

## Product Evaluation

WIN2226 | 0623

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

**Evaluation ID:** WIN-2226

**Effective Date:** July 1, 2023

**Re-evaluation Date:** March 2024

**Product Name:** 8100 Series Vinyl Single Hung Windows, Fin and Frame Installation, Impact Resistant

**Manufacturer:** Custom Window Systems, Inc.  
1900 SW 44<sup>th</sup> Avenue  
Ocala, FL 34474  
(352) 368-6922

### General Description:

System	Description	Label Rating	Design Pressure Rating
1	8100 Series Vinyl Single Hung Window; Fin Installed	H-R65 (36 x 62) Missile Level D	+65 / -75 psf
2	8100 Series Vinyl Single Hung Window; Frame Installed	H-R65 (36 x 62) Missile Level D	+65 / -75 psf
3	8100 Series Vinyl Single Hung Window; Frame Installed	LC-PG70 (36 x 71)-H Missile Level D	+70 / -70 psf
4	8100 Series Vinyl Single Hung Window; Frame Installed	LC-PG70 (36 x 71)-H Missile Level D	+60 / -60 psf
5	8100 Series Vinyl Single Hung Window; Frame Installed	LC-PG70 (52 x 62)-H Missile Level D	+70 / -70 psf
6	8100 Series Vinyl Single Hung Window; Frame Installed	LC-PG70 (52 x 71)-H Missile Level D	+70 / -70 psf

**General Description (continued):**

System	Description	Label Rating	Design Pressure Rating
7	8100 Series Vinyl Oriel Single Hung Window; Frame Installed	LC-PG70 (52 x 96)-H Missile Level D	+70 / -70 psf
8	8100 Series Vinyl Single Hung Window; Fin Installed	H-LC65 (53 x 76) Missile Level D	+65 / -65 psf
9	8100 Series Vinyl Single Hung Window; Frame Installed	H-LC65 (53 x 76) Missile Level D	+65 / -65 psf
10	8100 Series Vinyl Single Hung Window; Twin CHS	H-R65 (74 x 63) Missile Level D	+65 / -65 psf
11	8100 Series Vinyl Single Hung Window; Twin	H-R65 (74 x 72) Missile Level D	+65 / -65 psf
12	8100 Series Vinyl Single Hung Window; Fin Installed	LC-PG70 (36 x 71)-H Missile Level D	+65 / -65 psf

**Product Dimensions:**

System	Overall Size	Operable Sash Size	Fixed Sash Daylight Opening Size
1-2	36" x 62"	31-5/16" x 30-5/16"	31-13/16" x 27"
3-4, 12	35-3/4" x 70-3/4"	32-1/4" x 34-5/8"	31-9/16" x 31-3/8"
5	51-7/8" x 61-3/4"	48-3/8" x 30-3/16"	47-11/16" x 26-13/16"
6	51-7/8" x 72"	48-3/8" x 30-3/16"	47-11/16" x 37-1-16"
7	52" x 96"	48-9/16" x 30-3/16"	47-13/16" x 61-1/16"
8-9	53-1/8" x 76"	49-11/16" x 37-5/16"	48-15/16" x 33-15/16"
10	74-1/8" x 63"	32-5/16" x 30-3/16"	31-5/16" x 26-13/16"
11	74-1/8" x 72"	32-15/16" x 35-5/16"	32-3/16" x 31-15/16"

**Product Identification (Certification Label on Window):**

System		
1	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR# 138-269 (Impact) CAR# 138-725 (Structural)
	Product Name	8100 Single Hung w/ Fin
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05 ASTM E1886/E1996-02,05 Missile Level D
2	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR# 138-267 (Impact) CAR# 138-723 (Structural)
	Product Name	8100 Single Hung w/ Flange
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05 ASTM E1886/E1996-02,05 Missile Level D

**Product Identification (Certification Label on Window) - Continued):**

System		
3-4, 12	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR# 138-532 (Sys. 3); 138-533 (Sys. 12); 138-530 (Sys. 4) (Impact) CAR# 138-1092 (Sys. 3, 12); 138-1091 (Sys. 4) (Structural)
	Product Name	8100 PVC Flange Frame Imp Single Hung (Impact) (Sys. 3-4) 8100 PVC Fin Frame Imp Single Hung (Impact) (Sys. 12) 8100 PVC Fin/Flange Frame Imp Single Hung (Structural)
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E1886-05/E1996-05,09; Missile Level D
5	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR# 138-510 (Impact) CAR# 138-1047 (Structural)
	Product Name	8100 PVC Impact Flange Frame Single Hung (Impact) 8100 PVC Impact Flange Single Hung (Structural)
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E1886-02,04,05/E1996-02,04,06,09 Missile Level D
6	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR# 138-507 (Impact) CAR# 138-1031 (Structural)
	Product Name	8100 PVC Impact Single Hung (Impact) 8100 PVC Impact Flange Single Hung (Structural)
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E1886-02,04,05/E1996-02,04,06,09 Missile Level D
7	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR# 138-563 (Impact) CAR# 138-1365 (Structural)
	Product Name	8100 Flange Frame Impact Oriel Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E1886-05/E1996-05,09 Missile Level D
8	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR# 138-268 (Impact) CAR# 138-724 (Structural)
	Product Name	8100 Single Hung w/ Fin
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05 ASTM E1886/E1996-02,05 Missile Level D

**Product Identification (Certification Label on Window) - Continued:**

System		
9	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR# 138-266 (Impact) CAR# 138-722 (Structural)
	Product Name	8100 Single Hung w/ Flange
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05 ASTM E1886/E1996-02,05 Missile Level D
10	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR# 138-255 (Impact) CAR# 138-475 (Structural)
	Product Name	8100 PVC Twin Single Hung w/ Integral Mull
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05 ASTM E1886/E1996-02,05 Missile Level D
11	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR# 138-260 (Impact) CAR# 138-703 (Structural)
	Product Name	SH-8100 PVC Fin/Flange Imp SH Twin Combo Ass'y
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05 ASTM E1886/E1996-05 Missile Level D

**Impact Resistance:**

System	Impact Resistant	Requirement
1-12	Yes	These products satisfy TDI's criteria for protection from windborne debris. Install the assemblies at a height on the structure that does not exceed the design pressure rating for the assemblies.

**Installation:**

System		
1-2, 8-9	Type of Installation	Install in accordance with drawing No. TDI-155D, dated November 12, 2015. Revision D dated January 11, 2023. Signed and sealed by Lucas A. Turner, P.E. on February 28, 2023.
	Wall Framing	
	Fasteners	
	Fastener Location/Spacing	
	Fastener Penetration	
3, 12	Type of Installation	Install in accordance with drawing No. TDI-958D, dated November 12, 2015. Revision D dated January 11, 2023. Signed and sealed by Lucas A. Turner, P.E. on February 28, 2023.
	Wall Framing	
	Fasteners	
	Fastener Location/Spacing	
	Fastener Penetration	

**Installation (continued):**

System		
4-5	Type of Installation	Install in accordance with drawing No. TDI-812D and TDI-957D, dated November 12, 2015. Revision D dated January 11, 2023. Signed and sealed by Lucas A. Turner, P.E. on February 28, 2023.
	Wall Framing	
	Fasteners	
	Fastener Location/Spacing	
	Fastener Penetration	
6	Type of Installation	Install in accordance with drawing No. TDI-882D, dated November 12, 2015. Revision D dated January 11, 2023. Signed and sealed by Lucas A. Turner, P.E. on February 28, 2023.
	Wall Framing	
	Fasteners	
	Fastener Location/Spacing	
	Fastener Penetration	
7	Type of Installation	Install in accordance with drawing No. TDI-295D, dated December 16, 2015. Revision D dated January 11, 2023. Signed and sealed by Lucas A. Turner, P.E. on February 28, 2023.
	Wall Framing	
	Fasteners	
	Fastener Location/Spacing	
	Fastener Penetration	
10-11	Type of Installation	Install in accordance with drawing No. TDI-440D and TDI-491D, dated November 12, 2015. Revision D dated January 11, 2023. Signed and sealed by Lucas A. Turner, P.E. on February 28, 2023.
	Wall Framing	
	Fasteners	
	Fastener Location/Spacing	
	Fastener Penetration	

**Note:** Keep the manufacturer's installation instructions available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.