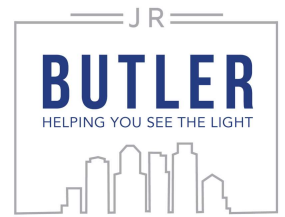


# J3015t Unitized Curtain Wall

## SYSTEM PERFORMANCE



### TEST SUMMARY

TEST	STANDARD	RESULTS	TEST LAB
Static Air Infiltration	ASTM E283	0.06 cfm/ft <sup>2</sup> @ 6.24 psf	Lab: Intertek – York, PA Report #: G8098.02-120-32 R1 Test Date: 7/20/17 – 9/21/17 Report Date: 3/15/23 (rev)
Static Air Exfiltration	ASTM E283	0.06 cfm/ft <sup>2</sup> @ 6.24 psf	
Static Water Resistance	ASTM E331	15 psf	
Dynamic Water Resistance	AAMA 501.1	15 psf	
Structural Design	ASTM E330	+ 30 psf / - 50 psf	
Structural Overload	ASTM E330	+ 45 psf / - 75 psf	
Vertical Interstory Movement	AAMA 501.7	+/- 3/4"	
Lateral Movement: Elastic	AAMA 501.4	+/- 5/8"	
Lateral Movement: Inelastic	AAMA 501.4	+/- 15/16"	
Thermal Cycling	AAMA 501.5	-10 °F to 180 °F	
Building Maintenance Equipment Load Resistance Test		600 lbs	
Condensation Resistance Factor CRF - CAPTURED	AAMA 1503.9	CRF <sub>frame</sub> : 76 CRF <sub>glass</sub> : 74	Lab: Intertek – York, PA Report #: M2874.02-116-46 R1 Test Date: 6/8/21 Report Date: 1/3/23 (rev)
Condensation Resistance Factor CRF – 4 side SSG	AAMA 1503.9	CRF <sub>frame</sub> : 79 CRF <sub>glass</sub> : 75	Lab: Intertek – York, PA Report #: M2870.02-116-46 R1 Test Date: 6/9/21 Report Date: 1/3/23 (rev)
Acoustic: CAPTURED 1" IGU (1/4", 1/2", 1/4")	ASTM E90 ASTM E1332	STC: 32 OITC: 26	Lab: Intertek – York, PA Report #: G8117.01-113-11-R2 Test Date: 9/28/17 Report Date: 4/6/23 (rev)
Acoustic: 4-SIDE SSG 1-1/16" IGU (5/16", 1/2", 1/4")	ASTM E90 ASTM E1332	STC: 35 OITC: 31	Lab: Intertek – York, PA Report #: G8117.02-113-11-R1 Test Date: 9/28/17 Report Date: 4/6/23 (rev)

Refer to the test reports in the above table for complete specimen description, data, and testing sequence.

Contact a JR Butler Inc. representative for more information.

## TEST STANDARDS

**Static Air Infiltration / Exfiltration:** ASTM E283-04 (2012), *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*. Testing was conducted at 6.24 psf positive and negative static air pressure difference. Allowable value  $\leq 0.06$  cfm/ft<sup>2</sup>. Actual measured values  $< 0.01$  cfm/ft<sup>2</sup>. **PASSED**

**Static Water Resistance:** ASTM E331-00 (2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, Curtain Walls by Uniform Static Air Pressure Difference*. Testing was conducted at 15 psf positive static air pressure difference for 15-minute duration. Water applied at a minimum rate of 5 gal/ft<sup>2</sup>hr. No uncontrolled leakage allowed. **PASSED**

**Dynamic Water Resistance:** AAMA 501.1-05, *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, Curtain Walls by Uniform Static Air Pressure Difference*. Testing was conducted at 15 psf positive static air pressure difference for 15-minute duration. Water applied at a minimum rate of 5 gal/ft<sup>2</sup>hr. No uncontrolled leakage allowed. **PASSED**

**Structural Performance:** ASTM E330/E330M-14, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*. Testing was conducted at +30 psf positive, -50 psf negative design loads and +45 psf positive, -75 psf negative overloads (1.5x design load). Deflection of system shall be measured and recorded at design and overload pressures for 10 seconds and evaluated using the following:

Criteria: **PASSED**

Deflection Normal to Wall Plane:  $L/175$  for spans less than 13'-6",  $L/240 + 1/4"$  for spans equal or greater than 13'-6".

Deflection Normal to Wall Plane for Cantilevers:  $2L/175$

The net permanent set for overload shall not exceed 0.1% of the clear span.

**Vertical Interstory Movement:** AAMA 501.7-11, *Recommended Static Test Method for Evaluating Windows, Window Wall, Curtain Wall, and Storefront Systems Subjected to Vertical Inter-Story Movements*. Three complete cycles performed in the vertical direction at the floor simulation. Three complete cycles shall be performed uniformly in the vertical direction at the supplied columns. Vertical movement will be 3/4" down, then back to zero, 3/4" up, then back to zero (one cycle).

Criteria: There shall be no failure or gross permanent distortion of anchors, frame, glass, or panels. Structural silicone shall not experience adhesive or cohesive failure along any glass, frame or panel edge. Glazing gaskets may not engage and weather seals may not fail. **PASSED**

**Lateral movement (elastic):** AAMA 501.4-09, *Recommend Static Test Method for Evaluating Curtain Wall and Storefront Systems Subjected to Seismic and Wind Induced Interstory Drifts*. Complete three complete cycles for the horizontal direction parallel to the main elevation at the upper intermediate simulation. Parallel horizontal movement will be 5/8" left, back to zero, 5/8" right and back to zero (one cycle).

Criteria: There shall be no failure or gross permanent distortion of anchors, frame, glass, or panels. Structural silicone shall not experience adhesive or cohesive failure along any glass, frame or panel edge. Glazing gaskets may not disengage and weather seals may not fail. **PASSED**

**Lateral movement (inelastic):** AAMA 501.4-09, *Recommend Static Test Method for Evaluating Curtain Wall and Storefront Systems Subjected to Seismic and Wind Induced Interstory Drifts*. Complete three complete cycles for the horizontal direction parallel to the main elevation at the upper intermediate simulation. Parallel horizontal movement will be 15/16" left, back to zero, 15/16" right and back to zero (one cycle).

Criteria: At the conclusion of the test there shall be no glass breakage, permanent damage to frame members, or anchors. **PASSED**

**Thermal Cycling:** AAMA 501.5-07, *Test Method for Thermal Cycling of Exterior Walls*. The entire mockup shall be subjected to three thermal cycles. Each cycle shall be maintained for two hours after establishing the following temperature and consist of:

Thermal Cycle Requirements

- a. Low exterior temperature of -10 °F for two hours after establishing temperature.
- b. High exterior ambient temperature of 180 °F for two hours after establishing temperature.
- c. Interior temperature shall be maintained between 60 °F and 80 °F

Criteria: Components used within the system shall withstand thermal movements without buckling, distortion, cracking, failure of glass, and failure of joint seals or undue stress on the finished surfaces, materials, or fixing assemblies. **PASSED**

**Building Maintenance Equipment Load Resistance:** A 600 lb force shall be applied directly to the window washing scaffold tie back acting normal to the wall outward, and a 600 lb force load in each direction acting parallel to the plane of the wall in left, right, up, and down directions. Each load shall be applied for ten seconds. A conjunctive uniform wind load of +/- 6.24 psf shall be applied to each load on the window washing guide track.

Criteria: There shall be no breakage or damage to surrounding or support construction. **PASSED**

**Condensation Resistance Factor (CRF):** AAMA 1503.9, *Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections*.

CAPTURED: CRF<sub>frame</sub> = 76 CRF<sub>glass</sub> = 74 Glass Makeup: 1" IGU (1/4" VNE-53, 1/2" 90% argon VTS, 1/4" clear)  
4-SIDE SSG: CRF<sub>frame</sub> = 79 CRF<sub>glass</sub> = 75 Glass Makeup: 1" IGU (1/4" VNE-53, 1/2" 90% argon VTS, 1/4" clear)

**Acoustic (STC/OITC):**

ASTM E90-09 (2016), *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions*

ASTM E1332-16, *Standard Classification for Rating Outdoor-Indoor Transmission Class*

CAPTURED: STC = 32 OITC = 26 Glass Makeup: 1" IGU (1/4" temp, 1/2" air, 1/4" temp)  
4-SIDE SSG: STC = 35 OITC = 31 Glass Makeup: 1-1/16" IGU (5/16" temp, 1/2" air, 1/4" temp)