



# Safety Clearance Test Report

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**(This report is not endorsed)**

**Report Number 0681.**

## Item Under Test (IUT):

Make: Authentic Oven.  
Model: Wood fired pizza oven 780.  
Type: Freestanding.

## Client Details:

Attention: Mr. Gareth Wing.  
Company Name: Authentic Oven Ltd.  
Company Address: 63 Paerangi Place, Tauriko, Tauranga, 3110, New Zealand  
Phone: (07)575 2873  
Manufacturer: As above

## Standard Specification:

AS/NZS 2918-2001 Appendix B Thermal testing of installation clearances;  
AS/NZS 2918-2018 Appendix B Thermal testing of installation clearances;  
Appendix B sets out the method for determining the maximum temperature rise above ambient temperature of heat sensitive materials as specified installation clearances from a solid fuel burning appliance.

## Client Instructions:

The client requested the item be tested to the above standard in both parallel and corner positions. The appliance was installed on a stainless steel trolley.

## Sample Details:

The sample supplied was a production model representative of the mass produced version.

## Report Record:

Test Record (Free Standing) CD-10230 revision 1.2.  
Report Preformat CD-00264 revision 2.2.

## Technical Note:

Accreditation was removed from this report as the flash fire was not achievable due to the construction of an open fire and the depth of the firebox; the fuel load required would be unsafe due to the stacked height for such firebox.

A handwritten signature in blue ink, appearing to read "P. Chen", written over a horizontal dashed line.

Tested and Checked by  
Mr. P. Chen  
Compliance Engineer

Test Date 20/12/2023  
Issue Date 06/03/2024

9B Lady Ruby Drive, East Tamaki, Auckland.  
PO Box 204-252 Highbrook, Manukau Auckland, 2161.  
Telephone +64 9 271 1616.



## **Section 1: Description**

### **Overall external dimensions:**

The heater had the following overall external dimensions (excluding trolley).

Height	670 mm	- measured to the flue spigot.
Width	988 mm	- measured at the widest points of the heater.
Depth	981 mm	- measured between rear most dome structure and fuel loading aperture.

*Refer to design drawings for detailed dimensions.*

### **Firebox internal dimensions:**

The fire box had the following basic internal dimensions.

Height	389 mm	- measured between brick floor and highest point of the internal dome..
Width	765 mm	- measured between the widest points of internal side walls.
Depth	875 mm	- measured between the rear most brick wall and door aperture lip.

*Refer to design drawings for detailed dimensions.*

### **Trolley dimensions:**

The Trolley had the following basic dimensions.

Height	1050 mm	- measured to the top surface of the trolley (include fire's floor brick).
Width	1000 mm	- measured between the widest points of the trolley.
Depth	1000 mm	- measured to the depth of the trolley.

### **Removable grilles and cook tops:**

The heater did not have any removable grille or cook tops.

### **Fuel loading doors:**

There was no fuel loading door for this appliance. The arch shape fuel loading aperture has the following dimensions:

Height	265 mm
Width	455 mm

### **Refractory materials and gaskets:**

The heater contained fire bricks forming the dome and floor.

*Refer to design drawings for material dimensions and specifications.*

### **Water heating device:**

The heater was not fitted with a water heating device.

### **Air circulation Fan:**

This heater was not fitted with an air circulation fan.

### **Catalytic combustor:**

This heater was not fitted with a catalytic combustor.

### **Bypass damper:**

The heater was not fitted with a bypass damper.



## **Section 2: Air inlets and outlet**

Open fire design, there was no primary nor secondary inlets.

### **Flue gas outlet:**

The flue gas outlet spigot was positioned centrally when viewed from the front of the firebox.

The flue spigot had an internal diameter of 200 mm.

*Refer to design drawings for detailed dimensions.*

### **Cross sectional area:**

The flue spigot outlet aperture was calculated to be 31416 mm<sup>2</sup>

*Refer to design drawings for detailed dimensions.*

## **Section 3: Flue System**

### **Flue pipe:**

The flue system consisted of a single skin flue pipe setup.

A single 200 mm diameter painted stainless steel flue that met the requirements of AS/NZS 2918:2001

### **Flue shield:**

The heater was not fitted with a flue shield.

The heater was not fitted with a deflector.

### **Ceiling plate**

A ceiling plate was fitted during test.

A 1.5 mm thick unpainted stainless steel ceiling plate measuring 435 mm x 435 mm with a central 255 mm circular hole was installed and spaced 12 mm from the ceiling.



**Section 4: Testing Information**

**Fuel data:**

Type of Fuel used: Soft Wood.  
 Species of Firewood: Pinus Radiata.  
 Largest axis of firebox: 765 mm Left to Right.  
 Fuel loading axis: 455 mm (Fuel loading aperture width).  
 Test Fuel length: 228 - 273 mm  
 Moisture content range: 10% - 15%  
 High fire fueling Rate: 3 pcs at approx. 15 minutes interval.

**Operating condition:**

Ambient temperature range during test: 27.0°C to 28.6°C  
 Barometric pressure: 1022 hpa

**Section 5: Test Results and Clearance**

**Maximum allowable temperature rises (as per AS/NZS 2918:2001 and AS/NZS 2918:2018)**

To comply with the temperature limits of this standard the temperature rise above ambient temperature of monitored surfaces shall not exceed 65°C for the high fire test and 85°C for the flash fire test.

**Floor Protector:**

AS/NZS 2918 standard section 3.3.2 places minimum requirements for the floor protector.

For an appliance other than a fireplace insert appliance, the floor protector shall extend under the appliance and not less than **300mm** beyond the front of the fuel-loading and ash-removal openings. The width of the floor protector shall be not less than the width of the appliance and shall extend not less than **200mm** from each side of any ash-removal or fuel-loading openings unless the floor forms an abutment with a wall or heat shield at a lesser distance.

**Minimum Access Clearance:**

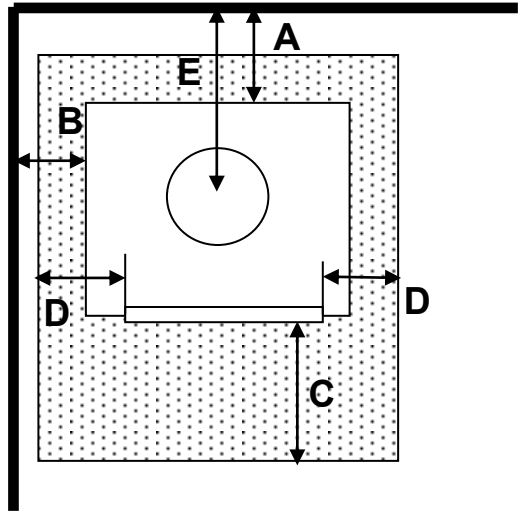
AS/NZS 2918 standard section 3.2.1 places minimum requirements for the access clearance.

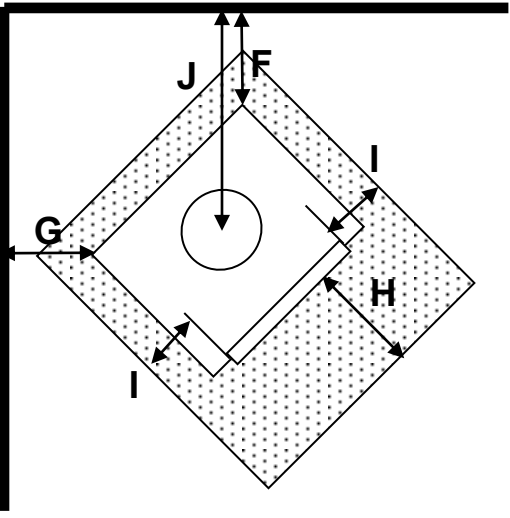
To provide the user with access to the appliance, the clearance between any part of the appliance which only hand access, occasional user access, or maintenance access is necessary and any adjacent fixed surface or object shall be not less than 100 mm.

**Floor Protector information:**

Floor Protector		
	Material	Thickness(mm)
Base Layer	Nil	Nil

**Test Results for high fire:**

Parallel Position Clearance Distance	Position	Clearance (mm)	Max temp rise (°C)
			High
	(A) Rear	100	Rear Wall
			33.41
	(B) Side	100	Side Wall
			34.16
	(C) Floor protector (front)	300	Floor
	(D) Floor protector (side)	200	Ceiling
			55.78
	(E) Flue (rear)	850	

Corner Position Clearance Distance	Position	Clearance (mm)	Max temp rise (°C)
			High
	(F) Side	100	Rear Wall
			39.17
	(G) Side	100	Side Wall
			39.77
	(H) Floor protector (front)	300	Floor
	(I) Floor protector (side)	200	Ceiling
			64.02*
	(J) Flue (rear)	985	

\* Note that this temperature passed within the laboratories margin of uncertainty.

**Technical Note:**

1. The clearance measurement A, B, F and G were taken from the distance between walls and closest point of the appliance, C and H were measured from the front of the fuel-loading opening, E and I were measured from each side of fuel-loading opening, E and J were calculated from the centre to the rear wall.
2. The flue was installed onto the flue spigot, extended centrally and vertically without bend before and after penetration of the ceiling plane.
3. Drawings shown above are not to scale.

**Section 6: Photo-documentation**

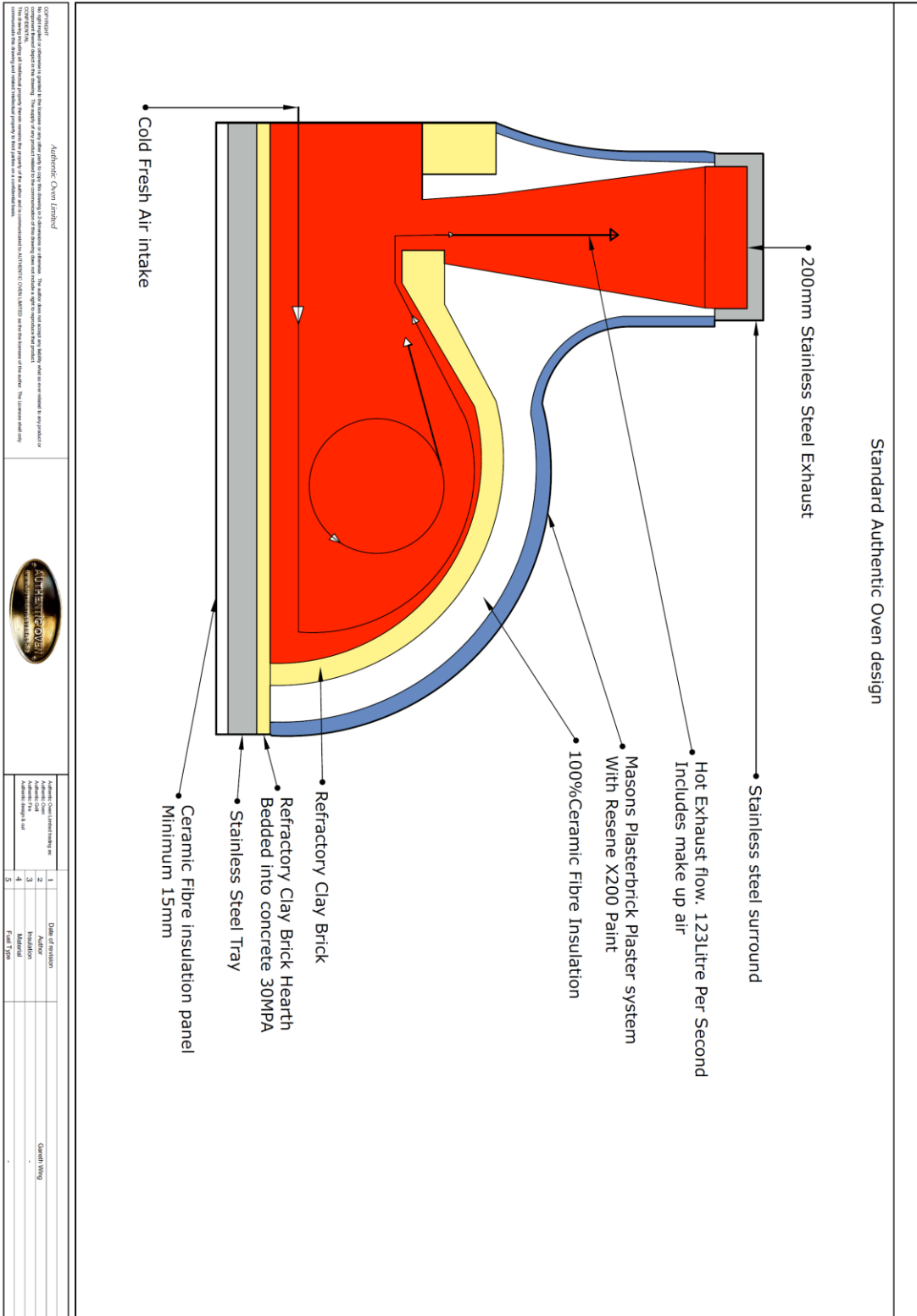


Appliance as tested (parallel position)



Appliance as tested (corner position)

**Section 7: Supplied Documentation**  
**Design drawings as supplied:**





Standard Authentic Oven Design

Design for 400Deg Centigrade hearth hover temp residential oven

Oven	External	Internal Dia	Hearth Insulation	Dome Insulation	Inner Arch H-W	Outer Arch Height
Oven780StdRes	W1000xD1000XH105	780	15	45	H238 -W475	H255-W510
Oven900StdRes	W1200xD1200XH130	900	15	45	H -W	H -W
Oven900StdCom	W1200xD1200XH133	900	25	62		
Oven1100RNdCom	Dia 1400XH155	1100	40	62		
Oven1300RNdCom	Dia 1600XH175	1300	50	62		
Oven1500RNdCom	Dia 1800XH182	1500	50	82		

All Authentic Oven within the standard oven design to incorporate a standard SS flue spigot (1A) manufactured by SFP. Flow rate for this flue transition 123L per second for all standard design ovens. A+B inner arch sizing no greater than H280 -W560. Flue height of extension no greater than 4800mm. If greater than 4800 extension a flue dampener is required. A non restrictive ADD rain cowl must be used on fixed flue systems

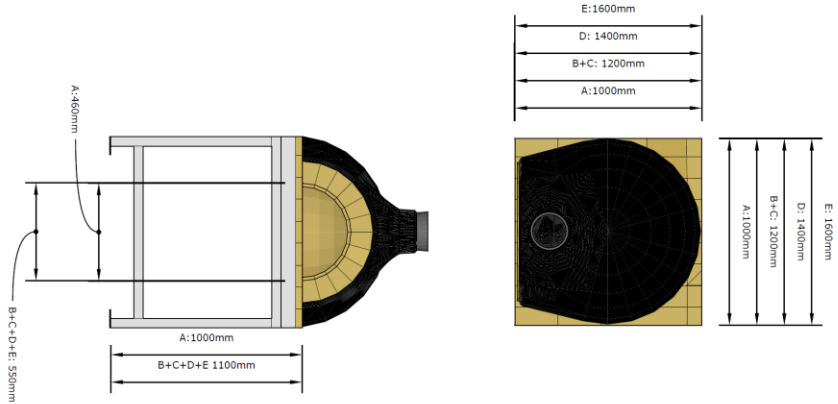
Brick Hearth Tile	Brick Dome	Concrete backing to Dome	Insulation over dome	Plaster Cladding
Oven780StdRes	37.5	20-45	45	5-10
Oven900StdRes	75	25-45	45-60	5-10
Oven900StdCom	75	25-55	45-75	5-10
Oven1100RNdCom	75	25-70	45-75	5-15
Oven1300RNdCom	75	25-80	45-90	5-20
Oven1500RNdCom	75			

Increasing the Hearth Insulation will increase the hearth temp  
 Increasing the dome Insulation will increase the dome temp  
 Increasing the total weight within the internal heated diameter area will reduce the internal temp  
 These figures result in an even hover temp. Meaning the pizza will cook both sides at the same rate within 10%  
 Flue exhaust is unchanged in temp and flow rate from 780-1500 Authentic Ovens.

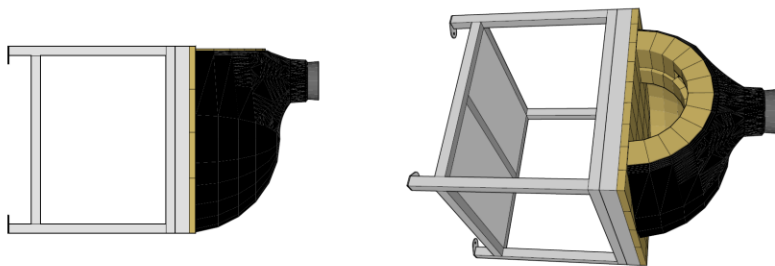
<p>Copyright © Authentic Ovens Limited. All rights reserved. The design and construction of the ovens are the property of Authentic Ovens Limited. The design and construction of the ovens are the property of Authentic Ovens Limited. The design and construction of the ovens are the property of Authentic Ovens Limited. The design and construction of the ovens are the property of Authentic Ovens Limited.</p>			<p>Authentic Ovens Limited trading as                  Authentic Ltd                  Authentic Range Ltd</p>	<p>1 2 3 4 5</p>	<p>Dome of protection                  Insulation                  Material                  Flue Type</p>	<p>2021/2018                  Ceramic Tiles                  Ceramic Tiles                  Solid Fuel</p>
<p>Authentic Ovens Limited</p>						



Family of Products Authentic Oven



**Product Authentic Oven**  
 Standard Insulation 50mm Ceramic Fibre  
 Standard Dome Refractory Brick 50--75mm  
 Hearth Brick 45mm + Ceramic Fibre board 15mm Insulation  
 A: Oven780StdRes  
 B: Oven900StdRes  
 C: Oven900StdCom  
 D: Oven1100RndCom  
 E: Oven1300RndCom  
 F: Oven1500RndCom



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1	Authentic Oven Limited
2	Authentic Oven Limited
3	Authentic Oven Limited
4	Authentic Oven Limited
5	Authentic Oven Limited

1	Date of Revision	15/08/2014
2	Authentic Oven Limited	Ceramic Fibre
3	Authentic Oven Limited	Ceramic Fibre
4	Authentic Oven Limited	Ceramic Fibre
5	Authentic Oven Limited	Ceramic Fibre



**Section 8: Measurement Uncertainty**

The recorded measurement uncertainties apply to all measurements within this test report unless otherwise specified.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k = 2$ , providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with IANZ requirements.

Measureand (X)	Calibrated Range	Measurement Uncertainty
Temperature	X 5 0 ° C	± 2 °C
	5 0 ° C < X 1 5	± 3 °C*
Mass	X 2 1 0 g	± 0.1%
	2 1 0 g < X 3 0	± 0.010 kg
	0 . 3 k g < X 6	± 0.012 kg
Length	X 2 0 0 mm	± 0.06 mm
	2 0 0 mm < X 1	± 3 mm
*Error is linear, ± 5 °C denotes maximum uncertainty with respect to 990 °C reading.		

Dimensions shown within this report are stated as those on the manufacturing drawings as supplied where the measured value is within the factory 'stated manufacturing tolerance.

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**End of report.**