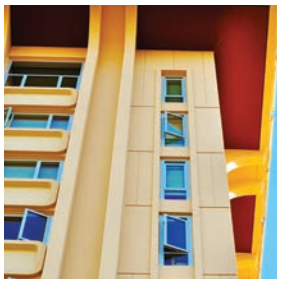
ALL WEATHER
ARCHITECTURAL ALUMINUM

Series 6000 2 1/2" - 3" Thermal Break Aluminum Windows - Outside Glaze

Product Specifications | Extrusion Details | Test Reports

Quality. Care. Commitment.
series 6000 windows | versatile durability





Series **6000** 2 1/2" - 3" Thermal Break Aluminum Windows - Outside Glaze

Introduction

Our Series 6000 (Outside Glazed) product line use 6063 extruded aluminum, age hardened to a T-6 rating for strength and durability. The profiles for this series are extruded as 2 separate parts and are then joined into a single profile using thermal struts. The aluminum extrusions are knurled and then crimped along the thermal profile to ensure a tight grip. The finished profile is thermally broken providing both improved thermal performance as well as improved condensation resistance. We use a 20mm offset thermal strut, although larger or smaller profiles are available upon request. (3" windows use a 31.9 mm strut)

The Series 6000 window line is available in the following finishes:

- Class I Clear Anodized**
- Class I Bronze Anodized**
- Standard White
- Custom Anodized
- 70% Kynar Paint Color
- A combination of the above finishes on the Interior vs. Exterior

Before the interior and exterior profiles are joined with the thermal strut, they can be painted or anodized with seperate colors for a two-toned window.

*** Indicates Finishes In Stock.*

Testing

Our Series 6000 projected and fixed windows manufactured with a 20mm thermal strut have been tested to AAMA standards as listed below: (Please see test reports located in the back of this section for window sizes)

- Series 6000 Fixed – FW-AW80
- Series 6000 Awning – AP-AW80
- Series 6000 Casement – C-AW80

All Weather has comprehensive files containing all historical testing. Each of the tests in the proceeding list are current, however, our archived testing may be more specific for your particular project and will be provided upon request.

Construction

Corners of frame and ventilators are mitered and crimped for structural integrity. Our typical construction uses 2 corner keys per corner in the vent and the frame. We can manufacture the frame and vent with up to 4 corner keys per corner. All muntin and other intermediate bars are firmly attached to their cross joints and their abutting sash sections. The frame sill, vents, and intermediate bars contain weep provisions. Frames are drilled and tapped to receive screen attachment hardware as required. All surfaces to be glazed have a bead retaining notch.

Hardware

Projected & Casement Windows: Vents shall operate on 4-bar heavy duty stainless steel hinges, and have die cast zinc cam handles with pole ring. brushed nickel hardware is available upon request.

Series 6000 awning and casement alternate: A worm gear rotary control operator with butt hinges and side mounted locking handle is provided for each casement ventilator. Casements can have a multipoint lock system upon request. Awnings can also be equipped with worm gear rotary hardware with loose pin/concealed hinges and locking handles on the jambs.

Screens

Screens are made of painted roll formed aluminum to match the window frame and use charcoal fiberglass mesh with plastic wicket doors. Wire mesh and Ultraview mesh screens are available upon request. The screens are installed and are removable from the inside of the building.

Series 6000 rotary casement and awning windows will have flat screens, also removable from inside the building.

Glazing

The Series 6000 offer a 1" OA on insulating glass units and 1/2" single glazed.

Weather-stripping

Our Series 6000 and 6500 fixed, casement, and awning windows are weather stripped with a bulb weatherstrip. It is inserted in an extruded slot at the exterior perimeter of the vent and on the interior perimeter of the frame bar. 2 rows are used to ensure low air infiltration and prevent weather penetration. The bulb seal can be replaced in the field after installation, if necessary, for maintenance purposes.

Installation Guidelines

- All windows must be installed in prepared openings in accordance with AAMA recommendations and the below-listed manufacturers' recommendations (If shop drawings are required, please refer to approved shop drawings for installation):
- All vent panels must be closed and locked.
- Each unit must be installed level, plumb and square with a ¼" clearance on the jambs and the header of the window.
- Remove wet plaster, mortar, stucco and cement immediately.
  (Note: windows should only be cleaned with mild soap and water.)
- Do not set items on the sill.
- In nail-on applications, a bead of caulking material should be applied to the inside nail-on fin just before installation to insure a water tight seal between the building and the window. In an equal leg window a bead of caulking material should also be applied.
- Any attachment screws or bolts should be sealed during the process of installation.
- After installation is complete, building paper and stucco wire (if a stucco application) should overlap the window nail-on flange.

Care & Maintenance

- Windows should be kept free of all dust, dirt, paint and plaster.
- The sill should be kept clean at all times. A vacuum cleaner with a crevice attachment is recommended.
- Window should only be cleaned with mild soap and water.
- **Caution:** Damage will occur to the frame finish, and to the sealed glass unit, if solvents, petroleum products, or caustic chemicals such as acetone or paint thinner are used to clean window frames. Damage caused by this type of abuse is not covered under warranty.

Series **6000** Limited Warranty

ALUMINUM WINDOWS One (1) year limited warranty

Every All Weather Architectural Aluminum, Inc., window is guaranteed to meet industry standards for performance against defects in material or workmanship for a period of one (1) year. Broken glass or damage due to improper installation or abuse are not covered by this warranty. Industry standards are defined by the American Architectural Manufacturers Association (AAMA), WDMA (Window & Door Manufactures Association and CSA (Canadian Standards Association), (AAMA/WDMA/CSA 101/I.S.2/A440-05)

INSULATED GLASS Ten (10) year limited warranty

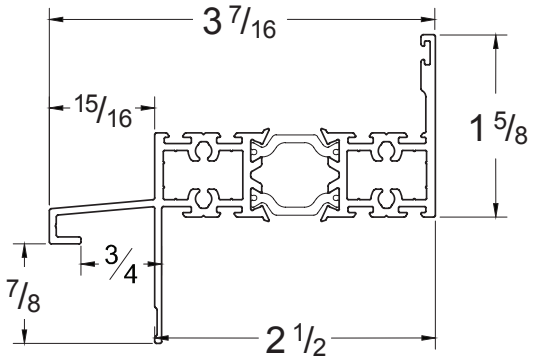
Every All Weather insulated glass unit is warranted for a period of ten (10) years from the date of manufacture except in the case of insulating glass containing decorative internal grids which are warranted for a period of one (1) year. All Weather warrants that under normal conditions of residential or light commercial use and service, moisture condensation, dust, and other foreign particles inside of the dead air space and/or loss of insulating value due to leakage of the unit at the sealed edges will not occur. In the event of a failed unit, All Weather will provide a replacement unit at no cost to the customer, or at its option, refund the original purchase price of said unit. This warranty applies to original units only and does not include removal or reinstallation.

WARRANTY IS SUBJECT TO THE FOLLOWING CONDITIONS AND TERMS

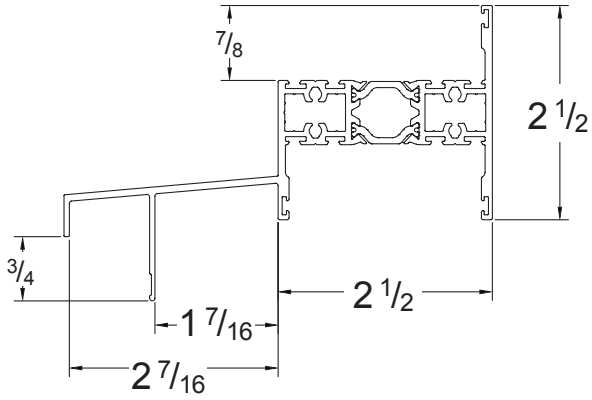
- All Weather must be paid in full for the products to qualify.
- The warranty on replacement units is limited to the remainder of the warranty period on the original units. Replacement units will be shipped F.O.B. original customer.
- This warranty does not include removal or reinstallation.
- All Weather will not assume liability for glass breakage or damage caused by improper glazing, All Weather windows shipped open for field glaze, improper installation, vandalism, misuse, abuse, or acts of nature including earthquake, flood, and fire, or damage resulting from use in sloped glazing installations or improper treatment including exposure to any chemicals or substances detrimental to the insulating seal of the units; faulty building construction or design; or in conditions where water or moisture can accumulate and remain around the sealed edges of the units. This warranty does not cover single pane glass or IG units that are field glazed, regardless of glass supplier, to include All Weather supplied glass / units. Customer supplied glass is also not covered.
- The warranty applies only to the original registered owner-occupant at the location where the products were originally installed and is not transferable.
- The paint surface of any special painted material is not covered under this warranty. Warranty claims for special paint must be filed with the paint vendor and are subject to their warranty terms and conditions.
- This warranty is void where units are installed in other than a normal residential or light commercial application or in any environment where units are exposed to excessive temperature gradients from surface to surface.

There are no warranties which extend beyond the description on the face hereof. All Weather will not be liable for any subsequent expenses involved in the removal of defective units, installation of replacement units or any other incidental or consequential damages, including but not limited to those for personal injury, arising from or alleged to have arisen from any breach of the warranty contained herein. The purchaser's exclusive remedy is limited to the legal remedies described in this warranty. All Weather makes no other warranty, either express or implied, regarding our product, its merchantability or fitness for a particular purpose. No employee representative, or dealer of All Weather is authorized to modify or change this warranty.

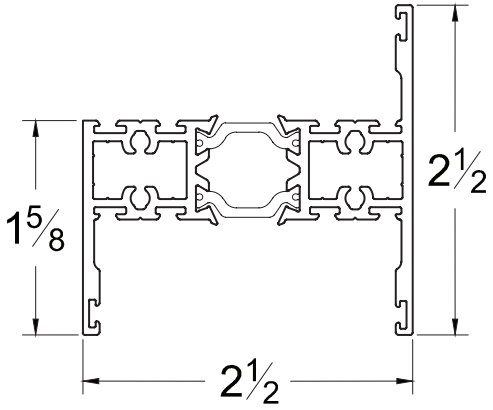
601 NAIL ON FRAME



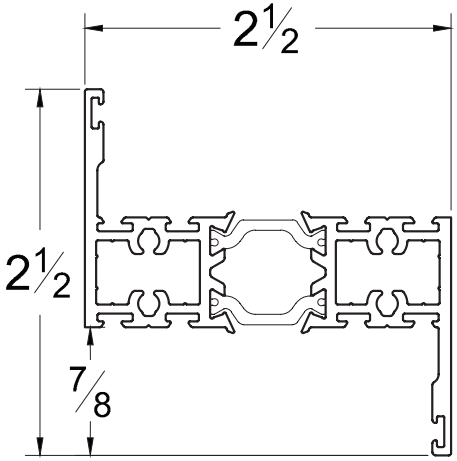
671 PANNING FRAME



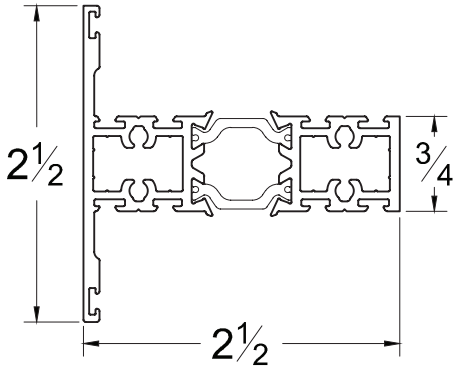
602 EQUAL LEG FRAME



603 VENT / MULLION

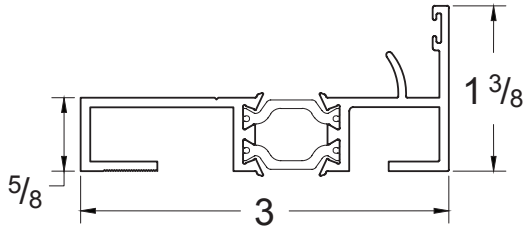


606 MULLION



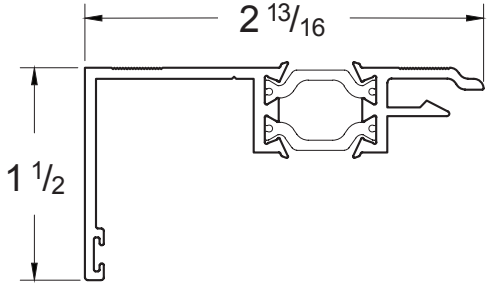
620 COMPENSATION CHANNEL

SILL



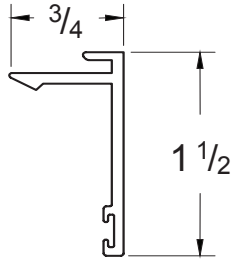
621 COMPENSATION CHANNEL

HEAD & JAMB



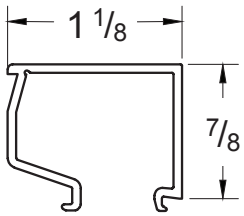
5622 COMPENSATION CHANNEL

SNAP FACE



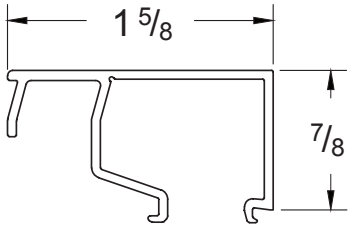
626 SQUARE BEAD

FOR 1" OA GLASS



628 SQUARE BEAD

FOR 1/2" OA GLASS



Series **6000** Configurations: Outside Glaze - Table Of Contents

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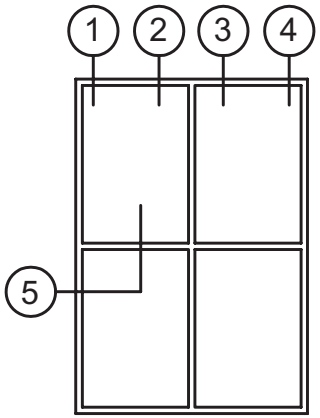

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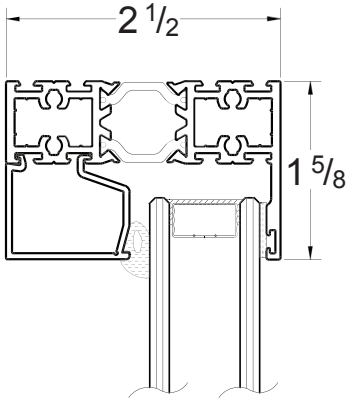

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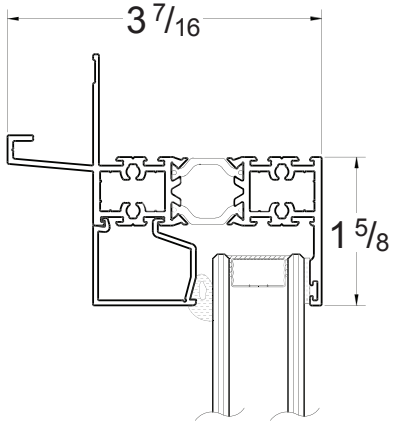

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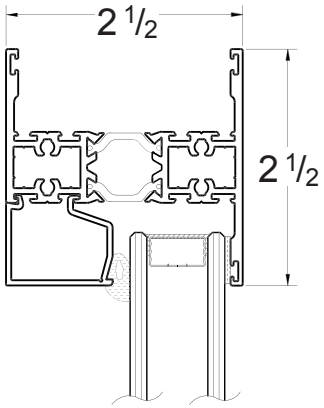

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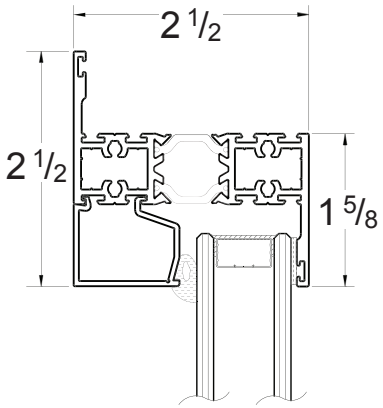

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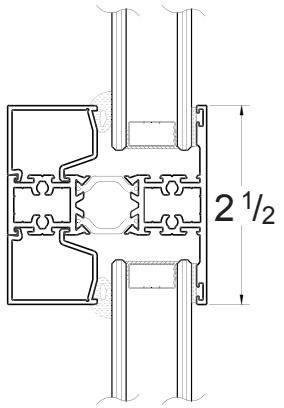

EQUAL LEG CASEMENT

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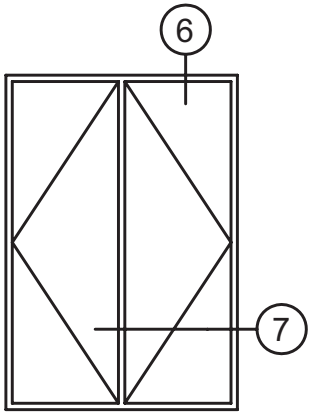

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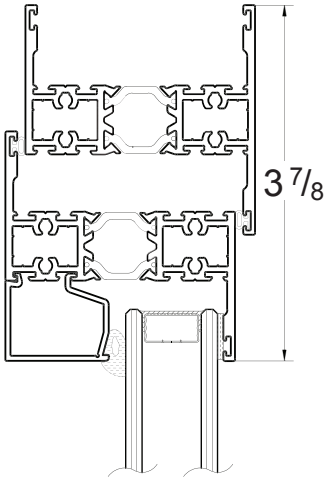

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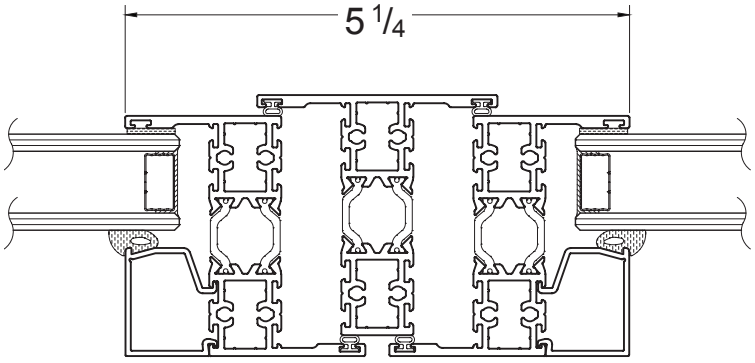

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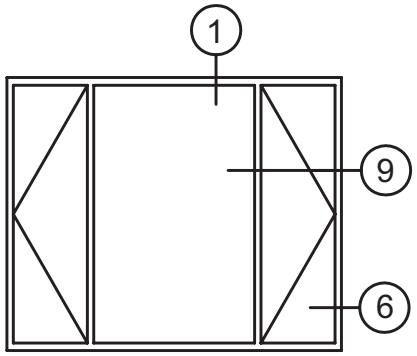

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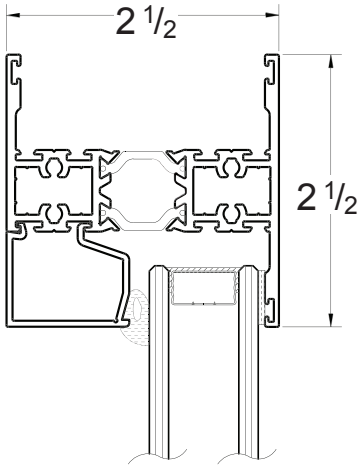

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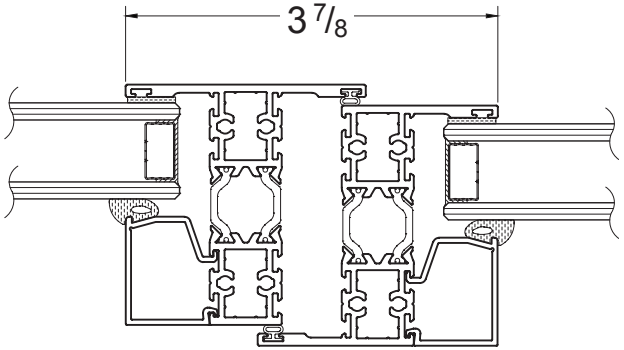

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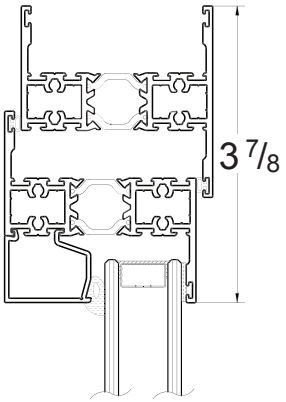

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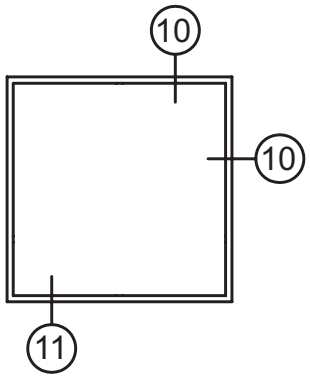

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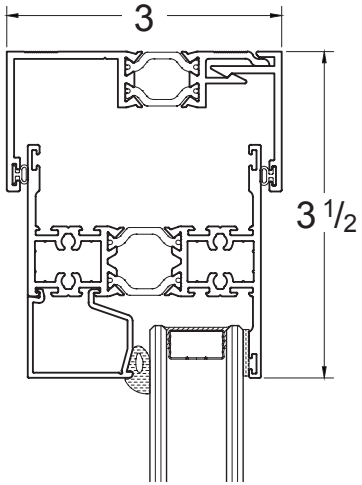

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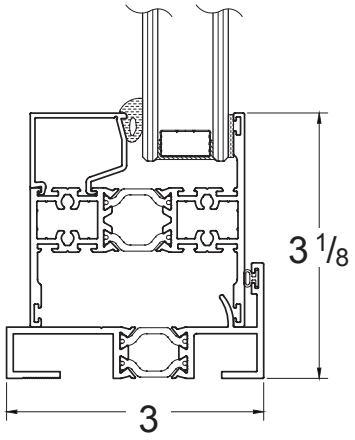
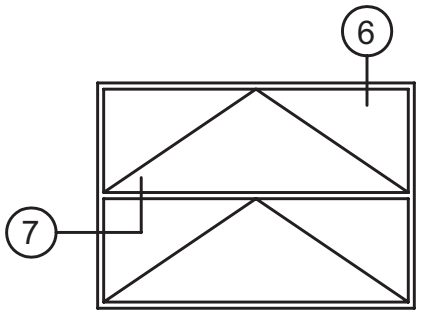


EQUAL LEG AWNING

AWNING / AWNING



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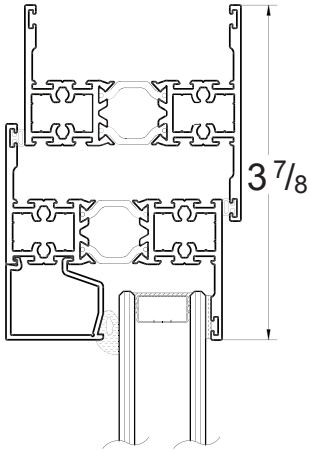

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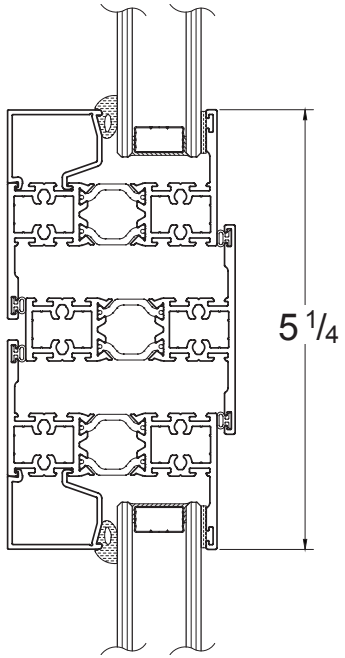
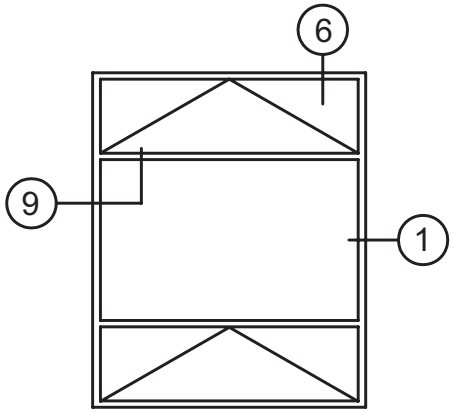


EQUAL LEG AWNING

AWNING / FIXED / AWNING



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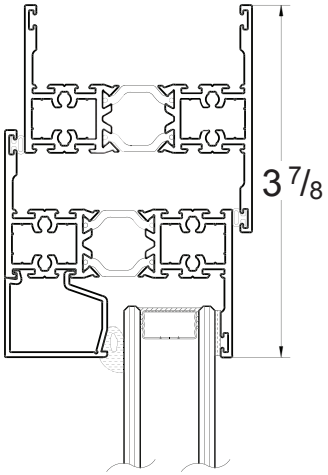

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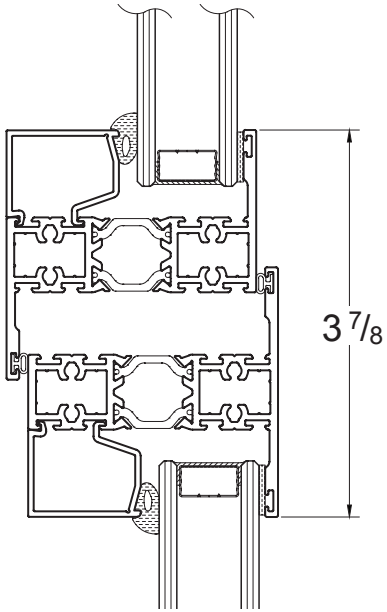

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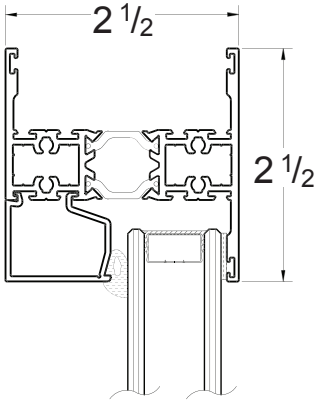

Series **6000** Testing

Intertek | Architectural Testing

TEST REPORT

Report No.: D8929.01-301-44

Rendered to:

All Weather Architectural Aluminum
Vacaville, CA

SERIES/MODEL: 6000
PRODUCT TYPE: Fixed Window

SPECIFICATION: AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

Title	Summary of Results
Primary Product Designator	Class AW–PG80–Size tested 1524 x 2515 mm (60 x 99 in)–Fixed
Design Pressure	±4320 Pa (±90.00 psf)
Air Infiltration	<0.1L/s/m² (<0.01 cfm/ft²)
Water Penetration Resistance Test Pressure	580 Pa (12.11 psf)

Test Completion Date: 07/22/2014

Reference must be made to Report No. D8929.01-301-44 dated 08/15/14 for complete test specimen description and detailed test results.

2524 E. Jensen Avenue
Fresno, CA 93706
www.archtest.com · www.intertek.com/building
p. 559.233.8705
f. 717.764.4129

Intertek | Architectural Testing

Test Report No.: D8929.01-301-44
Report Date: 08/13/14
Revision 1 Date: 08/15/14
Record Retention End Date: 07/22/18
Page 1 of 5

1.0 Report Issued To: All Weather Architectural Aluminum
777 Aldridge Road
Vacaville, CA 95688

2.0 Test Laboratory: Architectural Testing, Inc.
2524 East Jensen Ave.
Fresno, CA 93706
559 233 8705

3.0 Project Summary:

3.1 Series/Model: 6000

3.2 Product Type: Aluminum Fixed Window

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). The specimen tested successfully met the performance requirements for a **Class AW–PG80–Size Tested 1524 x 2515 mm (60 x 99in)–Fixed** rating.

3.4 Test Dates: 06/10/2014 - 07/22/2014

3.5 Test Record Retention End Date: All test records for this report will be retained until July 22, 2018.

3.6 Test Location: Architectural Testing Inc. test facility in Fresno CA.

3.7 Test Sample Source: The test specimen was provided by the client Representative samples of the test specimen will be retained by Architectural Testing for a minimum of four years from the test completion date.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Seamus Porter	All Weather Architectural Aluminum
David Douglass	Architectural Testing Inc.

2524 E. Jensen Avenue
Fresno, CA 93706
www.archtest.com · www.intertek.com/building
p. 559.233.8705
f. 717.764.4129

Series **6000** Testing

4.0 Test Specifications:

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA 910-93, *Voluntary "Life Cycle" Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 3.83 m² (41.23 ft²)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1524	60	2515	99

5.2 Frame Construction:

Frame Member	Material	Description
Head, sill jambs	Aluminum	Thermally improved, dual-strutted, extruded aluminum

Location	Joinery Type	Detail
All corners	Mitered	Sealed and secured using four aluminum corner keys. The corners were attached through the corner keys with (2) #8 x1-1/2" square drive pan head screws and (2) #8 x1-1/4" square drive pan head screws

5.3 Weatherstripping: No weatherstripping was utilized.

2524 E. Jensen Avenue
Fresno, CA 93706
www.archtest.com · www.intertek.com/building
p. 559.233.8705
f. 717.764.4129

5.0 Test Specimen Description: (Continued)

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

Type	Spacer	Interior & Exterior	Glazing Method
1" IG	Metal box	1/4" annealed	Exterior glazed against a bead of silicone and secured using aluminum glazing beads with a wedge gasket. A toe bead was applied at the perimeter.

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Fixed daylight opening	1	1441 x 2432	56-11/16 x 95-3/4	1/2"

5.5 Drainage:

Drainage Method	Size	Quantity	Location
Weep hole	7/8" x 1/8"	2	Each end of the sill snap in glazing bead.

5.6 Hardware: No hardware was utilized.

5.7 Reinforcement: No reinforcement was utilized.

6.0 Installation:

The specimen was installed into a Douglas-Fir wood buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the window was sealed with sealant.

Location	Anchor Description	Anchor Spacing
Nail fin	1/4" x 2" square drive pan head screws	3" from each corner and approximately 16" on center

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7.0 Test Results: The temperature during testing was 28°C (83°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
Sequential testing per AAMA 910			
Air Leakage, Infiltration per ASTM E 283 at 300 Pa (6.27 psf)	<0.1 L/s/m² (<0.01 cfm/ft²)	0.5 L/s/m² (0.10 cfm/ft²) max.	1
Water Penetration, per ASTM E 547 and ASTM E 331 at 580 Pa (12.11 psf)	Pass	No leakage	2
Uniform Load Deflection, per ASTM E 330	Jamb		
+3840 Pa (+80.2 psf)	0.5 mm (0.02")	2.5 mm (0.10") max.	
-3840 Pa (-80.2 psf)	0.5 mm (0.02")	2.5 mm (0.10") max.	2, 3, 4
Air Leakage, Infiltration per ASTM E 283 at 300 Pa (6.27 psf)	<0.1 L/s/m² (<0.01 cfm/ft²)	0.5 L/s/m² (0.10 cfm/ft²) max.	1
Water Penetration, per ASTM E 547 and ASTM E 331 at 580 Pa (12.11 psf)	Pass	No leakage	
Uniform Load Structural, per ASTM E 330	Jamb		
+5760 Pa (+120.3 psf)	0.3 mm (0.01")	0.9 mm (0.04") max.	
-5760 Pa (-120.3 psf)	0.3 mm (0.01")	0.9 mm (0.04") max.	3, 4
Forced Entry Resistance, per ASTM F 588 Type: D - Grade: 40	Pass	No entry	

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: *The client opted to start at a pressure higher than the minimum required.*

Note 3: *Loads were held for 10 seconds.*

Note 4: *Tape and film were not used to seal against air leakage during structural testing.*

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For ARCHITECTURAL TESTING, Inc.

Digitally Signed by: David Douglass
David Douglass
Project Manager

Digitally Signed by:Leaton Kirk
Leaton Kirk
Director – Regional Operations

LK:DD: ms

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Drawings (5) Complete drawings packet on file with Architectural Testing, Inc.

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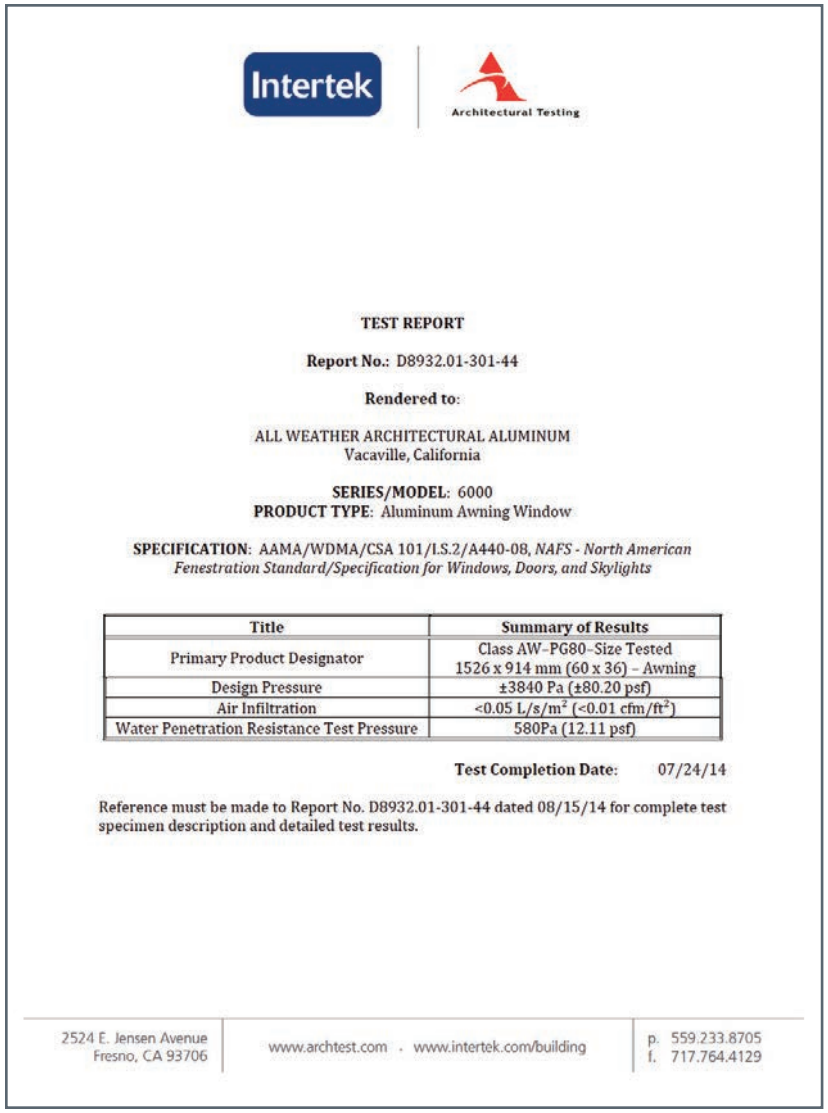

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TEST REPORT

Report No.: D8932.01-301-44

Rendered to:

ALL WEATHER ARCHITECTURAL ALUMINUM
Vacaville, California

SERIES/MODEL: 6000
PRODUCT TYPE: Aluminum Awning Window

SPECIFICATION: AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

Title	Summary of Results
Primary Product Designator	Class AW-PG80-Size Tested 1526 x 914 mm (60 x 36) – Awning
Design Pressure	±3840 Pa (±80.20 psf)
Air Infiltration	<0.05 L/s/m² (<0.01 cfm/ft²)
Water Penetration Resistance Test Pressure	580Pa (12.11 psf)

Test Completion Date: 07/24/14

Reference must be made to Report No. D8932.01-301-44 dated 08/15/14 for complete test specimen description and detailed test results.

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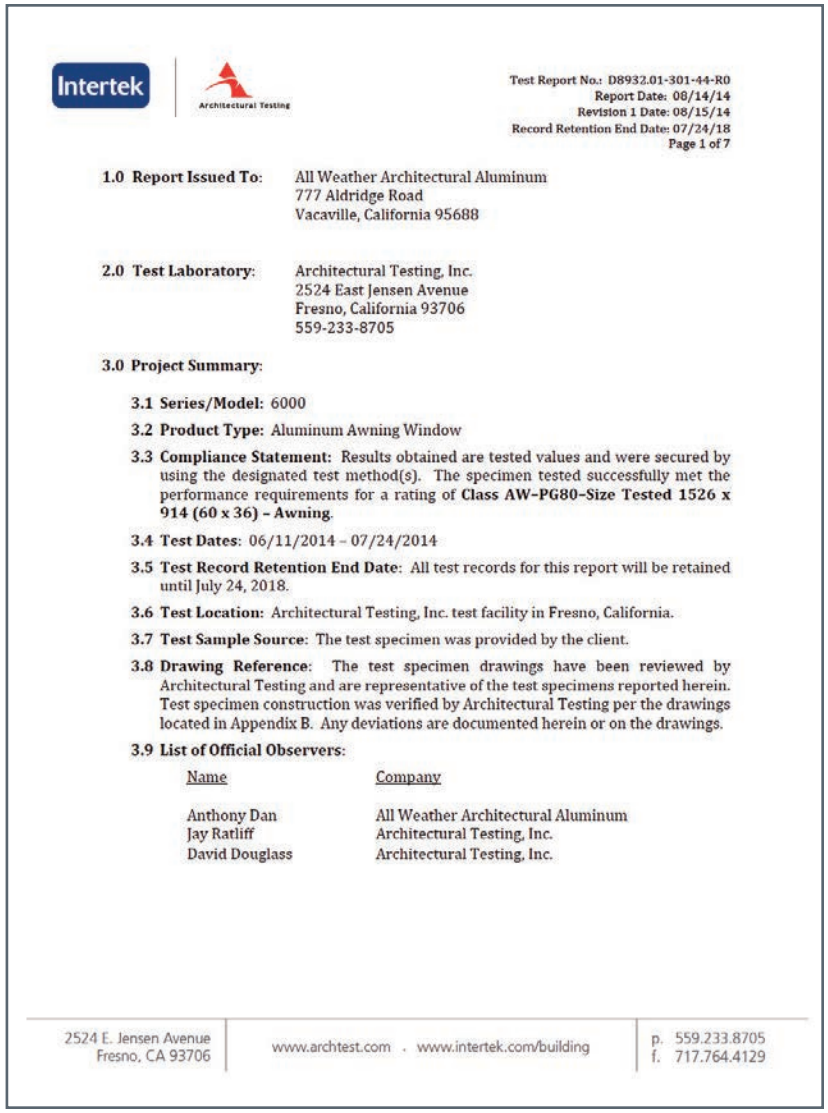

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Test Report No.: D8932.01-301-44-R0
Report Date: 08/14/14
Revision 1 Date: 08/15/14
Record Retention End Date: 07/24/18
Page 1 of 7

1.0 Report Issued To: All Weather Architectural Aluminum
777 Aldridge Road
Vacaville, California 95688

2.0 Test Laboratory: Architectural Testing, Inc.
2524 East Jensen Avenue
Fresno, California 93706
559-233-8705

3.0 Project Summary:

3.1 Series/Model: 6000

3.2 Product Type: Aluminum Awning Window

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). The specimen tested successfully met the performance requirements for a rating of **Class AW-PG80-Size Tested 1526 x 914 (60 x 36) – Awning**.

3.4 Test Dates: 06/11/2014 – 07/24/2014

3.5 Test Record Retention End Date: All test records for this report will be retained until July 24, 2018.

3.6 Test Location: Architectural Testing, Inc. test facility in Fresno, California.

3.7 Test Sample Source: The test specimen was provided by the client.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimens reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Anthony Dan	All Weather Architectural Aluminum
Jay Ratliff	Architectural Testing, Inc.
David Douglass	Architectural Testing, Inc.

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4.0 Test Specifications:

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA 910-93, *Voluntary "Life Cycle" Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 1.39 m² (15.0 ft²)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1526	60-1/16	914	36
Panel	1499	59	889	35

5.2 Frame Construction:

Member	Material	Description
Jambs, Head & Sill	Aluminum	Extruded, with crimped thermal break.

Location	Joinery Type	Detail
All corners	Mitered	Sealed, joined using corner keys, and fastened with two #10 x 1-1/2" square drive pan head self-drilling sheet metal screws and two #10 x 1" square drive pan head self-drilling sheet metal screws.

5.3 Panel Construction:

Member	Material	Description
Stiles & Rails	Aluminum	Extruded, with crimped thermal break.

Location	Joinery Type	Detail
All corners	Mitered	Sealed, and fastened with staked corner keys.

5.0 Test Specimen Description: (Continued)

5.4 Weatherstripping:

Description	Quantity	Location
Hollow bulb rubber	1 row	Frame
Hollow bulb rubber	1 row	Panel

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

Type	Spacer	Interior & Exterior	Glazing Method
1" IG	Metal box	3/16" annealed	Double-sided adhesive foam tape against interior stop; secured with snap-fit aluminum bead with rubber gasket; corners sealed with silicone sealant.

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Panel	1	1372 x 762	54 x 30	9/16"

5.6 Drainage:

Drainage Method	Size	Quantity	Location
Weep notch	1" long	2	Bottom rail weatherstripping, 1" from each corner.
Pressure equalization notch	1" long	2	Stiles weatherstripping, 1" from each top corner.

5.7 Hardware:

Description	Quantity	Location
Multi-arm steel hinge with snubber	2	Fastened with #10 x 3/4" square drive pan head self-drilling sheet metal screws: 5 in each stile, and 4 in each jamb.
Sweep lock	2	Fastened to bottom rail using two #10 x 1-1/2" Phillips flat head sheet metal screws.
Strike plate	2	Fastened to sill using two #10-24 x 5/16" Phillips flat head machine screws.

5.8 Reinforcement: No reinforcement was utilized.

Series **6000** Testing

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Test Report No.: D8932.01-301-44-R0
Report Date: 08/14/14
Revision 1 Date: 08/15/14
Record Retention End Date: 07/24/18
Page 4 of 7

6.0 Installation:

The specimen was installed into a Douglas fir wood test buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the window was sealed with Silicone sealant.

Location	Anchor Description	Anchor Spacing
Nail fin	1/4" x 1-1/2" square drive pan head screws	1" from each corner; spaced 12" – 15" on center.

7.0 Test Results: The temperature during testing was 26°C (79°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Notes
Life Cycle per AAMA 910			
Operating Force, per ASTM E 2068	Initiate motion: 160 N (36.0 lbf) Maintain motion: 107 N (24.1 lbf) Latches: 85 N (19.1 lbf)	Report Only 135 N (30.3 lbf) max. 100 N (22.5 lbf) max.	
Air Leakage, Infiltration per ASTM E 283 at 300 Pa (6.27 psf)	<0.05 L/s/m² (<0.01 cfm/ft²)	0.5 L/s/m² (0.10 cfm/ft²) max.	1
Water Penetration, per ASTM E 547 & ASTM E 331 at 580 Pa (12.11 psf)	Pass	No leakage	2, 7
Cycling (First Half) per AAMA 910			
Vent Panel: 2000 cycles	Pass	No damage	3
Locking Hardware: 2000 cycles	Pass	No damage	4
Misuse Testing per AAMA 910			
Ventilator Torsion Test at 330 N (74.2 lbf)	Pass	No damage	
Ventilator Vertical Load Test at 670 N (150.6 lbf)	Pass	No damage	
Cycling (Second Half) per AAMA 910			
Vent Panel: 2000 cycles	Pass	No damage	5
Locking Hardware: 2000 cycles	Pass	No damage	6

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Test Report No.: D8932.01-301-44-R0
Report Date: 08/14/14
Revision 1 Date: 08/15/14
Record Retention End Date: 07/24/18
Page 5 of 7

7.0 Test Results: (Continued)

Title of Test	Results	Allowed	Notes
Life Cycle per AAMA 910 (Continued)			
Operating Force, per ASTM E 2068	Initiate motion: 191 N (42.9 lbf) Maintain motion: 102 N (22.9 lbf) Latches: 31 N (7.0 lbf)	Report Only 135 N (30.3 lbf) max. 100 N (22.5 lbf) max.	
Air Leakage, Infiltration per ASTM E 283 at 300 Pa (6.27 psf)	<0.05 L/s/m² (<0.01 cfm/ft²)	0.5 L/s/m² (0.10 cfm/ft²) max.	1
Water Penetration, per ASTM E 547 & ASTM E 331 at 580 Pa (12.11 psf)	Pass	No leakage	2, 7
Uniform Load Deflection, per ASTM E 330	N/A	N/A	7
Uniform Load Structural, per ASTM E 330	N/A	N/A	7
Forced Entry Resistance, per ASTM F 588 Type: B - Grade: 10	Pass	No entry	
Sash/Leaf Torsion 70 N (15.7 lbf)	44.2 mm (1.74")	44.4 mm (1.75") max.	
Optional Performance			
Uniform Load Deflection, per ASTM E 330 +3840 Pa (+80.20 psf) -3840 Pa (-80.20 psf)	Top rail 4.4 mm (0.18") 0.9 mm (0.04")	8.6 mm (0.34") max. 8.6 mm (0.34") max.	7, 8, 9
Uniform Load Structural, per ASTM E 330 +5760 Pa (+120.3 psf) -5760 Pa (-120.3 psf)	Top rail 0.1 mm (0.01") 0.3 mm (0.01")	3.0 mm (0.12") max. 3.0 mm (0.12") max.	7, 8, 9

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Test Report No.: D8932.01-301-44-R0
Report Date: 08/14/14
Revision 1 Date: 08/15/14
Record Retention End Date: 07/24/18
Page 6 of 7

7.0 Test Results: (Continued)

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: *Without insect screen.*

Note 3: *Observations: No changes were noted during the first 2000 panel cycles.*

Note 4: *Observations: Paint wore off the locks and strike plates during the first 2000 lock cycles.*

Note 5: *Observations: After second 2000 panel cycles were complete, the friction shoe would no longer hold the panel at intermediate open positions. The friction shoe was adjusted prior to the next operating force measurement.*

Note 6: *Observations: The second 2000 lock cycles wore metal of the locks and strike plates.*

Note 7: *The client opted to start at a pressure higher than the minimum required.*

Note 8: *Loads were held for 10 seconds.*

Note 9: *Tape and film were used to seal against air leakage during structural testing. In the opinion of the test lab, the tape and film did not influence the results of the test.*

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Test Report No.: D8932.01-301-44-R0
Report Date: 08/14/14
Revision 1 Date: 08/15/14
Record Retention End Date: 07/24/18
Page 7 of 7

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For ARCHITECTURAL TESTING, Inc.

Digitally Signed by: David Douglass
David Douglass
Project Manager

Digitally Signed by: Leaton Kirk
Leaton Kirk
Director – Regional Operations

DD: ms

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Drawings (8)

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TEST REPORT

Report No.: D8931.01-301-44

Rendered to:

ALL WEATHER ARCHITECTURAL ALUMINUM
Vacaville, California

SERIES/MODEL: 6000
PRODUCT TYPE: Aluminum Casement Window

SPECIFICATION: AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

Title	Summary of Results
Primary Product Designator	Class AW–PG80–Size Tested 915 x 1524 mm (36 x 60) – Casement
Design Pressure	±3840 Pa (±80.20 psf)
Air Infiltration	0.1 L/s/m² (0.02 cfm/ft²)
Water Penetration Resistance Test Pressure	580Pa (12.11 psf)

Test Completion Date: 07/23/14

Reference must be made to Report No. D8931.01-301-44 dated 08/15/14 for complete test specimen description and detailed test results.

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Test Report No.: D8931.01-301-44-R0
Report Date: 08/14/14
Revision 1 Date: 08/15/14
Record Retention End Date: 07/23/18
Page 1 of 7

1.0 Report Issued To: All Weather Architectural Aluminum
777 Aldridge Road
Vacaville, California 95688

2.0 Test Laboratory: Architectural Testing, Inc.
2524 East Jensen Avenue
Fresno, California 93706
559-233-8705

3.0 Project Summary:

3.1 Series/Model: 6000

3.2 Product Type: Aluminum Casement Window

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). The specimen tested successfully met the performance requirements for a rating of **Class AW – PG80 – Size Tested 915 x 1524 (36 x 60) – Casement**.

3.4 Test Dates: 06/17/2014 – 07/23/2014

3.5 Test Record Retention End Date: All test records for this report will be retained until July 23, 2018.

3.6 Test Location: Architectural Testing, Inc. test facility in Fresno, California.

3.7 Test Sample Source: The test specimen was provided by the client.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimens reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix A. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Anthony Dan	All Weather Architectural Aluminum
Jay Ratliff	Architectural Testing, Inc.
David Douglass	Architectural Testing, Inc.

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4.0 Test Specifications:

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA 910-93, *Voluntary "Life Cycle" Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 1.39 m² (15.0 ft²)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	915	36	1524	60
Panel	889	35	1499	59

5.2 Frame Construction:

Member	Material	Description
Jambs, Head & Sill	Aluminum	Extruded, with crimped thermal break.

Joint	Type	Detail
All corners	Mitered	Sealed, joined using corner keys, and fastened with two #10 x 1-1/2" square drive pan head self-drilling sheet metal screws and two #10 x 1" square drive pan head self-drilling sheet metal screws.

5.3 Panel Construction:

Member	Material	Description
Stiles & Rails	Aluminum	Extruded, with crimped thermal break.

Joint	Type	Detail
All corners	Mitered	Sealed, and fastened with staked corner keys.

5.0 Test Specimen Description: (Continued)

5.4 Weatherstripping:

Description	Quantity	Location
Hollow bulb gasket	1 row	Frame
Hollow bulb gasket	1 row	Panel

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

Type	Spacer	Interior & Exterior	Glazing Method
1" IG	Metal box	3/16" annealed	Double-sided adhesive foam tape against interior stop; secured with snap-fit aluminum bead with rubber gasket; corners sealed with silicone sealant.

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Panel	1	762 x 1373	30 x 54-1/16	9/16"

5.6 Drainage:

Drainage Method	Size	Quantity	Location
Weep notch	1" long	2	Bottom rail weatherstripping, 1" from each corner.
Pressure equalization notch	1" long	2	Stiles weatherstripping, 1" from each top corner.

5.7 Hardware:

Description	Quantity	Location
Multi-arm steel hinge with snubber	2	Fastened with #10 x 3/4" square drive pan head self-drilling sheet metal screws: 4 each in the top and bottom rails, and 5 each in the head and sill.
Sweep lock	2	Fastened to lock stile using two #10 x 1-1/2" Phillips flat head sheet metal screws.
Strike plate	2	Fastened to lock jamb using two #10-24 x 5/16" Phillips flat head machine screws.

5.8 Reinforcement: No reinforcement was utilized.

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Test Report No.: D8931.01-301-44-R0
Report Date: 08/14/14
Revision 1 Date: 08/15/14
Record Retention End Date: 07/23/18
Page 4 of 7

6.0 Installation:

The specimen was installed into a Douglas fir wood test buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the window was sealed with Silicone sealant.

Location	Anchor Description	Anchor Spacing
Nail fin	1/4" x 1-1/2" square drive pan head screws	1" from each corner; spaced 12" – 15" on center.

7.0 Test Results: The temperature during testing was 26°C (79°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Notes
Life Cycle per AAMA 910			
Operating Force, per ASTM E 2068	Initiate motion: 25 N (6 lbf) Maintain motion: 13 N (3 lbf) Latches: 40 N (9 lbf)	Report Only 135 N (30.3 lbf) max. 100 N (22.5 lbf) max.	
Air Leakage, Infiltration per ASTM E 283 at 300 Pa (6.27 psf)	0.1 L/s/m² (0.02 cfm/ft²)	0.5 L/s/m² (0.10 cfm/ft²) max.	1
Water Penetration, per ASTM E 547 & ASTM E 331 at 580 Pa (12.11 psf)	Pass	No leakage	2, 7
Cycling (First Half) per AAMA 910			
Vent Panel: 2000 cycles	Pass	No damage	3
Locking Hardware: 2000 cycles	Pass	No damage	4
Misuse Testing per AAMA 910			
Ventilator Torsion Test at 330 N (74.2 lbf)	Pass	No damage	
Ventilator Vertical Load Test at 670 N (150.6 lbf)	Pass	No damage	
Cycling (Second Half) per AAMA 910			
Vent Panel: 2000 cycles	Pass	No damage	5
Locking Hardware: 2000 cycles	Pass	No damage	6

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Test Report No.: D8931.01-301-44-R0
Report Date: 08/14/14
Revision 1 Date: 08/15/14
Record Retention End Date: 07/23/18
Page 5 of 7

7.0 Test Results: (Continued)

Title of Test	Results	Allowed	Notes
Life Cycle per AAMA 910 (Continued)			
Operating Force, per ASTM E 2068	Initiate motion: 31 N (7 lbf) Maintain motion: 13 N (3 lbf) Latches: 13 N (3 lbf)	Report Only 135 N (30.3 lbf) max. 100 N (22.5 lbf) max.	
Air Leakage, Infiltration per ASTM E 283 at 300 Pa (6.27 psf)	<0.05 L/s/m² (<0.01 cfm/ft²)	0.5 L/s/m² (0.10 cfm/ft²) max.	1
Water Penetration, per ASTM E 547 & ASTM E 331 at 580 Pa (12.11 psf)	Pass	No leakage	2, 7
Uniform Load Deflection, per ASTM E 330	N/A	N/A	7
Uniform Load Structural, per ASTM E 330	N/A	N/A	7
Forced Entry Resistance, per ASTM F 588 Type: B - Grade: 10	Pass	No entry	
Sash/Leaf Torsion 90 N (20.2 lbf)	62.2 mm (2.45")	68.2 mm (2.69") max.	
Sash Vertical Deflection 270 N (60 lbf)	2.0 mm (0.08")	17.8 mm (0.70") max.	
Distributed Load 300 Pa (6.27 psf)	Pass	No damage	
Optional Performance			
Uniform Load Deflection, per ASTM E 330 +3840 Pa (+80.20 psf) -3840 Pa (-80.20 psf)	hinge stile 1.1 mm (0.05") 4.6 mm (0.18")	8.6 mm (0.34") max. 8.6 mm (0.34") max.	7, 8, 9
Uniform Load Structural, per ASTM E 330 +5760 Pa (+120.3 psf) -5760 Pa (-120.3 psf)	hinge stile 1.0 mm (0.04") 0.4 mm (0.02")	3.0 mm (0.12") max. 3.0 mm (0.12") max.	7, 8, 9

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Test Report No.: D8931.01-301-44-R0
Report Date: 08/14/14
Revision 1 Date: 08/15/14
Record Retention End Date: 07/23/18
Page 6 of 7

7.0 Test Results: (Continued)

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: *Without insect screen.*

Note 3: *Observations: At approximately 500 cycles, the vent panel hinge hardware began squeaking.*

Note 4: *Observations: Paint wore off the strike plates during the first 2000 lock cycles.*

Note 5: *Observations: There was no change observed during the second 2000 vent panel cycles.*

Note 6: *Observations: The second 2000 lock cycles wore metal of the locks and strike plates.*

Note 7: *The client opted to start at a pressure higher than the minimum required.*

Note 8: *Loads were held for 10 seconds.*

Note 9: *Tape and film were used to seal against air leakage during structural testing. In the opinion of the test lab, the tape and film did not influence the results of the test.*

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p. 559.233.8705
f. 717.764.4129

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Page 7 of 7

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For ARCHITECTURAL TESTING, Inc.

Digitally Signed by: David Douglass
David Douglass
Project Manager

Digitally Signed by: Leaton Kirk
Leaton Kirk
Director – Regional Operations

DD: ms

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Drawings (8)

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2524 E. Jensen Avenue
Fresno, CA 93706
www.archtest.com · www.intertek.com/building
p. 559.233.8705
f. 717.764.4129