

TEXAS DEPARTMENT OF INSURANCE

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

-PRODUCT EVALUATION
WIN-1475

Effective Date: November 1, 2011 (Revised April 1, 2012)
Reevaluation Date: **February 1, 2015**

*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.

Series 350 Vinyl Double Hung Windows, Three Wide, New and Replacement Construction, Non-Impact Resistant, manufactured by

Pella Corporation
102 Main Street
Pella, Iowa 50219
Telephone: (641) 621-1000

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 350 double hung windows specified in this report are vinyl double hung windows. This evaluation report includes three wide double hung window units. The vinyl double hung windows may be installed as new construction windows or as replacement windows. This report includes non-impact resistant vinyl double hung windows based on the following tested configurations:

General Description:

| System | Description | Label Rating |
|--------|--|-----------------|
| 1 | Series 350; Three Wide Vinyl Double Hung Windows; Equal Window; Fin Install; (X/X.X/X.X/X) | H-LC25 121 x 78 |
| 2 | Series 350; Three Wide Vinyl Double Hung Windows; Equal Window; Fin Install; (X/X.X/X.X/X) | H-LC25 121 x 63 |
| 3 | Series 350; Three Wide Vinyl Double Hung Windows; Unequal Window; Fin Install; (X/X.X/X.X/X) | H-LC25 146 x 78 |
| 4 | Series 350; Three Wide Vinyl Double Hung Windows; Unequal Window; Fin Install; (X/X.X/X.X/X) | H-LC25 146 x 78 |
| 5 | Series 350; Three Wide Vinyl Double Hung Windows; Unequal Window; Frame Install; (X/X.X/X.X/X) | H-LC25 146 x 78 |

Product Dimensions:

| System | Overall Size | Top Sash Size | Bottom Sash Size |
|--------|--------------|--|--|
| 1 | 121" x 78" | Three: 37.45" x 38.930" | Three: 37.45" x 38.930" |
| 2 | 121" x 63" | Three: 37.446" x 31.430" | Three: 37.446" x 31.430" |
| 3 | 146" x 78" | Two: 51.446" x 38.930" One: 34" x 38" | Two: 51.446" x 38.930" One: 34" x 38" |
| 4 | 146" x 78" | Two: 51.446" x 38.930" One: 34" x 38" | Two: 51.446" x 38.930" One: 34" x 38" |
| 5 | 146" x 78" | Two: 51.446" x 38.930" One: 34" x 38" | Two: 51.446" x 38.930" One: 34" x 38" |

Glazing Description:

| System | Glass Construction ¹ | Glazing Method ² |
|--------|---------------------------------|-----------------------------|
| 1 | IG-1 | GM-1 |
| 2 | IG-1 | GM-1 |
| 3 | IG-1 | GM-1 |
| 4 | IG-1 | GM-1 |
| 5 | 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 sashes contain sealed insulating glass units. The insulating glass units are comprised of two single strength ($\frac{3}{32}$ "") annealed glass lites separated by a metal reinforced butyl spacer system. The glass thickness and type used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The insulating glass units are exterior glazed against polyurethane reactive sealant. The insulating glass units are secured with snap-in 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.

Reinforcement (per window):

Systems 1, 3, 4, and 5: Extruded aluminum reinforcement is utilized in the upper sash interlock and the lower sash interlock. The reinforcement extends the full length of the members.

System 2: Extruded aluminum reinforcement is utilized in the upper sash interlock, the lower sash interlock, the lower sash stile, and the upper sash stile. The reinforcement extends the full length of the members.

Hardware:

- Helical tensile spring and pulley balances; Two (2) required; Located in each side jamb.
- Spring loaded metal Autolock with detent and strikes or positive action lock and strike; One (1) required; Located at the center of the meeting rail.

Product Identification: A certification program label (WDMA) will be affixed to the window. The certification program label includes the manufacturer's name; the name of the product: **350 Series Double Hung Annealed**; performance characteristics; the approved inspection agency (WDMA); and the applicable standards: ANSI/AAMA/NWDA 101/I.S.2-97 and AAMA/WDMA/CSA 101/I.S.2/A440-05.

LIMITATIONS

Design pressures:

| System | Maximum Width (in.) | Maximum Height (in.) | Design Pressures (psf) |
|--------|---------------------|----------------------|------------------------|
| 1 | 121 | 78 | ± 25 |
| 2 | 121 | 63 | ± 25 |
| 3 | 146 | 78 | ± 25 |
| 4 | 146 | 78 | ± 25 |
| 5 | 146 | 78 | ± 25 |

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 is required.

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. Two-wide assemblies of these windows are also acceptable within the limitations specified in this evaluation 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 (Fin Installation): The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The windows shall be mounted to the wood wall framing members using the nailing fin of the window with minimum No. 10 x 2" screws with 1/2 inch diameter washers. Along the head and sill, the fasteners shall be spaced approximately 6 inches from each corner and 6 inches on either side of the transition bar. Along each side jamb, the fasteners are spaced approximately 6 inches from each corner, 21 inches from the head, 3 inches above the meeting rail, and 5 inches below the meeting rail. The fasteners shall be long enough to penetrate a minimum of 1 1/2 inches into the wood wall framing.

System 2 (Fin Installation): The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The windows shall be mounted to the wood wall framing members using the nailing fin of the window with minimum No. 10 x 2" screws with 1/2 inch diameter washers. Along the head and sill, the fasteners shall be spaced approximately 6 inches from each corner and 6 inches on either side of the transition bar. Along each side jamb, the fasteners are spaced approximately 6 inches from each corner, 3 inches above the meeting rail, and 5 inches below the meeting rail. The fasteners shall be long enough to penetrate a minimum of 1 1/2 inches into the wood wall framing.

Installation (continued):

Systems 3 and 4 (Fin Installation): The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The windows shall be mounted to the wood wall framing members using the nailing fin of the window with minimum No. 10 x 2" screws with $\frac{1}{2}$ inch diameter washers. Along the head and sill, the fasteners shall be spaced approximately 6 inches from each corner, 6 inches on either side of the transition bar, and one at the mid-span. Along each side jamb, the fasteners are spaced approximately 6 inches from each corner, 21 inches from the head, 3 inches above the meeting rail, and 5 inches below the meeting rail. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wood wall framing.

System 5 (Frame Installation): The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The windows shall be mounted to the wood wall framing members using the frame of the window with minimum No. 10 x 2" screws with $\frac{1}{2}$ inch diameter washers. Along the head and sill, the fasteners shall be spaced approximately 6 inches from each corner, 6 inches on either side of the transition bar, and one at the mid-span. Along each side jamb, the fasteners are spaced approximately 6 inches from each corner, 21 inches from the head, 3 inches above the meeting rail, and 5 inches below the meeting rail. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wood 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.