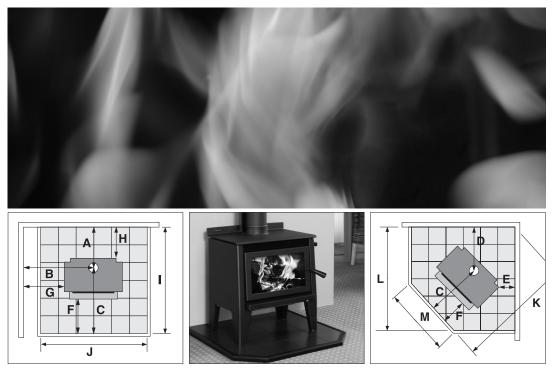
Wood Fire Installation & Owner's Operation Manual



metròfires

Freestanding Wood Fires

Important information	2
Assembling your Metro fire	2
Floor protector	4
Flue installation	5
Wetback installation	6
Clearances and specifications	7
Important operation information	8

Getting to know your Metro fire9
Operating your Metro fire9
Cleaning and maintenance 10
Troubleshooting
Metro Fires warranty 13
Replacement parts14-15
Heating accessories16







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

CAUTION! Important Information A WARNING! Important Information • WE HIGHLY RECOMMEND YOU READ THIS ENTIRE Mixing of appliance or flue-system components from different sources or modifying the dimensional specification or components MANUAL AS INCORRECT OPERATION, MISUSE AND/OR may result in hazardous conditions. Where such action is considered, LACK OF MAINTENANCE WILL VOID THE WARRANTY the manufacturer should be consulted in the first instance • The appliance and flue-system shall be installed in accordance with Do not install a Metro fire if there is any sign of visible damage to AS/NZS 2918 and the appropriate requirements of the relevant the product building code or codes • This appliance must be regularly maintained. • Any modification of the appliance that has not been approved in · Use authorised Metro replacement parts only. The use of writing by the testing authority is considered to be in breach of the unauthorised parts may void the warranty approval granted for compliance with AS/NZS 4013 and will void the warranty This manual MUST be left with the home owner • 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 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 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

- 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 fire

must not be any 150mm flue pipe exposed)

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

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

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

system which has been developed to enhance the performance of

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.

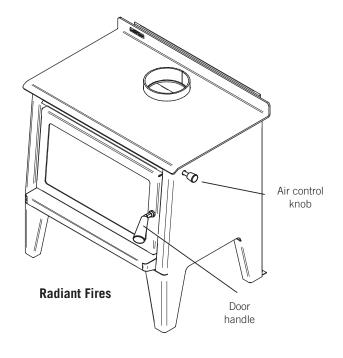
All Metro wood fires are packed in a single heavy-duty carton, and tek screwed to a wooden pallet. Having removed the packaging and located this manual, familiarise yourself with the illustrations on pages 2 & 3, and proceed as follows.

Metro radiant fires

345mm square

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

- 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 knob by screwing it on clockwise.



Assembling your Metro 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. Flue shield bracket 5A has also been packaged inside the firebox for the following pedestal models: Tiny Ped, Wee Ped, Xtreme Ped.

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.

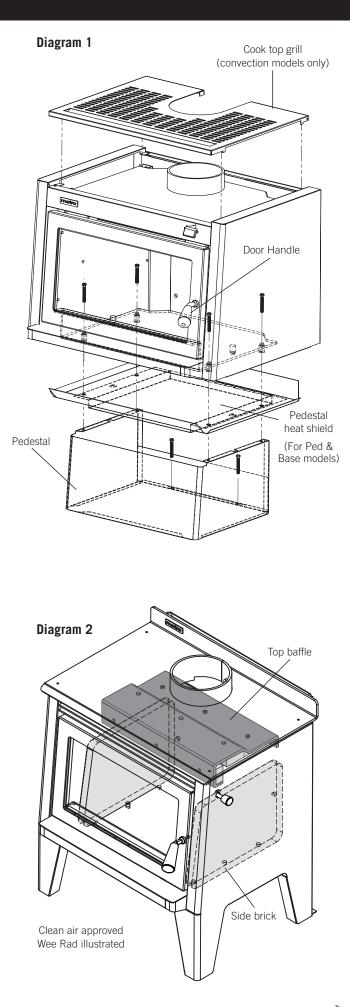
It is recommended that 2 people work together with the next step:

- Grab the flue spigot with one hand and the other hand underneath the top of the firebox door opening, lift upwards to stand the wood fire up
- 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.
- 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.



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/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 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 noncombustible 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 to comply with AS/NZS 2918, 3.8 is required.

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

Metro pedestal and base model fires

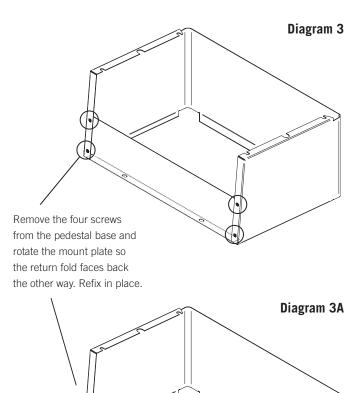
Prior to lifting the Metro fire onto the floor protector, ensure you have removed, rotated and re-assembled the mount plate from the back of the pedestal base as detailed in diagrams 3 & 3A above. This rear panel must be rotated with the return fold facing back the opposite way to create the mount plate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

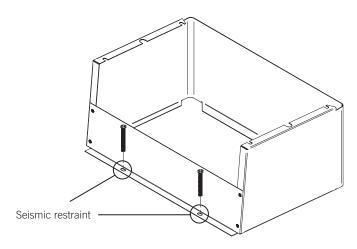
Once the location of the fire is established, you can then secure the Metro through the floor protector into the floor using the two seismic restraint holes in the rear edge of the mount plate.

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

Preparing the mount plate



Correct mount plate position



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/NZS 2918, and a copy of the installation manual must also be presented with your application to gain consent with 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

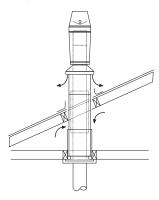
- Any modification to this flue system that has not been approved in ٠ writing by the testing authority is considered to be in breach of all approvals granted
- The flue systems 150mm diameter flue pipe must terminate a minimum of 4.6 metres above the top surface of the floor protector
- All joints in 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 the minimal clearances as detailed on page 7, only the Pioneer double flue shield can be used. All other flue shields will invalidate the installation.

The Pioneer double flue shield is a universal design with two alternative lower mounting brackets. Bracket 5A is suitable for fires with an inner rear heat shield and is packaged inside the firebox of these models (Tiny Ped, Wee Ped, Xtreme Ped). Bracket 5B is packaged with the flue shield and is suitable for all other freestanding Metro fires detailed in this manual.

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.

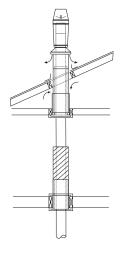
Single Storey Installations



Flat Cavity Ceiling

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

Two Storey Installations



Sloping Ceiling

2nd Floor - Exposed Flue pipe

Requires an ECO Flue Kit only with

Additional components below are not

1x 1200mm long mesh/screen

*In accordance with AS/NZS 2918

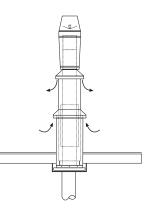
supplied by Metrofires but are also

additional lengths of flue pipe.

required for this installation*

A floor penetration kit

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.

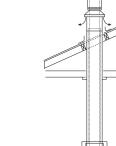
2nd Floor - Enclosed Flue pipe

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





WARNING! Important Information

- <u>DO NOT</u> 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

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.

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 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 likely be less.

- 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.

Wetback connections

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
- 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 and the clean air Wee Series models. 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.
- 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.
- 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.

Wetback	Suitable for models:
2kW Wetback	ECO Tiny RadECO Tiny Ped
Side Wetback	 Tiny Rad Woody Wee Rad Leg & Wee Rad Base Wee Rad Woody Wee Ped
3kW Wetback	 Xtreme Rad Leg & Xtreme Rad Base Xtreme Rad Woody Xtreme Ped Mega Rad All LTD rural models
4kW Wetback	• All LTD rural models

Note: The Wee Curve model cannot be fitted with a wetback.

Minimum clearances

All Metro wood fires comply with AS/NZS 2918. 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)

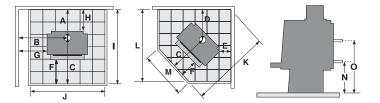
AS/NZS 2918 allows for a reduction in minimum clearances as detailed in Section 3, tables 3.1 and 3.2 of the standard.

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
- 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.



	Minimum installation			clearances with a Pioneer d				double flueshield fitted (mm)					Wetback		Dimensions			
Clean air models	A	В	C	D	E	F	G	Н	I	J	К	L	М	N	0	Width	Depth	Height
ECO Tiny Ped	211	433	580	290	25	235	185	60	791	650	990	780	250	280	470	496	492	659
ECO Tiny Rad	230	553	585	419	150	232	300	75	815	650	1180	910	250	280	470	505	508	667
Tiny Rad Woody	251	568	580	382	110	232	310	100	831	650	1120	870	250	365	555	515	498	758
Wee Rad - Leg 1	251	568	580	456	150	232	260	100	831	825	1225	1016	425	295	485	615	501	688
Wee Rad - Base	271	678	580	486	180	232	370	120	851	825	1270	1048	425	295	485	615	501	691
Wee Rad - Woody	271	708	580	506	200	232	400	120	851	825	1295	1066	425	365	555	615	501	758
Wee Curve	253	555	600	405	100	214	250	100	853	825	1171	980	426	n/a	n/a	607	539	667
Wee Ped ²	263	651	580	473	170	230	350	110	843	825	1250	1034	425	295	485	602	503	665
Xtreme Ped	251	624	630	442	110	226	280	100	881	907	1260	1070	507	312	502	688	554	707
Xtreme Rad - Leg	251	650	630	458	100	227	280	100	881	907	1280	1084	507	312	502	740	554	743
Xtreme Rad - Base	251	650	630	458	100	227	280	100	881	907	1280	1084	507	312	502	740	554	743
Xtreme Rad - Woody	251	680	630	478	120	227	310	100	881	907	1306	1103	507	382	572	740	554	813
Mega Rad	285	720	728	497	100	224	300	130	1013	1006	1435	1229	606	300	490	840	659	744
LTD rural models	A	В	C	D	E	F	G	Н	I	J	К	L	М	N	0	Width	Depth	Height
LTD Wee Rad - Leg	251	548	580	426	120	232	240	100	831	825	1185	989	425	295	485	615	501	688
LTD Wee Rad - Base	251	658	580	486	180	232	350	100	831	825	1270	1048	425	300	490	615	501	691
LTD Wee Rad - Woody	271	708	580	506	200	232	400	120	851	825	1295	1066	425	365	555	615	501	758
LTD Xtreme Rad - Leg	251	650	630	458	100	227	280	100	881	907	1280	1084	507	350	540	740	554	743
LTD Xtreme Rad - Base	251	650	630	458	100	227	280	100	881	907	1280	1084	507	350	540	740	554	743
LTD Xtreme Rad - Woody	251	680	630	478	120	227	310	100	881	907	1306	1103	507	420	610	740	554	813
LTD Mega Rad	285	720	728	497	100	224	300	130	1013	1006	1435	1229	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 - Leg corner clearance (E) can be reduced to 120mm. This in turn also reduces clearances (D) to 426mm, (K) to 1185mm and (L) to 987mm. When fitting the corner wing shields, the Wee Rad - Leg 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 418mm, (K) to 1170mm and (L) to 978mm.

MARNING! 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 fire

Your Metro fire 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 issues.

- 1. Your Metro fire must be installed correctly. We recommended you have your new fire installed by a NZHHA registered installer or a competent and suitably qualified installer.
- 2. In New Zealand a building consent is required from your local building authority. The homeowner is responsible for obtaining this consent.
- 3. It is preferable that Metro fires should be installed with a Metro ECO Flue System for improved heat retention.
- 4. Properly seasoned (dry) wood is necessary for your fire to operate efficiently. Wood with a high moisture content will result in flue pipe blockages, reduce heat output and create other issues. The only fuel to be used in this fire 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
 - Coal must not be used as a fuel

8

Note: Once split, Softwood usually takes a minimum of 12 months to season - Hardwoods 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 remain unseasoned 12 months later.

5. 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 failure of the flue pipe, flue spigot and upper burn chamber. 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.

Regular maintenance

- <u>DO NOT</u> operate the fire with over worn, faulty or missing door and glass seals. Door seals harden over time and become over-worn (3-4 year's). This allows air to leak into the fire, causing the appliance to 'over fire'
- <u>DO NOT</u> operate the fire with over worn, faulty or missing bricks, baffle plate, promet extension (white board on the baffle plate)
- DO NOT operate the fire 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.

Your Metro is covered by a full unconditional 12 month warranty on replacement parts, and a 10 year firebox warranty.

Heat output

Metro Fires advertised peak outputs (kW ratings) are based on the NZHHA Maximum Output test method which is undertaken by independent International Accredited New Zealand (IANZ) testing facilities. IANZ accreditation provides assurance that the independent testing facility operates effective quality processes, providing a professional service through expertise and technical competence that is recognised as world-class.

A specific loading method is used with specific fuel to obtain the results, which includes using dry 150mm x 50mm pine and the appliance being loaded and operated on the high setting for an extended period of time. During this time the appliance is periodically refuelled until the appliance reaches it's peak output.

Note: It is not recommended that the appliance be continually operated at it's peak output as this could increase the chance of damage to the appliance firebox and associated parts.

Getting to know your Metro fire

There is a single air control making your Metro fire easy to adjust. The air control moves from left to right, which is 'low to high'. Slide this control knob gently from right to left until you reach a stop. This is a pre-set 'low' position. Your Metro must not be operated at a lower burn rate than this setting.

Raising the door handle anti-clockwise until the latch releases will open the door. 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.

Operating your Metro 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. The fresh paint finish on your wood fire needs to be cured to preserve its quality and the curing process will last for approximately one hour and is likely to happen this one time.

<u>IMPORTANT</u>: Burning a small fire at a medium burn rate for the first few hours of operation will achieve the optimal curing process. Too hot or too cold could present curing issues.

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.

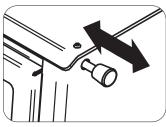
Light the paper at two or three locations across the front of the door opening and leave the door slightly ajar resting on the latch pin if necessary for a few minutes while the fire establishes. Once the kindling is burning well, open the door and add 2-3 small logs at a time until you have a wellestablished 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.

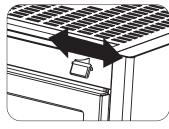
- For optimum performance fuel must be loaded so the logs lay "front to rear" in preference to laying across the width of the firebox. Spaces should be left between the logs to enable oxygen to get to as much of the surface of the fuel as possible
- A small hot fire loaded frequently is more efficient than a large fire burning on a low setting

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 to ensure proper combustion





Radiant fires air control

All other fires air control

- 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.

▲ **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.

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 <u>MUST BE FULLY</u> <u>SEASONED (DRY)</u>. 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.
- <u>DO NOT</u> 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 an extended period is likely to deposit corrosive elements into your system which could be detrimental to your Metro.

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 models 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.

A WARNING! Important Information

- WE HIGHLY RECOMMEND YOU READ THIS ENTIRE SECTION AS LACK OF MAINTENANCE AND SERVICING PARTS AS REQUIRED MAY VOID THE WARRANTY
- THIS APPLIANCE MUST BE REGULARLY MAINTAINED AND OPERATED AT ALL TIMES IN ACCORDANCE WITH THIS INSTRUCTION MANUAL. ALL REPLACEMENT PARTS MUST BE AUTHORISED METRO PARTS ONLY.

Your Metro fire will give you many years of efficient service with minimal maintenance if operated correctly using dry well seasoned fuel. Your Metro fire must be regularly maintained and any replacement parts must be genuine authorised Metro fires parts only. We recommend using a suitably qualified service agent.

Metro paint finish fires

Metro paint finish wood fires are coated with Pioneer Metallic Black high temperature paint. Over time paint finish fires will require periodic repainting to keep them looking their best. A coastal installation will likely require more regular maintenance over an inland environment due to the presence of salt laden air. Pioneer Metallic Black high temperature paint is the <u>ONLY</u> product suitable for revitalising the paint finish on your Metro fire.

<u>DO NOT</u> use Stove Black, Cast Iron Stove Polish or similar based products to refurbish your paint finished fire.

- The high temperature paint coating is porous to allow for expansion of the product materials and will degrade over time due to the temperatures experience during normal operation
- <u>DO NOT</u> wipe the painted surfaces with anything other than a dry soft cloth. Any ash on the surface when wiping will act as an abrasive to the surface finish
- <u>DO NOT</u> use any abrasive, solvent based or general household cleaners on your appliance as they will damage the surface coating
- Hot coals left on the ashlip, even for a short time, will burn off the painted surface exposing the parent material to oxidisation
- Take note that high salt laden air environments (coastal installations) can impact on the appliances surface degradation

Metro vitreous enamel finish fires

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 so care is required.

All Metro fires can be easily cleaned with a dry 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.

CAUTION! Important Information

- <u>DO NOT</u> operate this appliance with cracked door glass.
- <u>DO NOT</u> operate the fire with over worn, faulty or missing door seals. Door seals will harden over time and allow excess air to leak into the firebox causing the appliance to 'over fire'.
- <u>DO NOT</u> empty or store ashes in a combustible container.
- <u>DO NOT</u> use Stove Black, Cast Iron Stove Polish or similar based products to refurbish your paint finished fire. Pioneer Metallic Black high temperature paint is the <u>ONLY</u> product suitable for revitalising the paint finish on your Metro fire.

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.

- <u>DO NOT</u> use any general household cleaners or solvents to clean the glass on your Metro fire
- If your door glass breaks it must be replaced with 5mm thick ceramic glass which is available from your local Metro retailer
- Never use the door to force wood into the firebox, as this is likely to break the glass.

Door seals

The door and glass seals are something to be mindful of to achieve the optimum performance and heat output from your Metro fire.

A loose fitting door or glass panel are clear signs that the appliance seals need to be addressed. You may also notice that you're burning through more firewood than usual due to the excess air entering the firebox.

Over time, your Metro door rope and glass seals will gradually harden. Usually around 3-4 years, these 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 to replace both door and glass seals. Hold the door in both hands and lift the hinge end of the door up and over the top hinge pin, then carefully lower the door from the bottom hinge pin taking care not to damage the ashlip and/or appliance coating.

Fire bricks

Hair-line cracks are not uncommon and are a result of the intense heat within the firebox, coupled with mechanical damage caused by accidental impact when loading fuel. If the fire bricks become cracked to the extent that they start to break up and fall into the fire, 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.

Cleaning and maintenance for your Metro fire

The door latch is also adjustable as the latch pin on the right side of the firebox is fitted through a slot. This enables the latch pin to be loosened, moved forward/back and re-tightened to ensure a good tight door seal.

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.

<u>DO NOT</u> operate your fire continuously with a high ash or ember bed as you can damage the firebox rear wall components or increase the likelihood of necessary maintenance.

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 and fall into the firebox.

To remove and replace your Metro's top baffle, proceed as follows: -

- Fully open the Metro's door and remove the side firebricks carefully. This will give you maximum firebox width to easily remove the baffle
- Reach inside with the palms of your hand face up and extended and lift the top baffle up vertically towards the ceiling of the firebox. You can then pull the baffle assembly forward towards the front of the firebox. This will allow you to then lower the rear of the baffle past the lug supports and lift it out through the door opening. Place it onto a sheet of newspaper or similar to protect the floor protector/coverings
- To refit the top baffle. Proceed in the reverse order and note, the baffle must be fitted so its rear is touching the back of the firebox.

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.

Wetback blanking plates

Metro models that can be fitted with an internal wetback will feature two wetback blanking plates in the rear wall of the firebox. These plates 'seal' the wetback connection holes and are only removed if you choose to fit a wetback to your fire.

NO WETBACK FITTED

The wetback blanking plates should be checked annually, as any corrosion/erosion or deterioration can allow air to leak into the firebox at these points causing the appliance to 'over fire' and stress firebox integrity.

If deterioration is noticed during regular servicing and maintenance, please contact your Metro retailer or installer to have these blanking plates and sealing compound replaced. Failure to act on this may impact on warranty.

WETBACK FITTED

Wetback connection holes are sealed by your installer during wetback installation. The connection holes should be checked annually to ensure the seal remains intact, as any deterioration can allow air to leak into the firebox causing the appliance to 'over fire' and stress firebox integrity.

If deterioration is noticed during regular servicing and maintenance, please contact your Metro retailer or service agent. Failure to act on this may impact on warranty.

Troubleshooting

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
- The Metro Directional Cowl Top. Converts your ECO Cowl into a Directional ECO Cowl. A simple solution for reducing down draughting and atmospheric issues in troubled 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 the fixings 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'. Using a 10mm ring or open ended spanner, loosen any visible nuts/bolt heads 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 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-authorised 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	METRO FIRES DO TOYEAR
Model	FIREBOX
Colour	PREMIUM WARRANTY
Retailer	

Parts guide for your Metro fire – 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.

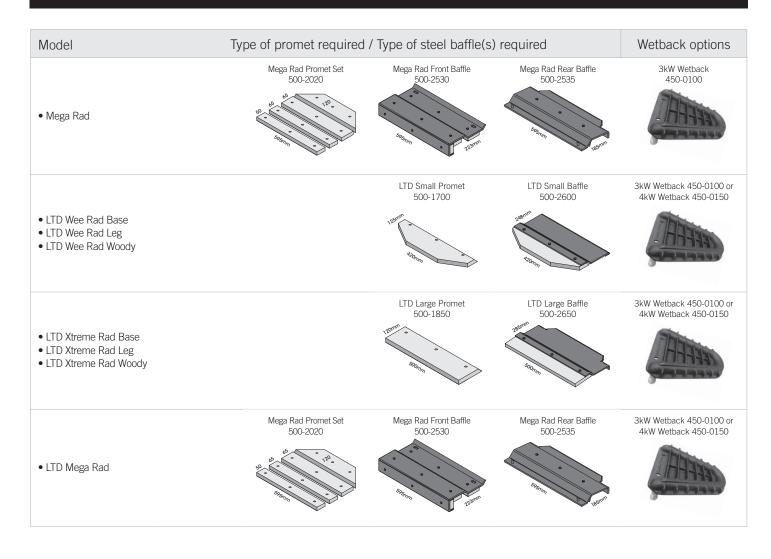
Hairline cracks in the promet extension are not uncommon and will have no adverse effect on the operation and performance of your Metro wood fire. These cracks are the result of intense heat coupled with expansion and contraction and is normal wear and tear.

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.



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



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 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



ECO Flue Systems



Corner and Wall Floor Protectors



Glass Tape



Flashrites and Versatiles



Heat Transfer Systems



Door Seal Rope



Wetbacks



Universal Door Seal Kits





High Temperature Paint

