

# Fenestration Testing Laboratory, Inc.

10235 8th Street • Rancho Cucamonga, CA 91730 • PH. (909) 477-4343 • FAX (909) 477-4348

Report No. : T14-030  
Date : September 5, 2014  
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**TESTED FOR**  
**INTERNATIONAL WINDOW CORP.**  
1551 E Orangethorpe Ave  
Fullerton, CA 92831

## 1.0 **PURPOSE**

The purpose of this report is to present the testing methods employed and the test results obtained during the performance testing of one (1) **Aluminum Sliding Glass Door** described in paragraph 4.0 of this report.

## 2.0 **TEST REFERENCES**

2.1 NAFS – North American Fenestration Standard/specification for windows, doors, and skylights  
AAMA/WDMA/CSA 101/IS.2/A440-11  
**Class CW PG40** Size Tested: 3137 X 2438 mm (124 X 96 inches) Type: SD

2.2 CAWM 300 - 96 Forced Entry Resistance Tests for Sliding Glass Doors

2.3 ASTM F882 - Forced Entry Resistance Tests for Sliding Glass Doors

## 3.0 **SUMMARY**

The test results in paragraph 5.0 indicate that the tested sample described in paragraph 4.0 of this report complied with the performance requirements of the above referenced specifications.

## 4.0 **SAMPLE SUBMITTED**

**SERIES:** 7722 Sliding Glass Door with 3” threshold and HP Interlock

**CONFIGURATION:** XO

**FRAME SIZE:** 3137 mm X 2438 mm (123.50” X 95.98”)

**FIXED PANEL:** 1540 mm X 2388 mm (60.63” X 94.02”)

**ACTIVE PANEL:** 1611 mm X 2388 mm (63.43” X 94.02”)

**GLASS:** Each panel was glazed with 1” overall insulated glass unit containing 3/16” tempered glass on the outside and 3/16” tempered glass on the inside.

**SPACER:** The spacer was an aluminum 5/8” wide box spacer and single sealed.

**GLAZING:** Both panels were channel glazed with wrap around gasket.

**WEEPAGE:** The threshold contained the following weeps:

- 1) The leg between the active and fixed channels contained a 1.75” x 0.25” weep 12” and 48” from each end for a total of four.
- 2) The screen track and the fixed channel outside leg contained a pair of 1.06” x 0.18” weeps 3” from each end and every 17” in the field for a total of eight pair.
- 3) The screen track was cut short 2” at each end.

**WEATHERING:** The frame fixed channel contained a strip of two finger vinyl full perimeter facing out and sealing to the inside face of the fixed panel.

The frame active channel contained two strips of 0.250" overall high polypile with center fin full perimeter; one strip of polypile facing in and one strip facing out.

The PVC snap-on interlocks adapters, each contained a strip of 0.250" overall high finseal; the strip on the active interlock faced out and the one on the fixed interlock faced in. The adapter on the fixed interlock also contained a strip of "bug strip" sweep vinyl that weathered to the active panel glass.

**HARDWARE:** The operable panel bottom rail contained an adjustable tandem steel roller in metal housing at each end. Each roller fit into the bottom rail channel and was fastened to the abutting stile with a pair of screws and at top of the housing with a single screw through the bottom rail.

The operable panel lock stile contained a metal recessed double mortise lock and handle assembly fastened with a pair of screws from inside 39" up from the bottom rail to the mid-span. When closed and locked, each hook lock tongue engaged a slot in the metal keeper which was fastened to the lock jamb with four #10 x 3.5" PPH screws.

**CONSTRUCTION:** The frame corners were mechanically joined with a pair of #10 x 0.1" Hex washer head screws. The active and fixed panel corners were each mechanically joined with a single #8 x 3" PPH screw.

The fixed interlock was secured to the frame with a 2" x 2" x 1-3/8" wide and 1/8" thick aluminum angle clip at the bottom end. The clip was secured to the interlock and threshold with a pair of #8 x 1.5" square drive screws respectively.

The sill fixed channel contained an aluminum snap-in channel cover that fit snugly between the active jamb and fixed interlock.

A PVC extrusion snap-fit onto each interlock stile to complete the interlock and retain the weather-stripping.

**CAULKING:** The following were sealed:

1. The frame corners were sealed full profile.
2. The fixed panel jamb stile, top rail and bottom rail were sealed to the frame from the interior and the bottom rail was also sealed from the exterior.
3. The heads of all screws anchoring the sill to the rough opening.
4. The sill fixed channel cover was sealed at each end.
- 5.

**ANCHORING:** The frame was fastened to the 2" x 8" wooden rough opening with #8 x 1.5" screws every 16" through the nail-on fins at head and jambs. The sill did not have a nail-on fin.

Additionally the frame jambs were each fastened to the rough opening with four #8 x 1.5" PPH screws through the jamb fixed channel in line with the plane of the door. The sill and head were fastened with eight #8 x 1.5" PPH screws evenly spaced across their respective spans.

## 5.0 TEST PROCEDURES AND RESULTS

5.1 All testing procedures were performed in accordance with the performance requirements of the test specifications referenced in paragraph 2.0 of this report.

## 5.2 TEST RESULTS

<u>PARAGRAPH</u>	<u>TEST DESCRIPTION</u>	<u>MEASURED</u>	<u>ALLOWED</u>
5.3.1.1	Operating Force (ASTM E 2068)		
	Breakaway Force	97.9 N (22.00 lbf)	180 N (40.47 lbf)
	Operating Force	55.6 N (12.5 lbf.)	115 N (25.85 lbf)
5.3.1.1.3	Latching Device		
	Open and Close Latch Device	24.5 N (5.5 lbf)	100 N (22.5 lbf)
5.3.2.1	Air Infiltration (ASTM E 283)		
	75 Pa	1.35 L/s•m <sup>2</sup>	1.5 L/s•m <sup>2</sup>
	(1.6 PSF)	0.27 CFM/ft <sup>2</sup>	0.3 CFM/ft <sup>2</sup>
	The tested specimen meets/exceeds the performance requirements specified in AAMA/WDMA/CSA 101 / I.S.2 / A440 for air leakage resistance.		
5.3.3.2	Water Penetration (ASTM E 547)*		
	290 Pa (6.06 PSF)	No Leakage	No Leakage
	With and without screen		
5.3.4.2	Uniform Load Deflection (ASTM E 330)*		
	1920 Pa (40.10 PSF) POS	13.72 mm (0.54")	13.72 mm (0.54")
	1920 Pa (40.10 PSF) NEG	11.43 mm (0.45")	13.72 mm (0.54")
5.3.4.3	Uniform Load Structural (ASTM E 330)*		
	2880 Pa (60.15 PSF) POS	1.54 mm (0.06")	7.11 mm ( 0.28")
	2880 Pa (60.15 PSF) NEG	1.54 mm (0.06")	7.11 mm ( 0.28")
5.3.6.3	Deglazing (ASTM E 987)		
	320 N (71.94 lbf) Stiles	10%	Less than 90%
	230 N (51.71 lbf) Rails	8%	Less than 90%
5.3.5	ASTM F 842 Type A & CAWM 300 Type I Window - Refer to Report T14-029 which was the same door series, same size, and same configuration as the door described in this report with the exception that this door had a higher sill inside leg and a high performance active interlock.		

\* The sliding glass door manufacturer opted to start testing at a level above the gateway.

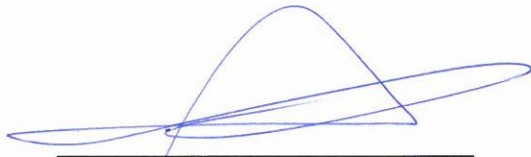
For a complete description of the tested sample refer to the attached sixteen (16) pages consisting of the bill of materials, cross section drawings, and individual die drawings.

Cross section drawings and die drawings of frame members are on file and have been compared to the sample submitted. Test sample sections, drawings and a copy of this report will be retained at the test laboratory for four years.

This test report may not be modified in any way without the written consent of Fenestration Testing Laboratory. The preceding test results relate only to the tested specimen and were obtained by using the applicable ASTM, AAMA, and CAWM test methods. This report does not constitute certification of this product. Certification can only be granted by an approved administrator and/or validator.


Testing Completed: August 4, 2014

Report Completed: September 3, 2014



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Pete Cruz  
Test Engineer



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Jim Cruz  
Testing Manager