

NATIONAL CERTIFIED TESTING LABORATORIES

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NCTL REPORT NO: 210-2778-1,2,3
TEST DATE: 02/19/02
REPORT DATE: 04/09/02
EXPIRATION DATE: 02/19/07

DC Not No: 02005

NCTL Certification No: 01-0312.02

Test Requested By: Stanek Vinyl Windows
4582 Willow Parkway
Cuyahoga Heights. OH 44125

Tests Conducted: Dade County Building Code Compliance Office Protocol PA 201-94, Impact Test Procedures. Dade County Building Code Compliance Office, PA 202-94, "Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components using Uniform Static Air Pressure." Dade County Building Code Compliance Office PA 203-94, "Criteria For Testing Products Subjected To Cyclic Pressure Loading."

Design Pressures:

Specimen 1 (PA-202)	Fixed Vinyl Window	+65 psf. -65 psf.
Specimen 1,2 & 3 (PA-201 / PA-203)	Fixed Vinyl Window	+40 psf. -40 psf.

(1) DESCRIPTION OF UNIT:

Model Designation: Stanek Vinyl Window Ultra Series "4000-1099" Extruded Vinyl Fixed Window.

Overall Size:

Specimens 1,2,3 Ultra "4000-1099" Frame 72.250" wide x 74.500" high x 3.250" deep

Configuration:

Specimens 1,2,3 O

No. & Size of Frame:

Specimens 1,2,3 1 lite (1) Direct Glazed 72.500" x 74.500"

(2) MATERIAL CHARACTERISTICS:

Frame and Sash material: Extruded Vinyl (PVC) Lineals.

Frame Construction:**Frame Dimensions:**

Specimen Nos. 1,2,3

3.250" wide by 1.683" high.

Each main frame member was constructed from rigid PVC lineals. Typical wall thickness ranged from 0.080" to 0.065". Each corner was of welded mitered corner construction. The threshold was constructed from rigid PVC and utilized an interior vertical leg height of 1.683".

Glazing:

Glazing Material: Each frame consisted of "Protective Glass industries" 1.125" glass utilizing the following materials from exterior to interior: 3/16" thick heat strengthened glass - 7 mil film - 0.188" air space - 0.125" thick polycarbonate - 3/16" air space - 7 mil film - 3/16" heat strengthened glass.

Glazing Method: Each specimen was interior glazed with a snap-in dual durometer extruded PVC glass stop measuring 0.552" wide by 0.720" high and wet glazed with GE Silicones "Silglaze" II SCS2800 Silicone Sealant on the horizontal and vertical glazing legs of the main frame members. All glass had a 0.800" bite.

Daylight Opening: Each specimen daylight opening (Specimens 1,2 & 3) measured 70.625" wide by 68.625" high.

Weather-stripping:

	<u>Quantity</u>	<u>Location</u>
Two (2) leaf dual durometer	One (1)	Perimeter of frame

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 [Handwritten Signature: B. G. G. / 6/6/02]

 [Handwritten Signature: J. J. G. / 5/23/02]

Hardware: N/A

Weep holes: N/A

Reinforcement: N/A

Sealant: Latex caulking as needed to seal unit into rough opening.

Insect Screen: N/A

(3) INSTALLATION:

Screws and Method of Attachment:

Sill:

Specimens 1,2,3: Four (4) No. 8 x 2-1/2" screws located at 12", 28", 44" and 60" from left end of sill.

Header:

Specimens 1,2,3: Four (4) No. 8 x 2-1/2" screws located at 12", 28", 44" and 60" from the left end of the head.

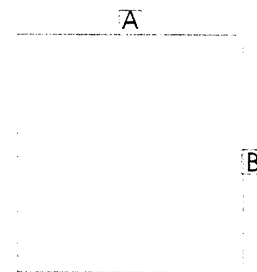
Both Jamb:

Specimens 1,2,3: Four (4) No.8 x 2-1/2" screws located 12, 28.750", 45.500" and 62" from lower edge.

(4) SEQUENCE OF TESTS PERFORMED:

Test Sequence: PA 202

1. Air Infiltration
2. 1/2 Test Pressure Positive
3. 1/2 Test Pressure Negative
4. Design Pressure Positive
5. Design Pressure Negative
6. Water Infiltration Positive Direction
7. Full Test Pressure Positive
8. Full Test Pressure Negative
9. Forced Entry



Deflection Measurements

Fixed Units' deflections were measured with two (2) 1" Federal dial indicators

Location A: Mid-span of head

Location B: Mid-span of right jamb.

6/6/02
4/2/02

AIR INFILTRATION

Air Infiltration Tests were conducted in accordance with PA 202-94.

Specimen 1 <u>Q</u> :	Air at 1.57 psf	Measured <0.01"cfm/ft ²	Allowable 0.30" cfm/ft ²
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WATER INFILTRATION TEST

Water Infiltration Test was conducted in accordance with PA 202-94.

Specimen 1 <u>Q</u> :	Water @ 9.75.0 psf. load for 15 minutes No water penetration over sill	Result: Passed
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STATIC AIR PRESSURE TESTS

Static Tests were conducted in accordance with PA 202-94.

Specimen 1 Q:
Design Load + 65 psf, - 65 psf.
Time: 30 sec

	<u>Location A</u>		<u>Location B</u>	
<u>Positive Loads</u>	<u>Defl.</u>	<u>Set</u>	<u>Defl.</u>	<u>Set</u>
1/2 Test (48.75 psf)	N/A	N/A	N/A	N/A
Design (65.00 psf)	0.070"	0.010"	0.040"	0.000"
Test (97.5 psf)	0.120"	0.030"	0.050"	0.010"

Design Load + 65 psf, - 65 psf.
Time: 30 sec

	<u>Location A</u>		<u>Location B</u>	
<u>Negative Loads</u>	<u>Defl.</u>	<u>Set</u>	<u>Defl.</u>	<u>Set</u>
1/2 Test (48.75 psf)	N/A	N/A	N/A	N/A
Design (65.00 psf)	0.010"	0.020"	0.040"	0.010"
Test (97.5 psf)	0.110"	0.030"	0.070"	0.010"

Deflection Readings are maximum. Maximum Deflection allowed $L/180 = 74.500"/180 = 0.413"$
(Applies to jamb only)
Allowable Perm. Set (0.4% of 74.500" span = 0.298")

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FORCED ENTRY RESISTANCE

Forced Entry Resistance Tests were conducted in accordance with AAMA1302.5-76

<u>Specimen 1</u>	<u>Measured</u>	<u>Allowed</u>
Paragraph A	0"	1/2"
Paragraph B	0"	1/2"
Paragraph C	0"	1/2"
Paragraph D,E,F	0"	1/2"
Paragraph E	0"	1/2"

LARGE MISSILE IMPACT TEST

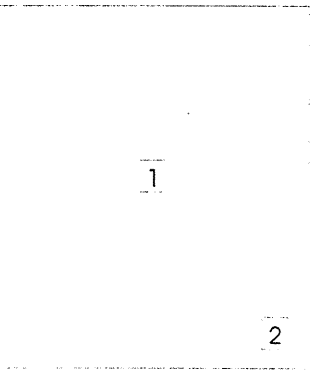
Impact tests were conducted in accordance with DCBCCD PA 201-94

Note:

X measurement from left edge of test specimen.

Y measurement from top edge of test specimen.

Type and weight of missile: #2 Southern Yellow Pine 2x4, Length approx. 89-1/4" & 9 lb.



Specimen 1:		Fixed Window (O)		
Impact Number	Impact Location	Speed (ft/sec)	X Measurement	Y Measurement
1.	1.	50.2	36.125"	37.250"
2.	2.	50	66.250"	68.500"
Specimen 2:		Fixed Window (O)		
Impact Number	Impact Location	Speed (ft/sec)	X Measurement	Y Measurement
1.	1.	50.3	36.125"	37.250"
2.	2.	50.2	66.125"	68.500"
Specimen 3:		Fixed Window (O)		
Impact Number	Impact Location	Speed (ft/sec)	X Measurement	Y Measurement
1.	1.	50.0	36.125"	37.250"
2.	2.	50.1	66.125"	68.500"

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 5/27/02

Note: None of the impacts penetrated the specimens and the specimens remained locked. Specimens 1, 2, & 3 were impacted as noted and cycled at a Design Pressure of +40 psf. - 40 psf. and passed successfully.

CYCLE TEST

Cycle tests were conducted in accordance with PA 203-94

Specimen 1 Q:

Design Load = + 40.0 psf. -40.0 psf.

Range of Test	Actual Load	Cycles Comp.
Positive Loads		
0.2 -0.5 DP	0.8-20.0	3,500
0.0 - 0.6 DP	0.0-24.0	300
0.5 - 0.8 DP	20.0-32.0	600
0.3 - 1.0 DP	12.0-40.0	100
Range of Test		
Negative Loads		
0.3-1.0 DP	12.0-40.0	50
0.5-0.8 DP	40.0-32.0	1,050
0.0-0.6 DP	0.0-24.0	50
0.2-0.5 DP	8.0-20.0	3,350

Specimen 2 Q

Design Load = + 40.0 psf. -40.0 psf.

Range of Test	Actual Load	Cycles Comp.
Positive Loads		
0.2 -0.5 DP	0.8-20.0	3,500
0.0 - 0.6 DP	0.0-24.0	300
0.5 - 0.8 DP	20.0-32.0	600
0.3 - 1.0 DP	12.0-40.0	100
Range of Test		
Negative Loads		
0.3-1.0 DP	12.0-40.0	50
0.5-0.8 DP	40.0-32.0	1,050
0.0-0.6 DP	0.0-24.0	50
0.2-0.5 DP	8.0-20.0	3,350

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 [Handwritten Signature: P. J. ...]

 [Handwritten Signature: ...]

 [Handwritten Date: 3/13/12]

Specimen 3 Q:

Design Load = + 40.0 psf. -40.0 psf

Range of Test	Actual Load	Cycles Comp.
Positive Loads		
0.2 -0.5 DP	0.8-20.0	3,500
0.0 - 0.6 DP	0.0-24.0	300
0.5 - 0.8 DP	20.0-32.0	600
0.3 - 1.0 DP	12.0-40.0	100

Range of Test	Actual Load	Cycles Comp.
Negative Loads		
0.3-1.0 DP	12.0-40.0	50
0.5-0.8 DP	40.0-32.0	1,050
0.0-0.6 DP	0.0-24.0	50
0.2-0.5 DP	8.0-20.0	3,350

Description of specimen after cycle test: Specimens showed no resultant failure or duress after 9000 cycles have been completed.

- Observers: Mr. Barry Portnoy (NCTL)
 Mr. Dan Conyers (NCTL)
 Mr. Keith Brown (NCTL)
 Mr. Robb Sherrod (NCTL)
 Mr. Steve Matthews (NCTL)
 Mr. Ron Stanek (Stanek Vinyl Windows)

Dade County Witness: None Present

DAN CONYERS
Laboratory Manager

Disclaimer: This test report was prepared by National Certified Testing Laboratory (NCTL), for the exclusive use of the above named client, it does not constitute certification of this product. The results are for that particular specimen tested and does not imply the quality of similar or identical products manufactured or installed from specifications identical to the tested product. NCTL is a testing lab and assumes that all information provided by the client is accurate and does not guarantee or warranty any product tested or installed.

Laboratory Compliance Letter

Notification No: NCTL - 02005

Laboratory Certification No: 01-0312.02

To Whom It May Concern,

On February 19, 2002 Stanek Vinyl Windows started testing at National Certified Testing Laboratories in Orlando, FL. All tests were performed in full accordance with all Dade County requirements with no deviations.

Test Report No.

NCTL 210-2778-1,2,3

Product Series Description

Ultra 4000-1099 Vinyl Fixed Window

(D.P. +65.0 exterior and -65 interior)PA 202

(D.P. +40.0 exterior and -40 interior) PA 202, 203

NATIONAL CERTIFIED TESTING LABORATORIES


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