

NATIONAL CERTIFIED TESTING LABORATORIES

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STRUCTURAL PERFORMANCE TEST REPORT

REPORT NO.: NCTL-210-1860-4
TEST DATE: 08-20-96
REPORT DATE: 09-03-96

LABORATORY CERTIFICATION NO: 94-0323.47

CLIENT: Florida Extruders International Inc.
2540 Jewett Lane
Sanford, FL 32771-1600

TEST SPECIMEN: Florida Extruders International Inc.'s Series "Milestone 1000" Horizontal Sliding Aluminum Prime Window. (Type XO) (HS-R50) (Design Pressure 50 psf Exterior & Interior)

TEST SPECIFICATION: ANSI/AAMA 101-93, "Voluntary Specifications for Aluminum and Poly (Vinyl Chloride) (PVC) Prime Windows and Sliding Glass Doors." ASTM E 283-91, Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen. ASTM E 330-90, Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference. ASTM E 331-93, Test Method for Water Penetration of exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference. ASTM E 547-93, Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Differential.

TEST SPECIMEN DESCRIPTION

GENERAL: The specimen tested was a type "XO" horizontal sliding aluminum prime window measuring 72" wide by 63" high overall. The active panel measured 35-5/8" wide by 59-3/8" high. The fixed lite was glazed to the frame members, providing a viewing area of 37-1/2" wide by 57-1/2" high. Frame and sash members were not thermally broken. One metal cam-type sweep lock was located at 3-1/2" from each end of the interior meeting stile. The keepers were extruded onto the exterior meeting stiles at lock positions. A rigid vinyl cap was fastened with two (2) screws at each end of the active panel top rail. One metal roller/plastic housing was located at each end of the active panel bottom rail. The frame was of double screw coped corner construction. The active panels were of double screw coped corner construction. The fixed meeting stiles were fastened to the head and sill at mid-span 36-1/2" from each jamb with two (2) screws.

INSTALLATION: The frame was mounted into the wood test buck using ten (10) (# 8 x 1") flat head screws.

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Bay P. Perkins
9/27/96

GLAZING: Both active panels and fixed panels were interior glazed using 3/16" clear annealed glass with an adhesive silicone and a snap-in rigid vinyl glazing bead.

WEATHERSTRIP: Single strips of polypile weatherstrip ((0.150" high) were located at the top rails, bottom rails and on each active panel. Single strips of polypile weatherstrip (0.150" high) were located at each jamb styles and each meeting rail interlocks.

WEEPS: One (1) weep hole measuring 3/16" x 1" and employing a plastic weep cover was located at 4-3/4" and 9-1/2" from each end of the exterior sill wall. One (1) weep hole measuring 3/16" x 1-3/16" was located at 3" and 31" from each end of the center sill track.

INTERIOR & EXTERIOR SURFACE FINISH: White painted aluminum.

SEALANT: All frame corners were sealed with a small-joint sealant.

INSECT SCREEN: An insect screen measuring 34" wide by 48-3/4" high was of square type corner construction with nylon corner keys. The screen employed fiberglass mesh cloth with a hollow vinyl spline.

TEST RESULTS

<u>PARAGRAPH NO.</u>	<u>TITLE OF TEST</u>	<u>MEASURED</u>	<u>ALLOWED</u>
**2.2.4.5.1	Operating Force Right Active Panel Left Active Panel	10# 4#	20# 20#
2.1.2	Air Infiltration 0.57 psf (15 mph) 1.57 psf (25 mph)	0.08 CFM/FT 0.19 CFM/FT	0.37 CFM/FT 0.37 CFM/FT
**2.1.3	* Water Resistance - (5.0 GPH/FT ²) WTP = 2.86 psf	No Entry	No Entry
2.1.4	Uniform Load Structural 22.5 psf Exterior 22.5 psf Interior	0.019" 0.015"	0.252" 0.252"
**2.2.4.5.2	Deglazing Test Active Panel Top Rail (70#) Bottom Rail (70#) Jamb Stile (50#) Meeting Stile (50#)	7.8% (0.039") 5.4% (0.027") 9.4% (0.047") 6.2% (0.031")	<100% <100% <100% <100%

Bryan Parsons
2/2/02

3.3	* Water Resistance - (5.0 GPH/FT ²) WTP = 9.25 psf	No Entry	No Entry
3.4.1	Uniform Load Structural 75.0 psf Exterior 75.0 psf Interior	0.180"	0.252"
		0.184"	0.252"

TEST COMPLETED: 08-20-96

** See parent test report no. NCTL-210-1860-3 for test results and qualifications.

* Test performed with and without insect screen.

This test specimen meets the performance criteria of level of HS-R50 of the ANSI/AAMA 101-93; ASTM E 283-91; ASTM E 330-90; ASTM E 331-93 & ASTM E 547-93 specifications. Detailed drawings were available for laboratory records and compared 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 years. The results obtained apply only to the specimen tested.

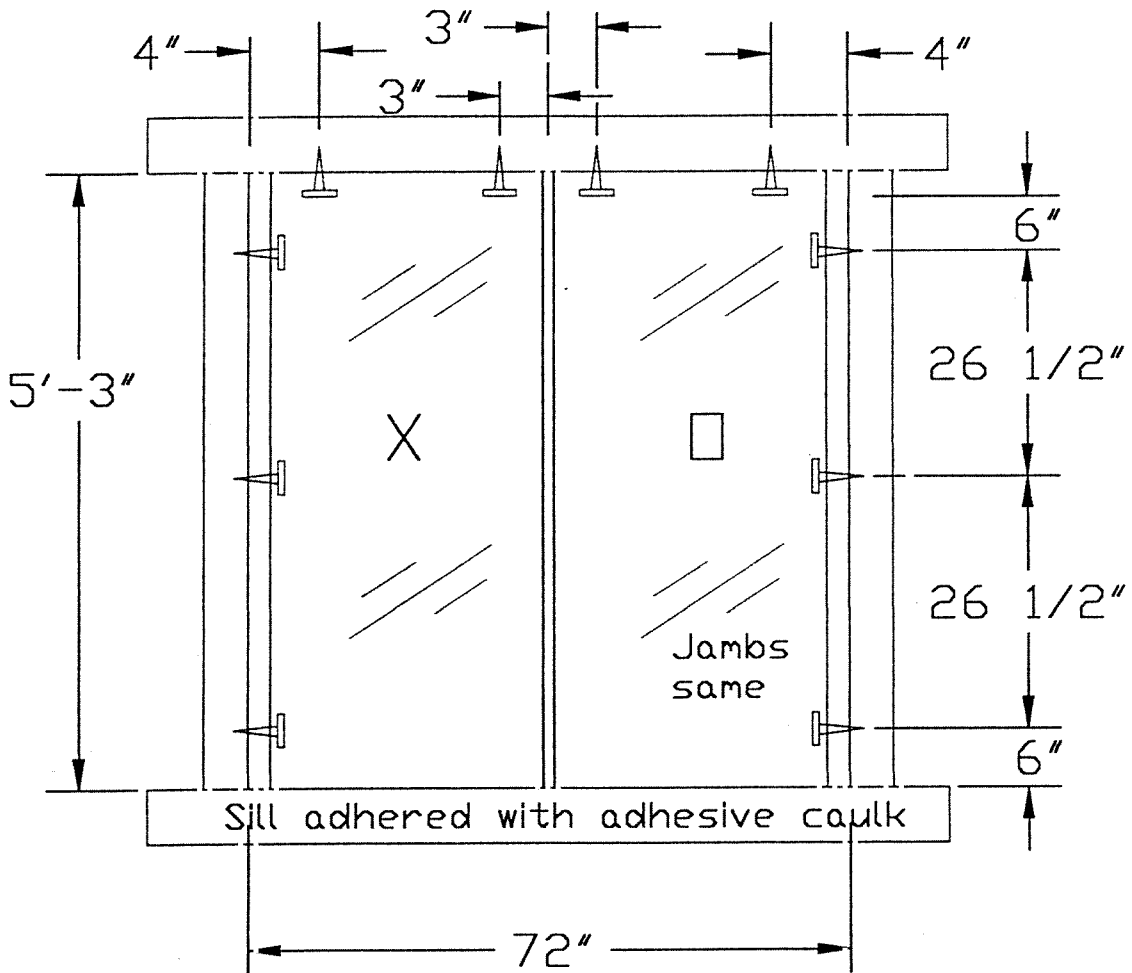
NATIONAL CERTIFIED TESTING LABORATORIES, INC.

MICHAEL E. LANE
Division Manager

MEL/d

Bryan Parkins
2/2/97

FASTENER LOCATIONS



The test specimen was flange mounted to the test buck using ten (10) #8 X 1" screws at locations shown.

△ - DENOTES SCREW

Bryan Perkins
8/20/96

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JOB NO. : NCTL-210-1860-3,4

COMPANY : FLORIDA EXTRUDERS

TEST DATE : 8-20-96