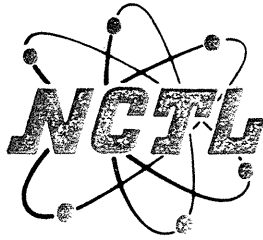


**Stanek Vinyl Windows  
Structural Performance Test Report  
NCTL 210-2691-1 2  
Ultra Series "3000" Single Hung  
Vinyl Prime Window  
Test Date: 10/05/01**

*Darryl Portno*  
*10/5/01*  
*10/5/01*



# NATIONAL CERTIFIED TESTING LABORATORIES

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## STRUCTURAL PERFORMANCE TEST REPORT

Report No: NCTL-210-2691-2  
Test Date: 10/05/01  
Report Date: 11/12/01

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

**Test Specimen:** Stanek Window's Ultra Series "3000" Single Hung Vinyl Prime Window (H-R60).

**Test Specification:** 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 one-over-one tilt single hung vinyl prime window measuring 52-1/2" wide by 88" high overall. The fixed lite was glazed to the frame members, providing a viewing area of 46-1/2" wide by 39" high. The bottom active sash measured 49" wide by 43-7/8" high. Frame and sash members were not thermally broken. The active sash was removable via single spiral balance with locking tilt shoe located in each interior jamb track. One (1) metal cam-type lock was located at 8" from each end of the active interior meeting rail. The metal keeper was located on the meeting rail at lock position. One (1) plastic tilt latch with thumb actuator was housed at each end of the top rail. One (1) metal pivot bar was fastened with three (3) rivets at each end of the bottom rail. One (1) steel square-shaped reinforcement tube (0.050" thick) filled the length of the active sash frame. The frame and active sash was of mitered corner construction. The fixed meeting rail was fastened to the jambs at mid-span with two (2) screws through a metal mounting bracket.

**Reinforcement:** The active sash was reinforced with a 0.050" thick galvanized steel U-Shaped channel measuring 0.724" wide by 0.930" high in top and bottom rail hollows and in both stiles.

**Glazing:** The active sash and fixed lite were interior glazed using sealed insulating glass with a silicone back-bedding and a snap-in rigid vinyl glazing bead. The overall insulating glass thickness was 7/8" consisting of two (2) lites of 0.185" thick tempered glass and one (1) space created by an intercept spacer system.

**Weatherseals:** One (1) strip of center fin weatherstrip (0.290" high) was located at the interlock position of the top rail of the active sash. Two (2) strips of center fin polypile weatherstrip (0.290" high) was located at the active sash stiles. One (1) strip of bulb vinyl weatherstrip was located at the bottom rail. One (1) strip of center fin polypile weatherstrip (0.290" high) was located at the bottom rail.

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**Weeps:** One (1) weep hole measuring 1" x 1/4" was located 3" from each end. One (1) weep hole was located at each end of the interior sill track. The interior vertical leg measured 2" from the threshold to the sill track.

**Interior & Exterior Surface Finish:** White Vinyl (PVC).

**Sealant:** The frame and active sash corners were sealed with a small-joint sealant.

**TEST RESULTS**

<u>Par. No.</u>	<u>Title of Test &amp; Method</u>	<u>Measured</u>	<u>Allowed</u>
2.2.1.6.1	Operating Force Active Sash Up Down	16 lbf 7 lbf	30 lbf 30 lbf
2.2.1.6.2	Deglazing - ASTM E987 Active Sash Meeting Rail (70 lbf) Bottom Rail (70 lbf) Left Hand Stile (50 lbf) Right Hand Stile (50 lbf)	3.2 % (0.016") 4.2 % (0.021") 3.2 % (0.016") 2.8 % (0.014")	<100% <100% <100% <100%
2.1.2	Air Infiltration - ASTM E283 1.57 psf (25 mph)	0.21 cfm/ft <sup>2</sup>	0.3 cfm/ft <sup>2</sup>
2.1.3	Water Resistance - ASTM E547 & ASTM E331 5.0 gph/ft <sup>2</sup> WTP= 6.75 psf	No Leakage	No Leakage
2.1.4.2 **	Uniform Load Structural - ASTM E330 67.5 psf Exterior 67.5 psf Interior	0.015" 0.025"	0.186" 0.186"
2.1.8	Forced Entry Resistance - ASTM F588 Grade 10 (See Appendix A for test results)	Meets As Stated	

**OPTIONAL PERFORMANCE**

4.3	Water Resistance - ASTM E547 & ASTM E331 5.0 gph/ft <sup>2</sup> WTP= 9.0 psf	No Leakage	No Leakage
4.4.2 **	Uniform Load Structural - ASTM E330 90.0 psf Exterior 90.0 psf Interior	0.020" 0.010"	0.186" 0.186"
**	No glass breakage or permanent damage causing the unit to be inoperable		

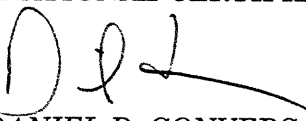
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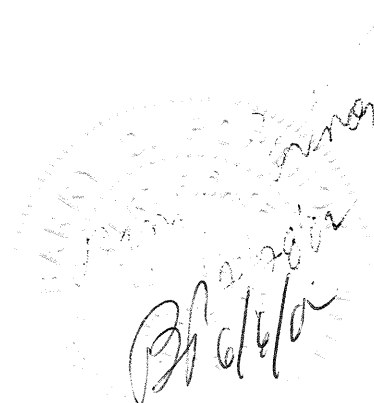
**TEST COMPLETED 10/05/01**

*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 H-R60 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**

  
**DANIEL D. CONYERS**  
Laboratory Manager

  
PH 10/5/01

**APPENDIX A**  
**Forced Entry Resistance Test Results**

**Test Method:** ASTM F588-97, "Standard Test Method for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact".

**TEST RESULTS**

<u>Paragraph No.</u>	<u>Loads</u>	<u>Duration</u>	<u>Measured</u>	<u>Allowed</u>
10.1-Lock Manipulation		5 Minutes	No Entry	No Entry
10.2.1.1-Test A1	L1=200 lbf	1 Minute	No Entry	No Entry
10.2.1.2-Test A2	L1=200 lbf L2=100 lbf interior	1 Minute	No Entry	No Entry
10.2.1.3-Test A3	L1=200 lbf L2=100 lbf exterior	1 Minute	No Entry	No Entry
10.2.1.4-Test A4	L1=200 lbf L2=100 lbf interior	1 Minute	No Entry	No Entry
10.2.1.5-Test A5	L1=200 lbf L2=100 lbf exterior	1 Minute	No Entry	No Entry
10.2.1.7-Test A7	L1=200 lbf L2=100 lbf interior L3= 35 lbf interior	1 Minute	No Entry	No Entry
10.2.1.8 Lock Manipulation		5 Minutes	No Entry	No Entry
10.2.4.2 Fixed Lite Glazing/Panel Manipulation		5 Minutes	No Entry	No Entry

