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## PRODUCT PERFORMANCE TEST REPORT

Rendered To:

### CMI ARCHITECTURAL PRODUCTS

608 Fourth Street S.E.

DeSmet, South Dakota 57231-0475

Report No. 02-31851.01

Test Dates: 12/09/1999

12/14/1999

Report Date: 12/29/1999

**Scope:** Air Infiltration Test  
One Single and One Pair Aluminum Swinging Doors

#### Test Procedure:

Air infiltration testing was conducted in accordance with ASTM E 283-91, "*Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtainwalls and Doors Under Specified Pressure Differences Across the Specimen.*" Testing was conducted at a 1.56 psf pressure difference.

**Series/Model Tested:** Series 200 Narrow Stile Door

**Type:** Aluminum swinging door

#### Overall Frame Size:

Single – 3' 3-1/2" wide by 7' 1-3/4" high

Pair – 6' 3-1/2" wide by 7' 1-3/4" high

#### Door Opening Size:

Single – 3' 0" wide by 7' 0" high

Pair – 6' 0" wide by 7' 0" high

#### Overall Area:

Single – 23.5 ft<sup>2</sup>

Pair – 45.0 ft<sup>2</sup>

**Finish:** Painted aluminum.

**Glazing:** The glazing on both doors consisted of monolithic 1/4" tempered glass. The glass was set between aluminum stops with EPDM gasket used on both the interior and exterior.

**Weatherstripping:**

Single door –

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Neoprene bulb	1 row	Door stops (frame)
Vinyl leaf “sweep”	1 row	Door bottom rail
Wool pile pad	2	Sill corners

Pair doors –

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Neoprene bulb	1 row	Door stops (frame)
Vinyl leaf “sweep”	1 row	Bottom of both door rails
Wool pile “astragal”	2 rows	Active panel stile, where doors meet
Wool pile pad	2	Sill corners

**Frame Construction:** The frame consisted of extruded aluminum with the corners square cut, sealed with small joint sealant and secured with screwed on corner blocks.

**Panel Construction:** Door panels consisted of extruded aluminum stiles and rails with the corners butted, screw-fastened to aluminum corner blocks and welded. All ends of vertical stiles were filled with expandable foam.

**Hardware:**

Single door –

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Dead bolt lock	1	Midspan of door lock stile engaging keeper in frame
Butt hinges	2	Hinge jamb, 5” from each end

Pair doors –

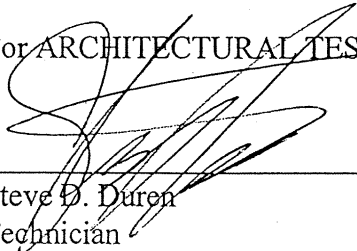
<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Dead bolt lock	1	Locking stile of active panel engaging stile of passive panel
Butt hinges	4	Two per door panel, 5” from each end
Flush bolt locks	2	Top and bottom of inactive leaf

**Test Results:**

<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
Air Infiltration Per ASTM E 283 @ 1.56 psf		
Single Door	0.39 cfm/ft <sup>2</sup>	0.50 cfm/ft <sup>2</sup> max.
Pair Doors	0.44 cfm/ft <sup>2</sup>	1.00 cfm/ft <sup>2</sup> max.

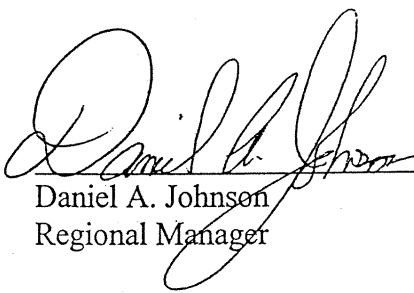
A copy of this report will be retained by ATI for a period of four years. This report is the exclusive property of the client so named herein and is applicable to the sample tested. Results obtained are tested values and do not constitute an opinion or endorsement by this laboratory.

For ARCHITECTURAL TESTING, INC.



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Steve D. Duren  
Technician



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Daniel A. Johnson  
Regional Manager

SDD/jb  
02-31851

**RE: Aluminum Entrance Door, Air Infiltration Test  
Clarification Re: ASTM E 283 Format**

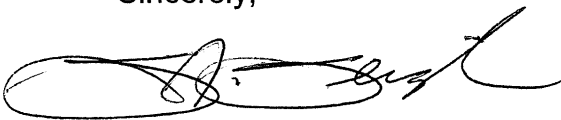
To Whom It May Concern,

With regard to the Architectural Testing, Incorporated test report dated December 29, 1999 for air infiltration testing in accordance with ASTM E 283-91; **This is an air infiltration test for leakage occurring at the perimeter of the door** – between the door and frame. The stile of door (**200 narrow, 351 medium, 452 wide stile, 400HD, 500HD, 4000 series, 8000 series or 9000 series**) is insignificant as this is a test for perimeter air leakage. It is effectively, a test of the weather seal in the door stop.

Manufacturers generally test the narrow stile door, as this door with smaller aluminum (stile) components would offer the greatest amount of member deflection and leakage under specified air pressures. The other doors would be of greater strength and higher performance results.

If you would like further verification of this testing format, please feel free to contact Daniel Johnson at Architectural Testing, Inc., 1-651-636-3835. If you would like to further discuss the quality and performance of our products; Please contact me at 1-800-334-1533.

Sincerely,



Gary J. Geigler, CSI  
Engineering Manager