



AAMA/NWWDA 101/LS.2-97
TEST REPORT SUMMARY

Rendered to:

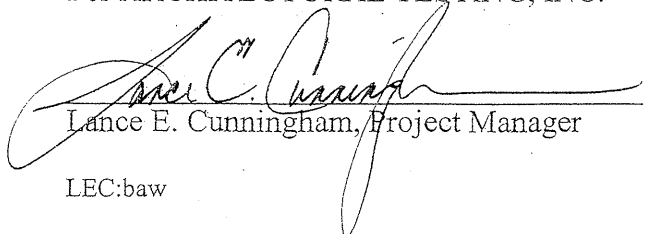
SIMONTON WINDOWS

SERIES/MODEL: 07-70
TYPE: PVC Double Hung Window (Non-Reinforced)

Title of Test	RESULTS	
	Test Specimen #1	Test Specimen #2
Rating	H-R25 48 x 80	H-R50* 36 x 60
Overall Design Pressure	25 psf	50 psf
Operating Force	27 lb max.	27 lb max.
Air Infiltration	0.06 cfm/ft ²	0.06 cfm/ft ²
Water Resistance	3.75 psf	7.50 psf
Structural Test Pressure	37.5 psf	75.0 psf
Deglazing	Passed	Passed
Forced Entry Resistance	Passed	Passed

Reference should be made to Report No. 01-41000.01 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.


Lance E. Cunningham, Project Manager

LEC:baw



Architectural Testing

AAMA/NWWDA 101/I.S.2-97 TEST REPORT

Rendered to:

SIMONTON WINDOWS
One Cochrane Avenue
Pennsboro, West Virginia 26415

Report No: 01-41000.01
Test Date: 02/14/02
Report Date: 03/13/02
Expiration Date: 02/14/06

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Simonton Windows to witness performance tests on two Series/Model 07-70, PVC double hung windows at their test facility in Pennsboro, West Virginia. The samples tested successfully met the performance requirements for the following ratings: Test Specimen #1: H-R25 48 x 80; Test Specimen #2: H-R50* 36 x 60.

General Note: An asterisk () next to the performance grade indicates that the size tested for optional performance was smaller than the Gateway test size for the product type and class.*

Test Specification: The test specimen was evaluated in accordance with AAMA/NWWDA 101/I.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.*

Test Specimen Description:

Series/Model: 07-70

Type: PVC Double Hung Window (Non-Reinforced)

Test Specimen #1: Gateway Performance Specimen H-R25 48 x 80

Overall Size: 4' 0" wide by 6' 8" high

Top Sash Size: 3' 7-13/16" wide by 3' 2-3/16" high

Bottom Sash Size: 3' 8-13/16" wide by 3' 3-3/16" high

Screen Size: 3' 7-3/4" wide by 3' 3-3/8" high

Glazing Type: 3/4" thick sealed insulating glass fabricated from two sheets of 0.087" thick annealed glass and a metal spacer system.

Reinforcement: No reinforcement



Test Specimen Description: (Continued)

Test Specimen #2: H-R50* 36 x 60

Overall Size: 3' 0" wide by 5' 0" high

Top Sash Size: 2' 7-13/16" wide by 2' 4-3/16" high

Bottom Sash Size: 2' 8-3/4" wide by 2' 5-3/16" high

Screen Size: 2' 7-11/16" wide by 2' 5-3/8" high

Glazing Type: 3/4" thick sealed insulating glass fabricated from two sheets of 0.087" thick annealed glass and a metal spacer system.

Reinforcement: No reinforcement

The following descriptions apply to all specimens.

Finish: All vinyl was white.

Glazing Details: The sash were exterior glazed with 3/4" thick sealed insulating glass fabricated from two sheets of 0.087" thick annealed glass and a metal spacer system using a silicone back-bedding and dual durometer snap-in vinyl glazing bead.

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.187" backed by 0.210" high pile with center fin	1 Row	Interior sill leg
0.250" diameter vinyl jacket foam-filled bulb	1 Row	Exterior of head adapter insert
0.187" backed by 0.250" high pile with center fin	1 Row	Top rail, exterior meeting rail, interior meeting rail, bottom sash stiles
0.187" backed by 0.250" high pile with center fin	2 Rows	Top sash stiles
0.187" backed by 0.340" high pile with center fin	1 Row	Exterior face of bottom sash stiles and exterior meeting rail
0.250" diameter, vinyl jacket foam-filled bulb	1 Row	Top rail
0.438" diameter, offset vinyl jacket/hollow foam-filled bulb	1 Row	Bottom rail
0.187" backed by 0.500" high vinyl jacket "C-shape" foam-filled bulb	1 Row	Bottom rail

Test Specimen Description: (Continued)

Frame Construction: The PVC frame was constructed using mitered and welded corner construction. A snap-in insert was installed in the interior pocket of the head.

Sash Construction: The PVC sash were assembled utilizing mitered and welded corner construction.

Screen Construction: The screen was constructed with roll-formed aluminum. The corners were square cut and secured using plastic corner keys. The fiberglass mesh screen was held-in-place with a flexible vinyl spline.

Hardware:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Metal cam lock and keeper	2	Interior meeting rail, 8" in from each end with adjacent keepers on exterior rail
Plastic tilt latch	4	Top corners of each sash
Metal pivot bar	4	Bottom corners of each sash
Constant force balance	4	Two per jamb three coils per balance
Vinyl sash stops	4	One at top of each interior jamb track and one at sill of each exterior jamb track

Drainage:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1-1/8" wide by 3/16" high weephole with cover	2	3-1/4" in from each corner of sill
3/16" diameter hole	4	Bottom rail and exterior meeting rail one 3/4" from each end
Cavity plug	2	Sill/jamb intersection, one at each end
1" wide by 1/8" high weepslot	2	Each end of intermediate sill leg located in sill hollow

Reinforcement: No reinforcement

Installation: The unit was installed in a 2" x 10" wood buck constructed of Spruce-Pine-Fir construction lumber. The unit was secured to the buck with two #8 screws per jamb and sealed with a silicone sealant. The screws were embedded into the test buck approximately 1-1/2".

Test Results:

The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
Test Specimen #1: Gateway Performance Specimen H-R25 48 x 80			
2.2.1.6.1	Operating Force	27 lbs	30 lbs max.
2.1.2	Air Infiltration (ASTM E 283) @ 1.57 psf (25 mph)	0.06 cfm/ft ²	0.30 cfm/ft ² max.
<i>Note #1: The tested specimen meets the performance levels specified in AAMA/NWWDA 101/I.S. 2-97 for air infiltration.</i>			
2.1.3	Water Resistance (ASTM E 547) (with and without screen) WTP = 2.86 psf	No leakage	No leakage
2.1.4.1	Uniform Load Deflection per ASTM E 330 (Measurements reported were taken on the exterior meeting rail) @ 22.5 psf (positive) @ 22.5 psf (negative)	0.821" 0.958"	See Note #2 See Note #2
<i>Note #2: The Uniform Load Deflection test is not an AAMA/NWWDA 101/I.S.2-97 requirement for this product designation. The data is recorded in this report for information only.</i>			
2.1.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the exterior meeting rail) @ 22.5 psf (positive) @ 22.5 psf (negative)	0.033" 0.032"	0.175" max. 0.175" max.
2.2.1.6.2	Deglazing Test per ASTM E 987 In operating direction at 70 lbs		
	Top rail	0.063"/13%	0.500"/100%
	Exterior meeting rail	0.031"/6%	0.500"/100%
	Interior meeting rail	0.063"/13%	0.500"/100%
	Bottom rail	0.031"/6%	0.500"/100%
	In remaining direction at 50 lbs		
	Top sash right stile	0.031"/6%	0.500"/100%
	Top sash left stile	0.031"/6%	0.500"/100%
	Bottom sash right stile	0.031"/6%	0.500"/100%
	Bottom sash left stile	0.031"/6%	0.500"/100%
2.1.7	Welded Corner Test	Meets as stated	Meets as stated

Test Results: (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
<u>Test Specimen #1: Gateway Performance Specimen H-R25 48 x 80 (Continued)</u>			
2.1.8	Forced Entry Resistance per AAMA 1302.5-76		
	Test A	No entry	No entry
	Test B	No entry	No entry
	Test C	No entry	No entry
	Test D	No entry	No entry
	Test E	No entry	No entry
	Test F	No entry	No entry
	Test G	No entry	No entry

Optional Performance

4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 3.75 psf	No leakage	No leakage
4.4.1	Uniform Load Deflection per ASTM E 330 (Measurements reported were taken on the exterior meeting rail)		
	@ 37.5 psf (positive)	1.534"	See Note #2
	@ 37.5 psf (negative)	1.770"	See Note #2
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the exterior meeting rail)		
	@ 37.5 psf (positive)	0.067"	0.175" max.
	@ 37.5 psf (negative)	0.082"	0.175" max.

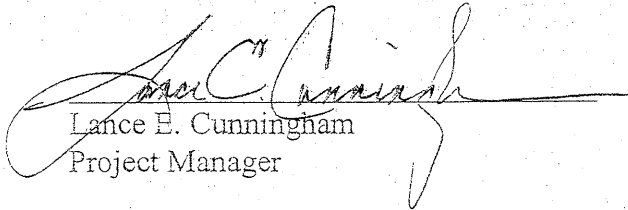
Test Specimen #2: H-R50* 36 x 60

Optional Performance

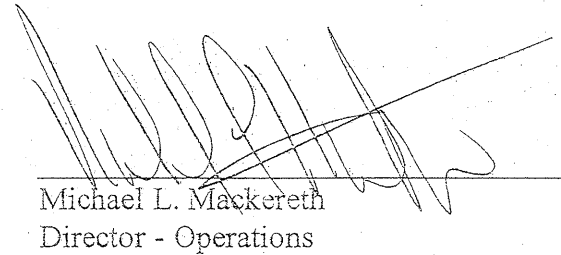
4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 7.50 psf	No leakage	No leakage
4.4.1	Uniform Load Deflection per ASTM E 330 (Measurements reported were taken on the exterior meeting rail)		
	@ 75.0 psf (positive)	0.948"	See Note #2
	@ 75.0 psf (negative)	1.012"	See Note #2
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the exterior meeting rail)		
	@ 75.0 psf (positive)	0.064"	0.127" max.
	@ 75.0 psf (negative)	0.051"	0.127" max.

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.

For ARCHITECTURAL TESTING, INC:



Lance E. Cunningham
Project Manager



Michael L. Mackereth
Director - Operations

LEC:baw
01-41000.01