

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION WIN-1365

Effective February 1, 2011

*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 **December 2012**.*

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 DH-2360 Vinyl Double Hung Windows, Individual, Non-impact Resistant, manufactured by

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1070 Technology Drive
Nokomis, Florida 34275
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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 DH-2360 double hung windows are vinyl double hung windows. The vinyl double hung windows evaluated in this report are individual, non-impact resistant, windows. This product evaluation report is for vinyl double hung windows based on the following tested constructions:

General Description:

System	Description	Label Rating
1	Series DH-2360 Vinyl Double Hung Window; (X/X)	H-LC35 54 x 91
2	Series DH-2360 Vinyl Double Hung Window; (X/X)	H-LC50 48 x 96
3	Series DH-2360 Vinyl Double Hung Window; (X/X)	H-LC30 44 x 75 Neg DP=40
4	Series DH-2360 Vinyl Double Hung Window; (X/X)	H-LC50 32 x 56
5	Series DH-2360 Vinyl Double Hung Window; (X/X)	H-LC50 44 x 62
6	Series DH-2360 Vinyl Double Hung Window; (X/X)	H-LC40 36 x 75 Neg DP=50
7	Series DH-2360 Vinyl Double Hung Window; (X/X)	H-LC45 48 x 68

Product Dimensions:

System	Overall Size	Top Sash Size	Bottom Sash Size
1	54" x 91"	49 $\frac{1}{2}$ " x 44 $\frac{1}{8}$ "	50 $\frac{1}{2}$ " x 45 $\frac{1}{8}$ "
2	48" x 86"	43 $\frac{5}{16}$ " x 41 $\frac{9}{16}$ "	44 $\frac{5}{16}$ " x 42 $\frac{9}{16}$ "
3	44" x 75"	39 $\frac{1}{4}$ " x 36 $\frac{5}{8}$ "	40 $\frac{1}{4}$ " x 37 $\frac{5}{8}$ "
4	32" x 56"	27 $\frac{3}{8}$ " x 26 $\frac{5}{8}$ "	28 $\frac{3}{8}$ " x 27 $\frac{5}{8}$ "
5	44" x 62"	39 $\frac{1}{4}$ " x 29 $\frac{3}{4}$ "	44 $\frac{3}{8}$ " x 30 $\frac{5}{8}$ "
6	36" x 75"	31 $\frac{1}{4}$ " x 36 $\frac{5}{8}$ "	32 $\frac{3}{8}$ " x 37 $\frac{5}{8}$ "
7	48" x 68"	43 $\frac{1}{4}$ " x 32 $\frac{5}{8}$ "	44 $\frac{1}{4}$ " x 33 $\frac{5}{8}$ "

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1-7	IG-1	GM-1

Note: ¹ See the "Glass Construction Key" for the glazing construction.

² See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

IG-1: Both operable sashes contain a sealed insulating glass unit. The sealed insulating glass unit in the tested assembly is comprised of two double strength ($\frac{1}{8}$ "") annealed glass lites separated by a butyl spacer system. The glass thickness and type 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 units in both sashes are exterior glazed. The insulating glass units are glazed onto a single part hot melt. The insulating glass units are secured in place with vinyl glazing beads.

Frame Construction: The frame members are manufactured from extruded vinyl (PVC). The frame corners are mitered and welded construction.

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

Hardware:

- Metal sweep locks with keepers; Two (2) per sash required; Located at the sash top rail, 9 inches from each end.
- PVC tilt latches; Two (2) per sash required; Located on the active meeting rail ends.
- Metal tilt pins; Two (2) per sash required; Located on the bottom rail ends.
- Balance assembly; Two (2) required; One (1) per jamb.

Reinforcement:

Systems 1 and 2: Extruded aluminum reinforcement is located in the bottom sash stiles, the top sash stiles, the locking rails, the keeper rails, and the bottom rails. The reinforcement extends the length of the members.

Systems 3 through 7: Extruded aluminum reinforcement is located in the exterior meeting rail. The reinforcement extends the length of the members.

Product Identification: A certification program label (Keystone) will be affixed to the window. The certification program label includes the performance characteristics and approved inspection agency to indicate compliance with the requirements of AAMA/WDMA/CSA 101/I.S.2/A440-05. The certification program 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 number and model name is located on the label:

Label Identification:

System	Model	Certification Authorization Report (CAR) number
1	DH 2360 PVC Double Hung	199-486
2	DH-2360 PVC Double Hung	199-487
3	DH 2360 PVC Double Hung	199-495
4	DH-2360 PVC Double Hung	199-488
5	DH 2360 PVC Double Hung	199-496
6	DH-2360 PVC Double Hung	199-497
7	DH-2360 PVC Double Hung	199-498

LIMITATIONS

Design pressures (DP):

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressure (psf)
1	54	91	± 35
2	48	86	± 50
3	44	75	+30/-40
4	32	56	± 50
5	44	62	± 50
6	36	75	+40/-50
7	48	68	± 45

Impact Resistance: These window assemblies do not satisfy the Texas Department of Insurance's criteria for protection from windborne debris. These window assemblies will need to be protected with an impact protective system when installed in areas where windborne debris protection is required.

Tested to Higher Negative Design Pressure: The Keystone label indicates that the product was tested to a higher negative design pressure rating. The higher negative design pressure rating is specified in the table above.

Acceptance of Smaller Assemblies: Windows 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 and this evaluation report. Detailed installation instructions and drawings are available from the manufacturer.

Installation:

System 1: The window frame shall be fastened to minimum Southern Yellow Pine dimension lumber. The window is secured to the wall framing using the window frame with minimum No. 8 x 2" screws. The fasteners are required along the frame head and side jambs. Along the head, the fasteners shall be spaced approximately 10 inches from each corner. Along each side jamb, the fasteners are located approximately 12 inches from each end and one at the mid span. In addition, the window is secured in place with minimum $\frac{1}{2}$ " x $\frac{1}{2}$ " wood blind stops located along the head and side jambs at the interior and the exterior. The blind stops are secured to the wall framing with minimum No. 6 x 2" screws located 3 inches from each corner and approximately 16 inches on center. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wall framing.

System 2: The window frame shall be fastened to minimum Southern Yellow Pine dimension lumber. The window is secured to the wall framing using the window frame with minimum No. 8 x 2" screws. The fasteners are required along the frame side jambs. Along each side jamb, the fasteners are located approximately 12 inches from each end and one at the mid span. In addition, the window is secured in place with minimum $\frac{1}{2}$ " x $\frac{1}{2}$ " wood blind stops located along the head and side jambs at the interior and the exterior. The blind stops are secured to the wall framing with minimum No. 6 x 2" screws located 3 inches from each corner and approximately 16 inches on center. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wall framing.

Systems 3, 5, 6, and 7: The window frame shall be fastened to minimum Southern Yellow Pine dimension lumber. The window is secured to the wall framing using the window frame with minimum No. 8 x 2" screws. The fasteners are required along the side jambs. Along each side jamb, the fasteners are located approximately 12 inches from each end and one at the mid span. In addition, the window is secured in place with minimum $\frac{1}{2}$ " x $\frac{1}{2}$ " wood blind stops located along the head and side jambs at the interior and the exterior. The blind stops are secured to the wall framing with minimum No. 6 x 2" screws located 3 inches from each corner and approximately 16 inches on center. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wall framing.

System 4: The window frame shall be fastened to minimum Southern Yellow Pine dimension lumber. The window is secured to the wall framing using the window frame with minimum No. 8 x 2" screws. The fasteners are required along the side jambs. Along each side jamb, the fasteners are located approximately 12 inches from each end. In addition, the window is secured in place with minimum $\frac{1}{2}$ " x $\frac{1}{2}$ " wood blind stops located along the head and side jambs at the interior and the exterior. The blind stops are secured to the wall framing with minimum No. 6 x 2" screws located 3 inches from each corner and approximately 16 inches on center. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wall framing.

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.