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TESTING LABORATORY
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IN FULL.

REGISTRATION No. 238

 **COMALCO** -  **Aluminium**

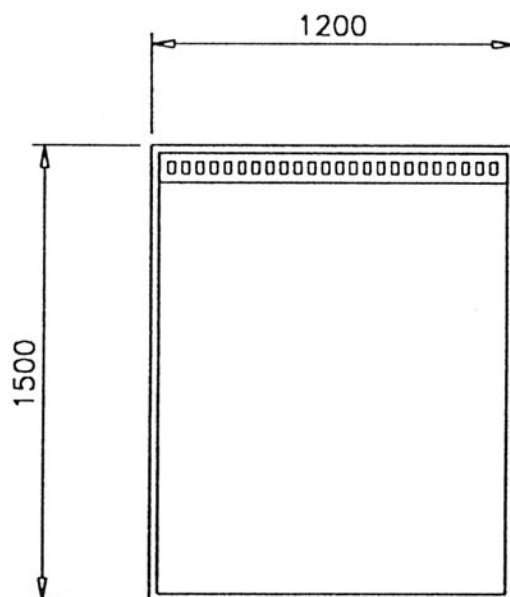
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WINDOW TESTING LABORATORY

CERTIFICATE OF TEST

REPORT	JOINERY DEVELOPMENTS VENT			
CLIENT	JOINERY DEVELOPMENTS			
SPECIFICATION	NZS 4211 : 1985			
REPORT No.	T147	DATE:	19JUNE96	PAGE 1 OF 5

DESCRIPTION



FRAME 2010
BEAD 5024

TESTED BY: D.REEVE

CHECKED BY: 



REPORT No. T147

DATE: 19JUNE96

PAGE 2 **OF** 5

CONSTRUCTION

GENERAL

The outer frame 2010 was mitre cut and screw fixed at each corner using two 6g x 19mm SS Pan Head screws.

The vent was mounted between the top of the glass and the head bar and held in position by an internal twin leaf backing vinyl and an external wedge.

The vent was constructed of aluminium extrusion, plastic moulded end caps, plastic closing strip and an internal aluminium mesh.

GLAZING

5mm glass was used in the test unit. The glass was glazed using an internal twin leaf vinyl and an external glazing wedge and a snap-in aluminium bead.

DRAINAGE

The cill was drained by two hood punched slots located 100mm in from the jambs.

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REPORT No. T147

DATE: 19JUNE96

PAGE 3 OF 5

TEST FACILITY

GENERAL

The test was performed in a 1m x 3m x 4m steel constructed test booth. The test unit was built into the front wall with a construction of 100 x 50mm timber work. A variable speed motor driving a centrifugal fan provided a negative or positive pressure within the booth.

Air flow measurements are derived by measuring the differential pressure through an orifice plate. Temperature and relative humidity are measured at the test booth and atmospheric pressure is obtained from the Meteorological Office. A water spray system is mounted on the rear wall with 6 square pattern nozzles slightly overlapping their pattern on the front test wall.

The nozzles are on a grid of two rows of three, set 1.5m apart. Each nozzle is specified to deliver a square pattern of 1.5 x 1.5m at 1m distance. Two flow metres and regulatory valves are utilised to ensure each row of nozzles receives the same volume of water.

Specified flow rate = 180/m²/hr

Flow per row of nozzles = $3 \times \frac{180}{60} \times (1.5)^2$ l/min

= 20.25 l/min

For deflection measurement a vertical beam is mounted on an independent frame. The beam carries three vernier callipers for recording movement at the ends and centre span of structural members.

NB: All measuring equipment is calibrated by an approved authority, and the total window testing facility has been assessed and registered by Telarc New Zealand in accordance with both New Zealand and Australian Window Standards.

(Registration No: 238)

TESTED BY: D.REEVE

CHECKED BY:



REPORT No. T147 **DATE:** 19JUNE96 **PAGE** 4 **OF** 5

TEST PROCEDURE

Tests on the window were carried out in the following sequence:-

1. Dimensional Accuracy
2. Air Infiltration
 - Using outlook mesh
 - Using microtech mesh
3. Water leakage
 - Using microtech mesh
4. Overall Strength

RESULTS

1. Dimensional Accuracy

The window frame complied.

PASS

2. Air Infiltration

■ Maximum permitted airflow:-

Level 2 = 3.6 l/s
Level 8 = 14.4 l/s

PASS
LEVEL 2

■ Actual Airflow, Vent Closed

Positive Airflow = 1.62 l/s
Negative Airflow = 0.5 l/s

PASS
LEVEL 2

■ Actual Airflow, Vent Open
(using outlook mesh)

Positive Airflow = 46.6 l/s
Negative Airflow = 44.6 l/s

■ Actual Airflow, Vent Open
(using microtech mesh)

Positive Airflow = 43.8 l/s
Negative Airflow = 44.6 l/s

**COMMENTS/
RESULTS**

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WINDOW TESTING LABORATORY

REPORT No.	T147	DATE: 19JUNE96	PAGE 5	OF 5
				COMMENTS/ RESULTS
3.	<u>Water Leakage</u>			
■	Maximum test pressure = 330 Pa			
	Each test conducted for the vent in fully open, ¼ open, ½ open and fully closed, followed the procedure of:-			
■	Intermediate test pressures 100 Pa, 150 Pa, and 225 Pa were each held for two minutes.			
■	The maximum test pressure, 330 Pa was held for ten minutes.			
■	<u>Vent Fully Open</u>			
	No leakage at intermediate pressures, minor splashes coming through at maximum pressures. Not significant.			PASS
■	<u>Vent ¼ Open</u>			
	No leakage.			PASS
■	<u>Vent ½ Open</u>			
	No leakage.			PASS
■	<u>Vent Fully Closed</u>			
	Minor leak through end cap. Not significant.			PASS
4.	<u>Overall Strength</u>			
	The window/vent was subjected to a pressure of 1550Pa, very high wind zone for a period of one minute, in both positive and negative direction without damage to the window/vent.			PASS
TESTED BY: D.REEVE				CHECKED BY: 