



Architectural Testing

ANSI/AAMA/WDMA STRUCTURAL TEST REPORT

Rendered to:

HURD MILLWORK COMPANY, INC.
520 South Whelen Avenue
Medford, Wisconsin 54451

ATI Report No: 06-30345.01

Test Date: 01/31/02

Report Date: 01/31/02

Expiration Date: 01/31/06

Series/Model: Monument 3-0 x 4-5.75 Vinyl Casement

Type: PVC Crank-out Casement Window

Test Procedure:

The test specimen was evaluated in accordance with ANSI/AAMA/WDMA 101/I.S. 2-97, "Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors," for conformance to the **Class C-C50 35 x 53** performance requirements. Uniform load structural testing was also performed per North Carolina Building Code 613.2-Mullions.

Test Specimen Description:

Overall Size: 35 -1/2" wide by 53 -1/4"

Sash Size: 33 -1/2" wide by 51 -1/4" high

Overall Area: 13.08 ft²

Finish: All vinyl was white.

Glazing: The sash was glazed using nominal 1" thick sealed insulating glass composed of two sheets of double strength clear annealed glass and a 3/4" thick aluminum spacer. The glass was set from the exterior against a continuous backbed of silicone and vinyl glazing beads were employed at the exterior.

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Test Specimen Description: (Con't)

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.187" backed by 0.320" high pile	1 row	Outer perimeter of sash
Q300x190 foam filled bulb	1 row	Interior perimeter of frame
QWS-530 foam filled bulb	1 row	Exterior perimeter of frame

Frame/Sash Construction: The frame and sash members were mitered and employed welded corner construction.

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Dual arm roto operator	1	Sill
10" metal 2-bar hinge w/tracks	2	Hinge side head and sill
Roto 2-point lock w/plastic strikes	1	Locking jamb/stile, located at tip of sash to centerline at 15 -1/2", 40 -1/2"
2 piece metal snubber	2	Hinge side jamb/stile located from tip of sash to centerline 17 -1/2", 38 -1/2"
Vinyl lift block	1	Frame sill

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
3/8" diameter hole	2	Exterior face of frame sill, 1 -1/2" each end
1/4" by 5/8" slot	2	Sill cavity, 3" each end
1/4" by 5/8" slot	2	Sash bottom rail, 3" each end

Installation: The window was installed into a nominal 2" by 6" wood buck/wall. The interior side of the integral nailing flange was sealed to the wood surround, as well as the nail head, and secured with 2" galvanized roofing nails spaced approximately 4" on center.

Test Results:

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
2.1.2	Air Infiltration ASTM E 283-91 @ 1.57 psf @ 6.24 psf	<0.01 cfm/ft ² <0.01 cfm/ft ²	0.30 cfm/ft ² -----
<i>The test specimen meets the performance levels specified in ANSI/AAMA/WDMA 101/I.S.2-97 for a C-C50 window.</i>			
2.1.3	Water Resistance ASTM E 547-96 @ 4.50 psf	No entry	No entry @ 4.50 psf
2.1.4.2	Uniform Load Structural ASTM E 330-97 Sash Top Rail @ 45.00 psf (positive) @ 45.00 psf (negative)	0.002" <0.001"	0.4% of L = 0.134" 0.4% of L = 0.134"
2.2.5.6.1	Vertical Deflection Test @ 60 lb	0.06"	< 0.25"/ft = 0.70"
2.2.5.6.2	Hardware Load Test @ 6.24 lbf/ft ²	No damage	No damage
2.1.7	Welded Corner Test	Meets as stated	Meets as stated
2.1.8	Forced Entry Resistance ASTM F 588-97 Grade 10	No entry	No entry @ Grade 10

Optional Performance:

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
4.3	Water Resistance ASTM E 547-96 @ 7.50 psf	No entry	No entry @ 7.50 psf

Test Results:(con't)

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
4.4.1	Uniform Load Deflection at Design Pressure* ASTM E 330-97 (60 seconds) Sash Top Rail		
	@ 50.00 psf (positive)	0.100"	No damage
	@ 50.00 psf (negative)	0.250"	No damage
4.4.2	Uniform Load Structural ASTM E 330-97 Sash Top Rail		
	@ 75.00 psf (positive)	0.003"	0.4% of L = 0.134"
	@ 75.00 psf (negative)	<0.001"	0.4% of L = 0.134"

* Not required for ANSI/AAMA/WDMA 101/I.S.2-97

Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product which may only be granted by the certification program Administrator.

Design Pressure Rating: For use in locations adhering to the S.B.C.C.I., S.F.B.C., S.F.B.C. Broward Edition, and where the pressure requirements as determined by ASCE 7 minimum design loads for buildings and other structures does not exceed design pressure ratings listed above.

ARCHITECTURAL TESTING, INC.

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