

# TEXAS DEPARTMENT OF INSURANCE

Engineering Services / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104  
Phone No. (512) 322-2212 Fax No. (512) 463-6693

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## PRODUCT EVALUATION WIN-1157

Effective August 1, 2009

*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 shall be subject to reevaluation **June 2010**.*

*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.*

**Series 8100 Vinyl Single Hung Windows, Impact Resistant, manufactured by**

**Custom Window Systems**  
**1900 SW 44<sup>th</sup> Ave**  
**Ocala, Florida 34474**  
**Telephone: (352) 368-6922**  
**www.cws.cc**

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

The Series 8100 window is a vinyl single hung window. The vinyl single hung windows evaluated in this report are individual, impact resistant windows. This product evaluation report is for vinyl single hung windows based on the following tested constructions:

### General Description:

System	Description	Label Rating
1	Series 8100 Vinyl Single Hung Windows; (O/X)	H-R65 53 x 76 ASTM E 1886; ASTM E 1996

### Product Dimensions:

System	Overall Size	Active Sash Size	Fixed Daylight Opening Size
1	53 $\frac{1}{8}$ " x 76"	48 $\frac{3}{4}$ " x 37"	48" x 33 $\frac{3}{4}$ "

### Glazing Description:

System	Glass Construction <sup>1</sup>	Glazing Method <sup>2</sup>
1	IG-1	GM-1

Note: <sup>1</sup> See the "Glass Construction Key" for the glazing construction.

<sup>2</sup> See the "Glazing Method Key" for the glazing method description.

**Glass Construction Key:**

IG-1: The active sash and the fixed sash contain a sealed insulating glass unit. The insulating glass unit is comprised of a double strength ( $\frac{1}{8}$ " ) annealed glass lite and a laminated glass unit separated by a desiccant-filled aluminum spacer system. The laminated glass unit is comprised of two double strength ( $\frac{1}{8}$ " ) annealed glass lites with a 0.090" thick DuPont PVB interlayer. The glass used in the insulating glass unit of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

**Glazing Method Key:**

GM-1: The insulating glass unit is set with Dow Corning 1199 structural silicone sealant compound and Truseal Perfect Glaze "H". The insulating glass unit is secure in place with a rigid vinyl glazing bead.

**Frame Construction:** The frame members are manufactured from extruded vinyl (PVC). The frame corners are mitered and welded construction. The fixed interlock meeting rail is coped, butted, and secured to the frame side jambs with two (2) screws per end.

**Sash Construction:** The sash members are manufactured from extruded vinyl (PVC). The sash corners are mitered and welded construction.

**Reinforcement:** Custom shaped aluminum reinforcement is used in the fixed interlock, the active sash meeting rail, the active sash stiles, the bottom rail, and the frame sill. Two (2) extruded aluminum channels are located on the underside of the active sash stile 4 inches on center. Two (2) extruded aluminum channels are located on the interior sill track  $23\frac{1}{2}$  inches on center from each corner of the sill. Two (2) extruded aluminum "T" bars are located on the underside of the active sash bottom rail  $21\frac{1}{2}$  inches on center from each corner. Two (2) extruded aluminum "T" bars are located on the inside sill track 6 inches on center from each corner of the sill.

**Hardware:**

- Block and tackle balance; Two (2) required; Located in the frame side jambs.
- Sash cam; One (1) required; Located at each top corner of both active sash stiles.
- Metal cam-type sweep lock; Two (2) required; Located 10 inches from each corner of the active sash top interlock rail; Secured with two (2) screws each.
- Metal keepers; Two (2) required; Located opposite the locks; Secured to the fixed meeting rail with two (2) screws each.

**Product Identification:** Two certification program labels (Keystone) will be affixed to the window. One certification program label includes the manufacturer's name; performance characteristics; the approved inspection agency (Keystone); and the applicable standard:

**System 1:** ANSI/AAMA/WDMA 101/I.S.2-97

The second certification program label includes the manufacturer's name; performance characteristics; the approved inspection agency (Keystone); and the applicable standards: ASTM E1886 and ASTM E 1996.

Each label contains a Certification Authorization Report (CAR) number located on the top right side of the label and a model name for the window. The following CAR numbers and model names are located on each label:

**Label Identification:**

		Certification Authorization Report (CAR) number	
System	Model	Label with AAMA/WDMA 101/I.S.2-97	Label with ASTM E 1886 and ASTM E 1996
1	Series 8100 Vinyl Single Hung w/Fin	138-155	138-212

**LIMITATIONS**

**Design pressures:**

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressures (psf)
1	53 $\frac{1}{8}$	76	$\pm 65$

**Impact Resistance:** These window assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The window assemblies passed Missile Level D specified in ASTM E 1996-02. The window assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These window assemblies will not need to be protected with an impact protective system.

**Acceptance of Smaller Assemblies:** Window assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

**INSTALLATION INSTRUCTIONS**

**General:** The window assembly shall be installed in accordance with the manufacturer's installation instructions. Detailed installation instructions and drawings are available from the manufacturer.

**Installation:** The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The window shall be mounted to the wood wall framing members using extruded aluminum "L" shaped clips (1  $\frac{1}{2}$ " x 2  $\frac{1}{2}$ " x  $\frac{1}{16}$ "). The aluminum clips are secured to the window frame within a "T" groove in the frame. The aluminum clips are secured to the wall framing with minimum No. 10 screws. Along the head and the sill, the clips shall be spaced approximately 6 inches from each corner and approximately 10 inches on center. Along each side jamb, the clips shall be spaced approximately 5 inches from each corner and approximately 18 inches on center. The fasteners shall be long enough to penetrate a minimum of 1  $\frac{1}{2}$ " into the wall framing members.

**Note:** The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.