

PERFORMANCE TEST REPORT

Rendered to:

A. J. MANUFACTURING

Series/Model: Z 17 Aluminum Frame

Report No: B4147.01-201-44
Report Date: 10/27/11
Expiration Date: 10/27/15

PERFORMANCE TEST REPORT

Rendered to:

A. J. MANUFACTURING
1217 Oak Street
Bloomer, Wisconsin 54724

Report No: B4147.01-201-44
Test Date: 10/24/11
Report Date: 10/27/11
Expiration Date: 10/27/15

Scope: Architectural Testing, Inc. (ATI) was contracted by A. J. Manufacturing to perform air infiltration and water penetration testing on one A.J. Manufacturing Z 17 access door.

Test Procedure: Air infiltration testing was conducted with positive and negative pressures on the Outswing Door. Water penetration testing was conducted with negative pressures on the Outswing Door.

Test Methods:

ASTM E 283-91(99), *Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.*

ASTM E 331-00, *Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.*

Test Specimen Description:

Series/Model: Z 17 access door

Overall Size: 2' 1-1/4" wide by 5' 1-1/4" high

Door Panel Size: 1' 10-3/4" wide by 4' 11" high by 1-3/4" thick

Overall Area: 10.74 ft²

Frame Construction: The door frame was comprised of extruded aluminum, with the corners straight cut and butted joints. The interior of the corners were sealed with small joint sealant.

Door Leaf Construction: The door leaf was "cake pan" style, comprised of 24 gauge galvanized steel skin, interior and exterior, with formed corners. The interior of the door consisted of pressure-injected polyurethane foam.

Test Specimen Description: (Continued)

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Continuous EPDM self-adhered gasket (hollow)	1 Row	Frame perimeter

Hardware:

Hinges, 6" piano style	2	Hinge jamb, 127 mm (5") from each end
Allegis adjustable roller cam locks	2	Door leaf lock, 152 mm (6") from each end

Test Results:

Air Infiltration: Air infiltration testing was conducted with negative pressure on the outswing door, and with no latch handles. (Latches sealed off with duct tape.)

<u>Inches H₂O</u>	<u>psf</u>	<u>Total Air Flow</u>		<u>Rate</u>	
		<u>cfm</u>	<u>cfm/ft²</u>	<u>cfm/ln ft</u>	
1.0	5.20	0.04	<0.01	<0.01	
2.0	10.4	0.02	<0.01	<0.01	
3.0	15.6	0.01	<0.01	<0.01	
4.0	20.8	0.01	<0.01	<0.01	
5.0	26.0	0.01	<0.01	<0.01	
6.0	31.3	0.01	<0.01	<0.01	
7.0	36.5	<0.01	<0.01	<0.01	
8.0	41.7	<0.01	<0.01	<0.01	
9.0	46.9	<0.01	<0.01	<0.01	
10.0	52.1	<0.01	<0.01	<0.01	
11.0	57.3	<0.01	<0.01	<0.01	
12.0	62.5	<0.01	<0.01	<0.01	

Test Results: (Continued)

Air Exfiltration: Air infiltration testing was conducted with positive pressure on the outswing door, and with no latch handles. (Latches sealed off with duct tape.)

<u>Inches H₂O</u>	<u>psf</u>	<u>Total Air Flow</u>		<u>Rate</u>
		<u>cfm</u>	<u>cfm/ft²</u>	<u>cfm/ln ft</u>
1.0	5.20	<0.01	<0.01	<0.01
2.0	10.4	<0.01	<0.01	<0.01
3.0	15.6	0.03	<0.01	<0.01
4.0	20.8	0.04	<0.01	<0.01
5.0	26.0	<0.01	<0.01	<0.01
6.0	31.3	0.15	0.01	0.01
7.0	36.5	0.06	<0.01	<0.01
8.0	41.7	0.15	0.01	0.01
9.0	46.9	0.60	0.05	0.04
10.0	52.1	0.50	0.01	0.01
11.0	57.3	3.00	0.28	0.22
12.0	62.5	9.00	0.84	0.66

Water Penetration: Water penetration testing was conducted with negative pressure on the outswing door. Prior to testing the lock handles were sealed on the exterior with duct tape.

<u>Inches H₂O</u>	<u>psf</u>	<u>Results</u>
2.0	10.4	No leakage
8.0	41.7	No leakage
14.0	72.8	No leakage
20.0	104.1	No leakage*

*After 120 continuous minutes of spray, otherwise tested in accordance with ASTM E331

A copy of this report will be retained by ATI for a period of four years. This report is the exclusive property of the client so named herein and is applicable to the sample tested. Results obtained are tested values and do not constitute an opinion nor endorsement by this laboratory.

ARCHITECTURAL TESTING, INC.

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TDG/jb