

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

Rendered to:

NEWTOWN MANUFACTURING

**SERIES/MODEL: 2500 Double Hung
TYPE: PVC Double Hung Window**

	Summary of Results	
Title	Test Specimen #1	Test Specimen #2
AAMA Rating	H-LC25 52 x 77	H-LC55* 44 x 60
Operating Force	28 lbs max.	N/A
Air Infiltration	0.16 cfm/ft²	N/A
Water Resistance Test Pressure	8.25 psf	8.25 psf
Uniform Load Deflection Test Pressure	±25.0 psf	±55.0 psf
Uniform Load Structural Test Pressure	±37.5 psf	±82.5 psf
Deglazing	Pass	N/A
Forced Entry Resistance	Grade 10	N/A

Reference should be made to ATI Report No. 07-30352.03 for complete test specimen description and data



Architectural Testing

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

Rendered to:

NEWTOWN MANUFACTURING
55 Thayer Street
Wilkes-Barre, Pennsylvania 18702

Report No: 07-30352.03
Test Date: 03/24/03
Report Date: 05/30/03
Expiration Date: 03/24/07

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Dayton Technologies, LLC to witness tests performed at their facility at Monroec, Ohio, on two Dayton Series/Model 8800, PVC double hung windows. The samples tested successfully met the performance requirements for the following ratings: Test Specimen #1: H-LC25 55 x 77 and Test Specimen #2: H-LC55* 44 x 60. This test report is a reissue of the original report 07-30352.01. This report is issued in the name of Newtown Manufacturing through written authorization of Dayton Technologies, L.L.C. Test specimen descriptions and results are reported herein.

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 Procedure: 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: 2500 Double Hung

Type: Double Hung Window

Test Specimen #1: H-LC25 52 x 77

Overall Size: 4' 4" wide by 6' 5" high

Upper Sash Size: 4' 0-5/8" wide by 3' 1-7/8" high

Lower Sash Size: 4' 0-1/2" wide by 3' 1-7/8" high

Screen Size (half): 4' 0" wide by 3' 1-1/2" high
(full): 4' 0-1/4" wide by 6' 1-7/8" high

130 Derry Court
York, PA 17402-9405
phone: 717.764.7700
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www.archtest.com

Test Specimen Description: (Continued)**Test Specimen #1: H-LC25 52 x 77 (Continued)**

Glass Type: Nominal 7/8" thick insulating glass was fabricated from two 1/8" thick annealed sheets with a Swiggle® spacer system.

Reinforcement: Steel reinforcement was utilized in all stiles, top sash head rail, bottom lift rail and keeper rail. See Dayton Technologies drawing #364A.

Test Specimen #2: H-LC55* 44 x 60

Overall Size: 3' 8" wide by 5' 0" high

Upper Sash Size: 3' 4-1/2" wide by 2' 5-3/8" high

Lower Sash Size: 3' 4-5/8" wide by 2' 5-7/16" high

Screen Size (half): 3' 4-1/4" wide by 2' 4-7/8" high
(full): 3' 4-1/4" wide by 4' 9-7/16" high

Glass Type: Nominal 7/8" thick insulating glass fabricated from two 1/8" thick annealed sheets with a Swiggle® spacer system.

Reinforcement: Steel reinforcement was utilized in the lock meeting rail only. See Dayton Technologies drawing #364A.

The following descriptions apply to all specimens.

Glazing Details: Both sash were sealed on the exterior with 3/8" by 1/8" butyl tape and secured on the with exterior PVC snap-in beads.

Finish: White PVC.

Test Specimen Description: (Continued)

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
0.250" high by 0.187" back pile with center fin	1 Row	Sill
0.400" high by 0.187" back pile with center fin	1 Row	Lock rail
0.300" high by 0.187" back pile with center fin	3 Rows	Stiles and head rail
0.300" high by 0.187" back pile with center fin	1 Row	Bottom lift rail
Amcsbury bulb (32680)	1 Row	Bottom lift rail
Schlegal foam flap (QEZ374)	1 Row	Keeper rail

Frame Construction: The frame was constructed of extruded PVC members. Corners were mitered and thermally welded.

Sash Construction: The sash was constructed of extruded PVC members. Corners were mitered and thermally welded.

Screen Construction: The screen frame was constructed of extruded aluminum with zinc die cast corner keys. The fiberglass mesh was secured with a flexible spline.

Test Specimen Description: (Continued)**Hardware:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Cam lock (52 x 77)	2	9-1/2" from jambs, 29-1/2" apart
(44 x 60)	2	9-1/2" from jambs, 21-1/2" apart
Tilt latch	4	Upper sash corners
Tilt pin	4	Lower sash corners
Spiral balancer	2	Top sash, in jambs
Coil balancer	2	Bottom sash, in jambs
Jamb separator (with springs)	2	One per jamb, at middle of jamb in jamb pocket

Drainage: Sloped sill

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1-1/4" x 1/8" weepslot	2	Exterior sill leg
3/8" x 1/8" weepslot	12	All rails

Installation: The test sample was installed into a nominal 2" by 10" #2 Southern pine wood buck with #8 by 3" steel screws into jambs, 2-1/2" down from head and 2-1/2" up from sill (four total). Exterior perimeter was sealed with silicone.

Test Results:

The results are tabulated as follows.

Test Specimen #1: H-LC25 52 x 77

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
2.2.1.6.1	Operating Force Upper Sash Lower Sash	28 lbs 28 lbs	35 lbs max. 35 lbs max.
2.1.2	Air Infiltration per ASTM E 283 @ 1.56 psf (25 mph)	0.16 cfm/ft ²	0.30 cfm/ft ² max.
<i>Note #1: The tested specimen meets the performance levels specified in AAMA/NWDA 101/I.S. 2-97 for air infiltration</i>			
2.1.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 3.75 psf	No leakage	No leakage
2.1.4.1	Uniform Load Deflection per ASTM E 330 (Deflections reported were taken on the meeting rail) (Loads were held for 52 seconds) @ 25.0 psf (positive) @ 25.0 psf (negative)	0.45" 0.66"	See Note #2 See Note #2
<i>Note #2: The Uniform Load Deflection test is not an AAMA/NWDA 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 meeting rail) (Loads were held for 10 seconds) @ 37.5 psf (positive) @ 37.5 psf (negative)	0.03" 0.12"	0.190" max. 0.190" max.

Test Results: (Continued)**Test Specimen #1: H-LC25 52 x 77 (Continued)**

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
2.2.1.6.2	Deglazing Test per ASTM E 987 In operating direction @ 70 lbs		
	Upper Sash		
	Top Rail	0.03"/6%	0.500"/100%
	Meeting Rail	0.03"/6%	0.500"/100%
	Lower Sash		
	Meeting Rail	0.03"/6%	0.500"/100%
	Bottom Rail	0.03"/6%	0.500"/100%
	In remaining direction @ 50 lbs		
	Upper Sash		
	Left Stile	0.01"/2%	0.500"/100%
	Right Stile	0.01"/2%	0.500"/100%
	Lower Sash		
	Left Stile	0.01"/2%	0.500"/100%
	Right Stile	0.01"/2%	0.500"/100%
2.1.7	Welded Corner Test	Meets as stated	Meets as stated
2.1.8	Forced Entry Resistance per ASTM F 588		
	Type A		
	Grade 10		
	Lock Manipulation Test	No entry	No entry
	Tests A1 through A7	No entry	No entry
	Lock Manipulation Test	No entry	No entry
<u>Optional Performance</u>			
4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 8.25 psf	No leakage	No leakage

Test Results: (Continued)

Test Specimen #2: H-LC55* 44 x 60

Optional Performance:

4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 8.25 psf	No leakage	No leakage
4.4.1	Uniform Load Deflection per ASTM E 330 (Deflections reported were taken on the meeting rail) (Loads were held for 52 seconds)		
	@ 55.0 psf (positive)	0.68"	See Note #2
	@ 55.0 psf (negative)	0.78"	See Note #2


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.

4.4.2	Uniform Load Structural per ASTM E 330 (Permanent sets reported were taken on the meeting rail) (Loads were held for 10 seconds)		
	@ 82.5 psf (positive)	0.07"	0.158" max.
	@ 82.5 psf (negative)	0.10"	0.158" max.

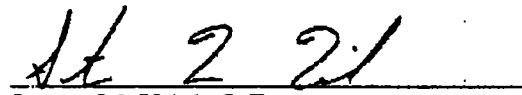
This report is reissued in the name of Newtown Manufacturing through written authorization of Dayton Technologies, LLC to whom the original report was rendered. The original Dayton Technologies, LLC Report No. is 07-30352.01.

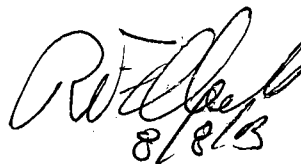
Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product which may only be granted by the certification program administrator. This report may not be reproduced, except in full, without the approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:


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07-30352.03


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DOCUMENT CONTROL ADDENDUM #07-30352.00

Current Issue Date: 05/30/03

Report No.: 07-30352.01

Requested by: Dennis Cox, Dayton Technologies, LLC

Purpose: AAMA/NWWDA 101/I.S. 2-97 testing on two Series/Model 8800 PVC double hung PVC windows.

Issued Date: 04/22/03

Comments:

Report No.: 07-30352.02

Requested by: Dennis Cox, Dayton Technologies, LLC and Carl Slocumb, Newtown Manufacturing

Purpose: Reissue Report No. 07-30352.01 in the name of Newtown Industries.

Issued Date: 05/28/03

Comments: Certification copy of report to Jeanie Pyor at NAMI.
Original report also sent to Mike Getz, Florida Window Masters, Inc.

Report No.: 07-30352.03

Requested by: Dennis Cox, Dayton Technologies, LLC and Carl Slocumb, Newtown Manufacturing

Purpose: Revise Report No. 07-30352.02.

Issued Date: 05/28/03

Comments: Florida P.E. seal required on report
Certification copy of report to Tanya Wix at NAMI.
Original report also sent to Mike Getz, Florida Window Masters, Inc.