



**AAMA/NWDA 101/I.S.2-97  
TEST REPORT SUMMARY**

**Rendered to:**

**SIMONTON WINDOWS**

**SERIES/MODEL: 75-75**

**TYPE: PVC Horizontal Sliding Window (XOX)**

Results				
Title of Test	Test Specimen #1	Test Specimen #2	Test Specimen #3	Test Specimen #4
Rating	HS-R20 100 x 60	HS-R45 100 x 48	HS-R30 84 x 60	HS-R55 84 x 48
Overall Design Pressure	20 psf	45 psf	30 psf	55 psf
Operating Force	6 lb max.	N/A	N/A	N/A
Air Infiltration	0.12 cfm/ft <sup>2</sup>	N/A	N/A	N/A
Water Resistance	6.75 psf	N/A	N/A	8.25 psf
Structural Test Pressure	30.0 psf	67.5 psf	45.0 psf	82.5 psf
Deglazing	Passed	N/A	N/A	N/A
Forced Entry Resistance	Grade 10	N/A	N/A	N/A

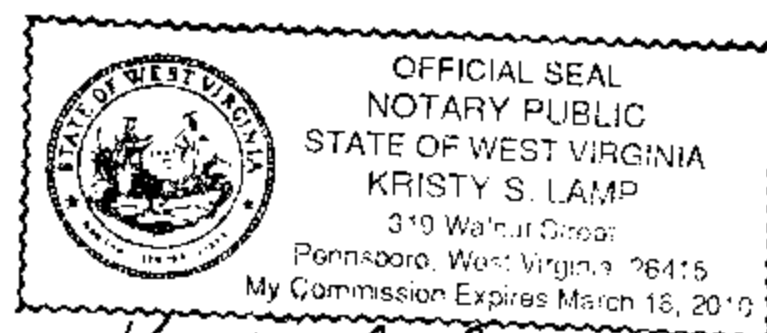
Reference should be made to Report No. 05-30305.01 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Digitally signed by Lynn George

Lynn George, Project Manager

LG:nlb





Architectural Testing

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

Rendered to:

SIMONTON WINDOWS  
One Cochrane Avenue  
Pennsboro, West Virginia 26415-9403

Report No: 05-30305.01  
Test Dates: 12/05/01  
And: 01/17/02  
Report Date: 02/12/02  
Expiration Date: 12/05/05

**Project Summary:** Architectural Testing, Inc. (ATI) was contracted by Simonton Windows to witness performance tests on Series/Model 75-75, PVC horizontal sliding windows at their test facility located in Pennsboro, West Virginia. The samples tested successfully met the performance requirements for the following ratings: Test Specimen #1 HS-R20 100 x 60; Test Specimen #2 HS-R45 100 x 48; Test Specimen #3 HS-R30 84 x 60; and Test Specimen #4 HS-R55 84 x 48. Test specimen descriptions and results are reported herein.

**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:** 75-75

**Type:** PVC Horizontal Sliding Window (Type XOX)

**Test Specimen #1:**

**Overall Size:** 8' 4" wide by 5' 0" high

**Operable Sash Size (2):** 1' 11-1/2" wide by 4' 7-3/4" high

**Fixed Sash Size:** 4' 2-7/16" wide by 4' 7-3/4" high

**Screen Size (2):** 1' 11-1/2" wide by 4' 7-11/16" high

**Glazing Type:** The operable sash were glazed with 3/4" thick sealed insulating glass fabricated with two 3/32" clear annealed sheets separated by a steel spacer system. The fixed sash was glazed with 3/4" thick sealed insulating glass fabricated with two 1/8" clear annealed sheets separated by a steel spacer system.

**Reinforcement:** No reinforcement utilized.

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**Test Specimen Description: (Continued)****Test Specimen #2:**

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

**Operable Sash Size (2):** 1' 11-1/2" wide by 3' 7-3/4" high

**Fixed Sash Size:** 4' 2-7/16" wide by 3' 7-3/4" high

**Glazing Type:** All sash were glazed with 3/4" thick sealed insulating glass fabricated with two 1/8" clear annealed sheets separated by a steel spacer system.

**Reinforcement:** (A2 reinforcement) The interior meeting stiles contained a rectangular shaped, extruded aluminum reinforcement measuring 0.748" x 0.472" x 0.062" (Reference drawing #56111). The exterior meeting stiles contained a custom shaped, extruded aluminum reinforcement measuring 0.650" x 0.489" x 0.094" (Reference drawing #19126).

**Test Specimen #3:**

**Overall Size:** 7' 0" wide by 5' 0" high

**Operable Sash Size (2):** 1' 7-1/2" wide by 4' 7-3/4" high

**Fixed Sash Size:** 3' 6-1/2" wide by 4' 7-3/4" high

**Glazing Type:** All sash were glazed with 3/4" thick sealed insulating glass fabricated with two 1/8" clear annealed sheets separated by a steel spacer system.

**Reinforcement:** (A2 reinforcement) The interior meeting stiles contained a rectangular shaped, extruded aluminum reinforcement measuring 0.748" x 0.472" x 0.062" (Reference drawing #56111). The exterior meeting stiles contained a custom shaped, extruded aluminum reinforcement measuring 0.650" x 0.489" x 0.094" (Reference drawing #19126).



**Test Specimen Description:** (Continued)

**Test Specimen #4:**

**Overall Size:** 7' 0" wide by 4' 0" high

**Sash Size (2):** 1' 7-3/8" wide by 3' 7-3/4" high

**Fixed Sash Size:** 3' 6-3/4" wide by 3' 7-3/4" high

**Screen Size (2):** 1' 7-1/2" wide by 3' 7-3/4" high

**Glazing Type:** All sash were glazed with 3/4" thick sealed insulating glass fabricated with two 1/8" clear annealed sheets separated by a steel spacer system.

**Reinforcement:** (A2 reinforcement) The interior meeting stiles contained a rectangular shaped, extruded aluminum reinforcement measuring 0.748" x 0.472" x 0.062" (Reference drawing #56111). The exterior meeting stiles contained a custom shaped, extruded aluminum reinforcement measuring 0.650" x 0.489" x 0.094" (Reference drawing #19126).

*The following descriptions apply to all specimens.*

**Finish:** All vinyl was white.

**Glazing Details:** The insulating glass was set from the exterior onto a double-sided adhesive tape and secured with single leaf dual durometer vinyl glazing beads.

**Weatherstripping:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.187" backed by 0.460" high pile with center fin	1 Row	Lock stile
0.187" backed by 0.250" high pile with center fin	2 Rows	Top and bottom rails, jamb stiles
0.187" backed by 0.340" high pile with center fin	1 Row	Exterior side of keeper stile
0.187" backed by 0.300" high pile with center fin	1 Row	Interior side of keeper stile

**Test Specimen Description:** (Continued)

**Frame Construction:** The PVC frame was assembled using mitered and welded corner construction. Rigid PVC roller tracks were applied to the sill. The center fixed sash was fastened to the head and sill using four nylon blocks, one at each sash corner. Each nylon block was fastened with one screw into the sash and two screws into the frame.

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

**Screen Construction:** The screen was constructed from extruded aluminum. The corners were square cut and secured with plastic corner keys. Fiberglass screen cloth was held-in-place with a flexible spline.

**Hardware:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Metal cam lock and keepers	4	Meeting stiles, 14" from each end
Plastic dual roller assembly	4	Bottom sash rail, one at each end
PVC sash anti-lift	2	Head, interior track at operable sash

**Drainage:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1-1/16" by 3/16" weepslot (with flap)	2	Exterior sill face, 4" from each end
1" by 3/16" weepslot	4	Interior sill track, 4" from each end; Intermediate sill wall, one at each end
1/4" diameter weephole	2	Exterior sill track, 4" from each end
5/32" diameter weephole	8	Bottom rails, one at each end Sill screen track, one at each end

**Installation:** The window was installed into a wood buck constructed of Spruce-Pine-Fir construction lumber. The unit was sealed with silicone caulking at the exterior and interior perimeter with the exception of an approximate 6" void at each interior sill corner. The unit was secured to the buck using four #8 wood screws, one at the top and bottom of each jamb (embedded 1-1/2" into the wooden test buck).



**Test Results:**

The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
<b><u>Test Specimen #1:</u></b> HS-R20 100 x 60			
2.2.1.5.1	<u>Operating Force</u> <u>Left Sash</u>		
	Open	6 lbs	20 lbs max.
	Close	5 lbs	20 lbs max.
	<u>Right Sash</u>		
	Open	6 lbs	20 lbs max.
	Close	6 lbs	20 lbs max.
2.1.2	Air Infiltration per ASTM E 283 (See Note #1) @ 1.56 psf (25 mph)	0.12 cfm/ft <sup>2</sup>	0.3 cfm/ft <sup>2</sup> max.
<i>Note #1: The tested specimen meets the performance levels specified in LAMA/NWDA 101/L.S. 2-97 for air infiltration.</i>			
2.1.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 2.86 psf	No leakage	No leakage
2.1.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the right meeting stile) @ 22.5 psf (positive) @ 22.5 psf (negative)	0.211" 0.111"	0.223" max. 0.223" max.
2.2.1.6.2	Deglazing Test per ASTM E 987		
	In operating direction at 70 lbs		
	Handle Stile	0.090"/18%	0.500"/100%
	Meeting Stile	0.125"/25%	0.500"/100%
	In remaining direction at 50 lbs		
	Top Rail	0.060"/12%	0.500"/100%
	Bottom Rail	0.060"/12%	0.500"/100%



**Test Results:**

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
<b><u>Test Specimen #1:</u></b> HS-R20 100 x 60 (Continued)			
2.1.7	Welded Corner Test	Meets as stated	Meets as stated
2.1.8	Forced Entry Resistance per ASTM F 588-97		
	Type: A		
	Grade: 10		
	Hand & Tool Manipulation	No entry	No entry
	Test A1 through A7	No entry	No entry
	Hand & Tool Manipulation	No entry	No entry
<u>Optional Performance</u>			
4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 6.75 psf	No leakage	No leakage
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the right meeting stile)		
	@ 30.0 psf (positive)	0.211"	0.223" max.
	@ 30.0 psf (negative)	0.208"	0.223" max.
<b><u>Test Specimen #2:</u></b> HS-R45 100 x 48			
<u>Optional Performance</u>			
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the exterior meeting stile)		
	@ 67.5 psf (positive)	0.139"	0.175" max.
	@ 67.5 psf (negative)	0.128"	0.175" max.
<b><u>Test Specimen #3:</u></b> HS-R30 84 x 60			
<u>Optional Performance</u>			
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the exterior meeting stile)		
	@ 45.0 psf (positive)	0.156"	0.223" max.
	@ 45.0 psf (negative)	0.169"	0.223" max.



**Test Results:** (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
<b><u>Test Specimen #4:</u></b> HS-R55 84 x 48			
<u>Optional Performance</u>			
4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 8.25 psf	No leakage	No leakage
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the exterior meeting stile)		
	@ 82.5 psf (positive)	0.156"	0.175" max.
	@ 82.5 psf (negative)	0.140"	0.175" 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:

Digitally signed by Lynn George

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05-30305.01