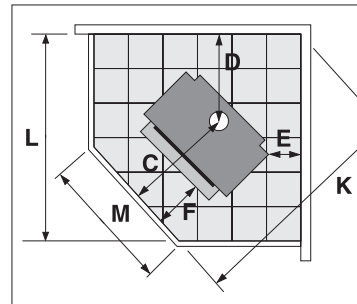
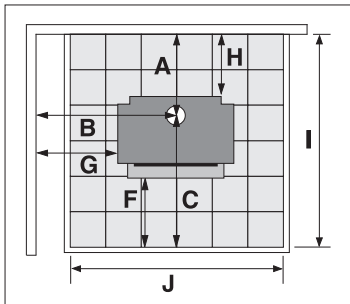


# Wood Fire Installation & Owner's Operation Manual



# metrofires

## Freestanding Ultra Fires

Important information.....	2	Getting to know your Metro fire.....	9
Assembling your Metro fire.....	2	Operating your Metro fire.....	9
Firebox parts and components .....	3	Cleaning and maintenance .....	11
Floor protector .....	5	Troubleshooting .....	12
Flue installation.....	6	Metro Fires warranty .....	13
Clearances and specifications .....	7	Replacement parts .....	14
Important operation information .....	8	Heating accessories.....	15
Where to install a Metro fire in your home.....	9		



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/NZS 2918 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/NZS 4013 and CM1 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/NZS 2918 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 and have been tested to AS/NZS 2918 with a 12mm spaced ceiling plate of no less than 345mm square

## **⚠️ 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
- A registered electrician is required to replace the fan motor and thermostat if necessary
- 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/NZS 2918
- 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.*

Your Ultra fire is virtually fully assembled for your convenience.

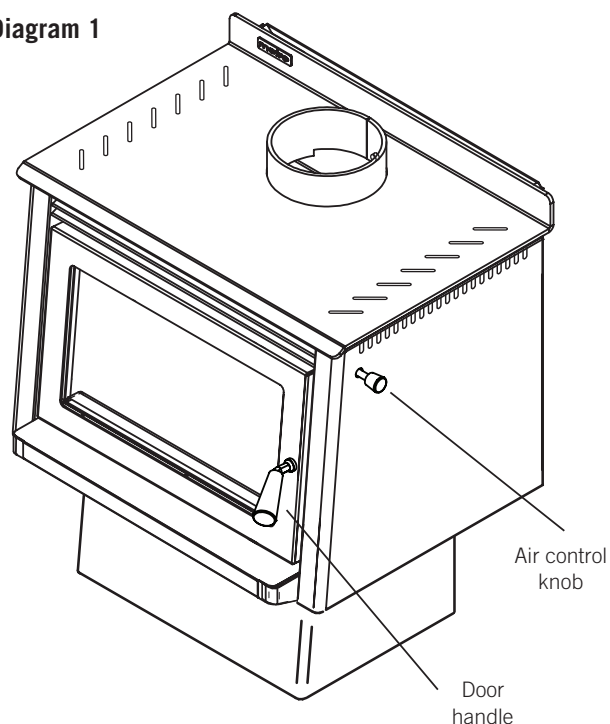
- Open door to access and install the bricks, two side and one rear. Brick assembly / removal is detailed opposite for each model
- Check upper baffle is pushed hard back with the front resting on side lugs
- Check air tube is locked in the correct position beneath the baffle
- Attach the door handle to the door latch by screwing it on clockwise
- Attach the air control knob by screwing it on clockwise.

### **Ultra Wee Rad & Ultra Xtreme Rad models only**

Open rear pedestal cover to access the 230V fan unit and remove any support packaging that may be holding the fan in position. Check that the fan has not moved during transport and is sitting in a parallel position. The fan is bolted to a fixed bracket on one side, while the motor side has a floating position.

The convection fan is required to be connected to a 230VAC power point. In addition to the supply power cable you will see an electrical plug inside the pedestal which is the connection to the thermostat. After inspection refit the rear cover panel to the pedestal. (See Diagram 3 on page 5).

**Diagram 1**



# Firebox parts and components - Bricks, baffle and airtube

The Ultra fires are fitted with 2x side firebricks and 1x rear firebrick. Please see details below for brick configuration and placement for each model.

## Air Tube

- The Air Tube must be removed to allow removal of the baffle. The Air Tube retaining clip is easier accessed if the front of the baffle is raised by resting a spacer on top of the pin to see the tube slip ring and locking pin. Once the locking pin is removed, the Air Tube slides to the right to release the left side allowing the tube to be fully removed. When refitting the airtube the left side has to index over the bolt head locator so the air jets face in a forward/down direction.

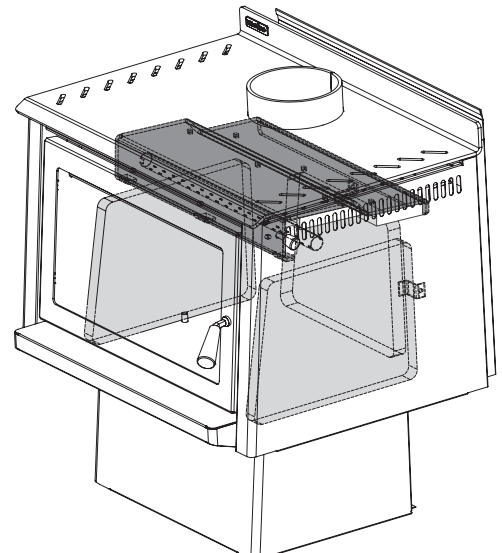
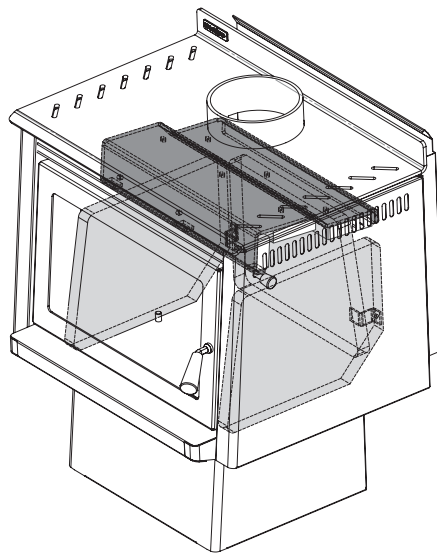
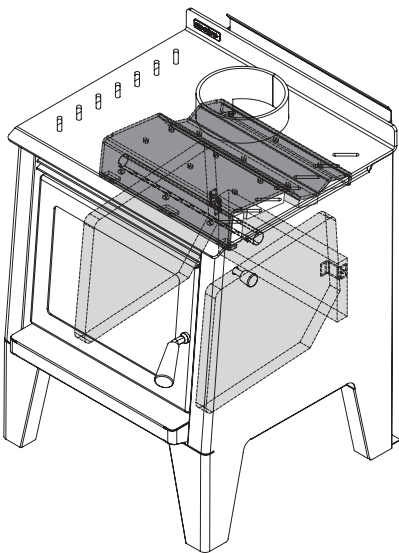
## Upper baffle

The Air Tube must be removed to enable baffle removal. Before lifting out the baffle note the position of bolt heads and other obstructions that the baffle needs to clear on removal.

- Lift the rear of the baffle 20mm to clear rear support pins and slip forward 20mm while also supporting the front of the baffle so it does not drop down, then lower the rear of baffle vertically down while guiding the front of the baffle behind the front baffle pins. Tilt the vertical baffle forward and extract at 45 degrees while clearing hinge bolts and latch bolts.
- If replacing sacrificial 'Promet' boards on the baffle, finger tighten the bolts as much as possible then using a spanner tighten nuts a further half turn. Over tightening will cause the promet to crack during expansion/contraction.

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 as illustrated in the diagrams below.

Diagram 2 - Brick replacement



## Ultra Tiny Rad

### Side bricks

1. Angle the vertical edge of the brick in behind the Z bracket at the rear of the firebox. The sloping end of the brick is at the front of the fire.
2. Raise the brick off the base of the fire and swing it into position against the side wall lowering it down behind the base lug.

### Rear brick

1. The rear brick slips down vertically behind the Z brackets at the rear of the fire.

## Ultra Wee Rad

### Side bricks

1. At an angle horizontal to the base, place the front of the brick behind the square lip at the front of the fire. The sloping end of the brick is at the front of the fire.
2. Raise the rear of the brick to clear the Z bracket and swing it into position against the side wall lowering it behind the Z bracket.

### Rear brick

1. Lean the rear brick over at the top and position the top of the brick under the Z bracket at the rear of the fire.
2. Once the brick is under the Z bracket, push the brick at the bottom until the brick is hard against the rear wall.

## Ultra Xtreme Rad

### Side bricks

1. Raise the rear corner of the side brick so the brick can move back to provide clearance at the front of the brick.
2. Swing the front edge of the brick into the centre of the firebox to get the brick free of the rear support bracket.

### Rear brick

1. Raise the square end of the rear brick so the brick can move back to provide clearance for the front edge.
2. Swing the front edge of the brick into the firebox to get the brick free of the rear support bracket

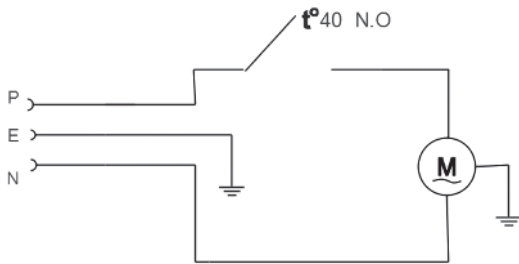
# Firebox parts and components - Fan unit (Ultra Wee Rad & Ultra Xtreme Rad models only)

## **WARNING!** Important Information

- A registered electrician is required to replace the fan motor and thermostat if necessary
- Use authorised Metro replacement parts only. The use of unauthorised parts will void the warranty and compliance
- The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Children being supervised not to play with the appliance.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

### Fan wiring circuit

230/240VAC, 50/60Hz, 15 watt



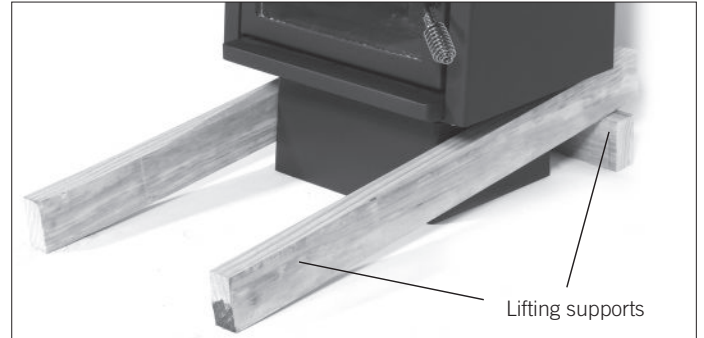
### Fan Unit

- The fan must always be connected to a 230VAC power supply when the fire is used. The 15 watt fan will operate once the thermostat heats to 40°C. This can take between 10 - 20 minutes. It is important to have the fan in operation as the air flow impacts on the fires performance.
- The fan is a permanent fixture and can only be replaced by a suitably registered electrician.
- The thermostat operates the fan at 40°C on temperature rise. This thermostat is manufactured to outlast the fire, but should the thermostat require replacement follow the procedure listed below.

### To replace the fan / thermostat (Electrician only)

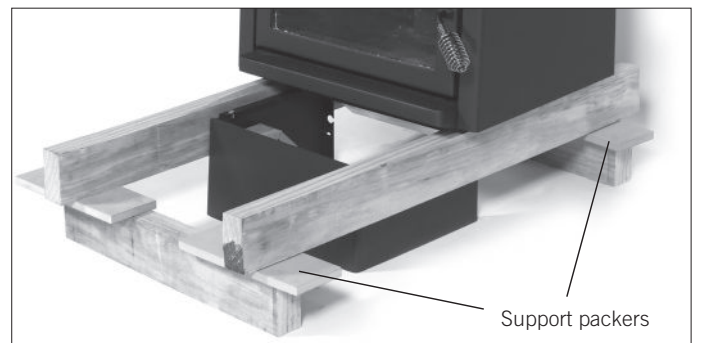
1. Ensure the power supply is unplugged at the wall.
2. Remove the seismic restraints to remove the rear mount panel of the pedestal. Disconnect the thermostat plug inside the pedestal.
3. It will be necessary to place lifting supports on each side of the Pedestal and fully elevate the rear of the supports as illustrated in 'Step 1'. The use of jacks at the rear makes it easier
4. Remove 4 x M6 bolts on the inside bottom plate of the firebox to release the pedestal. (nuts are locked onto the pedestal and will not turn)
5. Elevate the front lifting supports to raise the fire and place packers beneath the lifting arms. Only 10mm clearance is required between the fire and pedestal to allow the pedestal to be slid forward.

6. Elevate the rear support packing a further 10mm as illustrated in Step 2
7. Access to both the fan unit and thermostat is now possible.
8. When reinstalling the pedestal use a long bolt or a screw driver to re-align the pedestal holes before re-fixing the pedestal and lowering the elevated fire to the floor. Replace both seismic restraints.



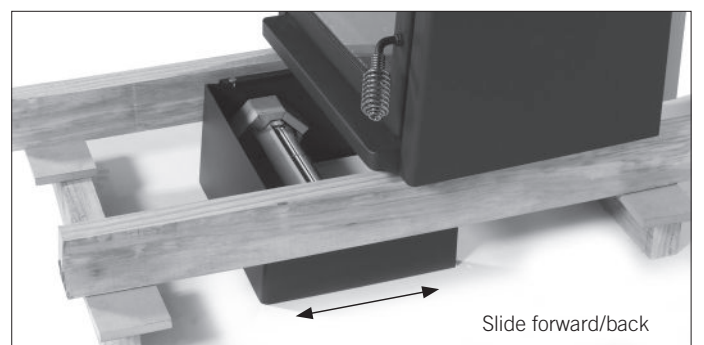
### Fan access / pedestal removal - Step 1

Place lifting supports on each side of the pedestal and fully elevate the rear of the supports. The use of jacks at the rear will make it easier.



### Fan access / pedestal removal - Step 2

Elevate both front and rear lifting supports to raise the fire by placing packers beneath the lifting arms. A minimum 10mm clearance is required between the fire and pedestal to allow the pedestal to be slid forward.



### Fan access / pedestal removal - Step 3

Slide the pedestal forward to expose the fan unit and thermostat for servicing. Reinstall the pedestal using a long bolt or a screw driver to re-align the pedestal holes before re-fixing and lowering the elevated fire to the floor. Replace both seismic restraints.

# Floor protector size, construction and fitting

Pioneer manufacture an extensive range of 'Ash Floor Protectors' which comply with the minimum floor protector requirements of AS/NZS 2918 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/NZS 2918. 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 installation clearances table 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;

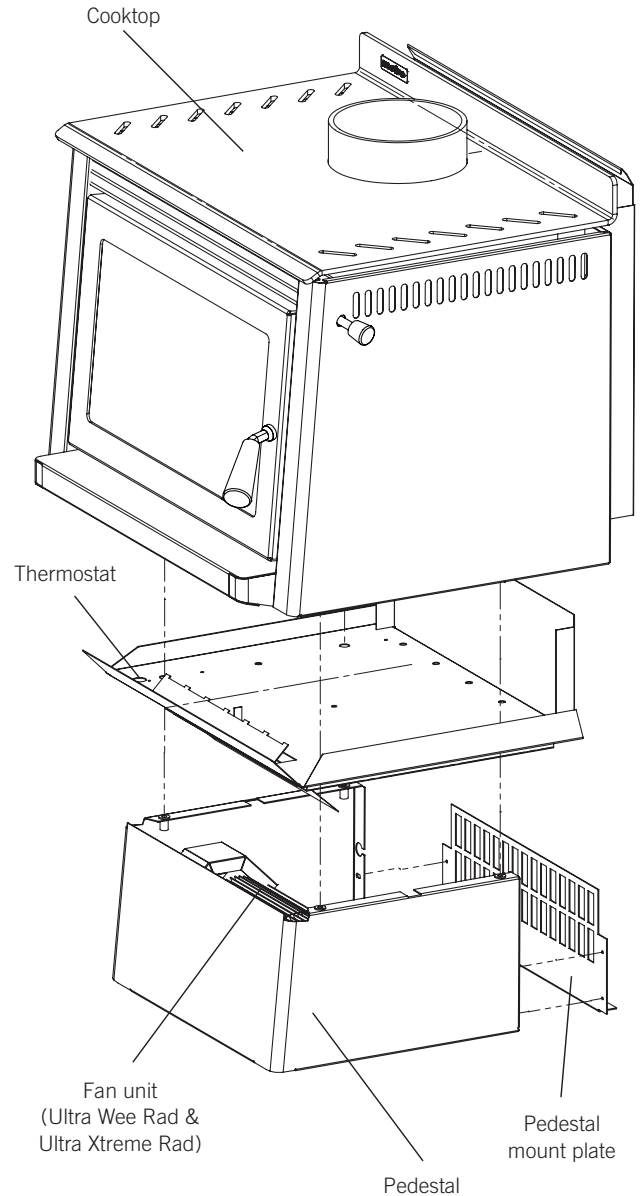
- Ceramic tiles with grouted joints fixed directly to a hard base over timber flooring
- A sheet of toughened glass, panel steel etc. laid directly onto a wooden or other combustible floor.

## Location and installation

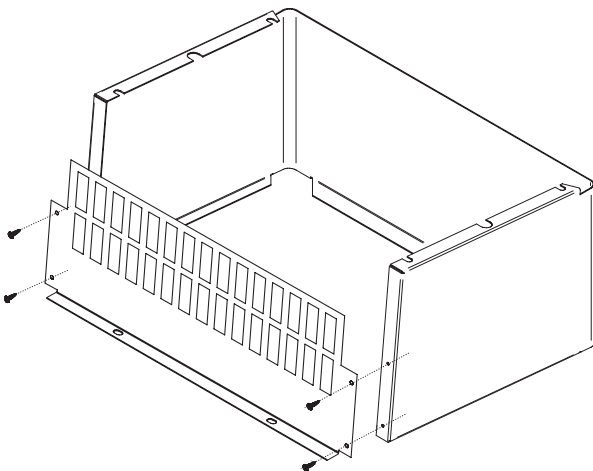
After confirming satisfactory fan alignment (Ultra Wee Rad & Ultra Xtreme Rad models) and removal of any packaging support material, lift the Metro fire onto the floor protector. Using a suitable measuring device, ensure that the minimum wall clearances and front floor protector projections as detailed 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. The seismic restraints must pass through the floor protector and anchor into the floor below. It is recommended to use fixings such as screws or raw plug masonry bolts to achieve a flush mount which will more easily allow pedestal removal from beneath the fire should this later become necessary.

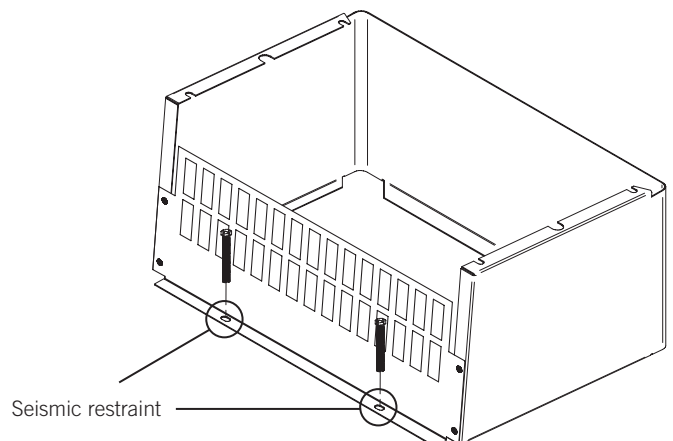
*Note: The anchors must pass through the floor protector and securely anchor the Metro to the floor but do not over tighten.*



## Diagram 3 Pedestal mount plate removal / fixing



## Diagram 4: Seismic restraints





# 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](http://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/NZS 2918, 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:

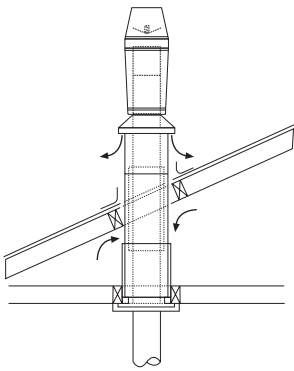
- Metro ECO flue systems must be installed to allow unrestricted air supply from either the ceiling cavity for an ECO Flue Kit, or above the roof line if the ECO Flue Kit and ECO Option Kits are both installed
- The ECO Flue system must be installed into a 'vented' flat ceiling cavity, or have an ECO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

- ECO Flue systems shall be installed in accordance with AS/NZS 2918 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.

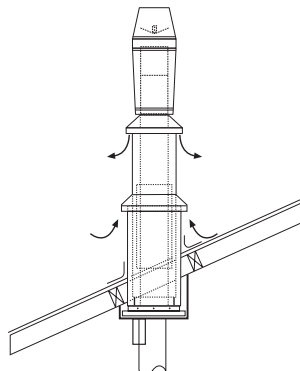
Detailed below are the more common installation methods for installing Metro ECO Flue Systems. To ensure a safe and efficient installation, this flue system must be installed as detailed below by either a registered installer, or someone competent in installing solid fuel appliances.

## Single Storey Installations



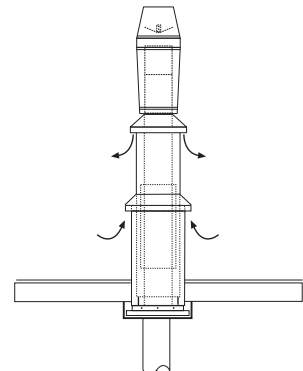
### Flat Cavity Ceiling

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



### Sloping Ceiling

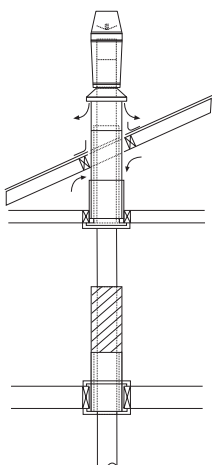
Both the ECO Flue Kit and ECO Option Kit are required to enable air to be drawn from outside the home.



### 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



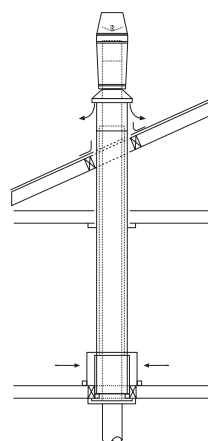
### 2nd Floor - Exposed Flue pipe

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/NZS 2918



### 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/NZS 2918

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

## Minimum clearances

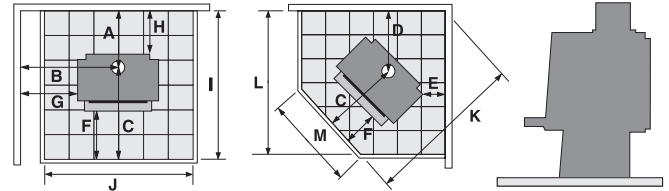
All Metro wood fires comply with AS/NZS 2918. Minimum installation clearances are in millimetres (mm) with a Pioneer double flue shield fitted to the appliance / flue pipe. All clearances are measured from the following reference points as illustrated in the diagrams opposite:

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

AS/NZS 2918 allows for a reduction in minimum clearances as detailed in Section 3, Tables 3.1 and 3.2 of the Standard.

The Ultra Tiny Rad and Ultra Wee Rad have undergone additional testing with corner wing shields fitted for reduced installation clearances. The footnotes below the table apply to these selected models.

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.



## Installation clearances with a Pioneer double flueshield fitted (mm)

Model	Minimum installation clearances (mm)													Dimensions		
	A	B	C	D	E	F	G	H	I	J	K	L	M	Width	Depth	Height
Ultra Tiny Rad	280	578	611	430 <sup>1</sup>	160 <sup>1</sup>	233	320	110	891	725	1220 <sup>1</sup>	977 <sup>1</sup>	325	515	547	688
Ultra Wee Rad	268	658	580	497 <sup>2</sup>	190 <sup>2</sup>	232	350	100	848	825	1285 <sup>2</sup>	1059 <sup>2</sup>	425	615	515	691
Ultra Xtreme Rad	277	635	632	450	100	227	280	100	909	907	1267	1075	507	710	582	722

<sup>1</sup> Ultra Tiny Rad corner clearance (E) can be reduced to 125mm with the Pioneer Corner Wing Shields fitted. This in turn also reduces clearances (D) to 396mm, (K) to 1171mm and (L) to 943mm. When fitting the Corner Wing Shields the Ultra Tiny Rad must be installed to a corner clearance (E) of not less than 125mm.

<sup>2</sup> Ultra Wee Rad corner clearance (E) can be reduced to 165mm with the Pioneer Corner Wing Shields fitted. This in turn also reduces clearances (D) to 471mm, (K) to 1245mm and (L) to 1031mm. When fitting the Corner Wing Shields the Ultra Wee Rad must be installed to a corner clearance (E) of not less than 165mm.

## **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 CM1 and will void the warranty
- Do not use flammable liquids or aerosols in the vicinity of this appliance when it is operating
- 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.
- It is critical that the fire is operated with the fan switched on.

Please note, the above 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 5 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:

- 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.

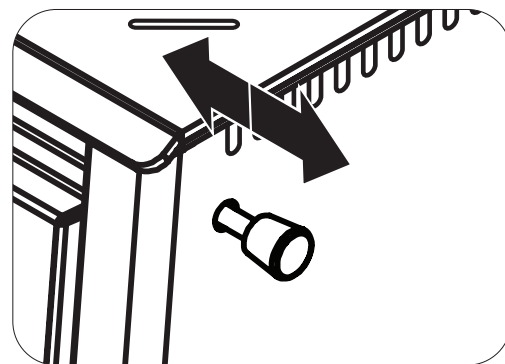
Generally, you can install your Metro in your home anywhere that suits you; Pioneer offer various fan systems to transfer heat to other sections of the home that are not heated sufficiently. It is necessary if using a fan system that the Metro you have purchased has sufficient output to heat the total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

## 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 an 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.



Ultra fires air control

## Operating your Metro Ultra fire

If your Metro has only been installed within the last day, 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.

### Fuel

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.

It is always recommended to burn well dried fuel that has good air flow to ensure the timber has dried right through to the core. Seasoned timber will only dry over one summer subject to it's size and if it is covered from rain but also allowing plentiful air to pass through the stack for drying. The moisture content must be under 25%. It is best to allow a minimum of 12 months drying time for soft woods and at least double this for hard woods with good air flow required through the stack.

*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.*

Burning properly seasoned (dry) fuel will result in;

- Less ash buildup
- Less emission into the environment
- Less creosote that can cause a host of issues
- Maintain a clean flue system
- Extend the life of the sacrificial components in your fire

### Fan (Ultra Wee Rad and Ultra Xtreme Rad models)

The fan must always be switched on. The fan will start when the thermostat reaches 40°C in approximately 10-20 minutes from initial lighting.

*Note: The fan must be plugged into a power supply and turned on at all times during operation.*

# Operating your Metro wood fire - continued

The Metro Ultra Fires outperformed the testing standards for emissions allowing them to be installed into homes throughout New Zealand. Metro Ultra Fires meet the specification of ECAN's Ultra Low Emission standards and discharge incredibly low emission particulate even during the ignition light up phase.

You can greatly assist in minimising emission discharge by following the guide below on how to help reduce emission while also helping yourself with this ideal lighting technique. This 'upside-down method' is particularly time saving to light as two minutes after ignition the door can be fully closed while the fire generates a good ember bed without constant ongoing effort of loading fuel to establish the ember bed. The less time the fire door is opened, the quicker the fire heats and forms an ember bed of hot coals to enable the addition of further fuel.

Fuel positioning is predominantly in a front to back orientation to promote good air flow within the combustion chamber.

The specified emission results were achieved by following the described method below using dry fuel with less than 25% moisture content.

## Step 1 - Cold start / Air control full open (high):

- Place 3-4 medium pieces of fuel as shown in Step 1 below
- Cross stack kindling on top of the lower stack
- Place two fire lighters on the base fuel near the front of the fuel stack
- Light the fire lighters and partially close the door, resting the door spindle on the latch
- After 2-3 minutes with the kindling well alight, you can fully close the door and begin to establish a good ember base for reloading.

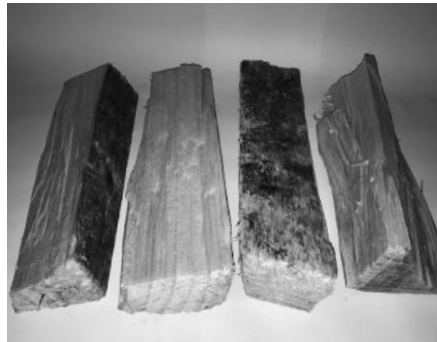


### Step 1 - Start up load 2-3 MINS

#### Fuel load sizes

- Ultra Tiny 0.8kg (+ kindling 1kg)
- Ultra Wee & Xtreme 1.2kg (+ kindling 1kg)

Place two fire lighters on the base fuel near the front of the fuel stack. Light the fire lighters and partially close the door, resting the door spindle on the latch. After 2-3 minutes with the kindling well alight, you can fully close the door.



### Step 2 - Intermediate load 20-30 MINS LATER

#### Fuel load sizes

- Ultra Tiny 1.7kg
- Ultra Wee & Xtreme 2kg

Reloading is actioned once the majority of the flame has died away which is approximately 20-30 minutes after lighting. The fire should be well established with hot coals evident. At this point you can place the intermediate load of firewood.



### Step 3 - Main load 30 MINS LATER

#### Fuel load sizes

- Ultra Tiny 2kg
- Ultra Wee & Xtreme 2kg

Reloading is actioned once the majority of the flame has died away which is approximately 30 minutes after last loading. The fire should be well established with hot coals evident. At this point you can place the main load of firewood.

## Step 2 - Intermediate load / Air control full open (high):

- Reloading is actioned once the majority of the flame has died away which is approximately 20-30 minutes after lighting. The fire should be well established with hot coals evident. At this point you can place the intermediate load of firewood
- Place 3-4 pieces of fuel across the ember bed as shown. Maintain air gaps between each piece but if one layer is too condensed, cross stack a piece on top.

## Step 3 - Main load / Air control full open (high):

- Reloading is actioned once the majority of the flame has died away which is approximately 30 minutes after last loading. The fire should be well established with hot coals evident. You can now place your normal sized firewood (approximately 2kg). Once the fire is well established, regulate the air control to achieve desired burn rate and heat output
- Always move the air control to the right (high) prior to opening the door, then open the door slowly. Every time you refuel, leave the air control on 'high' to re-establish the fire
- When loading fuel, place firewood end-on, 'front to back'. Air gaps should be left between the fuel 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 door glass.

When reloading, always ensure firewood is placed onto an established ember bed. If the ember bed is low, open the air control to maximum and load smaller timber pieces first to re-establish the ember bed.

# 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 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 or to the top of the base ribs (if present). 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 cause the promet to disintegrate at a faster rate and require replacement sooner.*

## Airtube

This is a wear part of the firebox and should be checked monthly. Replace when worn out for optimum performance. Removal and replacement of the airtube is detailed on page 3.

## 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:-

- Remove the airtube and top baffle as detailed on page 3. Place these parts 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.
- 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 and airtube.

*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

## Correct installation

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)

### Air extraction units

In a modern well sealed home an air extraction unit may remove passive airflow from the room which the wood fire requires for combustion. Turn off any air extraction unit during the initial lighting of the fire.

### 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 operating. 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 re-adjusting, 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. See page 11 for full instructions on 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 5 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 5 years.

Components including panel coating, door retainers, door seals, glass, trim, baffle, bricks, fan and thermostat 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.

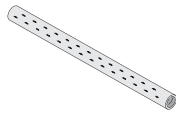
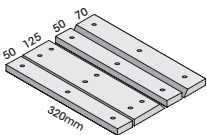
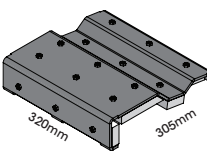
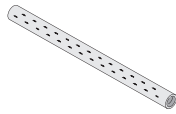
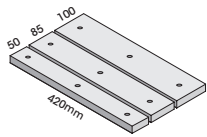
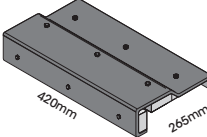
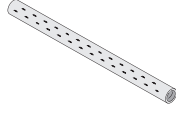
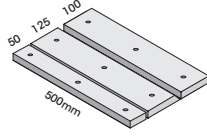
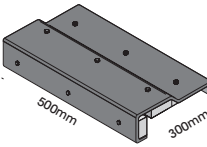
Listed below are the parts and product codes for your Metro wood fire. The promet/baffle should be regularly checked and must always be in place during the operation of your fire.

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.

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
• Ultra Tiny Rad	<p>Ultra Tiny Rad Air Tube 500-1504</p> 	<p>Ultra Tiny Rad Promet Set 500-1575</p> 	<p>Ultra Tiny Rad Baffle 500-2503</p> 	No wetback can be fitted to this appliance
• Ultra Wee Rad	<p>Ultra Wee Rad Air Tube 500-1505</p> 	<p>Ultra Wee Rad Promet Set 500-2006</p> 	<p>Ultra Wee Rad Baffle 500-2506</p> 	No wetback can be fitted to this appliance
• Ultra Xtreme Rad	<p>Ultra Xtreme Rad Air Tube 500-1508</p> 	<p>Ultra Xtreme Rad Promet Set 500-2011</p> 	<p>Ultra Xtreme Rad Baffle 500-2516</p> 	No wetback can be fitted to this appliance



### 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](http://www.metrofires.co.nz)

### [metrofires.co.nz](http://metrofires.co.nz)

Visit the Metro website: [metrofires.co.nz](http://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.



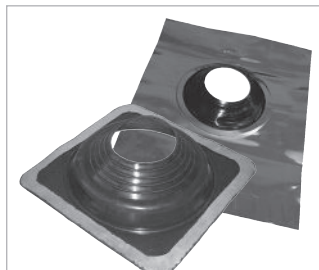
### Pioneer heating accessories

Pioneer/Metro Fires offer a wide range of heating accessories designed to complement your Metro wood fire. The range includes ECO flue systems, floor protectors, wetbacks, heat transfer systems, baffles, bricks and more.

For further details talk to your Metro agency or visit [www.metrofires.co.nz](http://www.metrofires.co.nz)



ECO Flue Systems



Flashrites and Versatiles



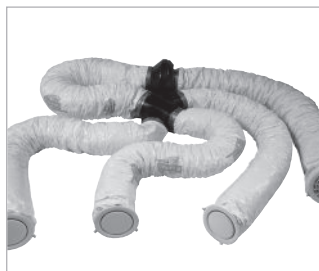
Wetbacks



High Temperature Paint



Corner and Wall Floor Protectors



Heat Transfer Systems



Universal Door Seal Kits



Fire Cement And Silicone



Glass Tape



Door Seal Rope



Chubb Smoke Detectors

