

Product Evaluation Report
Vista Fold™ Bi-Fold Aluminum Door System(HVHZ)
-Large and Small Missile Impact Resistant-

1.0 Product Manufacturer: Euro-Wall Systems, LLC
24100 Tiseo Blvd.
Port Charlotte, FL 33980

2.0 Code edition: Florida Building Code 5th edition (2014)-Building Volume-HVHZ
Florida Building Code 5th edition (2014)-Residential Volume-HVHZ

3.0 Evaluation Method: Engineering Evaluation (method 1D) in accordance with 61G20-3 F.A.C.

4.0 Product Category: Exterior Doors

4.1 Product Sub-Category: Swinging Exterior Door Assemblies (Inswing and Outswing)

5.0 Product Description:

5.1 Exterior Head-Aluminum (6063-T5)

5.2 Exterior Jamb-Aluminum (6063-T5)

5.3 Standard Sill-Aluminum (6063-T5)

5.3.1 Standard Sill (modified)-Aluminum (6063-T5)

5.3.2 ADA Sill-Aluminum (6063-T5)

5.4 Panel Rails and Stiles-Aluminum (6063-T5)

5.5 Glazing Option #1: 9/16" O.A. (1/4"-AN-.090 Sentry Glass-1/4" AN)

5.5.1 Glazing Option #1: 1" O.A. (1/8" FT-5/16" A.S.-1/4"-AN-.090 Sentry Glass-1/4" AN)

5.6 Glazing Method-Exterior dry glazed with EPDM gaskets meeting ASTM 864-05

5.7 Drainage- Sill liner with weeped sill

6.0 Code Testing Performance Requirements (HVHZ)

6.1 TAS 201-94 Impact Test Procedures

6.2 TAS 202-94 Criteria for Testing Impact and Non-Impact Resistant Building Envelope
Components Using Uniform Static Air Pressure

6.3 TAS 203-94 Criteria for Testing Products subject to Cyclic Wind Pressure Loading

7.0 Performance Test Results Summary:

7.1 Blackwater Testing, Inc. (Miami-Dade Certification #14-0911.04) Report #:BT-CON-15-001

7.1.1 Signed/Sealed by Yamil Kuri, P.E. On May 19th, 2015

7.1.2 TAS 201-Large Missile Impacts

7.1.3 TAS 203-Cyclic Pressure Loading (DP ± 75.0 psf)

7.1.4 Overall Size= 332-1/8" x 120" =276.79 ft²

7.1.5 Panel Size= 36-5/16" x 116"

7.2 Blackwater Testing, Inc. (Miami-Dade Certification #14-0911.04) Report #:BT-EUW-15-001

7.2.1 Signed/Sealed by Yamil Kuri, P.E. On May 19th, 2015

7.2.2 TAS 202-Air Infiltration @ 1.57 psf (ASTM E 283)-0.15 cfm/ft²

7.2.3 TAS 202-Water Infiltration (ASTM E 331)-11.25 psf (standard sill with riser)

7.2.4 TAS 202-Structural Loads (DP ± 75.0 psf)

7.2.5 Overall Size= 332-1/8" x 120" =276.79 ft²

7.2.6 Panel Size= 36-5/16" x 116"

7.0 Performance Test Results (cont.):

- 7.3 Architectural Testing, Inc. Report #:C5958.01-401-18
 - 7.3.1 Signed/Sealed by Shawn G. Collins, P.E. on June 18th,2013
 - 7.3.2 TAS 202-Air Infiltration @ 1.57 psf (ASTM E 283)-0.11 cfm/ft²
 - 7.3.3 TAS 202-Water Infiltration (ASTM E 331)-9.19 psf (standard sill with riser)
 - 7.3.4 TAS 202-Structural Loads (DP \pm 60.0 psf)
 - 7.3.5 TAS 201-Large Missile Impacts
 - 7.3.6 TAS 203-Cyclic Pressure Loading (DP \pm 60.0 psf)
 - 7.3.7 Overall Size= 220-1/2" x 120" =276.79 ft²
 - 7.3.8 Panel Size= 36-1/8" x 115-7/8"
- 7.4 Architectural Testing, Inc. Report #:C4820.04-401-18 (Specimen #1 and #2)
 - 7.4.1 Signed/Sealed by Shawn G. Collins, P.E. on June 18th,2013
 - 7.4.2 TAS 202-Air Infiltration-ADA sill #1 @ 1.57 psf (ASTM E 283)-0.23 cfm/ft²
 - 7.4.3 TAS 202-Structural Loads (DP \pm 75.0 psf)
 - 7.4.4 Overall size #1= 220-1/2" x 120" =276.79 ft²
 - 7.4.5 Panel Size #1= 36-1/8" x 115-7/8"
 - 7.4.6 Overall Size #2= 74-2-3/4" x 120" =64.58 ft²
 - 7.4.7 Panel Size #2= 36-7/16" x 115-7/8"
- 7.5 Intertek Report #: 1002455458COQ-004A
 - 7.5.1 ASTM 1886-Large Missile Impacts-Missile Level D-Wind Zone 4
 - 7.5.2 ASTM 1996-Cyclic Pressure Loads (DP \pm 100.0 psf)
 - 7.5.3 Overall Size= 159" x 100" =110.42 ft²
 - 7.5.4 Panel Size= 39" x 95-15/16"
- 7.6 Intertek Report #:100244636COQ-002
 - 7.6.1 ASTM E 330-Structural Loads (DP \pm 70.0 psf)
 - 7.6.2 Overall size = 160" x 100" =111.11 ft²
 - 7.6.3 Panel Size = 39" x 95-11/16"
- 7.7 Blackwater Testing, Inc.(Miami-Dade Certification #14-0911.04) Report #:BT-EUW-16-002A
 - 7.6.1 TAS 201-Large Missile Impacts
 - 7.6.2 TAS 203-Cyclic Pressure Loading (DP+60.0/-65.0 psf)
 - 7.6.3 Overall size = 312-5/8" x 120" =260.52 ft²
 - 7.6.4 Panel Size = 44" x 115-7/8"
- 7.8 Blackwater Testing, Inc.(Miami-Dade Certification #14-0911.04) Report #:BT-EUW-16-002A_S
 - 7.6.1 TAS 202/ASTM E 283 @ 1.57 psf (0.156 cfm/ft²)
 - 7.6.2 TAS 202/ASTM E 331 Water penetration @ 9.00 psf
 - 7.6.3 TAS 202/ASTM E 330 Structural +60.0/-65.0 psf
 - 7.6.4 AAMA 1304-Forced Entry Resistance- Pass
 - 7.6.5 Overall size = 312-5/8" x 120" =260.52 ft²
 - 7.6.6 Panel Size = 44" x 115-7/8"

8.0 Engineering Analysis and Evaluation:

| Allowable Design Pressures by Panel Size (± psf) | | | | | | | | | | |
|---|----------------------|-------|-------|-------|-------|---------|-----------|---------|---------|---------|
| Panel Height (Inches) | Panel Width (Inches) | | | | | | | | | |
| | | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | 52 |
| | 72 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 75.0 |
| | 78 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 75.0 | 75.0 |
| | 84 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 75.0 | +60/-65 |
| | 90 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 75.0 | 75.0 | +60/-65 | +60/-65 |
| | 96 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 75.0 | +60/-65 | +60/-65 | +60/-65 |
| | 102 | 100.0 | 100.0 | 100.0 | 93.2 | 75.0 | 75.0 | +60/-65 | +60/-65 | |
| | 108 | 75.0 | 96.9 | 83.7 | 75.0 | 75.0 | +60/-65 | +60/-65 | | |
| | 114 | 75.0 | 77.9 | 75.0 | 75.0 | 75.0 | +60/-65 | +60/-65 | | |
| | 120 | 75.0 | 75.0 | 75.0 | 72.9 | +60/-65 | +60/-61.6 | | | |
| | 126 | 75.0 | 75.0 | 68.0 | 62.2 | 55.7 | 50.5 | | | |
| | 132 | 75.0 | 65.4 | 58.6 | 51.5 | 46.1 | | | | |
| | 138 | 68.0 | 56.9 | 49.0 | 43.1 | 38.5 | | | | |
| | 144 | 57.3 | 47.9 | 41.2 | 36.3 | | | | | |

Note: Applies to both inswing and outswing configurations, segmented and radiused installations

8.1 Installation Anchorage Analysis signed and sealed by Thomas D. Sullivan, P.E. for multiple substrates

8.2 Engineering Evaluation report signed and sealed by Thomas D. Sullivan, P.E. for conformance to the Florida Building Code 5th edition (2014)

8.3 Glazing complies with ASTM E 1300-04

9.0 Installation Instructions:

9.1 Installation instructions signed and sealed by Thomas D. Sullivan, P.E. for the Vista-Fold™ Bi-Fold Aluminum Folding Door System

10.0 Limits and Conditions of Use:

10.1 Limited to maximum frame area= 415.19 ft² (1.5x max tested frame area)

10.2 Max panel size as shown

10.3 Limited to non-shuttered applications inside and outside of the HVHZ where the project specific allowable stress design pressure does not exceed the pressures indicated in the chart noted in section 8.0 when determined in accordance with ASCE 7-10

10.4 Alternate conditions not specifically addressed by this approval shall be designed by a registered Florida Professional Engineer or Architect

10.5 The structural adequacy of the substrate bearing the wind loads superimposed by this product are the responsibility of others

10.6 Conformance to the requirements of the Florida Building Energy, as applicable, are not included in the scope of this evaluation.

11.0 Certificate of Independence: Pursuant to the requirements of 61G20-3 F.A.C, I hereby certify that this Florida Professional Engineer, performing this evaluation, does not have nor will acquire an interest in any company manufacturing or distributing products for which the report is being issued. This is also to certify that this Florida Professional Engineer, does not have, nor will acquire a financial interest in any other entity involved in the approval process of this product.

12.0 Certification: In the professional opinion of this evaluating engineer the aforementioned product, the Vista Fold™ Bi-Fold Aluminum Door System meets the requirements of the Florida Building Code 5th edition for non-shuttered use in the HVHZ when utilized within the limits of use noted herein.

