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

PRODUCT EVALUATION Effective June 1, 2010
WIN-1096

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 January 2011.

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 2902/4902 Vinyl Twin Single Hung Windows, New Construction or Replacement Windows, Non-impact Resistant, manufactured by

Silver Line Building Products
Route One North
P.O. Box 6029
North Brunswick, NJ 08902
(732) 435-1000

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 2902/4902 windows are vinyl twin single hung windows. The vinyl twin single hung windows evaluated in this report are individual, non-impact resistant windows. This product evaluation report is for vinyl twin single hung windows based on the following tested constructions:

General Description:

System	Description	Label Rating
1	Series 2902/4902 Vinyl Twin Single Hung Windows	H-R50 76 x 62
2	Series 2902/4902 Vinyl Twin Single Hung Windows	H-R50 76 x 72
3	Series 2902/4902 Vinyl Twin Single Hung Windows	H-R35 96 x74
4	Series 2902/4902 Vinyl Twin Single Hung Windows	H-R35 80 x 74
5	Series 2902/4902 Vinyl Twin Single Hung Windows	H-R50 79 x 60

Product Dimensions:

System	Overall Size	Sash Size	Fixed Daylight Opening Size
1	75 ½ " x 62"	Two: 35 ⅜ " x 30 ½ "	Two: 32 ¾ " x 27 ¾ "
2	75 ½ " x 72"	Two: 35 ⅜ " x 35 7/16 "	Two: 32 ¾ " x 32 ¾ "
3	95 ½ " x 74"	Two: 45 ½ " x 36 ½ "	Two: 43" x 34"
4	80" x 74"	Two: 37 ½ " x 36 ½ "	Two: 35 ¼ " x 34"
5	79" x 60"	Two: 32 ¼ " x 29 ½ "	Two: 34 ¼ " x 27"

Glazing Description:

System	Glass Construction [1]	Glazing Method [2]
1	IG-1	GM-1
2	IG-2	GM-1
3	IG-2	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: The window contains sealed insulating glass units. The sealed insulating glass unit is comprised of two sheets of $\frac{3}{32}$" thick clear annealed glass and a steel Intercept™ spacer system. The glass thickness and type in the insulating glass unit of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-2: The window contains sealed insulating glass units. The sealed insulating glass unit is comprised of two sheets of $\frac{1}{8}$" thick clear annealed glass and a steel Intercept™ spacer system. The overall thickness of the insulating glass unit is $\frac{5}{8}$". The glass thickness and type 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 fixed insulating glass unit is interior glazed and the sash insulating glass unit is exterior glazed. The insulating glass units are set against silicone sealant. A rigid vinyl snap-in glazing bead secures the insulating glass units in place.

Frame Construction: The frame members are manufactured from extruded vinyl (PVC). The frame corners are mitered and welded construction. The intermediate frame jamb is secured at each end with screws through a plate in the head and the sill. The fixed meeting rail is secured with a fitted PVC block. The PVC block is secured to the intermediate frame jamb and to fixed meeting rail with screws.

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

Reinforcement:

Systems 1, 3, 4, and 5: Roll formed steel reinforcement is utilized in the fixed meeting rail, the lock rail, and intermediate frame jamb. The reinforcement extends the length of the members.

System 2: Roll formed steel reinforcement is utilized in the fixed meeting rail, the lock rail, and in the intermediate frame jamb. Extruded aluminum reinforcement is utilized in the sash stiles. The reinforcement extends the length of the members.

Hardware (per window):

- Sweep locks with adjacent keepers; Two (2) required; Located on the lock rail, at each end. The keepers are aligned opposite the locks on the fixed meeting rail.
- Block and tackle balances; Two (2) required; One per jamb.
- Vinyl tilt latches (Systems 1 and 2); Two (2) required; Located at each end of the lock rail.

Hardware (per window) - continued:

- Plastic tilt latches (Systems 3, 4, and 5); Two (2) required; Located at each end of the lock rail.
- Metal pivot pins (Systems 1 and 2); Two (2) required; Located on each end of the bottom rail.
- Aluminum pivot pins (Systems 3 and 4); Two (2) required; Located on each end of the bottom rail.

Product Identification: A certification program label (WDMA) will be affixed to the window. The certification program label includes the manufacturer's name; the product name: **Series 2902 Vinyl Single Hung**; performance characteristics; the approved inspection agency (WDMA); and the applicable standard: AAMA/WDMA/CSA 101/I.S.2/A440-05.

LIMITATIONS

Design pressures:

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressures (psf)
1	75 1/2	62	± 50
2	75 1/2	72	± 50
3	95 1/2	74	± 35
4	80	74	± 35
5	79	60	± 50

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.

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:

Fin Installation to Wood (Systems 1 and 2): The wall framing shall be minimum Spruce-Pine-Fir lumber. The window is secured to the wall framing members using the window nailing fin with either No. 8 x 1 3/4" screws or 11 gauge x 1 3/4" roofing nails. The fasteners shall be located approximately 5 inch from each corner and approximately 5 inches on center along the perimeter of the window. The fasteners shall be long enough to penetrate a minimum of 1 1/2 inches into the wall framing. The window shall be set in a bed of silicone.

Fin Installation to Wood (Systems 3 and 4): The wall framing shall be minimum Spruce-Pine-Fir lumber. The window is secured to the wall framing members using the window nailing fin with either No. 8 x 1 3/4" screws or 11 gauge x 1 3/4" roofing nails. The fasteners shall be located approximately 6 inch from each corner and approximately 8 inches on center along the perimeter of the window. The fasteners shall be long enough to penetrate a minimum of 1 1/2 inches into the wall framing. The window shall be set in a bed of silicone.

Fin Installation to Wood (System 5): The wall framing shall be minimum Spruce-Pine-Fir lumber. The window is secured to the wall framing members using the window nailing fin with either No. 8 x 1 ¾" screws or 11 gauge x 1 ¾" roofing nails. The fasteners shall be located approximately 3 inch from each corner and approximately 3 inches on center along the perimeter of the window. The fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the wall framing. The window shall be set in a bed of silicone.

Frame Installation to Wood (Systems 1 through 5): The wall framing shall be minimum Spruce-Pine-Fir lumber. The window is secured to the wall framing members using the window frame head, sill, and side jambs with minimum No. 8 x 1 ¾" screws. Along the head and sill, the fasteners shall be located approximately 6 inches from each corner, 6 inches on either side and at the center of the intermediate frame jamb, and one at the mid-span of each window. Along each side jamb, the fasteners shall be located approximately 6 inches from each corner, 6 inches on either side of the meeting rail, and one at the mid-span of each sash. The fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the wall framing. The window shall be set in a bed of silicone.

Frame Installation to Concrete or CMU (Systems 1 through 5): The wall framing shall be precast concrete, cast in place concrete, or concrete masonry units (CMU) construction. Hollow CMU is acceptable. The window is secured to the wall framing members using the window frame head, sill, and side jambs with minimum 3⁄16" diameter Tapcons. Along the head and sill, the fasteners shall be located approximately 6 inches from each corner, 6 inches on either side and at the center of the intermediate frame jamb, and one at the mid-span of each window. Along each side jamb, the fasteners shall be located approximately 6 inches from each corner, 6 inches on either side of the meeting rail, and one at the mid-span of each sash. The fasteners shall be long enough to penetrate a minimum of 1 ¼ inches into the wall framing and shall be located a minimum of 2 ⅝ inches from the edge of the opening. The window shall be set in a bed of silicone.

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.