



# ESSE EW Ironheart

## Particulate Emission Power Output & Efficiency Testing of the EW Ironheart

The ESSE EW Ironheart solid fuel cooking appliance was tested for particulate emissions power output and efficiency according to the requirements of the joint Australian/New Zealand Standard AS/NZS 4012/4013 (1999).

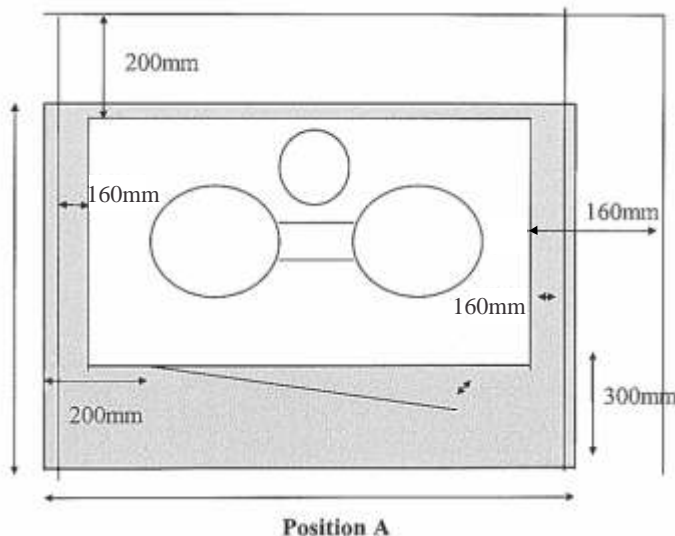
The appliance particulate emission factor was 2.7 g/kg of softwood, and combined efficiency of the appliance for all burn rates 51%.

The Esse EW Ironheart solid fuel cooking appliance complies with the requirements of AS/NZA/4012/4013 (1999).



## Clearances

### Minimum Clearances for the ESSE EW Ironheart solid fuel cooking appliance fitted with a water heater installed using a standard triple skin flue kit using 150mm heat shield.



The appliance and flue combinations were tested at the following clearances:

#### Position A (Parallel)

- ∞ 200mm from the rear wall to the above of the appliance top plate.
- ∞ 160mm from the side wall above the hob to the edge of the appliance hob edge.
- ∞ 160mm from the left and right side walls below the hob level to appliance side panel.

The ESSE EW Ironheart solid fuel cooking appliance, when installed with a default flue kit incorporating a 180° x 900mm stainless steel heat shield, conforms to the requirements of Australian/New Zealand Standard 2918:2001.

## Hearth

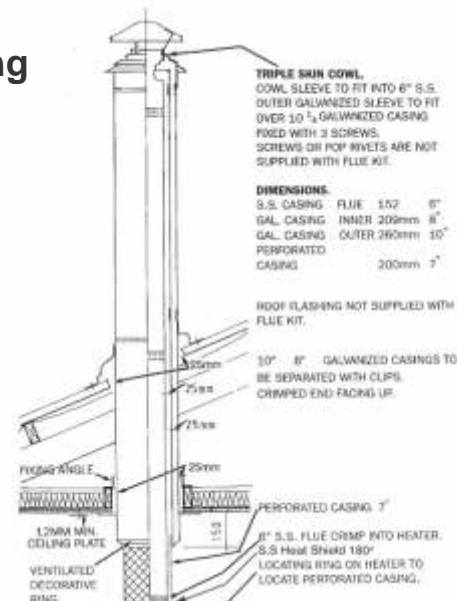
A hearth was installed beneath and in front of the appliance.

The hearth (cement fibre or similar) must be installed so that its leading edge is a minimum of 300mm in front of the appliance base.


The floor protector must be a minimum of 900mm wide x 850mm deep x 6mm thick.

(See shaded area on above image.)

## Flueing



## SOLID FUEL BURNING APPLIANCE CONSTRUCTION DETAILS

Appliance Model Name:	EW - Ironheart		
Manufacturer:	ESSE		
Serial Number:	N/A		
Overall Height (to top of top plate):	900mm		
Overall Width (not including top plate):	890mm		
Overall Depth (not including top plate):	550mm		
Top Plate Width:	900mm		
Top Plate Depth:	600mm		
Top Plate Thickness:	5mm		
Appliance Base: N/A	<i>Height: N/A</i>	<i>Width: N/A</i>	<i>Depth: N/A</i>
Appliance Legs x4	<i>Height: 275mm</i>	<i>Width: 100 mm Top 50mm Bottom</i>	<i>Depth: 100 mm Top 50mm Bottom</i>
Firebox Description:	<i>Height: 300mm</i>	<i>Width: 275mm</i>	<i>Depth: 490mm</i>
Firebox Material Type/ Seam Fully Welded:	Carbon Steel Yes		
Firebrick Size:	<i>Height: 6x 375mm 1x 210mm Thickness: 25mm</i>	<i>Width: 6x 70mm 1x 240 No of: 7</i>	
Main Door Opening:	<i>Height: 340mm</i>		<i>Width: 275mm</i>
Door:	<i>Height: 370 mm</i>	<i>Width: 360 mm</i>	<i>Depth: 25mm</i>
Door Glass:	<i>Height: 300mm</i>	<i>Width: 290 mm</i>	
Primary Air Location:	Above Door		
Dimension of Primary Air:	12mm x 30mm Holes x 9		
Area of Primary (mm <sup>2</sup> ):	3240		
Secondary/Tertiary Air Location:	Air Slot Below Ash Pan Door		
Dimension of Secondary/Tertiary Air:	12mm x 30mm Holes x 9		
Area of Secondary/Tertiary Air (mm <sup>2</sup> ):	3240		
Baffle Plate size and location:	Top of Firebox 500mm x 265mm		
Flue Dimensions:	152mm OD		
Spigot Dimensions: Adapter Plate on Flue Box	160mm OD	155mm ID	
Spigot to Rear of Appliance:	5 mm		
Rear Internal to External Heat Shield:	15mm		
Side Internal to External Heat Shield:	35mm		
Heat Shield Material Type:	Carbon Steel		
Water Heater Fitted:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Fan Location/Speeds:	N/A		
Catalytic Combustor:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Grate:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Diagrams:	Over the page		
Signed:  Date: <i>50/9/10</i>			