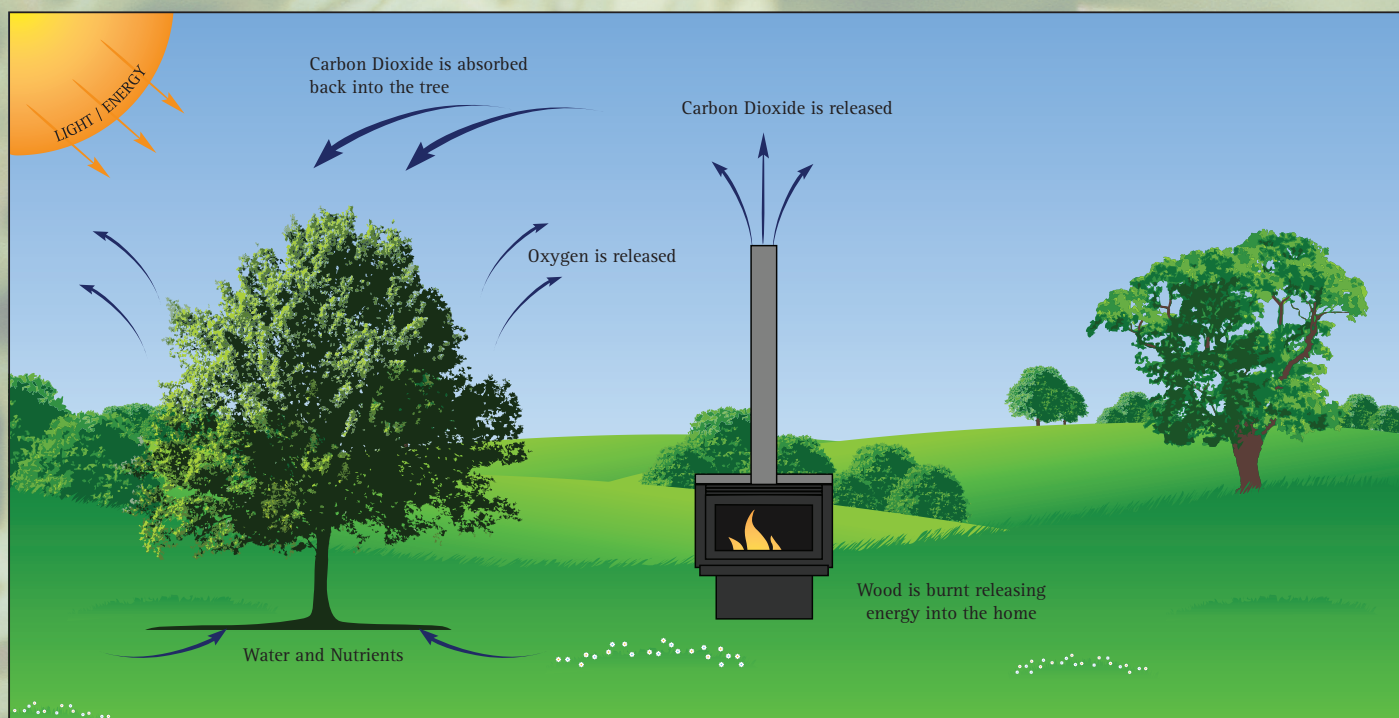


# WOOD IS GOOD

Wood is a renewable energy source. It is abundant, biodegradable, reusable, easily farmed and regrown. The more we sustainably use the stored solar energy in wood, the less we need to use fossil fuels.

The climate friendly and efficient conversion of the energy stored in wood into heat is recognised worldwide as an important tool in the fight to reduce CO<sub>2</sub> emissions.

Using the natural power of wood as efficient, sustainable energy, we can pass on the ancient love of fire and modern need for climate protection to the next generation.



This is a basic diagram showing the workings of Photosynthesis, which is the reason why the fuel wood, is the world's number one sustainable fuel and is carbon neutral. No matter how much wood we use, it will always be reproduced without increasing New Zealand's carbon footprint.



Milan showroom situated  
in our Auckland factory

**Milan**  
HEATING SYSTEMS



# INTRODUCTION

**Dallas Metal Industries Ltd** is a privately owned company established in 1989.

Situated in Manukau, Auckland, our extensive range of plant and production facilities enable us to manufacture our own range of Milan woodfires and supply contract metal processing services to many of New Zealand's leading manufactures.

Milan woodfires have been heating New Zealand homes for 28 years. Milan woodfires bring you inspired designs expertly engineered and manufactured by our highly trained staff. When you purchase a Milan woodfire you can be assured of a quality, robust product.

## Milan Features

- Firebox - Hot rolled steel plate totally sealed and brick lined.  
Five year warranty
- Single action heat controls for ease of operation
- Removable Baffle Plates for easy cleaning
- Air wash over glass
- Optional hot water boosters on some models
- Cook top options
- Extended burn times on some models

**The National Enviromental Standard** effective 1/09/2005 means properties with a land area of less than two hectares becomes a clean air zone.

You can only install a woodfire that meets this standard, 1.5grams particulate per 1 kilogram of fuel burnt with a minimum space heating efficiency of 65%.

**The Milan Harmony range of woodfires meet this criteria.**

**Please note:** Some Council's may enforce more stringent emission bylaws. We advise you clarify with your local council before your purchase. The Milan range of rural woodfires are able to be installed into non clean air zones.

**Milan**  
HEATING SYSTEMS

PROVEN  
TRUSTED  
TRIED



# Convection Woodfire Range



## Caldo Clean Air Harmony

- Brick lined firebox
- Ash Floor Protector Approved
- Heats areas up to 130m<sup>2</sup>
- Steel Baffle Plate
- Stainless Steel secondary Air tubes
- Advanced Inner Heat Shield Technology that allows Milan to High Temperature powder coat the Caldo's outer cabinet.
- Small floor protector required. Only 835mm deep x 800mm wide for standard wall setting.

**Also available in a rural model with water booster option**

## Piccolo Clean Air Harmony

- Brick lined firebox
- Ash Floor Protector Approved
- Heats areas up to 130m<sup>2</sup>
- Steel Baffle Plate
- Stainless Steel Secondary Air tubes
- Finished in Pyrotec HR High Temperature Metallic Black Powder Coat and Metallic Black High Temperature paint.
- Small floor protector required. Only 820mm deep x 800mm wide for standard wall setting.



## Milano Clean Air Harmony

- Brick lined firebox
- Ash Floor Protector Approved
- Wide East-West Firebox design
- Heats areas up to 186m<sup>2</sup>
- Steel Baffle Plate
- Stainless Steel secondary Air tubes
- Finished in Pyrotec HR High Temperature Metallic Black Powder Coat and Metallic Black High Temperature paint.

**Also available in a rural model with water booster option**



**Milan**  
HEATING SYSTEMS

All Milan Woodfires are available as a package option (woodfire, flue system and floor protector).  
Consult your Milan dealer



# Convection Woodfire Range



## ARDORE Clean Air Harmony

- Brick lined firebox
- Ash Floor Protector Approved
- Bay window Door Design for added flame view
- Steel-Promate Baffle design
- Heats areas up to 204m<sup>2</sup>
- Finished in Pyrotech HR High Temperature Metallic Black Powder Coat and Metallic Black High Temperature paint.

**Also available in a rural model with water booster option**

## Milan Insert Clean Air Harmony

- Deep Steel Firebox Promate Brick lined
- Stainless Steel Air tubes
- Steel-Promate Baffle Plate
- Heats areas up to 177m<sup>2</sup>
- Available with the Milan Insul Cab for pre-fabricated chimneys
- Finished in Pyrotec HR High Temperature Metallic Black Powder Coat and Metallic Black High Temperature paint.

**Also available in a rural model with water booster option**



## Insul Cab

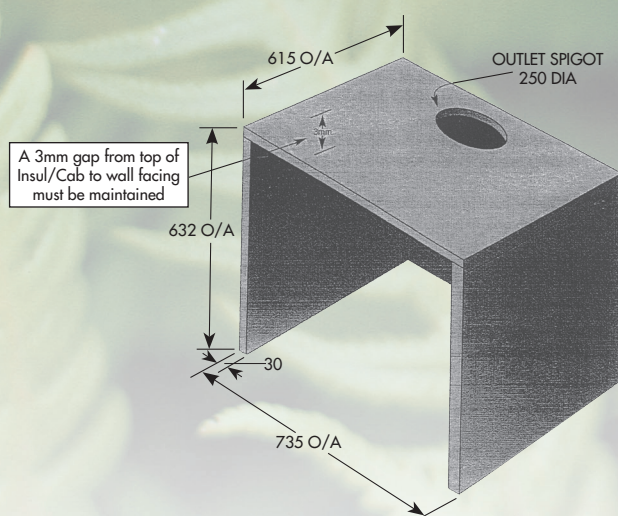
(For Harmony Insert only)

### Contents:

- 1 Insul Cab casing
- 1 150 S/S flue length x 600L
- 1 200 Vented inner casing x 600L
- 1 250 perforated outer casing x 600L

### NOTE:

Milan flue components supplied must be used due to special cooling system.



**Milan**  
HEATING SYSTEMS

All Milan Woodfires are available as a package option (woodfire, flue system and floor protector). Consult your Milan dealer

TRIED TRUSTED PROVEN



# Radiant Woodfire Range

**Radiant Woodfires** heat an area up quicker than convection style fires. Unlike a convection woodfire which convects hot air upwards from the top of the appliance, radiant fires release heat directly from all exposed outer surfaces of the firebox. This results in more heating being retained in the lower areas of the room meaning they are ideally suited for homes with high ceilings or with poor insulation.

## Caldo Rad Rustic Clean Air Harmony

- Manufactured from hot rolled steel plate
- Brick lined firebox
- Ash Floor Protector Approved
- Suitable for 2-3 bedroom homes up to 140m<sup>2</sup>
- Steel Baffle Plate
- Stainless Steel Secondary Air tubes
- Finished in Metallic Black High Temperature paint.
- Small floor protector required. Only 825mm deep x 785mm wide for standard wall setting.

**Also available in a rural model with water booster option**



## Tuscany Rural Model

- Manufactured from hot rolled steel plate
- Brick lined firebox
- Ash Floor Protector Approved
- Deep Firebox design
- Heats areas up to 232m<sup>2</sup>
- Steel Baffle Plate
- Water Booster option
- Finished in Metallic Black High Temperature paint

**Milan**  
HEATING SYSTEMS

All Milan Woodfires are available as a package option (woodfire, flue system and floor protector).  
Consult your Milan dealer

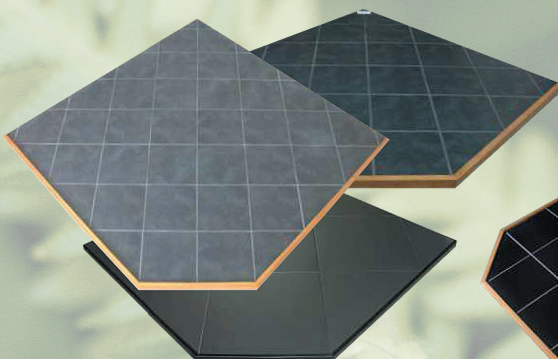


# Milan Floor Protectors

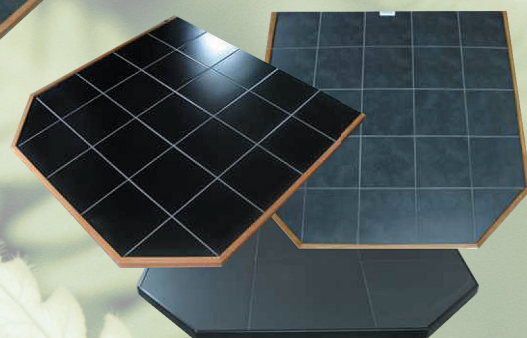
Built to last Milan Floor Protectors come in a range of sizes and colours, are suitable for gas, wood, pellet and diesel fires. They come in “Ash” and “Insulated” types which cover just about every fire on the market. Both types meet floor protector requirements AS/NZS 2918:2001



Woodbasket Extension



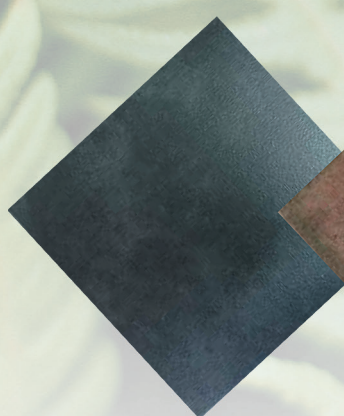
Corner Hearths



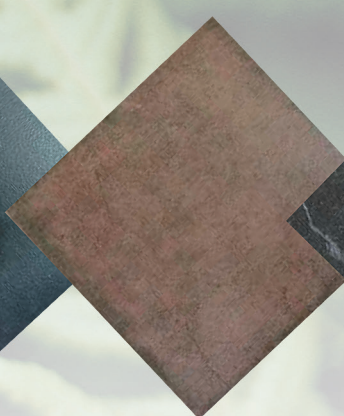
Wall Hearths

Coming in both wall and corner installations they can be finished in Rimu or black metal trim. For more information on sizes, types and tile colours, consult your local retailer.

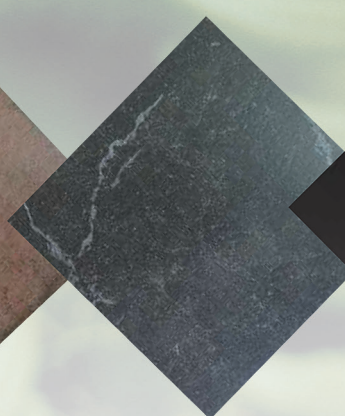
## Tile Colours



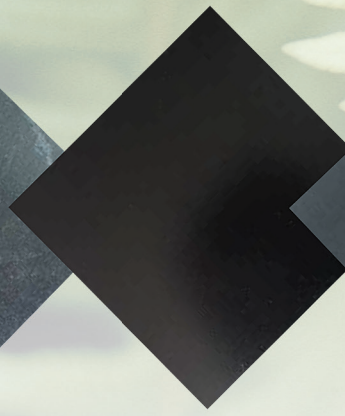
Charcoal



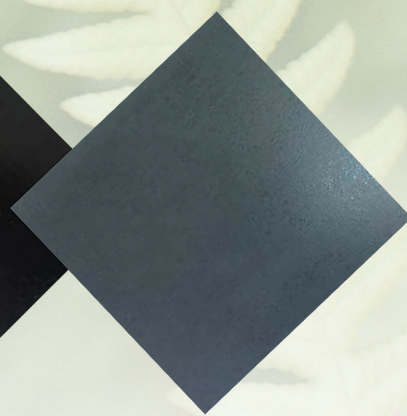
Terracotta



Slate



Black



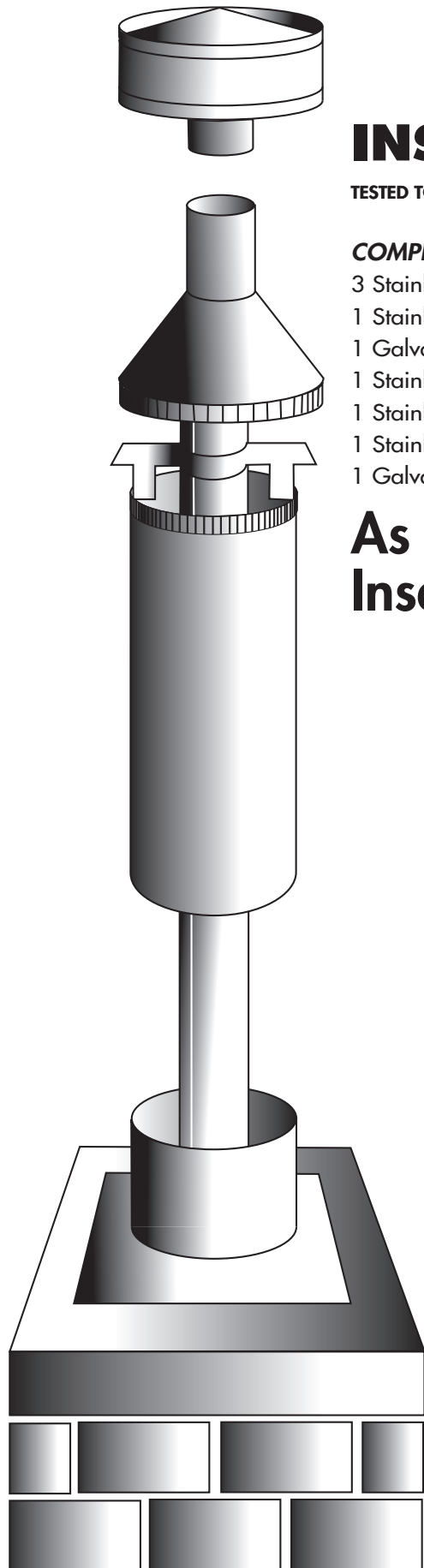
Antracite

All Milan tile colours & patterns shown on this page are indicative only

**Milan**  
HEATING SYSTEMS



# Milan Heating Systems use and recommend the Foley Flue System



## INSERT FLUE SYSTEM

TESTED TO AS/NZS2918:2001

### COMPRISING:

- 3 Stainless Steel Flue Pipes 150 x 1200mm dia.
- 1 Stainless Steel Flue Pipe 150 x 600mm dia.
- 1 Galvanised Chimney Liner
- 1 Stainless Steel Rainhat (Anti-Downdraught Cowl)
- 1 Stainless Steel Flashing Cone
- 1 Stainless Steel Spreader
- 1 Galvanised Chimney Plate

**As used in the Milan Harmony  
Insert package option**



# Milan Heating Systems use and recommend the Foley Flue System

## FREE STANDING FLUE SYSTEM 4.2m

TESTED TO AS/NZS2918:2001

### Stainless Steel Painted Hi-Therm (150mm dia)

**COMPRISING:**

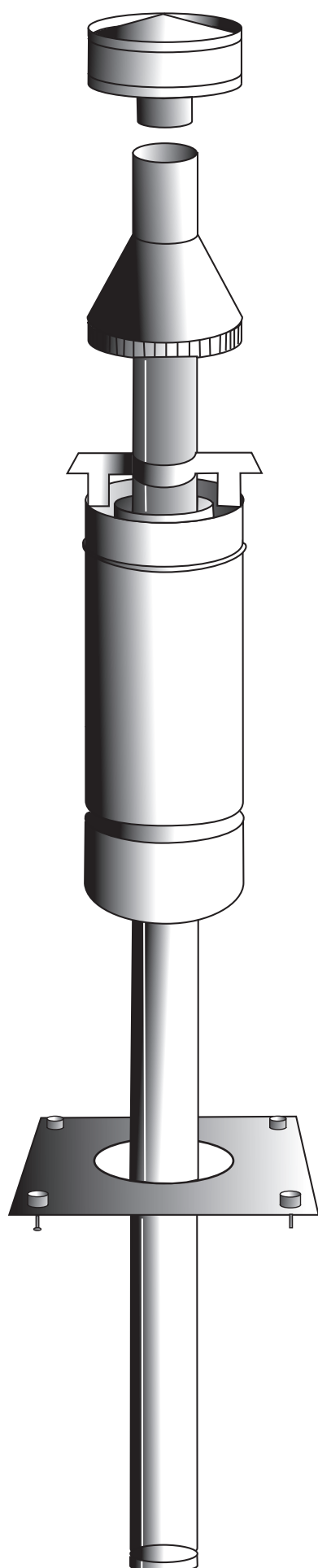
- 1 Stainless Steel Flue Pipe 150 x 600mm
- 1 Stainless Steel Flue Pipe 150 x 1200mm
- 1 Galvanised Inner/Outer Casing
- 1 Stainless Steel Rainhat (Anti-Downdraught Cowl)
- 1 Stainless Steel Flashing Cone
- 1 Stainless Steel Spreader
- 1 Ceiling Plate
- 1 Packet of Screws and Ceramic Spacers
- 2 Painted Stainless Steel Flue Pipes 150 x 1200mm, matt black
- 1 x 1200 Galvanised Slip Joint

**As used in the Milan Freestanding  
range of Fire package options**

### Stainless Steel Flue System 4.2m

**COMPRISING:**

- 1 Stainless Steel Flue Pipe 150 x 600mm
- 3 Stainless Steel Flue Pipes 150 x 1200mm
- 1 Galvanised Inner/Outer Casing
- 1 Stainless Steel Rainhat (Anti-Downdraught Cowl)
- 1 Stainless Steel Flashing Cone
- 1 Ceiling Plate
- 1 Stainless Steel Spreader
- 1 Lower Centralising Spreader
- 1 Packet of Screws and Ceramic Spacers
- 1 x 1200mm Galvanised Slip joint





# Milan Heating Systems use and recommend the Foley Flue System

## ENERGY SAVER FLUE SYSTEM

TESTED TO AS/NZS2918:2001

25MM WIDE AIR GAP

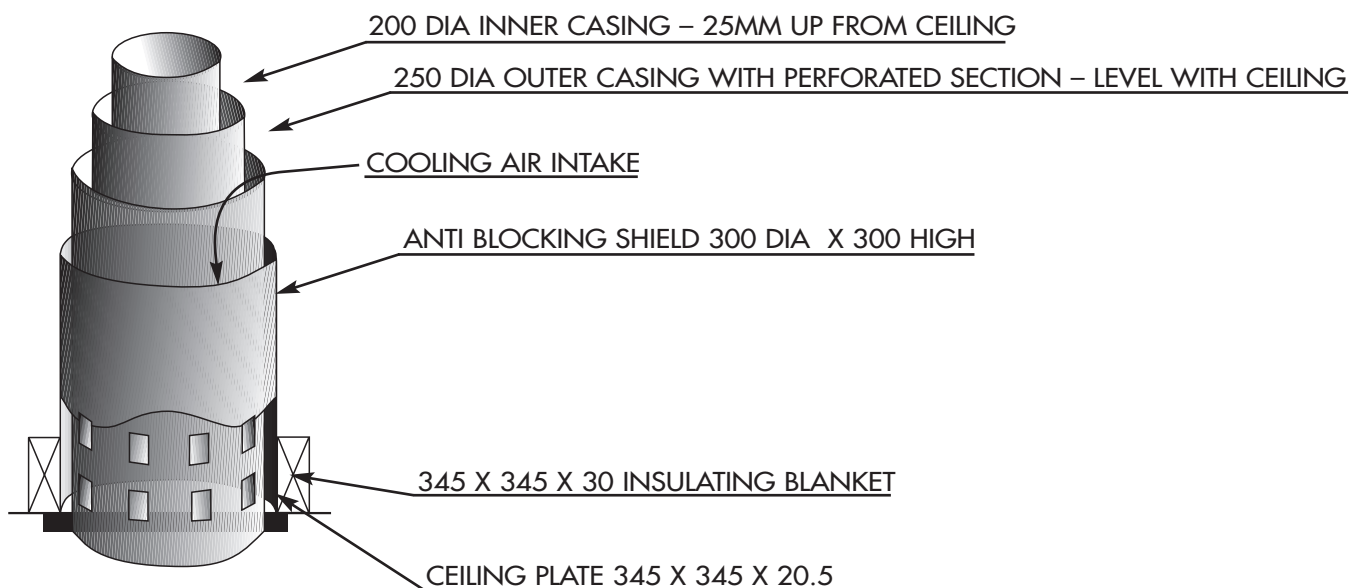
### Energy Saver Flue System 4.2m

#### COMPRISING:

- 1 Stainless Steel Flue Pipe 150 x 600mm
- 1 Stainless Steel Flue Pipe 150 x 1200mm
- 2 Stainless Steel Flue Pipe 150 x 1200mm painted Matt Black
- 1 Galvanised Liner Casing 200 x 1200mm + Stainless Steel Bands
- 1 Galvanised Outer Casing 250 x 1200mm with Perforated Section
- 1 Anti-Blocking Shield 300 x 300mm
- 1 Stainless Steel Rainhat (Anti-Downdraught Cowl)
- 1 Stainless Steel Flashing Cone
- 1 Stainless Steel Spreader
- 1 Packet of Screws and Ceramic Spacers
- 1 Ceiling Plate with Insulation Blanket
- 1 Galvanised Slip Joint 900mm

- Saves up to 40% of energy by preventing heated room air escaping through ventilation cavity.
- Acts as Fire Stop in the event of house fire.
- Reduces wind and traffic noise.
- Easy and economical to fit to horizontal and sloping ceilings.

Ask your Retailer about upgrading to the Energy Saver Flue System.





# Caldo Rad Rustic Harmony



<i>New Zealand</i>	A	B	C	D	E	F	G	H
<i>With s/s flue pipe shield</i>	100	450	300	100	100	230	740	400

1	2	3	4	
785	825	1030	1160	

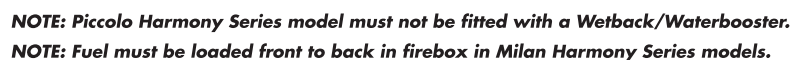
# Caldo Harmony



<i>New Zealand</i>	A	B	C	D	E	F	G	H
<i>With s/s flue pipe shield</i>	100	225	300	100	50	235	525	365

1	2	3	4
835	800	1000	1105

# Piccolo Harmony

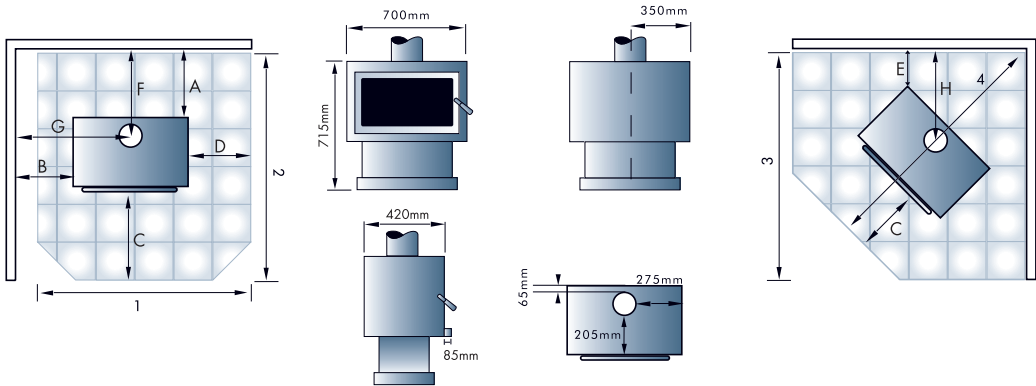


<i>New Zealand</i>	A	B	C	D	E	F	G	H
<i>With s/s flue pipe shield</i>	100	225	300	100	50	235	525	365

1	2	3	4	
820	800	1000	1105	



# Milano Harmony

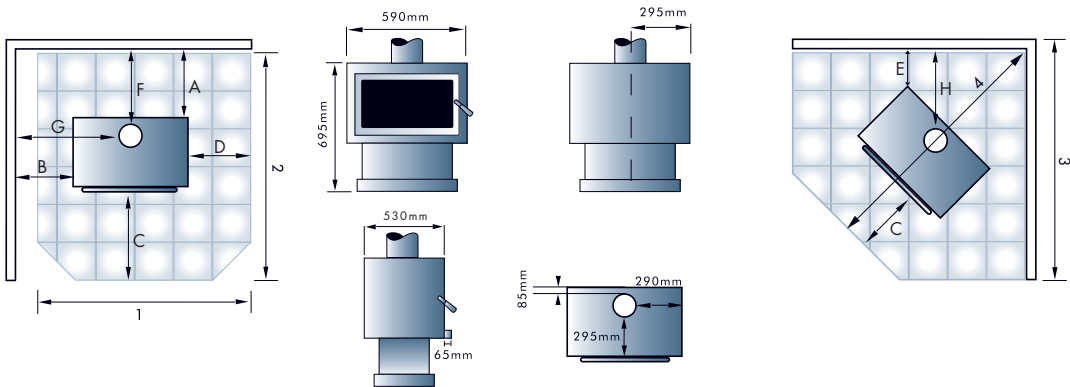


**NOTE: The Milano Harmony Series model must not be fitted with a Wetback/Waterbooster.**  
**NOTE: Fuel must be loaded front to back in firebox in Milan Harmony Series models.**

Minimum Clearance to Combustibles in Millimetres AS/NZS2918 : 2001								
New Zealand	A	B	C	D	E	F	G	H
With s/s flue pipe shield	100	250	300	100	50	245	600	400

Floor Protector Dimensions				
1	2	3	4	
900	820	1055	1140	

# Ar'dore Harmony



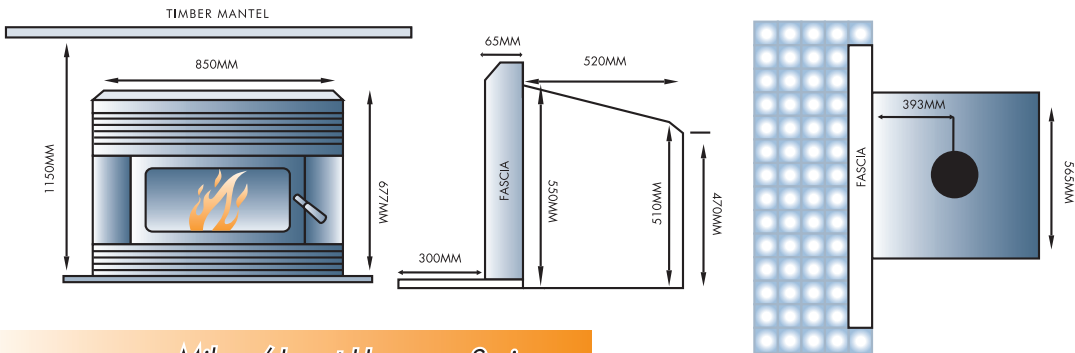
**NOTE: Ar'dore Harmony Series model must not be fitted with a Wetback/Waterbooster.**  
**NOTE: Fuel must be loaded front to back in Milan Harmony Series models.**

Minimum Clearance to Combustibles in Millimetres AS/NZS2918 : 2001								
New Zealand	A	B	C	D	E	F	G	H
With double s/s flue pipe shield	100	300	300	123	75	180	515	315
Without s/s flue pipe shield	325	400	300	123	200	410	615	440

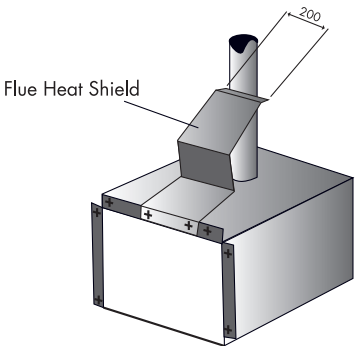
Floor Protector Dimensions				
1	2	3	4	
840	930	1090	1240	

*Note: The Ar'dore must be installed with a Milan Double Stainless Flue Shield*

# Insert Harmony



Milan / Insert Harmony Series

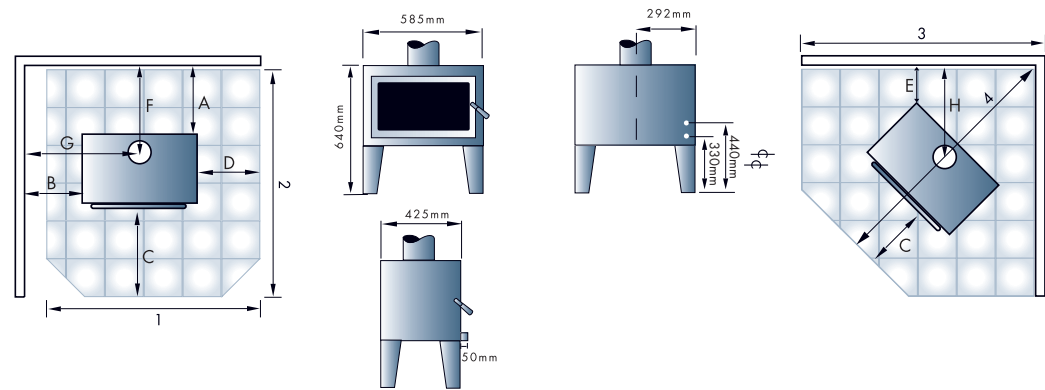


SECONDARY AIR TUBES. PLEASE NOTE.  
 When refitting stainless steel secondary air tubes, the front tube must be fitted with the row of 14 air holes facing forward and the row of six air holes facing downwards. The rear secondary air tube must be fitted with the row of 12 air holes facing forward.  
 NOTE. Fuel must be loaded front to back in Milan Harmony Series models.  
 NOTE. The Insert Harmony Series model must not be fitted with a wetback/waterbooster.  
 Flue Heat Shield  
 To comply with AS/NZS2918-2001  
 Appendix E safety testing.  
 The flue heat shield must be fitted on installation.



# Caldo Rad Rustic Rural

This is not a 'Clean Air' woodfire model. This woodfire can only be installed into properties of two hectares or more.



Minimum Clearance to Combustibles in Millimetres AS/NZS2918 : 2001

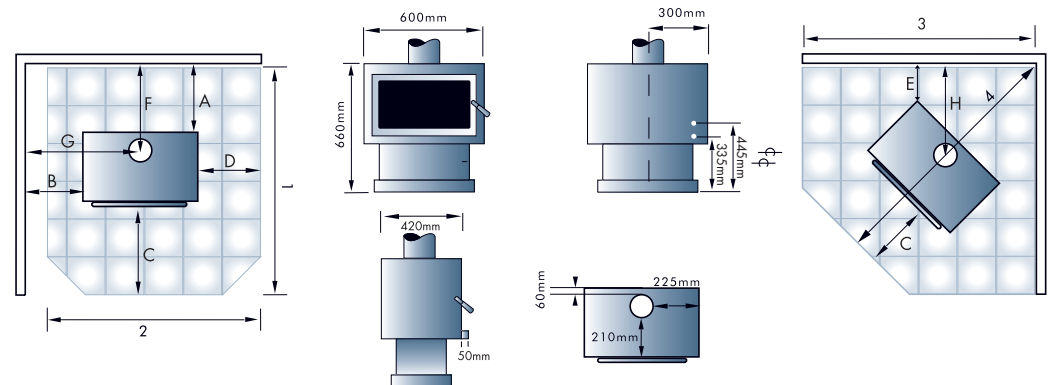
New Zealand	A	B	C	D	E	F	G	H
With s/s flue pipe shield	100	450	300	100	100	230	740	400

Floor Protector Dimensions

1	2	3	4
785	825	1030	1160

# Caldo Rural

This is not a 'Clean Air' woodfire model. This woodfire can only be installed into properties of two hectares or more.



Minimum Clearance to Combustibles in Millimetres AS/NZS2918 : 2001

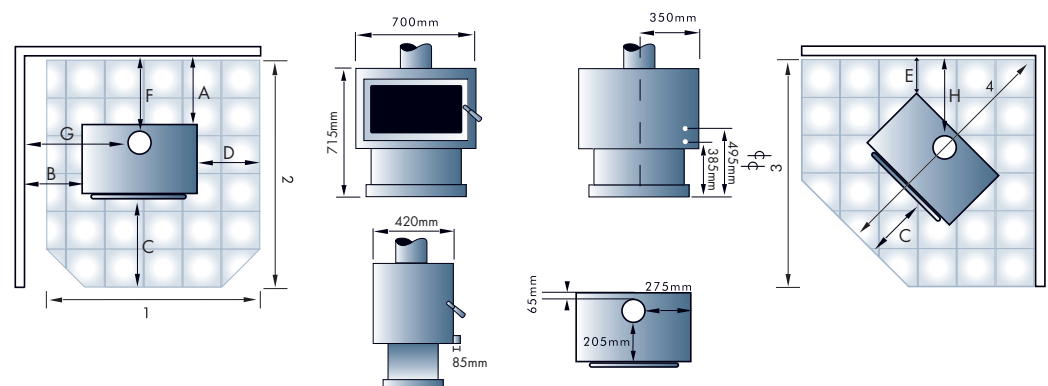
New Zealand	A	B	C	D	E	F	G	H
With s/s flue pipe shield	100	225	300	100	50	235	525	365

Floor Protector Dimensions

1	2	3	4
835	800	1000	1105

# Milano Rural

This is not a 'Clean Air' woodfire model. This woodfire can only be installed into properties of two hectares or more.



Minimum Clearance to Combustibles in Millimetres AS/NZS2918 : 2001

New Zealand	A	B	C	D	E	F	G	H
With s/s flue pipe shield	100	250	300	100	50	245	600	400

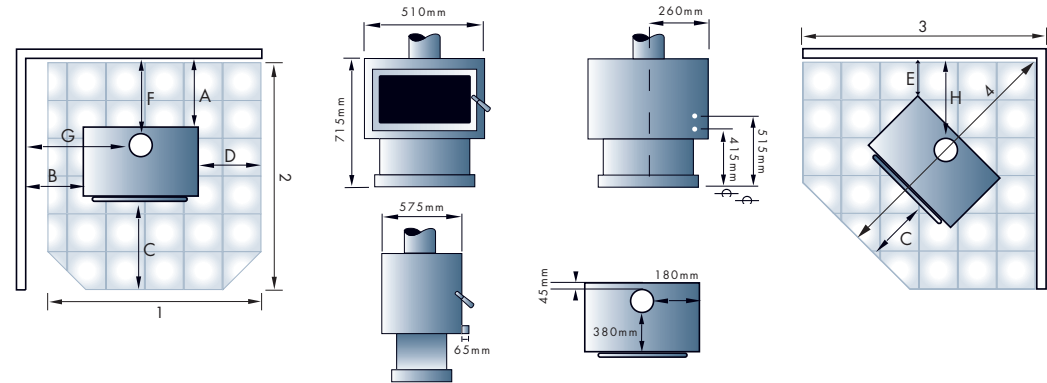
Floor Protector Dimensions

1	2	3	4
900	820	1055	1140



# Tuscany Rural

This is not a 'Clean Air' woodfire model. This woodfire can only be installed into properties of two hectares or more.

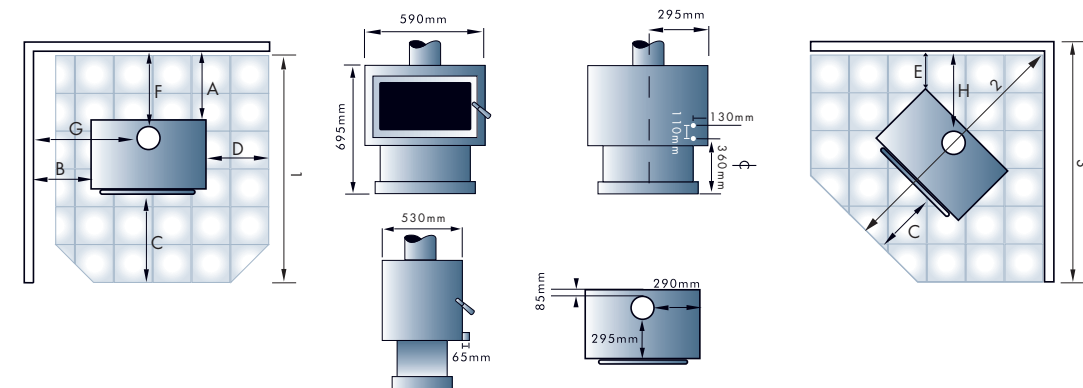


Minimum Clearance to Combustibles in Millimetres AS/NZS2918 : 2001								
New Zealand	A	B	C	D	E	F	G	H
With flue shield	200	750	300	175	350	245	930	550
Without flue shield	600	800	300	175	500	645	980	700

Floor Protector Dimensions				
1	2	3	4	
860	1075	1330	1620	
860	1475	1475	1825	

# Ar'dore Rural

This is not a 'Clean Air' woodfire model. This woodfire can only be installed into properties of two hectares or more.



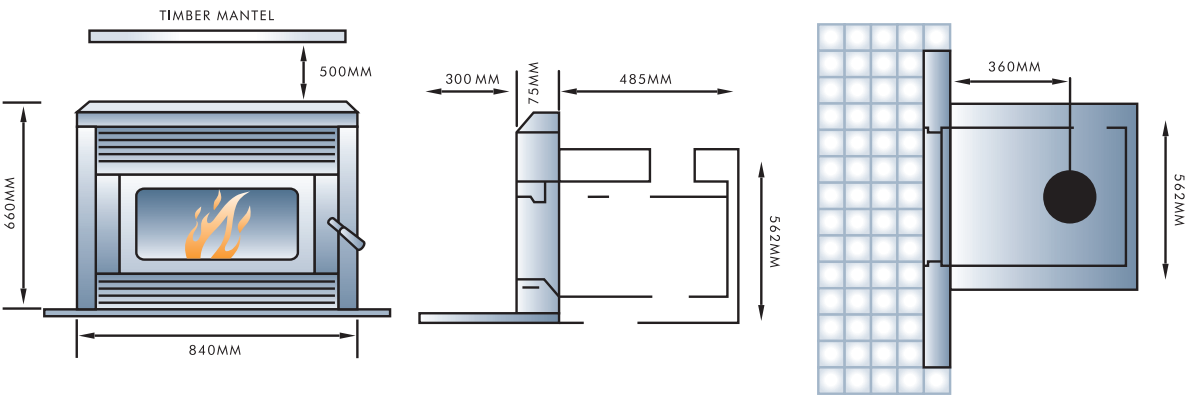
Minimum Clearance to Combustibles in Millimetres AS/NZS2918 : 2001								
New Zealand	A	B	C	D	E	F	G	H
With double flue shield	100	300	300	110	75	180	515	315
Without flue shield	325	400	300	110	200	410	615	440

Floor Protector Dimensions			
1	2	3	
930	1240	1090	

Note: The Ar'dore must be installed with a Milan Double Stainless Flue Shield

# Insert Rural

A Timber mantel or surround must be at least 500mm above the top of the fascia, unless the mantel protrudes less than 50mm in front of the fire surround.



This is not a 'Clean Air' woodfire model. This woodfire can only be installed into properties of two hectares or more.



## Milan Harmony Series Internal Firebox Sizes

	Height (mm) (to baffle plate)	Width (mm)	Depth (mm)	Heated Area*
Caldo Rad Rustic	290	420	300	140m <sup>2</sup>
Caldo	290	420	300	130m <sup>2</sup>
Piccolo	290	420	300	130m <sup>2</sup>
Milano	290	520	300	186m <sup>2</sup>
Tuscany	350	360	500	232m <sup>2</sup>
Ar'dore	300	420	370	204m <sup>2</sup>
Insert	290	430	400	177m <sup>2</sup>

\*Approximate heated area with unit burning on high. The amount of windows, single or double glazed, the age of the home, number of doors, amount of insulation etc. are some of the variables that impact on the holding of heat in a home. An airtight modern insulated home is going to hold the heat longer therefore a woodfire will heat a larger area that it would in an older home with minimum insulation.

## Minimum Floor Protector Size

(minimum size in millimetres based on fire fitted with flue pipe shield)

	Wall	Ash	Wide	Deep
Caldo Rad Rustic Harmony & Rural	✓	✓	785	825
Caldo Harmony & Rural	✓	✓	800	835
Piccolo Harmony	✓	✓	800	820
Milano Harmony & Rural	✓	✓	900	820
Tuscany Rural	✓	✓	860	1075
Ar'dore Harmony	✓	✓	840	930
Ar'dore Rural	✓	✓	810	930
Insert Harmony	Non combustible floor protector of at least 45 mm thickness above the room floor which must extend 300mm from the door glass and 200mm either side of the door opening.			
Insert Rural	A minimum of 300mm extension from the door opening. The first 225mm of this extension must be of insulating material of at least 50mm in thickness. Forward of this there must be 75mm of a non combustible surface for ash protection.			

Wetback/Boosters may be fitted to the Rural range of fires.

## Emissions and Efficiencies of Milan Harmony Series

	Emission	Efficiency
Caldo Rad Rustic	1.18g/Kg	69.9%
Caldo	0.70g/Kg	71.3%
Piccolo	0.70g/Kg	71.3%
Milano	0.88g/Kg	71.4%
Ar'dore	0.88g/Kg	65.0%
Insert	1.20g/Kg	65.6%