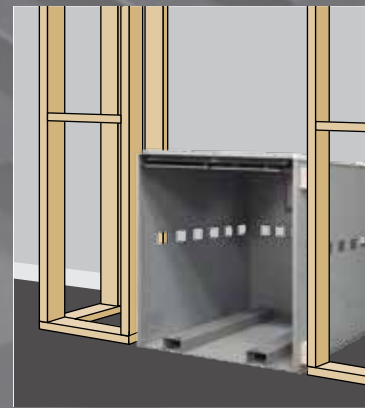
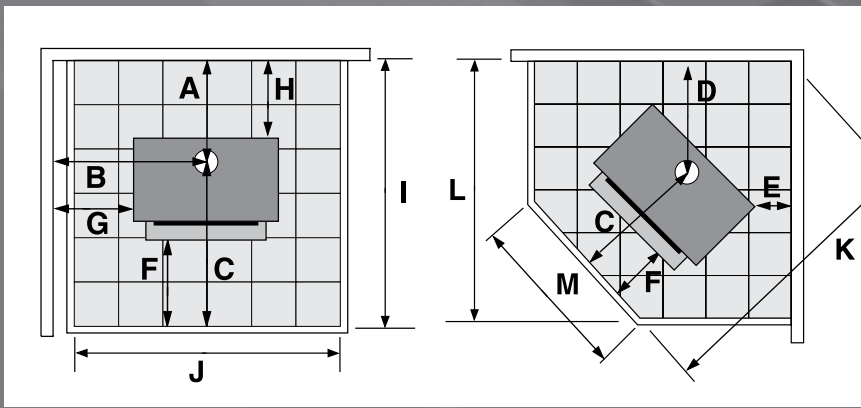
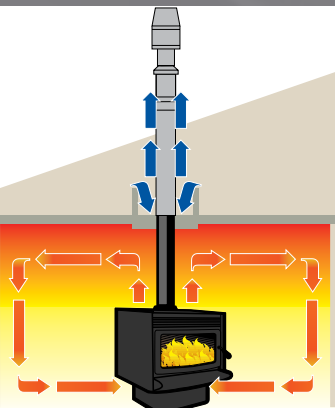


metrofires

2013 Specifications



national environmental standards

Emission and efficiency requirements

National Environmental Standards (NES) came into effect throughout New Zealand in 2005, imposing a minimum 65% efficiency and maximum 1.5 grams emission requirement on all wood fires installed on properties with a land area of less than two hectares.

65% Heat Efficiency Requirement

100% of the heat produced by a wood fire does not remain within the home as some of the heat is lost up the flue system. NES requires a minimum of 65% of the heat produced by a wood fire to remain within the home as space heating to obtain NES compliance.

This can be made more difficult to achieve if a wetback is fitted. Wetbacks utilise the heat within the firebox to produce hot water, and this heat is not allowed to be calculated within the 65% requirement. The majority of Metro wood fires can be fitted with a wetback and still meet NES compliance.

1.5 Gram Emission

1.5 grams is the maximum amount of particulate that is allowed to be emitted from the wood fire per 1kg of fuel burnt. There are certain regions in New Zealand that have

more stringent by-laws in place. For example, Central Otago Air Shed 1 is limited to 0.7 grams and Canterbury is limited to 1 gram. Please check with your local council on emission limits within your region.

Metro take pride in achieving many industry firsts, which has come from the huge resource invested in research and development. Metro Fires offer the largest range of NES and ECan approved wood fires, the majority with water heating options. In addition, Metro still offer a large range of LTD models for rural home owners wanting longer burn times.

Clean Air Models

Specifically designed for properties less than two hectares, these models surpass the requirements of the NES. Utilising advanced combustion technology these Metro's have a complex firebox design which operates at higher combustion temperatures.

LTD Models

Designed for properties of two hectares or more, LTD Metro's retain over night burn capabilities while still meeting internationally accepted emission and efficiency standards.

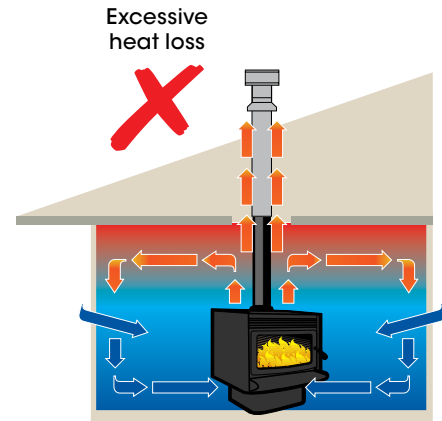
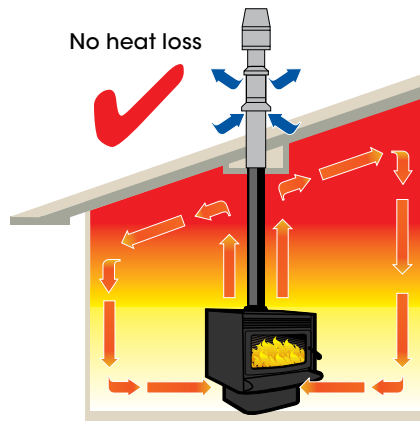
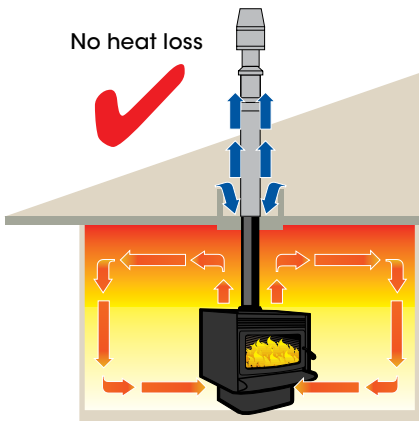
Clean Air Models	Tested Emission & Efficiency		ECan Authorisation Number		Complies with NES
	Without Wetback	With Wetback	Without Wetback	With Wetback	
Ambie One	0.95gms/71%	Not Tested	120834	Not Tested	Without Wetback only
Ambie Plus	0.42gms/69%	0.49gms/67%	120835	120836	With & Without Wetback
ECO Tiny Ped	0.72gms/78%	1.00gms/66%	073897	080009	With & Without Wetback
ECO Tiny Rad	0.94gms/75%	0.85gms/67%	072605	072607	With & Without Wetback
R1	0.64gms/71%	Not Tested	Not available at time of print	Not Tested	Without Wetback only
R2	0.79gms/70%	Not Tested	Not available at time of print	Not Tested	Without Wetback only
Wee Rad	0.62gms/70%	0.68gms/68%	130815	130816	With & Without Wetback
ECO Wee Ped	0.88gms/70%	0.96gms/65.2%	092976	102679	With & Without Wetback
ECO Wee Curve DV	0.60gms/68%	Not tested	093460	Not Tested	Without Wetback only
ECO Xtreme Ped DV	0.86gms/69%	1.04gms/67.4%	112024	102677	With & Without Wetback
Xtreme Rad - Leg & Ped	0.64gms/67%	0.62gms/66%	Not available at time of print	Not available at time of print	With & Without Wetback
ECO Euro Rad DV	0.72gms/72%	Not tested	072608	Not Tested	Without Wetback only
ECO Euro Ped DV	0.65gms/70%	1.08gms/70.2%	112001/112019	N/A in Canterbury	With & Without Wetback
ECO Smart Insert	0.49gms/68%	0.82gms/67%	102411	102426	With & Without Wetback
ECO Trend Insert	0.91gms/65%	Not tested	101159	Not Tested	Without Wetback only
ECO Mega Smart Built-In	0.65gms/69%	0.56gms/66%	110719	111058	With & Without Wetback

Please note: Some regional councils have imposed emission requirements which take precedence over the NES, while some councils in New Zealand have imposed or are considering adopting by-laws relating to environmental issues. If in doubt, consult your local council or Metro retailer. Some councils require a "Test Certificate" detailing the wood fire approval details. All Metro's Test Certificates are listed on www.metrofires.co.nz

ECan approvals were not available at the time of printing. If you live in Canterbury, Nelson or certain parts of Central Otago, you may need the ECan authorisation number, if so please refer to your Metro retailer or www.metrofires.co.nz to obtain the test certificate / ECan authorisation number.

peak performance

Maintain a warm home with no heat loss and reduce fuel consumption



Metro ECO Base Flue System

With an ECO Base Flue System, the cooling air required by the flue system is drawn from either the ceiling cavity, or outside your home.

The ECO Base Flue System reduces your fuel consumption and ensures the heat produced by your Metro wood fire stays within your home.

The energy savings achieved by the ECO Base Flue System are impressive. Lab testing of a conventional flue system resulted in the heated air produced by a wood fire being drawn out of the home at an astounding rate of 450 litres per minute.

Metro ECO Option Kit

The ECO Option Kit is designed to be installed in combination with the ECO Flue System. The ECO Option Kit enables homes without a vented ceiling cavity, or a sloping ceiling home, to still achieve the same performance and efficiency benefits the ECO Flue System provides.

Install an ECO Flue System

To get the best from your wood fire and maintain the heat it produces in your home, request an ECO Flue System is installed with your Metro.

A winning combination to keep your home warm for many years to come.

Conventional flue systems

A conventional flue system draws air from the room to keep itself cool.

This results in the heated air from your wood fire being drawn out of your home. This heated air is then replaced with cold outside air drawn back into your home.

On a cold winter's night this hugely inefficient system can empty an average sized room once every hour of potentially 28°C air. It replaces it with the outside air which in some regions can be below zero.



Metro's ECO Cowl

Operating on a vertical discharge principal, the ECO Cowl induces updraft of the flue gases and increases draw within the flue pipe.

Standard with every ECO Base Flue System, the ECO Cowl ensures the best performance and efficiency possible from your Metro wood fire.

Metro offer both the ECO Base Flue System and the ECO Option Kit with optional stainless steel liners for a superior look and finish. (Recommended for all coastal installations)

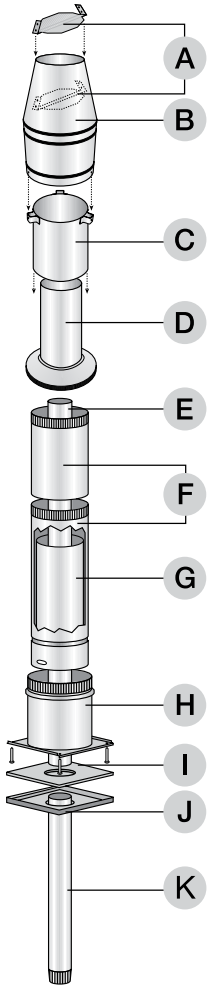
Metro ECO Cowl



Standard Cowl



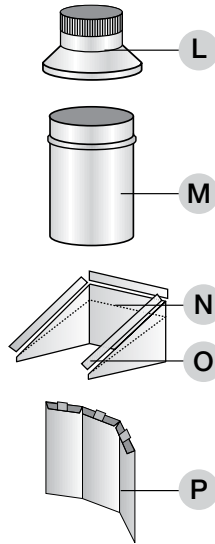
ECO Flue Systems



Metro ECO Base Flue System

Metro ECO Base Flue System is designed for installation into a home that has a ceiling cavity with unrestricted air supply. A vented ceiling cavity is required as the ECO Base Flue System draws its cooling air from the ceiling cavity.

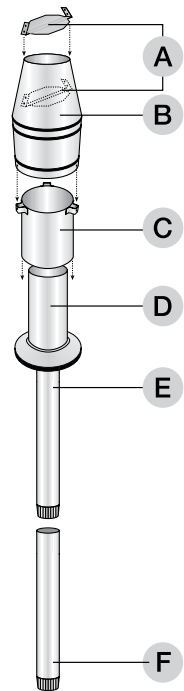
A	1 x S/Steel weather butterfly
B	1 x S/Steel ECO Cowl housing
C	1 x 225mm x 200mm diameter S/Steel outer casing extension
D	1 x 480mm x 150mm long S/Steel flue pipe extension with flashing cone
E	1 x 1200mm x 150mm diameter S/Steel flue pipe
F	1 x 1200mm x 250mm diameter galvanised outer casing with 750mm long slip section
G	1 x 800mm x 200mm diameter galvanised inner casing
H	1 x Galvanised mounting plate with brackets and 300mm long x 300mm diameter casing attached
I	1 x insulation gasket
J	1 x clip-on ceiling plate
K	2 x 1200mm lengths of 150mm diameter S/Steel flue pipe painted metallic black
+	1 x plastic bag of assembly bolts



Metro ECO Option Kit

Designed to be added to the Metro ECO Base Flue System for installations that do not have a vented ceiling cavity and require the flue systems cooling air to be drawn in from above the roofline (outside the building).

L	External intake flashing cone
M	300mm diameter outer liner extension
N	Drop box infill panel
O	Drop box edge covers
P	Ceiling plate mounted heat shield



Metro Swap-Over Kit

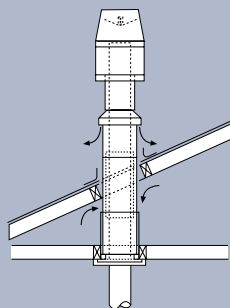
Designed for the replacement of a homes flue system while retaining the existing 200mm and 250mm liners already installed in the home.

A	1 x S/Steel weather butterfly
B	1 x S/Steel ECO Cowl housing
C	1 x 225mm x 200mm diameter S/Steel outer casing extension
D	1 x 480mm x 150mm long S/Steel flue pipe extension with flashing cone
E	1 x 1200mm x 150mm diameter S/Steel flue pipe
F	2 x 1200mm lengths of 150mm diameter S/Steel flue pipe painted metallic black

single storey installation

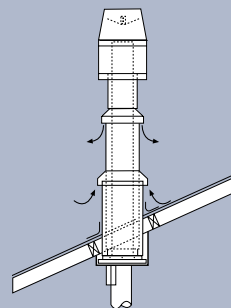
Shown beside are the most common installation methods for installing the Metro ECO Base Flue System in a single storey home.

To ensure safe and efficient installation, this flue system must be installed as detailed by either a registered installer, or someone competent in installing solid fuel appliances.



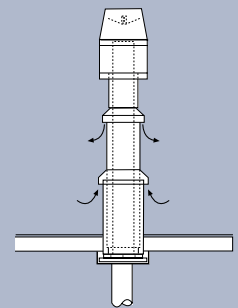
Flat Cavity Ceiling

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



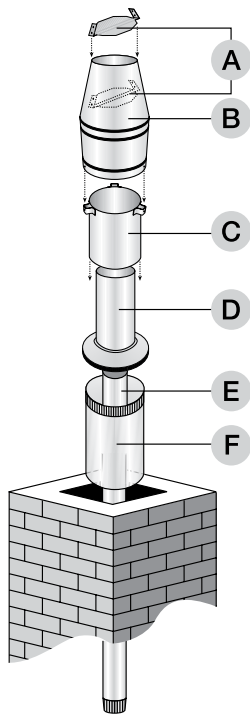
Sloping Ceiling

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



Flat Ceiling/Roof

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

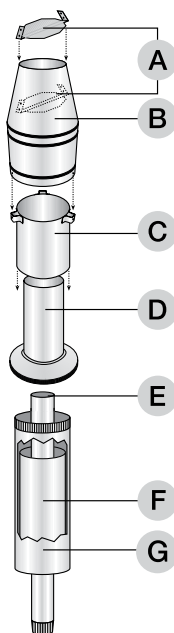


Metro ECO Insert Flue System

Designed for all Insert Metro wood fires, being installed into a masonry chimney cavity. Suitable for the following Metro Insert models:

- LTD Trend Insert
- ECO Trend Insert
- ECO Smart Insert

A	1 x S/Steel weather butterfly
B	1 x S/Steel ECO Cowl housing
C	1 x 225mm x 200mm diameter S/Steel outer casing extension
D	1 x 480mm x 150mm long S/Steel flue pipe extension with flashing cone
E	3 x 1200mm x 150mm diameter S/Steel flue pipe
F	1 x 600mm x 250mm diameter galvanised outer casing

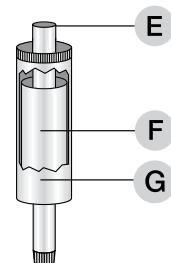


Metro ECO Built-In Flue System

Designed for installations into a timber framed chimney cavity. Suitable for the following Metro Built-In models:

- LTD & ECO Inserts, ECO Smart Insert complete with the Vented Zero Clearance Cabinet, converting the Insert to a Built-In appliance
- ECO Mega Smart Built-In

A	1 x S/Steel weather butterfly
B	1 x S/Steel ECO Cowl housing
C	1 x 225mm x 200mm diameter S/Steel outer casing extension
D	1 x 480mm x 150mm long S/Steel flue pipe extension with flashing cone
E	3 x 1200mm x 150mm diameter S/Steel flue pipe
F	3 x 1200mm x 200mm diameter galvanised inner casing
G	3 x 1200mm x 250mm diameter galvanised outer casing



Metro ECO Extension Kit

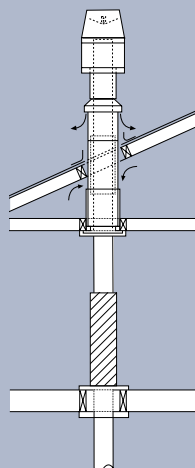
Designed to provide extensions in 1200mm sections for the Metro ECO Base Flue System and ECO Built-In Flue System.

E	1 x 1200mm x 150mm diameter S/Steel flue pipe
F	1 x 1200mm x 200mm diameter galvanised inner casing
G	1 x 1200mm x 250mm diameter galvanised outer casing

two storey installation

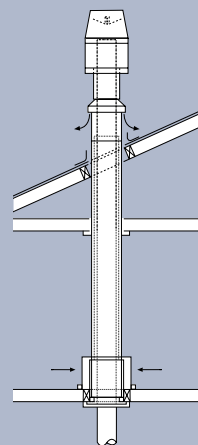
Shown beside are the most common installation methods for installing the Metro ECO Base Flue System in a two storey home.

To ensure safe and efficient installation, this flue system must be installed as detailed by either a registered installer, or someone competent in installing solid fuel appliances.



2nd Floor Exposed Flue pipe

Requires an ECO Base Flue System with additional lengths of flue pipe, a floor penetration kit, 1 x 1200mm long mesh/screen in accordance with AS/NZS2918:2001.



2nd Floor Enclosed Flue pipe

Requires an ECO Base Flue System only with additional lengths of flue pipe, 200mm & 250mm inner/outer combination liners. A 2nd floor vent cover and an additional ceiling plate with a 250mm diameter hole in accordance with AS/NZS2918:2001.

insert / built-in clearances & dimensions

Checklist before installation

The masonry chimney must be swept and checked for:

- Cracks and general overall condition, with repairs carried out if necessary by a suitably qualified person.
- Cavity dimensions to ensure the fireplace insert will fit, it may be necessary to remove the fire bricks from the lower masonry chimney cavity.
- The base of the masonry chimney cavity on which the Metro fireplace insert will rest must be level, if it is not, it must be levelled using mortar.
- If an ash removal door exists in the base of the chimney it should be sealed shut to prevent air entering the cavity.

To minimise/stop heat loss up the chimney cavity, it is highly recommended that the wood fire cabinet is sealed, by packing any gaps that exist between the sides and top of the fireplace insert cabinet and fireplace surround, by using a suitable rated insulation (fibertex 450 or similar).

ECO Insert Fan

On properties less than 2 hectares, the Metro ECO Insert must be installed with Metro's ECO Insert fan which is a single speed, thermostatically controlled device. Fitting instructions for the fan are supplied with the fan module.

Mantelshelf

If a timber or combustible mantelshelf exists above the fireplace insert opening, it should be a minimum distance above the top of the Metro's fascia, minimum distances are detailed in the table below.

If the clearance is less than the minimum specified, a deflector or heat shield will be required to be fitted under the mantel. Please refer to AS/NZS 2918:2001 for further instructions.

Insert Floor Protector Requirements

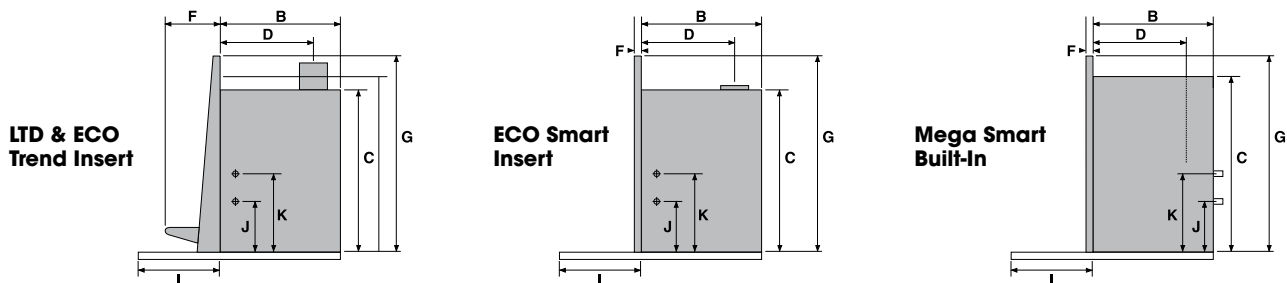
A floor protector must project from behind the fascia the distance specified (I) in the table below, and 200mm from each side of the door opening. Minimum overall projection is the distance from the front of the wall lining (behind the fascia) to the front non combustible point of the floor protector.

ECO Smart Insert: Requires an insulated floor protector with recommended construction of tiles on 26mm thick eterpan. The forward projection is dependent on the height of the fireplace insert above the combustible floor, which is detailed below.

ECO Insert: Only requires a non-insulating ash-hearth floor protector. Recommended construction is tiles on 6mm thick villa board. Also any non-combustible material fixed directly to a combustible floor is acceptable, including glass, steel or aluminum sheet.

LTD Insert: Requires an insulated floor protector. The forward projection is dependent on the height of the fireplace insert above the combustible floor. The schedule of projections listed for heights of 0mm to 41mm+ can be achieved by the thickness of the floor protector, raising the insert or a combination of the two. Recommended construction is 'tiled eterpan' with a combined thickness as detailed below.

ECO Mega Smart Built-In: Requires an insulating floor protector with recommended construction of 18mm thick eterpan or equivalent, finished with a non combustible tile or similar. The floor protector must be a Min. width of 1057mm with a Min. overall projection of 505mm.



Metro fireplace inserts are tested to comply with AS/NZS 2918:2001 incorporating Appendix 'E' when installed in accordance with the installation and operation manual supplied with every Metro wood fire.

Insert & Built-In Dimensions (mm)

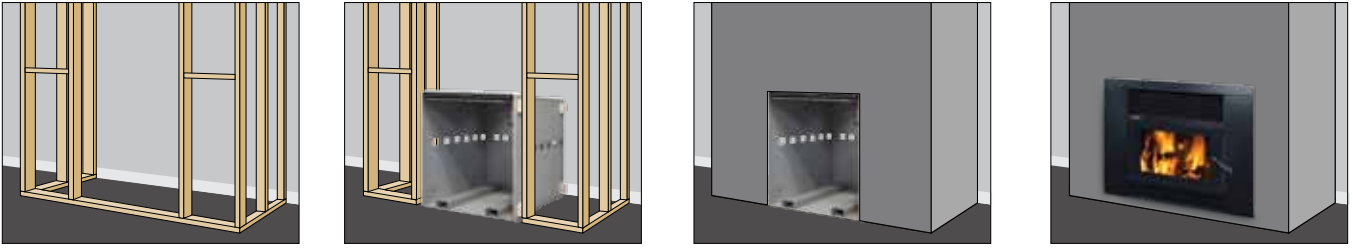
	Firebox Width	Firebox Depth	Firebox Height	Flue Centre	Fascia Width	Fascia Depth	Fascia Height	Min. F/P Width	Min. F/P Projection	Setback In	Setback Out	Mantelshelf
	A	B	C	D	E	F	G	H	I	J	K	
LTD Trend Insert	560	500	550	405	810	185	650	825	350	170	360	460
ECO Trend Insert	560	500	550	405	810	185	650	825	300	170	360	340
ECO Smart Insert	560	495	550	405	890	30	672	825	312	130	325	475
ECO Mega Smart Built-In	860	621	815	445	1057	30	825	1057	505	212	402	500

Please note: All measurements detailed for the Trend and Smart Inserts exclude the insulating blanket.

Floor Protector Heights	0mm	10mm	15mm	20mm	25mm	30mm	35mm	40mm	41mm+
ECO Smart Insert - Dimension I	395mm	371mm	371mm	353mm	353mm	332mm	332mm	312mm	312mm
ECO Insert - Dimension I	300mm minimum projection is required irrespective of the height of the floor protector								
LTD Insert - Dimension I	455mm	455mm	445mm	436mm	424mm	408mm	396mm	366mm	350mm
ECO Mega Smart - Dimension I	505mm minimum projection is required irrespective of the height of the floor protector								

installation into a timber cavity

Installing a Built-In Metro wood fire into a timber framed cavity



Converting a Metro Insert wood fire into a Built-In wood fire

Metro offer three Insert models which are traditionally installed into a masonry chimney, and one dedicated built-in wood fire specifically designed for installation into timber framed cavities.

All Metro Insert wood fires can also be converted into a Built-In appliance by utilising Metro's Vented Zero Clearance Cabinet (VZCC). This cabinet enables any of the Metro Inserts to then be installed into a timber framed cavity.

Vented Zero Clearance Cabinet

The function of the VZCC as shown above, is to enable the Metro LTD Insert, ECO Insert and ECO Smart Insert to be installed into a timber framed wall. The VZCC therefore replaces the more traditional masonry chimney at a fraction of the cost. Detailed instructions for the VZCC installation are available from your Metro retailer or www.metrofires.co.nz

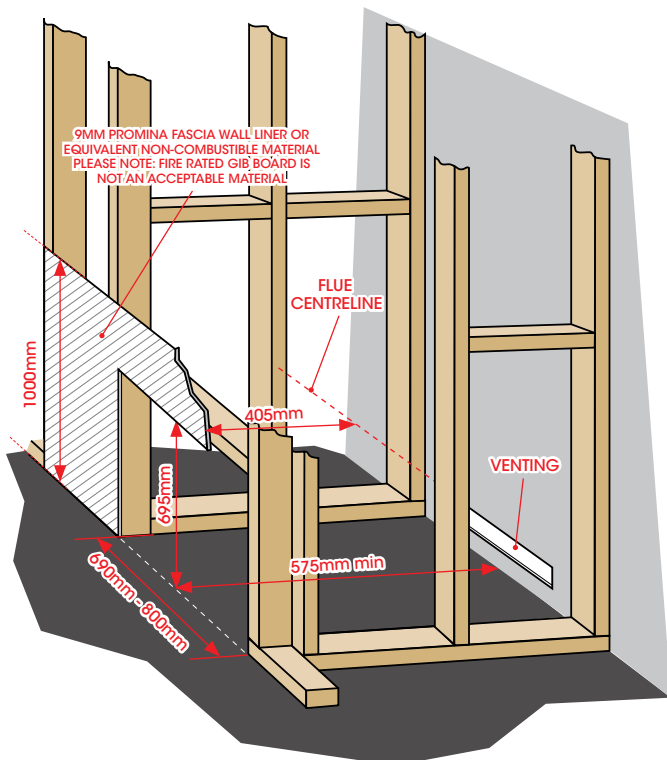
Metro ECO Built-In Flue System

Metro's ECO Built-In Flue System must be used with all 'built-in' installations of Metro wood fires. This flue system incorporates Metro's unique vertical discharge cowl which improves flue draft and increases the performance of your wood fire.

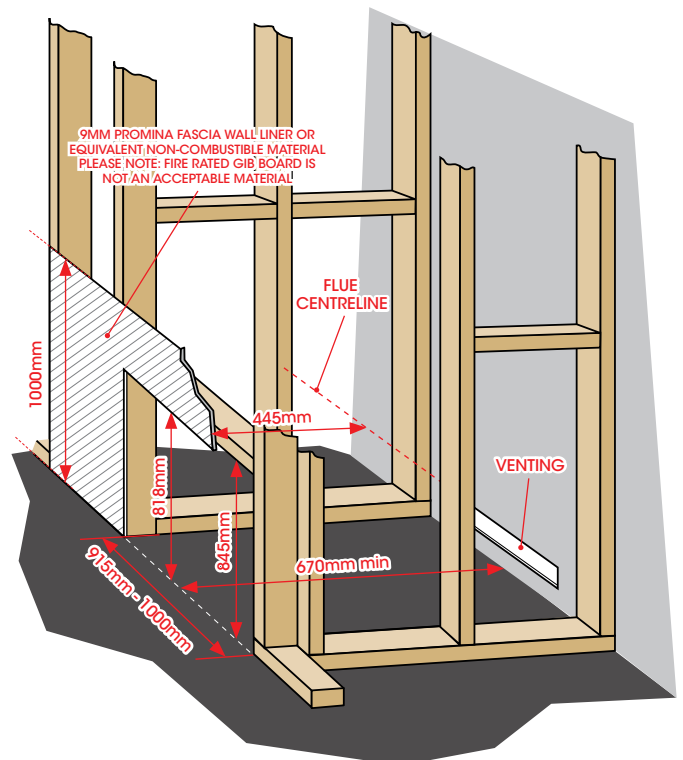
A minimum length of 4.1m of 150mm diameter flue pipe is required for ECO/LTD Insert and ECO Smart and 4.0m for ECO Mega Smart. The total length of the 150mm flue pipe must be fully encased from top to bottom with a 200mm diameter inner casing and a 250mm diameter outer casing.

Please refer to the Vented Zero Clearance Cabinet installation manual for full details and specifications.

Preparing the wall opening/cavity for an Insert Metro wood fire



Preparing the wall opening/cavity for the Mega Smart Built-In Metro wood fire



freestanding clearances & dimensions

Minimum clearances shown are in millimetres, with a Pioneer double flue shield fitted. All Metro wood fires comply with AS/NZS 2918:2001. 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.

Clearance Reductions

AS/NZS 2918:2001 allows for a reduction in minimum clearances as detailed in tables 3.1 and 3.2 of the standard.

Some Metro models have undergone additional testing which allows for reduced clearances, details are:

- LTD Wee Ped clearances 'B' and 'G' can be reduced by 80mm, if installed with a Pioneer double flue shield with the side extensions fitted.
- LTD Wee Ped clearances 'H' and 'I' can be reduced by 50mm providing a wetback is not fitted.
- Wee Rad corner clearance 'E' can be reduced to 120mm with the Wee Rad corner wing shields fitted.

Please note: 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.

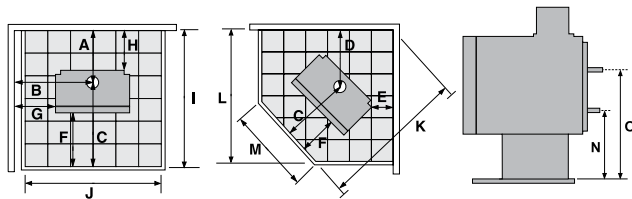
- ECO Euro Ped & ECO Xtreme Ped clearance 'E' can be reduced to 110mm, if installed with a Pioneer double flue shield with the side extensions fitted.

Freestanding Floor Protectors

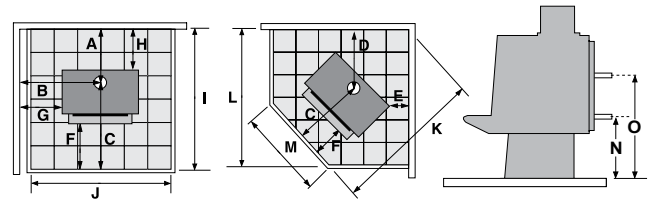
Metro freestanding wood fires do not require an insulating floor protector, are tested and comply with the minimum floor protector requirements of AS/NZS 2918:2001. Note:

- Minimum floor protector sizes are specified below
- A floor protector can include ceramic tiles, a sheet of toughened glass, panel steel or any other non combustible material laid directly onto a wooden floor
- Metro manufacture a large range of floor protectors in a range of tiles and colours, in three different trim options.

Ambience Models



Other Models



Wood Fires	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Width	Depth	Height
Ambie One	250	538	589	391	100	275	250	100	839	825	1142	960	427	350	540	577	464	717
Ambie Plus	267	685	658	462	125	275	350	100	925	905	1317	1110	506	360	550	671	550	759
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
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	243	568	580	455	150	230	260	100	823	825	1224	1015	425	295	485	615	498	688
ECO Wee Ped	260	595	580	385	85	200	300	110	840	825	1120	950	425	295	485	590	530	665
ECO Wee Curve DV	300	555	580	405	100	200	250	150	880	825	1150	975	425	280	470	607	537	665
ECO Xtreme Ped DV	230	585	625	495	170	200	250	80	855	905	1325	1120	505	325	515	670	575	700
Xtreme Rad - Leg & Base	251	650	630	458	100	227	280	100	881	907	1277	1077	507	349	539	740	554	743
ECO Euro Rad DV	250	625	625	435	80	200	250	100	875	905	1240	1065	505	338	528	750	575	745
ECO Euro Ped DV	230	585	625	495	170	200	250	80	855	905	1325	1120	505	325	515	670	575	700
LTD Wee Rad	243	548	580	425	120	230	240	100	823	825	1180	985	425	295	485	615	498	688
LTD Wee Ped	250	595	580	400	85	200	300	100	830	825	1145	950	425	295	485	590	530	665
LTD Xtreme Ped	250	575	625	455	110	200	240	100	875	905	1265	1065	505	340	530	670	575	700
LTD Xtreme Rad	251	650	630	458	100	227	280	100	881	907	1277	1081	507	350	540	740	554	743
LTD Euro Ped	250	575	625	455	110	200	240	100	875	905	1265	1065	505	340	530	670	575	700
LTD Mega Rad	270	675	725	500	125	200	300	120	995	905	1425	1175	505	353	543	750	680	745
LTD Mega Ped	270	610	725	465	130	200	275	120	995	905	1400	1140	505	340	530	670	675	700

Please note: Wetback connections for the Tiny Models are 92mm left of the flue centre. The Wee Rad is 226mm left of the flue centre, Xtreme Rad is 275mm left of the flue centre and all other Metro models are 140mm left of the flue centre facing the Metro/wall.