutions)

Check flue pipe joins

If the flue pipe joins are not sealed correctly, the flue pipe will not draw as well as it should. The flue pipe join connecting into the flue spigot on top of the Metro is most critical, if this is not sealed correctly, smoke will enter the room when the door is ajar. To check this join is sealed correctly, run a match or lighter flame around the join. If the flame is sucked into the spigot then it is not sealed correctly. This check needs to be done when the fire is not going. Ensure you check the rear of the flue pipe/spigot join, as due to the seam in the flue pipe, this is the most common area for not being sealed correctly.

Ensure the fuel you are using is correctly seasoned

If you are burning unseasoned fuel (wet), the fire will cause nothing but problems. The Metro won't deliver much heat, it will be lazy, smoke will enter the room when the door is ajar, and the door glass will run black. Unseasoned fuel is the main contributor to excessive creosote deposits which can be corrosive to your appliance and flue system.

Flue pipe length is too short

Add more flue pipe as the longer the flue system, the better the draw of the flue pipe. Please note, if you did not purchase the Metro ECO Flue System, you will not have the ECO Cowl which increases draw. We highly recommend the Metro ECO Cowl is fitted as this will increase the draw. If you already have an ECO Cowl and smoke is still entering the room, please add another 600mm length of flue pipe.

Downdraft/Turbulence blockage

If you have checked all of the previous factors and the fire is still smoking into the room, it's possible there may be a down draft issue. Down draft is environmental and can be caused by many variables, and it is purely trial and error to ascertain the cause.

Air turbulence and/or negative air pressure influences around the flue termination can be caused by too close or overhanging trees or natural/artificial ridges etc. Address these where possible or look to extend the flue above the roofline.

Other options may be:

- 'H' Cowl, designed purely for downdraft issues, but if you have an ECO Cowl fitted as standard, you will also need to add another 600mm of flue pipe to compensate as the H Cowl is shorter in length
- Directional Cowl, designed for high wind areas.

Air control setting

Ensure the air control setting is on high before opening the door to reload, as this increases the draw up the flue pipe. Open the door slowly.

If your Metro did not smoke, but its starting too and is getting worse:

The flue pipe is in need of a clean. It is recommended that the flue pipe be cleaned every season, however if you are burning the fire on low a lot, or are using unseasoned fuel, flue pipe cleans will be required more frequently.

Other issues you may experience

I can smell smoke in the room after a low burn cycle

The smell is creosote that will be seeping through the flue pipe join or out of the flue spigot onto an external surface, thus creating the smell in your room. The cause will be either unseasoned fuel, fuel mass too large, incorrect operation on low burn cycles or a combination. Creosote is very corrosive and excessive buildups will result in the flue pipe and potentially the flue spigot and upper burn chamber failing. The formation of excessive creosote is not an appliance issue, it is a fuel and operational issue. Failure of flue pipe or firebox due to creosote build up is not covered under warranty as excessive creosote build up is only possible from either unseasoned fuel or incorrect operation.

The Metro is noisy as it heats up and cools down

There will always be some expansion and contraction noise as the Metro heats and cools. This can usually be reduced by loosening three nuts at the rear of the appliance. To remedy, locate the 25mm deep cavity at the rear of your Metro between the 'rear panel' and the 'inner rear heat shield'. You will see a 6mm nut and two 6mm bolt heads in this cavity. Using a 10mm ring or open ended spanner, loosen all three so they are finger tight only.

On all Metro freestanding fires the air channel that allows the combustion air to enter the fire is fitted to the top underneath of the door opening. It is fitted with two M6 bolts. Slightly loosen both of these bolts.

The Metro won't turn down as much as it did

The door itself may need readjusting, the hinge and latch is slotted and allows for movement. Loosening the hinge and moving it back a few mm will make the door seal tighter and stop air leaking into the fire. The door and glass seals may be in need of replacing, which is generally required every 3-4 years.

Familiarise yourself with the instructions on page 10 before proceeding with this maintenance.

Warranty details for your Metro wood fire

Metro wood fires are manufactured in New Zealand, using the highest quality of materials, workmanship and the latest manufacturing techniques, which is why we offer a full 10 year firebox warranty and a 1 year parts warranty for your peace of mind.

Metro Warranty

(NZ Consumer laws apply to this warranty)

Pioneer Manufacturing Limited (Pioneer) warrants the steel firebox against defective materials and workmanship which would render it unfit for normal domestic use, from the date of purchase by the original consumer, for a period of 10 years.

Components including panel coating, door retainers, door seals, glass, trim, baffle & bricks are warranted for a period of 1 year from the date of original purchase for normal domestic use against defective materials and workmanship.

All associated accessories including, but not limited to, fans, flue systems, flue shields, wetbacks, tool sets, ash pots etc, are covered by a 1 year warranty against defective materials and workmanship.

It is recommended, but not a condition of this warranty, that a full service/inspection of the Metro fire be carried out at the end of each winter season.

Warranty Conditions

- The Metro fire must be installed, operated and maintained strictly in accordance with the building code and this installation and operation manual
- The Metro fire must be installed and used in a domestic application
- This warranty covers appliance like for like replacement or repair at the manufacturer's discretion but excludes freight, travel, installation, labour and/or any other associated costs
- Pioneer or their agents are not liable for any loss or expense direct or indirect arising from the failure of any part or operation of the appliance
- Operation of this appliance in violation of the warnings in this operation and installation manual will void this warranty
- Your Metro fire must be regularly maintained and we recommended it is also serviced annually. Proof of servicing may be required. If a wood fire is not regularly maintained and serviced, the life span will be reduced. If your Metro wood fire has been neglected, by not being regularly maintained and serviced, warranty may be declined

CAUTION! Important Information

Note: The following 3 points require regular inspection/maintenance (every time the ash bed is cleaned out, generally 3-5 times a season) and if not maintained will void the firebox warranty. Please ensure you keep your proof of purchase/receipt on any parts you buy.

- It is critical the fire not be operated with over worn, faulty or missing door seals. Door seals will harden over time and become over-worn (3-4 year's) and will cause air to leak into the fire, causing the appliance to 'over fire'. Do not operate the fire with cracked, or broken door glass
- It is critical the fire not be operated with over worn, faulty or missing bricks, baffle plate or baffle extension (white board on or under the baffle plate)
- A claim under this warranty should be directed to the retailer who supplied the Metro fire. If this is not possible write directly to the manufacturer stating details of fault, model, serial number of your Metro, dated proof of purchase and name of retailer purchased from.

Warranty Exclusions

(This manufacturer's warranty does not cover)

- Service calls which are not related to any defect in the product (i.e. operational, installation or fuel issues). The cost of a service call will be charged if the problem is not found to be a product fault
- Defects caused by factors other than normal domestic use or use in accordance with the product's operation manual
- Defects caused through the product being operated in an 'over-fired' manner resulting in sections of the firebox operating excessively hot to the point that sections glow red. (Note – This will result in distortion of the firebox)
- Defects to the product caused by accident, neglect, misuse or act of God
- The cost of repairs carried out by non-authorized repairers or the cost of correcting such unauthorised repairs
- Required maintenance as set out in this manual.

Service under this manufacturer's warranty must be provided by a repairer authorised by Pioneer Manufacturing Ltd. Such service shall be provided during normal business hours.

IMPORTANT! Complete and retain these details at time of purchase:

Purchase Date

Serial Number

Model

Colour

Retailer



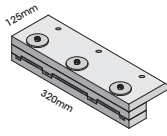
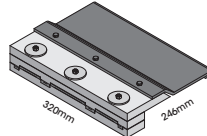

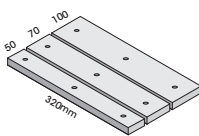
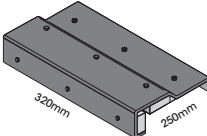

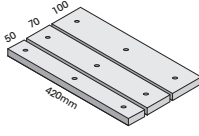
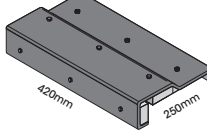
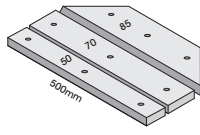
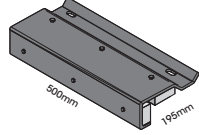
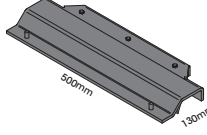
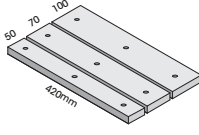
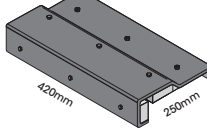

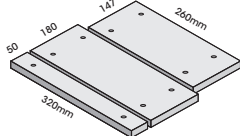
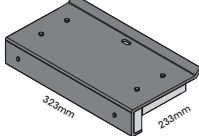
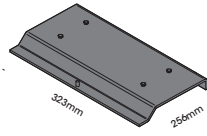

Parts guide for your Metro – Promet, baffles and wetback options

Your Metro wood fire must be regularly maintained and we recommended it is also serviced annually. If a wood fire is not regularly maintained and serviced, the life span will be reduced.

If your Metro wood fire has been neglected, by not being regularly maintained and serviced, with authorised Metro parts replaced as required, your warranty may be declined.

Listed below are the parts and product codes for your Metro wood fire. The promet/baffle should be regularly checked and must always be in place during the operation of your fire.

The baffle should be resting on four support lugs (two on each side of the firebox). It must be hard back against the rear of the firebox with the 'promet extension' (white board) or return front steel edge of the baffle facing forward.

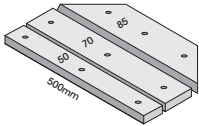
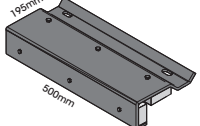
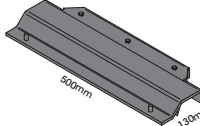

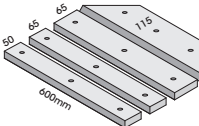
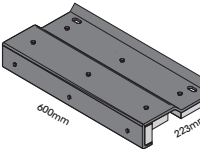
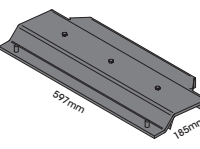

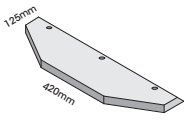
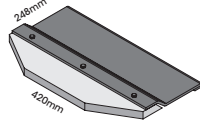

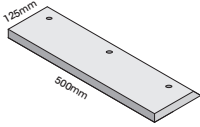
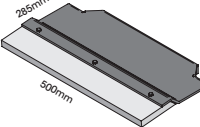

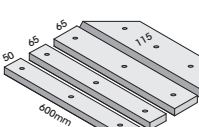
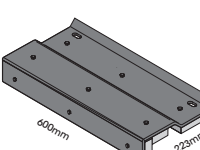
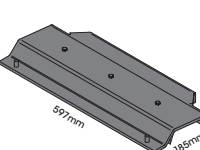

Model	Type of promet required / Type of steel baffle(s) required			Wetback options
<ul style="list-style-type: none"> • ECO Tiny Ped • ECO Tiny Rad 	ECO Tiny Promet 500-1550 	ECO Tiny Baffle 500-2050 	ECO 2kW Booster 450-0050 	
<ul style="list-style-type: none"> • Tiny Rad Woody 	Tiny Woody Promet Set 500-2004 	Tiny Woody Baffle 500-2504 	Side Wetback 450-0275 	
<ul style="list-style-type: none"> • R1 	Wee/R1 Promet Set 500-2005 	Wee/R1 Baffle 500-2505 	No wetback can be fitted to this appliance	
<ul style="list-style-type: none"> • R2 	Xtreme/R2 Promet Set 500-2010 	Xtreme/R2 Front Baffle 500-2510 	Xtreme/R2 Rear Baffle 500-2515 	No wetback can be fitted to this appliance
<ul style="list-style-type: none"> • Wee Rad • Wee Rad Base • Wee Rad Woody • Wee Ped 	Wee/R1 Promet Set 500-2005 	Wee/R1 Baffle 500-2505 	Side Wetback 450-0275 	
<ul style="list-style-type: none"> • Classic Rad 	Classic Rad Promet Set 500-2015 	Classic Rad Front Baffle 500-2520 	Classic Rad Rear Baffle 500-2525 	Side Wetback 450-0275 

Parts guide for your Metro – Promet, baffles and wetback options

Hairline cracks in the promet extension are not uncommon and will have no adverse effect on the operation and performance of your Metro wood fire. These cracks are the result of intense heat coupled with expansion and contraction and is normal wear and tear.

If the promet extension starts to break up and pieces fall into the firebox it must be replaced.

Note: Impact damage when loading wood and burning wood which is not properly seasoned, i.e. 25% moisture content or more, will cause the promet to disintegrate and require replacement. Always burn dry well seasoned wood and take care when loading wood into the firebox.

Model	Type of promet required / Type of steel baffle(s) required			Wetback options
<ul style="list-style-type: none"> • Xtreme Rad • Xtreme Rad Base • Xtreme Rad Woody • Xtreme Ped 	Xtreme/R2 Promet Set 500-2010 	Xtreme/R2 Front Baffle 500-2510 	Xtreme/R2 Rear Baffle 500-2515 	3kW Wetback 450-0100 
<ul style="list-style-type: none"> • Mega Rad 	Mega Rad Promet Set 500-2020 	Mega Rad Front Baffle 500-2530 	Mega Rad Rear Baffle 500-2535 	3kW Wetback 450-0100 
<ul style="list-style-type: none"> • LTD Wee Rad • LTD Wee Rad Base • LTD Wee Rad Woody 		LTD Small Promet 500-1700 	LTD Small Baffle 500-2600 	3kW Wetback 450-0100 or 4kW Wetback 450-0150 
<ul style="list-style-type: none"> • LTD Xtreme Rad • LTD Xtreme Rad Base • LTD Xtreme Rad Woody 		LTD Large Promet 500-1850 	LTD Large Baffle 500-2650 	3kW Wetback 450-0100 or 4kW Wetback 450-0150 
<ul style="list-style-type: none"> • LTD Mega Rad 	Mega Rad Promet Set 500-2020 	Mega Rad Front Baffle 500-2530 	Mega Rad Rear Baffle 500-2535 	3kW Wetback 450-0100 or 4kW Wetback 450-0150 

Metro wood fire specifications

Metro have a Specifications Brochure available which details relevant compliance data for every model. This brochure is updated annually and details the minimum clearances and specifications for all models, which is generally required when applying for a building consent. See your Metro retailer to obtain a copy, or visit www.metrofires.co.nz

metrofires.co.nz

Visit the Metro website: metrofires.co.nz to view Metro's 'video demos' showing the latest in wood fire technology energy saving options. You can view the entire Metro product range, find out where your nearest Metro retailer is located or simply check out the latest specifications, installation requirements and emission and efficiency data for the Metro of your choice.



Pioneer heating accessories

Pioneer/Metro Fires offer a range of heating accessories designed to compliment your Metro wood fire. See below for some of the products within our heating accessory range. The range of accessories includes floor

protectors, heat transfer systems, child guards, baffles, bricks and more. For further details ask your Metro retailer for a copy of the Pioneer/Metro Fires heating accessories brochure, or visit www.metrofires.co.nz



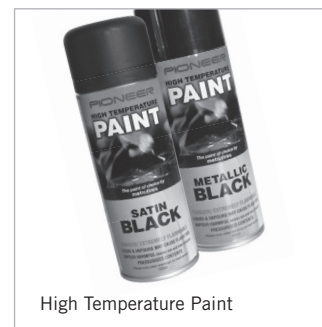
ECO Flue Systems



Flashrites and Versatiles



Wetbacks



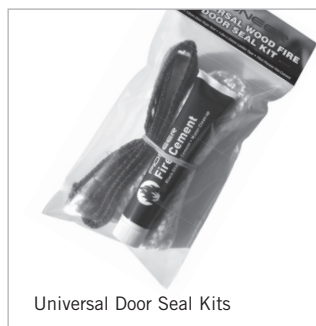
High Temperature Paint



Child Guards



Heat Transfer Systems



Universal Door Seal Kits



Fire Cement And Silicone



Corner and Wall Floor Protectors



Glass Tape



Door Seal Rope



Chubb Smoke Detectors



Sheetmetal Fabricated Products Ltd.

150 MM FREE STANDING WOODFIRE FLUE KIT INSTALLATION INSTRUCTIONS

WARNING: THIS FLUE KIT HAS BEEN MANUFACTURED IN ACCORDANCE WITH AS/NZS 2918:2001 AND TESTED TO APPENDIX F. TO ENSURE SAFETY THIS FLUE KIT MUST BE INSTALLED AS OUTLINED IN THESE INSTRUCTIONS AND THE APPROPRIATE REQUIREMENTS OF THE RELEVANT BUILDING CODE OR CODES. WOOD FIRE AND FLUE CLEARANCES FROM COMBUSTIBLE WALLS MUST BE IN ACCORDANCE WITH WOOD FIRE MANUFACTURER'S SPECIFICATIONS AND AS/NZS 2918:2001. THESE INSTALLATION INSTRUCTIONS ARE FOR TESTED APPLIANCES ONLY.

CAUTION: MIXING FLUE SYSTEM COMPONENTS FROM DIFFERENT SOURCES OR MODIFYING THE DIMENSIONAL SPECIFICATION OF COMPONENTS MAY RESULT IN HAZARDOUS CONDITIONS. WHERE SUCH ACTION IS CONSIDERED, THE MANUFACTURER SHOULD BE CONSULTED IN THE FIRST INSTANCE.

CAUTION: IT IS THE RESPONSIBILITY OF THE INSTALLER TO ENSURE THAT THE INSTALLATION OF THIS FLUE KIT COMPLIES WITH AS/NZS 2918:2001, THE APPLIANCE MANUFACTURERS SPECIFICATIONS FOR FLUE PIPE SHIELD AND CEILING PLATE AND THAT THE RELEVANT BUILDING CODES ARE ADHERED TO.

BENDS AND EXTENSIONS TO THE LENGTH OF A FLUE SYSTEM ARE PERMITTED (AS/NZS 2918 2001 4.1)

- 1) Locate Wood Fire in its proposed position and mark a point on the ceiling that is directly above the centre of the Wood Fire's Flue Spigot. Check that the Wood Fire's location allows the OUTER CASING to clear all structural roof timbers.
- 2) Cut a 250mm square hole in ceiling. Directly above cut a hole in roof to accommodate OUTER CASING.
- 3) Fit timber nogs around ceiling. i.e. Nogs form a 250mm square aperture that allows air to circulate freely over the OUTER CASING surface.
- 4) Position the OUTER CASING so that it is flush with the underneath of the ceiling and protrudes through the roof the required height. Note that AS/NZS 2918:2001 4.9.1(a) states, "the FLUE PIPE shall extend not less than 4.6m above the top of the floor protector". Refer to diagram B.
 - a) If the FLUE PIPE is within 3 metres of the ridge, the FLUE PIPE must protrude at least 600mm above the ridge of the roof.
 - b) If the distance from the ridge is more than 3 metres, the FLUE PIPE must protrude at least 1000mm above roof penetration.
 - c) The FLUE PIPE must be more than 3 metres from any nearby structure. (Refer diagram C).

Additional FLUE PIPE, OUTER CASING and/or INNER CASING may have to be added to ensure the following:

- I) The correct minimum roof penetration height.
- II) Sufficient overall height to encase the FLUE PIPE which must extend a minimum of 4.6 metres from the floor protector. Refer diagram B.

Note that the INNER CASING should extend 200mm above roof penetration.

NB: Do not secure the OUTER CASING SLIP EXTENSION onto the OUTER CASING, as final adjustment will be required when fitting cowl assembly. See Paragraph 11.

- 5) Fix an appropriate flashing around the OUTER CASING to seal onto the roofing material. Refer to the manufacturer's recommendations for correct fitting. NB: On iron roofs, fixings such as metal angle brackets (approximately 25mm x 25mm) can be fitted under the flashing to securely fix the roof to OUTER CASING.
- 6) Drill holes in ceiling plate for the fixing screws. Place CEILING PLATE over Wood Fire's Flue Spigot, ensuring the folded edges are facing the ceiling.
- 7) Position bottom length of FLUE PIPE (crimped end downwards) into Wood Fire Flue Spigot.

Refer to the supplier of the Wood Fire and use flue pipe sealant if recommended.

- 8) Assemble FLUE PIPES together ensuring seams are straight, offsetting the seams will ensure a neat fit. FLUE PIPES **must** be assembled with crimped ends down (towards Wood Fire). Secure each joint with a minimum of three Monel Steel rivets equally spaced around the joint. If using HI-THERM FLUE PIPE the protective wrapping should be left on the FLUE PIPE during installation.
- 9) From the roof lower FLUE PIPE through OUTER CASING into the bottom FLUE PIPE securing with three monel rivets.
- 10) Check that the FLUE PIPE SPACING BRACKETS inside the INNER CASING are correctly positioned and then from the roof slide the INNER CASING into the OUTER CASING until the brackets rest on to the internal swage ring of the OUTER CASING, this will ensure the INNER CASING is the correct 12mm above ceiling level.

Check the INNER CASING when correctly positioned extends a minimum of 200mm above the roof penetration.

- 11) Before securing the OUTER CASING SLIP EXTENSION to the OUTER CASING with 3 rivets, ensure the FLUE PIPE extends above the top of the OUTER CASING SLIP EXTENSION 145mm. Adjust SLIP EXTENSION to obtain this measurement.
- 12) Fit TOP SPACER BRACKET to the FLUE PIPE making sure the lugs fit snugly inside OUTER CASING SLIP EXTENSION. Make sure TOP SPACER BRACKET fits hard down onto OUTER CASING SLIP EXTENSION.
- 13) Fit CASING COVER over the FLUE PIPE and push down firmly onto TOP SPACER BRACKET.
- 14) Fit COWL but do not secure, as removal for flue cleaning will be necessary. Deform or ovalise the stub of the COWL to ensure it is a tight friction fit.
- 15) Fasten CEILING PLATE to ceiling using screws and ceramic spacers provided. Ensure an even air gap around FLUE PIPE when fixing. Remove protective plastic from CEILING PLATE. N.B. 12mm air gap between ceiling plate and ceiling must be maintained.
- 16) Leave all installation and operating instructions with the owner.

Cleaning of Flue Pipes before lighting the fire.

Stainless Steel pipe should be wiped clean using a soft cloth and methylated spirits to remove finger marks and oils used to manufacture the flue pipe.

Hi-Therm flue pipe can be touched up using only STOVE BRIGHT aerosol paint.



Sheetmetal Fabricated Products Ltd.

150mm Free Standing Wood Fire Flue Kit Installation Instructions Complies with AS/NZS 2918:2001

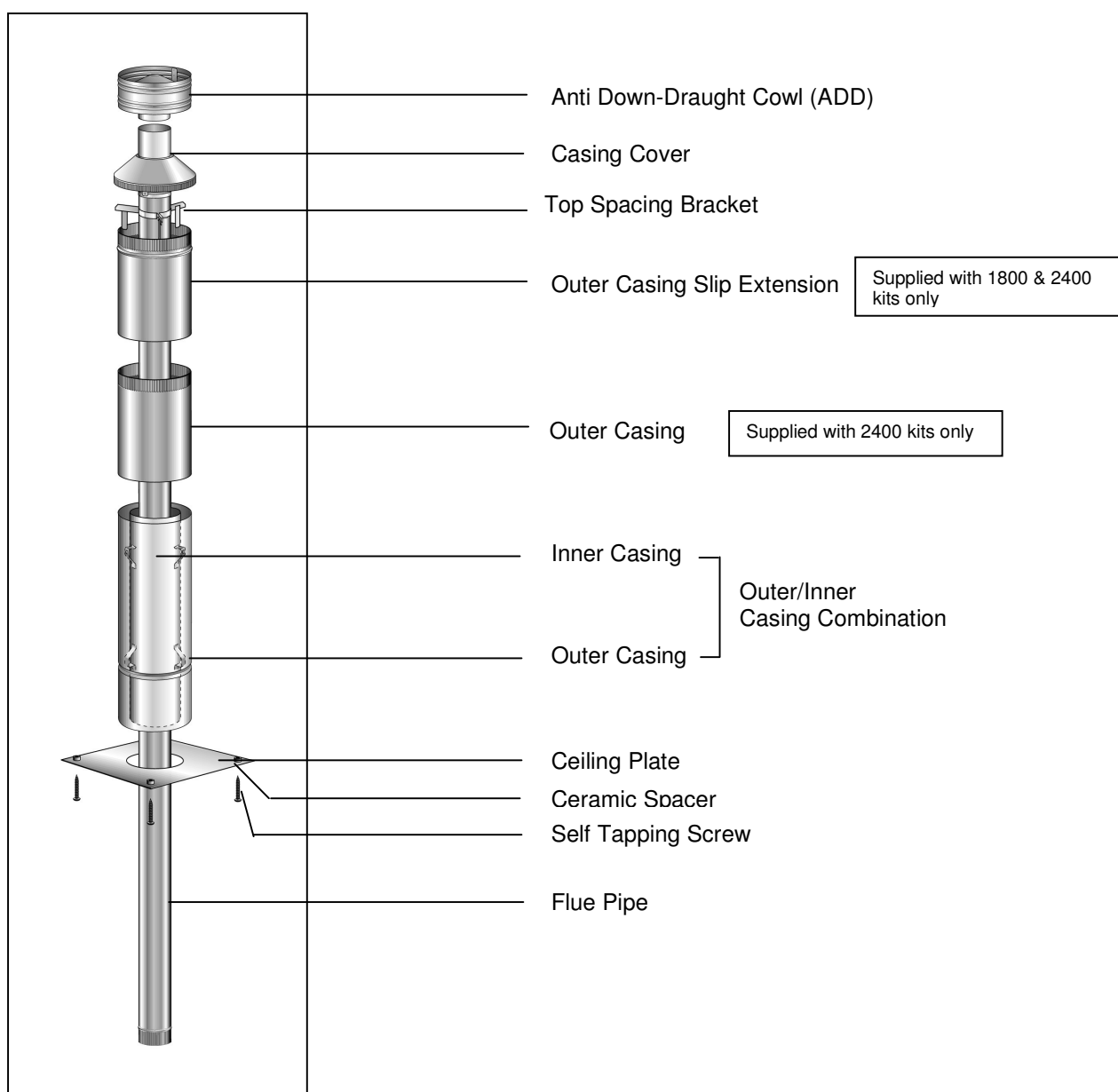


Diagram C AS/NZS 2918:2001 pg 37

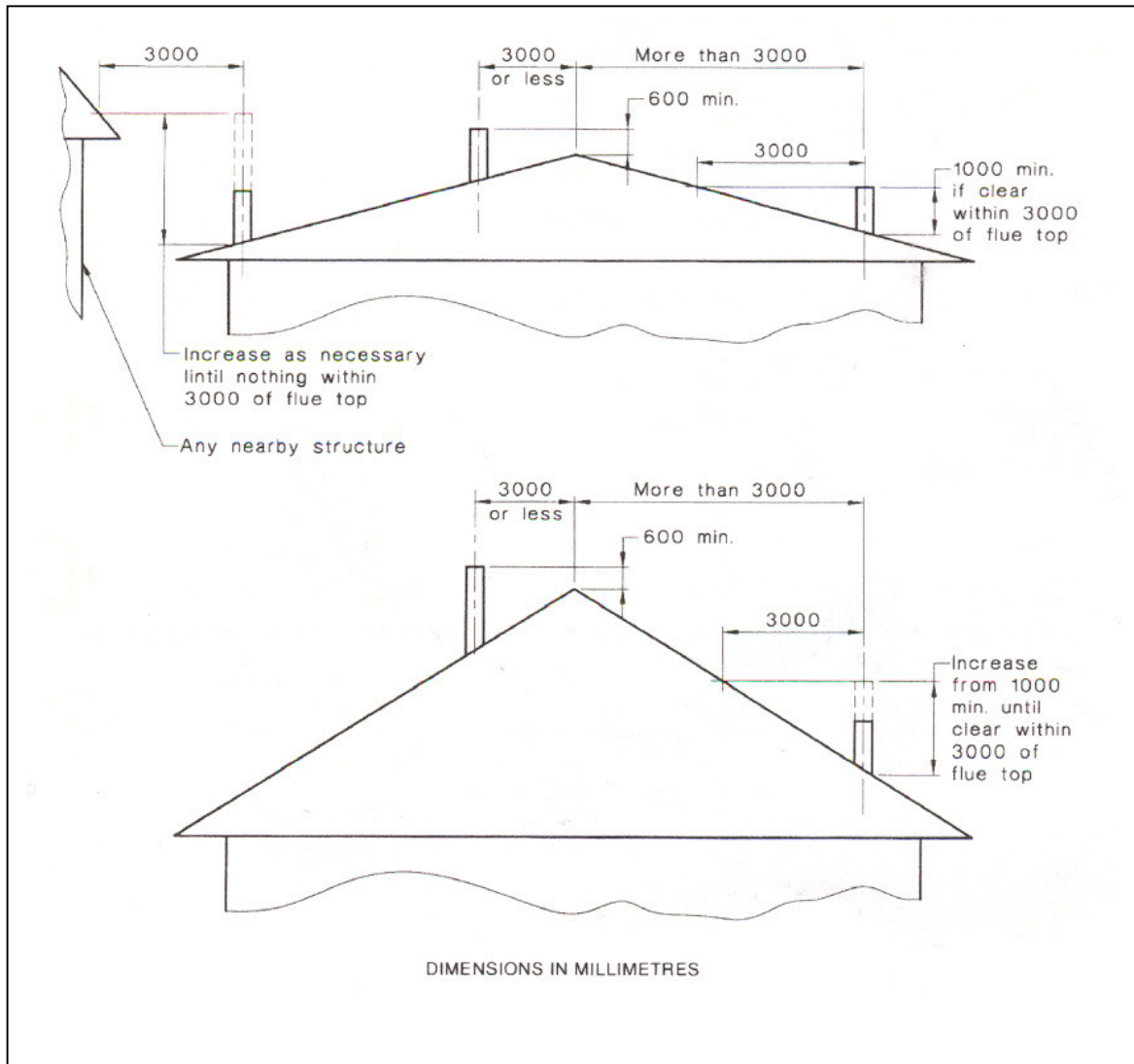
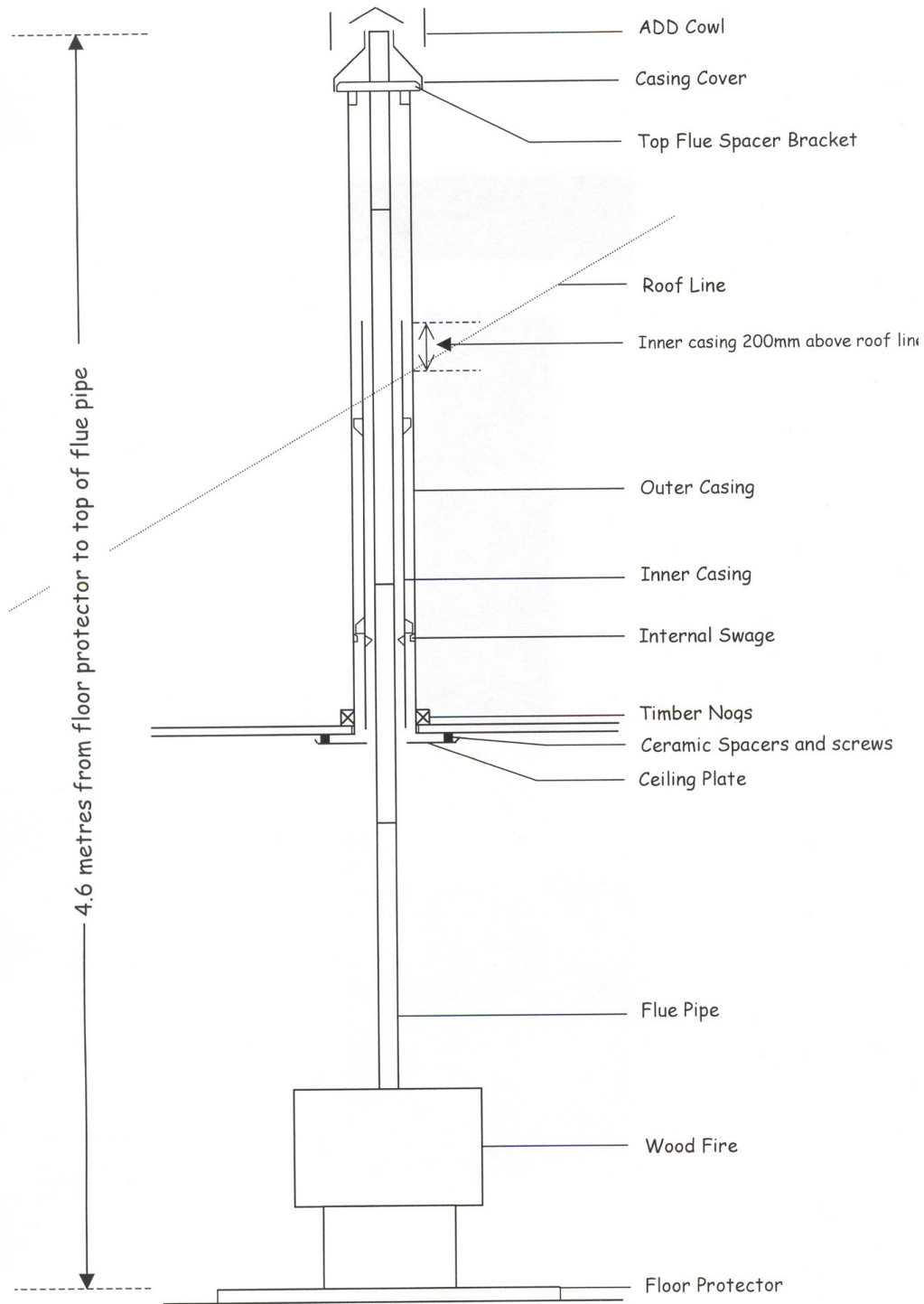


Diagram B



HI-THERM STAINLESS STEEL FLUE PIPES

HI-THERM Flue Pipe is a high temperature, matt finish Flue Pipe designed for use on slow combustion, solid fuel heaters.

HI-THERM Flue Pipe is ideal for heaters that have high flue temperatures and that also can be operated under circumstances that may produce creosoting of Flue Pipes for short periods of time, ie, on refuelling and with air control in shut or low position. Clean air guidelines must be observed.

- HI-THERM Flue Pipe is a **maintainable** product.

CONDITIONS OF USE

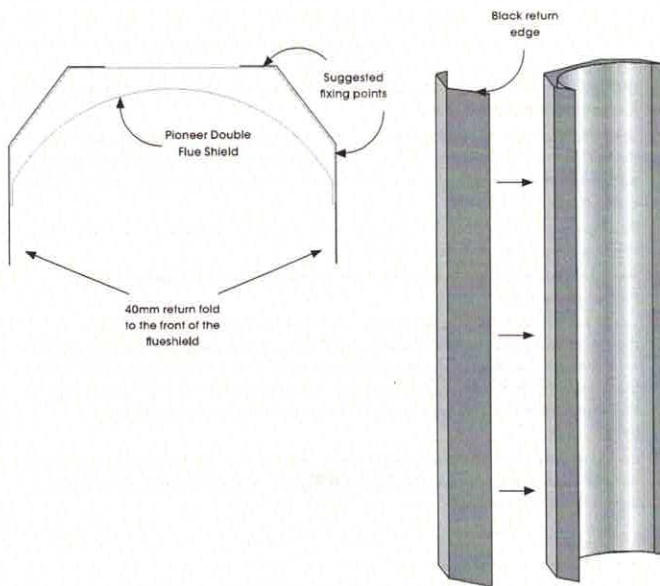
- *The Wood Fire must be operated in accordance with the manufacturer's instructions. Clean air guidelines and regulations must be observed.*
- *HI-THERM Flue Pipe must be swept by mechanical means only. (We recommend mixed head or polypropylene brushes). Under NO circumstances should chemical flue cleaners, (soot destroyers) or steel chimney brushes be used.*
- *HI-THERM Flue Pipe should not be used on a Wood Fire burning treated or wet (unseasoned) wood. **Only use newspaper when lighting the fire; never burn colour printed brochures or junk mail.***
- *HI-THERM Flue Pipes **must** be secured together with a minimum of three Monel Steel rivets equally spaced around the joint.*
- *The paint finish appearance may change, depending on Wood Fire operation and is designed to be a MAINTAINABLE finish. To maintain paint finish or touch up use only genuine STOVE BRIGHT Aerosol. (Refer label on packaging).*
- *HI-THERM Flue Pipe must be installed in accordance with SFP installation instructions, using flue componentry supplied by SFP. It is the responsibility of the installer to ensure no water leaks into the Hi-Therm Flue System.*
- *The Stainless Steel Flue Pipe used in "Hi-Therm Stainless Steel Flue Pipe" is warrantied for five years, providing the above conditions are met.*

**FAILURE TO OBSERVE THESE CONDITIONS
MAY NEGATE WARRANTIES**

Pioneer Double Flue Shield - Side extensions

Some Metro models have undergone additional testing which allows for reduced clearances when side extensions are fitted to the Pioneer Double Flue Shield. The Pioneer Flue Shield side extensions are fitted to the Pioneer Double Flue Shield as detailed below.

The side extensions locate on both left and right hand sides of the flueshield. When fixing the side extensions to the Pioneer Double Flue Shield, ensure you have the black face of the side extension facing outwards with the 40mm return edge facing toward the front of the wood fire. Each side extension can be fixed to the outer skin of the Pioneer Double Flue Shield using either stainless steel rivets or a suitable fastening in the suggested fixing points as illustrated.



Pioneer Universal Double Flue Shield



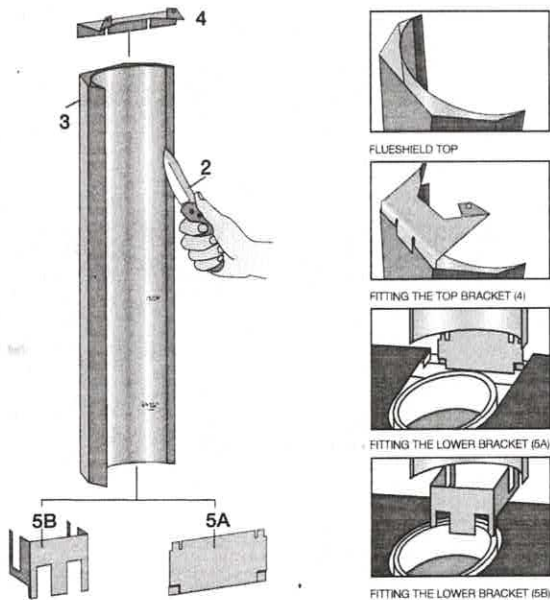
PIONEER

Flue Shield Fitting Instructions

Pioneer Double Flue Shield

This flue mounted shield is a universal design with two alternative lower mounting brackets enabling it to be fitted to any brand wood fire. The highly reflective stainless steel inner shield and vented cavity between rear and inner shields ensures maximum shielding of walls directly behind the installed appliance. Due to its compact design, if minimum side clearances specified with your wood fire are necessary this may require the side depth of the flue mounted shield to be extended with optional side extension panels. Refer to the specifications supplied with your wood fire or consult your wood fire retailer.

Parts and assembly



Double Flue Shield fitting instructions

1. Unpack the Flue Mounted Shield, detach the three brackets and familiarise yourself with the illustrations.
2. Using a sharp knife or razor blade, carefully cut through the plastic film on the "inside face" where it meets the outer shield (refer sketch). Cut along the full length of the flue mounted shield on both sides, then peel off and fully remove the plastic film from the stainless steel inner shield.
3. Peel back and fully remove the plastic film from the outer shield.
4. Fit the top bracket to the flue mounted shield as illustrated ensuring the rear mid section of the bracket fits "outside" while the two outer sections of the bracket fit "inside".
5. Fit the appropriate lower bracket to your wood fire.

Lower bracket "5A" suitable for wood fires with an inner rear heat shield.

Attach bracket "5A" to the inner rear heatshield directly behind the flue outlet as illustrated on the opposite page. The rear/outer face of the flue mounted shield then locates into the bracket "5A".

Lower Bracket "5B" suitable for all other wood fires without an inner rear heat shield. On certain model wood fires without a raised flue spigot it will be necessary to cut off both the lower outer legs from the bracket "5B" leaving the central tongue to locate inside the flue outlet only.

Two tabs are provided and if folded back at 90 degrees the bracket and flue mounted shield will mount lower onto the appliance.

The flue mounted shield then locates into the two notches provided in bracket "5B" as illustrated.

6. Once the Flue Mounted Shield is fitted in position onto either of the two lower mounting brackets, check to ensure a large gap is not present between the top of the wood fire and the base of the Flue Mounted Shield, as this may result in a hot spot on the rear wall directly behind the flue outlet. If your wood fire has a lift off top grill the Flue Mounted Shield should be raised sufficiently to enable the top grill to be removed.
7. Using the pre-punched holes in the two tabs provided on the top bracket as guides, drill into the flue pipe and secure the top bracket to the flue pipe with two Stainless Steel rivets (not supplied).

3.4.2 Built-in appliance installations

3.4.2.1 General

Built-in appliance installations shall be tested in accordance with Appendix B and they shall comply with the temperature limits of Paragraph B10.

3.4.2.2 Built-in appliance mantelshelves

Unless a specific mantelshelf arrangements have been shown to be satisfactory during Appendix B testing, mantelshelf arrangements specified for fireplace insert appliances may be used.

3.4.3 Freestanding installations installed in fireplaces or masonry enclosures

If an appliance intended for freestanding installation is installed in a masonry enclosure the clearance between the appliance and any heat-sensitive material shall be in accordance with the requirements of Clause 3.4, as appropriate.

NOTE: Installers should be aware that in some circumstances heat sensitive materials may be obscured by masonry.

3.5 STABILITY

An appliance shall be installed with sufficient stability so as not to detract from the intended normal operation of the appliance nor to create a hazard for users of the appliance.

3.6 WATER CONNECTIONS

All water connections to an appliance shall be in accordance with the appropriate requirements of AS 3500.4.1 or NZS 4603 and the regulatory authority, as appropriate.

3.7 ELECTRICAL CONNECTIONS

All electrical connections to and within an appliance shall be in accordance with the requirements of AS/NZS 3000, AS/NZS 3100 or ER 93, and the regulatory authority as appropriate.



3.8 SEISMIC RESTRAINT

Where required by the regulatory authority, provision shall be made for seismic restraint of the floor protector and the appliance. Sufficient restraint shall be provided to resist a seismic loading equal to 0.4 times the mass of the appliance. The load shall be applied horizontally in any direction at the mid-height of the combustion chamber. The appliance shall not move, tilt or be dislodged from its installed position during application of the load.

NOTES:

- 1 The seismic loading is to be applied before the flue system is installed.
- 2 Where the appliance is secured to the floor protector the test is to be applied to the combination at a point approximately 100 mm above the top surface of the floor protector.

Tenancy Services

Smoke alarm requirements



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What you need to know

New Requirements for Smoke Alarms
in Residential Rental Properties
came into force on 1 July 2016.



First edition, reprinted in 2015 by Ministry of Business, Innovation and Employment

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Do the new requirements apply to my rental property?

- › If your residential rental property is covered by the Residential Tenancies Act (RTA) the new requirements apply.

Do I have to have smoke alarms in my rental property?

- › Yes, there must be at least one working smoke alarm in within 3 metres of each bedroom door or every room where a person sleeps.
- › In self-contained caravans, sleep outs or similar there must be a minimum of one working smoke alarm.
- › In multi-storey or multi-level homes (including split levels) there must be at least one smoke alarm on each level or storey.

Who's responsible for replacing smoke alarm batteries?

- › Tenants are responsible for changing batteries in smoke alarms that are designed to have the battery changed during their tenancy.
- › Landlords are responsible for ensuring the smoke alarms are working at the beginning of every new tenancy.

What type of smoke alarms are required?

- › From 1 July 2016, if you are installing new smoke alarms or if you are replacing an existing smoke alarm, you must install photoelectric smoke alarms with long life batteries that have a life span of at least 8 years.
- › There are many different brands of smoke alarms that meet the new requirements.
- › The smoke alarms must be photoelectric alarms with long life batteries and this will be displayed on the smoke alarm and its packaging.
- › Smoke alarms must comply with one of the following manufacturing standards: Australian Standard AS3786:1993; or equivalent international standard: UL217 (USA), ULCS531 (Canada), BS5446: Part 1 (United Kingdom), BS EN 14604 (United Kingdom) or ISO12239 (International) – this should be prominently displayed on the packaging and on the alarm.
- › If in doubt ask, the hardware retailer can advise which smoke alarms comply with the required standards.

Where can you purchase long life photoelectric smoke alarms?

- › You can purchase long life photoelectric smoke alarms from any of the national hardware chains or your local hardware store.