

INTERNATIONAL WINDOW TEST REPORT

SCOPE OF WORK

AAMA/WDMA/CSA 101/I.S.2/A440 TESTING ON THEIR SERIES 5920 IWC VINYL SLIDING DOOR, SLIDING DOOR.

REPORT NUMBER

Q5773.02-303-44 R0

TEST DATES

10/23/23 - 02/28/24

ISSUE DATE

04/12/24

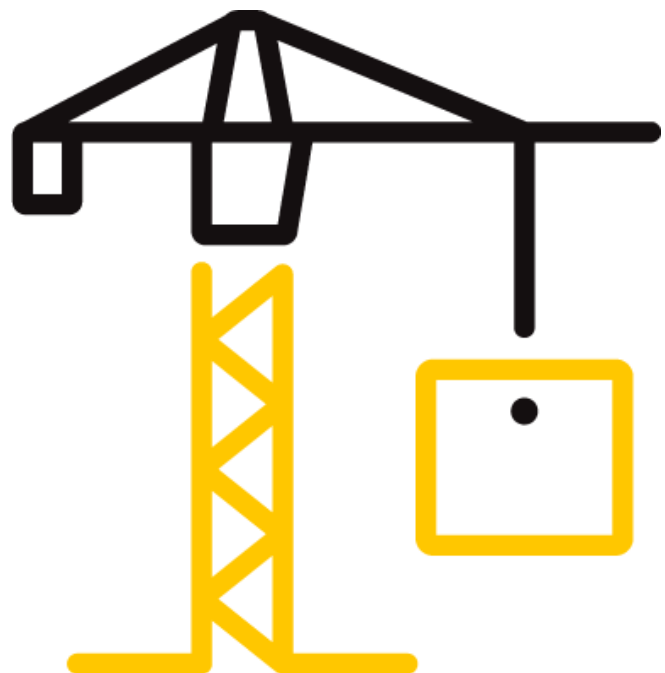
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TEST REPORT FOR INTERNATIONAL WINDOW

Report No.: Q5773.02-303-44 R0

Date: 04/12/24

REPORT ISSUED TO INTERNATIONAL WINDOW

2455 Wardlow Road
Corona, CA 92880

SECTION 1 SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by International Window, 2455 Wardlow Road Corona, CA 92880 to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 on their 5920 IWC Vinyl Series Sliding Glass Door, Sliding Door. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at the Intertek Inc. test facility in Lake Forest, CA.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

COMPLETED BY:	Luis Sotelo Hernandez	REVIEWED BY:	Tyler Westerling P.E.
TITLE:	Project Coordinator Building and Construction	TITLE:	Operations Manager Building and Construction
SIGNATURE:		SIGNATURE:	
DATE:	04/12/24	DATE:	04/12/24

BAJ

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SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class LC – PG25 Size tested 2440mm X 2440mm (96.06" X 96.06")
Design Pressure	±1200 Pa (±25.06 psf)
Negative Design Pressure	-1200 Pa (-25.06 psf)
Air Infiltration	0.90 L/s/m ² (0.19 cfm/ft ²)
Exfiltration Level	1.04 L/s/m ² (0.22 cfm/ft ²)
Water Penetration Resistance Test Pressure	180 Pa 3.76 psf)

SECTION 3

TEST SPECIFICATIONS/METHODS

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-17 - *North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

The following test methods were used during testing:

ASTM E283/E283M-19, *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*

ASTM E330/E330M-14(2021), *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM E547-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference*

ASTM E987-88(2017), *Standard Test Methods for Deglazing Force of Fenestration Products*

ASTM E2068-00(2022), *Standard Test Method for Determination of Operating Force of Sliding Windows and Doors*

ASTM F842-17, *Standard Test Methods for Measuring the Forced Entry Resistance of Sliding Door Assemblies, Excluding Glazing Impact*

CAWM 300-96, *Forced Entry Resistance Tests for Sliding Glass Doors.*

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MATERIAL SOURCE/INSTALLATION

Test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of two years from the test completion date.

The specimen was installed into a Douglas-Fir wood buck. The rough opening allowed for a 1/4" shim space and the exterior perimeter of the specimen was sealed to the test buck. Installation of the tested product was performed by Intertek Inc.

LOCATION	ANCHOR DESCRIPTION	ANCHOR SPACING
From the corners	#6 X 1-5/8" Philips flat head phosphate screw	3" on center
Perimeter of the frame	#6 X 1-5/8" Philips flat head phosphate screw	12" on center

SECTION 5

EQUIPMENT

Calibration of test equipment was performed by Intertek B&C in accordance with AAMA 205-15.

The following equipment was utilized to apply Forced Entry Resistance (FER) loading in accordance with ASTM F842:

EQUIPMENT	ASSET NUMBERS	CALIBRATION DUE DATE
Control Panel	62967	4/16/24
Load Cells	005135-63196	8/29/24-8/29/24
Force Gauge	005555	9/26/24
Pressure Gauge	INT03761	8/5/24
Transducers	INT01423-INT01500-62849	4/30/24-4/30/24-5/10/24
Spray Rack	63244	7/5/24
Weather Station	INT03099	10/10/24
Stopwatch	64988	12/27/25

A FER tool kit containing the following tools was also utilized:

24 gauge 0.024" thick x 0.78" wide x 3.5" long stainless-steel spatula/putty knife/non-cutting tool, unwrapped.

6" Phillips head screwdriver [unpowered, 6 in max]

6" standard slot-type pliers [max 6 to 7 in (150 to 175 mm) overall length]

Black annealed 16-gauge straight wire.

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LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Andrew Vogt	Intertek B&C
Benjamin Johns	Intertek B&C

SECTION 7

TEST SPECIMEN DESCRIPTION

Product Type: Sliding Door

Series/Model: 5920 IWC Vinyl Series Sliding Glass Door

Product Sizes:

Test Specimen #1

OVERALL, AREA:	WIDTH		HEIGHT	
	millimeters	inches	millimeters	inches
5.95 m ² (64.08 ft ²)				
Overall size	2440	96.06	2440	96.06
Exterior sash	1223	48.15	2390	94.09
Interior sash	1228	48.35	2387	93.98
Screen	1216	47.87	2402	94.57

Frame Construction:

MEMBER	MATERIAL	DESCRIPTION
Head	PVC	Extruded
Jambs	PVC	Extruded
Sill	PVC	Extruded

	JOINERY TYPE	DETAIL
All corners	Mitred	Thermally Welded

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Panel Construction:

MEMBER	MATERIAL	DESCRIPTION
Head	PVC	Extruded
Jambs	PVC	Extruded
Sill	PVC	Extruded

	JOINERY TYPE	DETAIL
All corners	Mitred	Thermally Welded

Reinforcement: *No reinforcement was utilized.*

DRAWING NUMBER	LOCATION	MATERIALS
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Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
1 spline pile	1	At the perimeter of the exterior panel.
1 spline pile	1	At the exterior panel interlock.
0 spline pile	1	At the interior panel interlock.
1 spline pile	1	At the jambs and the head of the frame.
1 spline pile	1	At the head right jamb and sill of the interior panel.

Glazing: *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

GLASS TYPE	SPACER TYPE	INTERIOR LITE	EXTERIOR LITE	GLAZING METHOD
.752" IG	IG4	3/16" Tempered	3/16" Tempered	Exterior glazing tape with interior glass stop.

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Exterior Panel	1	1110 X 2262	43.70 X 89.06	1/2"
Interior Panel	1	1113 x 2270	43.70 X 89.37	1/2"

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Drainage:

METHOD	SIZE	QUANTITY	LOCATION
Weep hole	1/2" Wide X 3/8"	2	6" from each jamb on the sill
Weep hole	1/2" Wide X 3/8"	2	42" from each jamb on the sill

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Lock	1	56" from the head on the right jamb of the inside panel (inside view).
Keeper	1	Adjacent to the Lock on the right jamb of the frame (inside view).
Roller Assembly	2	On the sill at both jambs

Screen Construction:

FRAME MATERIAL	CORNER CONSTRUCTION	MESH TYPE	MESH ATTACHMENT METHOD
Aluminium	Mitred	Fiberglass	Compression Gasket

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TEST RESULTS

The temperature range during testing was 14.44°C (58°F). The results are tabulated as follows:

Test Specimen #1:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Operating Force, per ASTM E2068	Initiate Motion: 46.71 N (10.5 lbf) Maintain Motion: 40.03 N (9.0 lbf) Locks: 53.38 N (12.0 lbf)	135 N (30.35 lbf) max 110 N (24.73 lbf) max 100 N (22.48 lbf) max	
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	0.90 L/s/m ² (0.19 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1, 2
Air Leakage, Exfiltration per ASTM E283 at 75 Pa (1.57 psf)	1.03 L/s/m ² (0.22 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1, 2
Water Penetration, per ASTM E5471 at 180 Pa (3.76 psf) with screen	Pass	No leakage	3
Water Penetration, per ASTM E547 at 180 Pa 3.76 psf) without screen	Pass	No leakage	3
Uniform Load Deflection, per ASTM E330 Deflections taken at the interlock. +1200 Pa (+25.06 psf) -1200 Pa (-25.06 psf)	62.74 mm (2.47") 63.50 mm (2.50")	Report only	4,5,6,7
Uniform Load Structural, per ASTM E330 Permanent set taken at the interlock. +1800 Pa (+37.59 psf) -1800 Pa (-37.59 psf)	2.04 mm (0.08") 0.76 mm (0.03")	9.40 mm (0.37") max. 9.40 mm (0.37") max.	4,5,6,7
Forced Entry Resistance, per ASTM F842, Type: A - Grade: 10	Pass	No entry	

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Test Specimen #1:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Forced Entry Resistance, per CAWM 300, Type: 1	Pass	No Entry	
Thermoplastic Corner Weld	Pass	Meets as stated	
Deglazing, per ASTM E987 Operating direction, 320 N (70 lbf) Remaining direction, 230 N (50 lbf)	Pass	Meets as stated	
	Pass	Meets as stated	
Insect Screen Serviceability Test Per ASTM E1748 60 N (13.5 lbs)	Pass	No disengagement	

Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: Test Date 03/28/24 / Time: 7:30 A (Air Note Only)

Note 3: With and without insect screen.

Note 4: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

Note 5: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 6: Loads were held for 10 seconds.

Note 7: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

SECTION 9

ALTERATIONS

Alteration #1: Date - 4/11/24
Cause for alteration – Failed CAWM 300 test.
Remedial action taken – Changed keeper to part #2315 on page 30.

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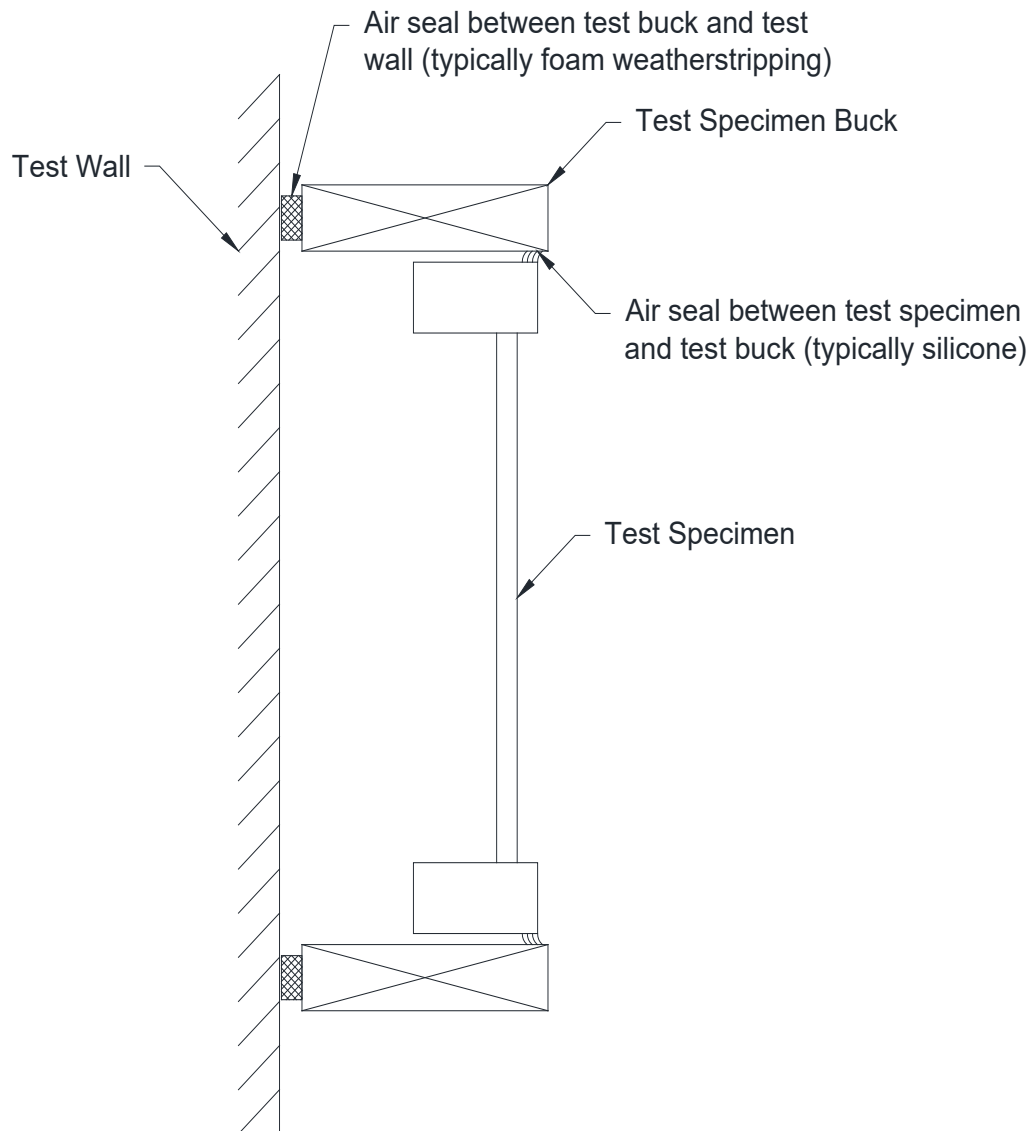
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SECTION 10

LOCATION OF AIR SEAL

The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.



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SECTION 11

CONCLUSION

The specimens tested successfully met the performance requirements for the following rating:

TEST SPECIMEN(S)	TITLE	SUMMARY OF RESULTS
1	AAMA/WDMA/CSA 101/I.S.2/A440-17	Class LC – PG25 Size tested 2440mm X 2440mm (96.06" X 96.06")

SECTION 12

DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

Note: Complete drawings packet on file with Intertek B&C.



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SECTION 13

REVISION LOG

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