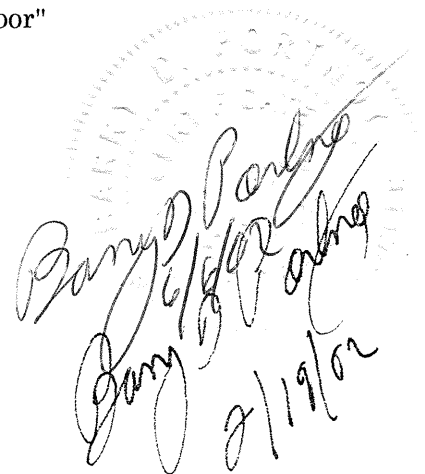


STANEK VINYL WINDOWS

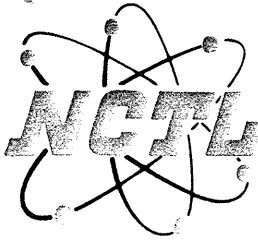
STRUCTURAL PERFORMANCE TEST REPORT

Model "Ultra Series 2000 3 Lite Patio Door"
OXO Sliding Glass Door

NCTL-110-7012-2



Danny Parlane
Danny Parlane
2/19/02



NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17402 • TELEPHONE (717) 846-1200
FAX (717) 767-4100
www.nctlinc.com

STRUCTURAL PERFORMANCE TEST REPORT

Report No: NCTL-110-7012-2
Test Date: 10/14/99
Report Date: 10/22/99
Expiration Date: 10/31/03
Revised Date: 01/11/00

Client: Stanek Vinyl Windows
4582 Willow Parkway
Cuyahoga Heights, OH 44125

Test Specimen: Stanek Vinyl Windows' Model "Ultra Series 2000 3 Lite Patio Door" Type
OXO Sliding Glass Door (SGD-R60 108x83).

Test Method: AAMA/NWWDA 101/I.S.2-97, "Voluntary Specifications for Aluminum, Vinyl
(PVC), and Wood Windows and Glass Doors."

TEST SPECIMEN DESCRIPTION

General: The test specimen was a three panel type OXO vinyl sliding glass door measuring 108" wide by 82-1/2" high overall. The active panel measured 36-3/4" wide by 80-1/4" high; the fixed panels measured 36-3/4" wide by 80-1/4" high. A rigid vinyl combination cover/weatherstrip holder/ interlock was used at the right active stile and right fixed panel meeting stile, left fixed panel stile and intermediate frame stile. A rigid vinyl intermediate frame stile was fastened with four (4) screws at the head and sill was located at the left fixed panel meeting stile. A rigid vinyl solid insert measuring 1" by 1/4" was located at the length of the intermediate frame stile hollow. A rigid vinyl cover was snap-fitted at the length of the fixed meeting stile and intermediate frame stile. A rigid vinyl fixed panel retainer was located at the length of both fixed panel bottom rails. Both fixed panels were fastened to the sill and head with three (3) screws and four (4) screws into each jamb. The left fixed panel was fastened to the intermediate frame stile with five (5) evenly spaced screws. A rigid vinyl screen retainer track was fastened with eight (8) equally spaced screws at the exterior of the left fixed panel stile. An extruded aluminum screen roller track was located at length of the exterior sill surface. One extruded aluminum combination roller track/ vertical sill leg measuring 68-1/2" in length was located at the active interior sill track. The intermediate frame stile employed a metal keeper measuring 52" in length fastened with eight (8) equally spaced screws and located at 12" from the sill. One claw-type four point/single handle door lock assembly was located at the length of the active lock stile and was fastened with fifteen (15) evenly spaced screws. One cast metal and rubber stop fastened with two (2) screws was located at 1-1/2" from the right end of the head/jamb corner. A rigid vinyl panel stop block measuring 1" by 3/4" by 1-1/2" fastened with one (1) screw was located at the top of the active jamb stile. One adjustable metal double roller assembly was used at each end of the active bottom rail. The frame corners were of welded/mitered corner construction at the head and four (4) screw butt-type corner construction at the sill corners. The panel corners were of welded/mitered corner construction. An extruded aluminum reinforcement tube measuring 0.053" thick was fastened with four (4) screws in all panel stiles and two (2) screws in all panel rails and filled the length of all panel hollows and intermediate frame stile.

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Phyllis A. Perkins
2/19/02

Glazing: All panels were interior glazed using sealed insulating glass with a dual leaf dual durometer back bedding and a dual leaf dual durometer snap-fit glazing bead. The overall insulating glass thickness was 1.125" consisting of a "Heat Mirror SC75" film suspended between two lites of double strength tempered glass and two air spaces created by Bayform's "Warm Edge" spacer system. A low emissivity coating was applied to glazing surface no. 3.

Weatherseals: A single strip of center fin weatherstrip (0.260" high) was located at the active meeting stile cover/ interlock, the right fixed panel meeting stile cover/ interlock, the active bottom rail, both jambs and the head. A double strip of center fin weatherstrip (0.260" high) was located at the active top rail, active lock stile and the sill. A single strip of adhesive-backed open cell foam measuring 3" by 1" by 1/2" was located at each end of the right fixed meeting stile and the right fixed panel cover/interlock. An adhesive-backed polypile pad measuring 2" by 1" by 0.500" was located at the head interior track above the right fixed panel meeting stile. An adhesive-backed polypile pad measuring 2" by 1/4" by 0.500" was located in the head at the exterior of the right fixed panel meeting stile. An adhesive-backed center fin pad measuring 2" by 1/4" by 0.500" was located at the sill at the exterior of the right fixed panel meeting stile. An adhesive-backed center fin pad measuring 2" by 1" by 0.500" was located at the sill interior track above the right fixed panel meeting stile. An open cell foam filled both fixed bottom rail hollows.

Weeps: One (1) weep hole measuring 3/8" in diameter was located at 1-1/4" from each end and at midspan of all panel bottom rail glazing channels. One (1) weep hole measuring 3/16" in diameter was located at 5-3/4" from each end of the exterior horizontal bottom rail surface of all panels. One (1) weep hole measuring 5/16" in diameter was located at 3" from each end of the fixed panel retainer located under each fixed panel bottom rail.

Interior & Exterior Surface Finish: White vinyl (PVC).

Sealant: The interior and exterior connecting perimeters were sealed with a silicone sealant. The intermediate frame stile cover and left fixed panel cover were sealed with an adhesive sealant. The intermediate frame stile ends were sealed with a silicone sealant.

Screen: An insect screen measuring 36" wide by 81-1/2" high was of mitered type corner construction with staked-in-place steel corner gussets. The screen employed fiberglass mesh cloth with a hollow vinyl spline, one pull handle, one weatherseal and one adjustable metal spring loaded roller at each end of the top and bottom rails.

TEST RESULTS


<u>Par. No.</u>	<u>Title of Test & Method</u>	<u>Measured</u>	<u>Allowed</u>
2.2.19.5.1	Operating Force		
	Active Panel		
	break-away	18 lbf	25 lbf
	open	16 lbf	20 lbf
	close	13 lbf	20 lbf

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 2/19/02

<u>Par. No.</u>	<u>Title of Test & Method</u>	<u>Measured</u>	<u>Allowed</u>
2.2.19.5.2	<i>Deglazing - ASTM E987</i>		
	<i>Active Panel - Interior</i>		
	<i>Top Rail (50 lbf)</i>	1.8 % (0.009")	<100%
	<i>Bottom Rail (50 lbf)</i>	2.2% (0.011")	<100%
	<i>Jamb Stile (70 lbf)</i>	4.2% (0.021")	<100%
	<i>Meeting Stile (70 lbf)</i>	3.6 % (0.018")	<100%
	<i>Active Panel - Exterior</i>		
	<i>Top Rail (50 lbf)</i>	1.6% (0.008")	<100%
	<i>Bottom Rail (50 lbf)</i>	2.0 % (0.010")	<100%
	<i>Jamb Stile (70 lbf)</i>	4.6 % (0.023")	<100%
	<i>Meeting Stile (70 lbf)</i>	4.0 % (0.020")	<100%
2.1.2	<i>Air Infiltration - ASTM E283</i>		
	<i>0.57 psf (15 mph)</i>	0.1 cfm/ft ² (0.05 cfm/ft ²)	-----
	<i>1.57 psf (25 mph)</i>	0.1 cfm/ft ² (0.09 cfm/ft ²)	0.3 cfm/ft ²
2.1.3	* <i>Water Resistance - ASTM E547</i>		
	<i>5.0 gph/ft²</i>		
	<i>WTP = 2.86 psf</i>	No Leakage	No Leakage
2.1.4.2	** <i>Uniform Load Structural - ASTM E330</i>		
	<i>22.5 psf Exterior</i>	0.011"	0.324"
	<i>22.5 psf Interior</i>	0.013"	0.324"
2.1.7	<i>Welded Corner</i>		Meets As Stated
2.1.8	<i>Forced Entry Resistance - ASTM F842</i>		
	<i>Level 10</i>		Meets As Stated
	<i>(See Appendix A for test results)</i>		

OPTIONAL PERFORMANCE

4.3	* <i>Water Resistance - ASTM E547</i>		
	<i>5.0 gph/ft²</i>		
	<i>WTP = 9.00 psf</i>	No Leakage	No Leakage
4.4.2	** <i>Uniform Load Structural - ASTM E330</i>		
	<i>90.0 psf Exterior</i>	0.189"	0.324"
	<i>90.0 psf Interior</i>	0.102"	0.324"
	* <i>Tested with and without screen</i>		
	** <i>No glass breakage or permanent damage causing the unit to be inoperable</i>		


 PH [Signature]
 Gary Portnoy
 2/19/02

TEST COMPLETED 10/14/99

The tested specimen meets (or exceeds) the performance levels specified in Table 2.1 of AAMA/NWWDA 101/I.S.2-97 for air infiltration. The listed results were secured by using the designated test methods and indicate compliance with the performance requirements of the referenced specification paragraphs for the SGD-R60 108x83 product designation.

Detailed drawings were available for laboratory records and comparison to the test specimen at the time of this report. A copy of this report along with representative sections of the test specimen will be retained by NCTL for a period of four (4) years. The results obtained apply only to the specimen tested. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen may be drawn from this test. This report does not constitute certification of the product which may only be granted by a certification program validator.

NATIONAL CERTIFIED TESTING LABORATORIES

Douglas R. Young (amb)

DOUGLAS R. YOUNG
Technician

Marc A. Cramer

MARC A. CRAMER
Acting Manager of Testing Services

DRY/amb

BB 6/16/02
Darryl Parkes
10/19/02

APPENDIX A

Forced Entry Resistance Test Results

Test Method: *ASTM F588-85 (94), "Standard Test Method for Resistance of Window Assemblies to Forced Entry, Excluding Glazing".*

TEST RESULTS

<u>Paragraph No.</u>	<u>Loads</u>	<u>Duration</u>	<u>Measured</u>	<u>Allowed</u>
7.0-Hand Manipulation		5 Minutes	No Entry	No Entry
8.0-Tool Manipulation		5 Minutes	No Entry	No Entry
9.1.1.1-Test 1	150 lbf	2 Minutes	No Entry	No Entry
9.1.1.2-Test 2	150 & 75 lbf Interior	2 Minutes	No Entry	No Entry
9.1.1.3-Test 3	150 & 75 lbf Exterior	2 Minutes	No Entry	No Entry
9.1.1.4-Test 4	150 lbf	2 Minutes	No Entry	No Entry
9.1.1.5-Test 5	150 & 75 lbf Interior	2 Minutes	No Entry	No Entry
9.1.1.6-Test 6	150 & 75 lbf Exterior	2 Minutes	No Entry	No Entry
9.1.1.7-Test 7	150 & 75 & 25 lbf Interior	2 Minutes	No Entry	No Entry
9.1.1.8				
7.0-Hand Manipulation		5 Minutes	No Entry	No Entry
8.0-Tool Manipulation		5 Minutes	No Entry	No Entry
9.1.2.1-Test 8	150 lbf	2 Minutes	No Entry	No Entry
9.1.2.2-Test 9	150 & 75 lbf	2 Minutes	No Entry	No Entry
9.1.2.3-Test 10				
7.0-Hand Manipulation		5 Minutes	No Entry	No Entry
8.0-Tool Manipulation		5 Minutes	No Entry	No Entry

A circular stamp is partially visible, containing the text "NATIONAL CENTER FOR TESTING & LABORATORY". Overlaid on the stamp is a handwritten signature in black ink that reads "Baldor Palma" followed by "Baldor Palma" and "2/19/08".