



Product Evaluation

WIN1367 | 1217

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-1367

Effective Date: December 1, 2017

Re-evaluation Date: January 2020

Product Name: Series 9040 Double Hung Windows, Frame Installation, Impact Resistant

Manufacturer: WinDoor Incorporated
7500 Amsterdam Drive
Orlando, FL 32832
(407) 481-8400

General Description:

System	Description	Label Rating	Design Pressure Rating
1	Double Hung Windows; Equal Lite; LMI Rating	H-C90 60 x 99 Missile Level D	+90 / -150 psf
2	Double Hung Windows; Cottage Vent; LMI Rating	H-C90 60 x 99 Missile Level D	+90 / -150 psf
3	Double Hung Windows; Equal Lite; SMI Rating	H-C90 60 x 99 Missile Level A	+90 / -150 psf
4	Double Hung Windows; Cottage Vent; SMI Rating	H-C90 60 x 99 Missile Level A	+90 / -150 psf

Product Dimensions:

System	Overall Size	Top Sash Size	Bottom Sash Size
1	60" x 99"	56-7/16" x 50-1/8"	56-7/16" x 50-5/16"
2	60" x 99"	56-7/16" x 38-7/16"	56-7/16" x 62"
3	60" x 99"	56-7/16" x 50-1/8"	56-7/16" x 50-5/16"
4	60" x 99"	56-7/16" x 38-7/16"	56-7/16" x 62"

Product Identification (Certification Agency Labels on Window (Two Labels)):

System		
1	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-411; 167-233
	Product Name	9040 Impact Double Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05; ASTM E 1886-05; ASTM E 1996-05; Missile Level D
2	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-417; 167-235
	Product Name	9040 Cottage Impact Double Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05; ASTM E 1886-05; ASTM E 1996-05; Missile Level D
3	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-410; 167-232
	Product Name	9040 Impact Double Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05; ASTM E 1886-05; ASTM E 1996-05; Missile Level A
4	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-416; 167-234
	Product Name	9040 Cottage Impact Double Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05; ASTM E 1886-05; ASTM E 1996-05; Missile Level A

Impact Resistance:

System	Impact Resistant	Requirement
1, 2	Yes	These products satisfy TDI's criteria for protection from windborne debris in the Inland I and Seaward zone. Install the assemblies at a height on the structure that does not exceed the design pressure rating for the assemblies.
3, 4	Yes	These products satisfy TDI's criteria for protection from windborne debris in the Inland I and Seaward zone. The window assemblies may be installed at heights 30 feet or higher on the structure as long as the design pressure rating for the assemblies is not exceeded. Note: These window assemblies may not be installed at heights less than 30 feet.

Installation:

Wall Framing Construction: The windows may be mounted to several types of wall framing construction. The types of wall framing construction allowed include:

- Concrete (minimum compressive strength: 3,192 psi)
- Hollow concrete block (ASTM C-90, Grade N, Type 1 or greater)
- Wood dimension lumber (minimum Spruce-Pine-Fir)
- Wood backed (minimum Spruce-Pine-Fir) minimum 20 gauge steel

Fasteners:

- Concrete and hollow concrete block wall framing; Minimum 1/4" diameter ITW Tapcons; Minimum 1-1/4" embedment; Minimum 2-1/2" edge distance.
- Wood and wood backed steel wall framing; Minimum No. 14 screw; Minimum 1-3/4" embedment.

Fastener Spacing: The fasteners must be installed through the window frame and into the wall framing. Two rows of fasteners are required. Along the head, the fasteners must be located approximately 6" from each end and approximately 16" on center. Along the sill, the fasteners must be located approximately 6" from each end. Along each side jamb, the fasteners must be located approximately 6" from each end, 6" on either side of the meeting rails, and approximately 16" on center. At the meeting rail location on each side jamb, three fasteners per row are required, spaced 2" on center.

Note: Keep the manufacturer's installation instructions at the job site during installation. Use corrosion resistant fasteners as specified in the IRC, IBC, and the Texas Revisions.