

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION DR-129

December 1, 2005

*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 3 years after the effective date.*

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 7100H Vinyl Outswing Entry Doors, Impact Resistant, manufactured by

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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 7100H outswing entry door is a vinyl entry door. The outswing entry doors evaluated in this report are impact resistant doors. This product evaluation report includes the following:

Outswing Entry Door

Outswing Entry Door with a Fixed Panel

Outswing Entry Door with a Fixed Panel Mullled to an Outswing Entry Door with a Fixed Panel

This product evaluation report is for vinyl outswing entry doors based on the following constructions:

General Description:

System	Description	Label Rating
1	Series 7100H Outswing Entry Door; (X)	HGD-LC60 79 x 84
2	Series 7100H Outswing Entry Door with a Fixed Panel; (XO)	HGD-LC60 79 x 84
3	Series 7100 H; Outswing Entry Door with a Fixed Panel Mullled to an Outswing Entry Door with a Fixed Panel; (XO/XO)	HGD-LC60 79 x 84 (See note below)
4	Series 7100H Outswing Entry Door; (X)	HGD-C50 79 x 94
5	Series 7100H Outswing Entry Door with a Fixed Panel; (XO)	HGD-C50 79 x 94

Note: In System 3, each outswing entry door with a fixed panel assembly must bear the label rating indicated. The maximum dimensions and the design pressure rating for the mullled assembly shall be as specified in the limitations section of the evaluation report.

PRODUCT DESCRIPTION (CONT.)

Component Dimensions:

System	Overall Door Size	Fixed / Operable Panel Size(s)	Fixed / Operable Panel Glass Size(s)
1	39 1/4" x 83 1/2"	37 3/8" x 81 1/2"	29" x 73 1/2"
2	79" x 83 1/2"	37 3/8" x 81 1/2"	29" x 73 1/2"
3	160 1/4" x 83 1/2"	37 3/8" x 81 1/2"	29" x 73 1/2"
4	39 1/4" x 94"	37 3/8" x 92 1/2"	29" x 84 1/2"
5	79" x 94"	37 3/8" x 92 1/2"	29" x 84 1/2"

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 Description Key" for the glazing construction.

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

Glazing Description Key:

IG-1: The fixed and operable panels contain a sealed insulating glass unit. The sealed insulating glass unit is comprised of a laminated glass unit and a double strength (1/8") fully tempered Low – E TI AC glass lite separated by a Truseal Swiggle strip spacer system. The laminated glass unit is comprised of two double strength (1/8") annealed glass lites with a 0.090 inch Solutia PVB interlayer.

Glazing Method Key:

GM-1: The insulating glass units are set from the exterior with Sika 250-PC-C structural silicone backbedding at the interior, and the heel of the glass, full perimeter. Glass stop rails and stiles secure the insulating glass units from the interior.

Frame Construction: The frame members are manufactured from extruded vinyl (PVC). The frame corners are mitered and welded construction. The fixed snap-on interlock is attached with screws. Snap-in pocket covers are located at the frame head, sill, and jamb pockets. Snap-in retaining legs are located at the interior of the frame sill and at the interior and center of the frame jambs. An aluminum sill cover (threshold) snaps over the vinyl frame sill. Snap-in mull caps are located on the interior and exterior side of the mullions.

Panel Construction: The panels are manufactured from extruded vinyl (PVC). The panel corners are mitered and welded construction. The fixed panel top and bottom rail are fastened to the frame members with screws.

PRODUCT DESCRIPTION (CONT.)

Hardware (Systems 1-3):

- Butt hinge (Ultra Hardware) located at the $\frac{1}{4}$ points at frame fixed astragal. The hinge is attached to the door stile with three (3) No 10 x $1\frac{1}{4}$ " screws. The top three hinges are attached to the fixed astragal with two (2) No. 10 x 1" screws and one (1) No. 10 x 3" screw. Bottom hinge is attached to the fixed astragal with three (3) No. 10 x 1" screws.
- Stainless steel handle set (Hoppe) located 41 inches from the door bottom rail.

Hardware (Systems 1-3) - continued:

- Lock system hardware (Hoppe) installed with six (6) No. 8 x $1\frac{1}{4}$ " screws and contains lock gear with bottom bolt, top extension with shoot bolt, middle extension and shoot bolt striker with shoot bolt strike attached with two (2) No. 8 x 1" screws and one (1) No. 8 x 3" screw.
- Dead bolt strike (Hoppe) attached with three (3) No. 8 x 1" screws.

Hardware (Systems 4-5):

- Butt hinge (Ultra Hardware) located 7 inches from each end and at $19\frac{1}{2}$ " on center at the astragal jamb. The hinge is attached to the door stile with three (3) No 10 x $1\frac{1}{4}$ " screws. The top three hinges are attached to the astragal jamb with two (2) No. 10 x 1" screws and one (1) No. 10 x 3" screw. Bottom two hinges are attached to the astragal jamb with three (3) No. 10 x 1" screws.
- Stainless steel handle set (Hoppe) located 36 inches from the door bottom rail.
- Lock system hardware (Hoppe) installed with six (6) No. 8 x $1\frac{1}{4}$ " screws and contains lock gear with bottom bolt, top extension with shoot bolt, middle extension and shoot bolt striker with shoot bolt strike attached with two (2) No. 8 x 1" screws and one (1) No. 8 x 3" screw.
- Dead bolt strike (Hoppe) attached with three (3) No. 8 x 1" screws.

Reinforcement: Steel reinforcement is utilized. Panel reinforcement is located in the stiles and rail cavities. Lock stile reinforcement is located in the frame jamb. Frame hinge reinforcement is located in the frame hinge jamb. Reinforcement is located in the mullions and is attached to the door jambs with No. 8 x $1\frac{1}{2}$ " screws spaced 2" from each end and 12" on center. The reinforcement extends the length of the members.

Product Identification: A certification program label will be affixed to the window. The certification program label includes the manufacturer's name, performance characteristics and approved inspection agency to indicate compliance with the requirements of AAMA/NWWDA 101/I.S.2 and compliance with AAMA 506-2000.

LIMITATIONS

Design pressures (DP):

System	Overall Width (in.)	Overall Height (in.)	Design Pressure (psf)
1	$39\frac{1}{4}$	$83\frac{1}{2}$	± 60
2	79	$83\frac{1}{2}$	± 60
3	$160\frac{1}{4}$	$83\frac{1}{2}$	± 60
4	$39\frac{1}{4}$	94	± 50
5	79	94	± 50

LIMITATIONS (CONT.)

Impact Resistance: These door 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 door assemblies passed Missile Level D specified in ASTM E 1996-01. 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 door assemblies will not need to be protected with an impact protective system.

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

INSTALLATION INSTRUCTIONS

General: The door assembly shall be prepared and installed in accordance with the manufacturers recommended installation instructions. Detailed drawings are available from the manufacturer. The wood wall framing members shall be minimum Southern Yellow Pine lumber.

Installation (Systems 1 and 4): The door is secured to the wall framing through the frame head, sill, and jambs with minimum No. 8 screws. Along the jambs, the fasteners are spaced a maximum of 2 inches from each corner and a maximum of 12 inches on center. Along the frame head, and sill, the fasteners are spaced a maximum of 2 inches from each corner and at the mid-span of the panel. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ " into the wall framing members. For concrete/masonry, minimum $\frac{3}{16}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of $1\frac{1}{2}$ " into the masonry/concrete.

Installation (Systems 2 and 5): The door is secured to the wall framing through the frame head, sill, and jambs with minimum No. 8 screws. Along the jambs, the fasteners are spaced a maximum of 2 inches from each corner and a maximum of 12 inches on center. Along the frame head, and sill, the fasteners are spaced a maximum of 2 inches from each corner, 2 inches on either side of the fixed astragal, and at the mid-span of the fixed and operable panels. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ " into the wall framing members. For concrete/masonry, minimum $\frac{3}{16}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of $1\frac{1}{2}$ " into the masonry/concrete.

Installation (System 3): The door is secured to the wall framing through the frame head, sill, and jambs with minimum No. 8 screws. Along the jambs, the fasteners are spaced a maximum of 2 inches from each corner and a maximum of 12 inches on center. Along the frame head, and sill, the fasteners are spaced a maximum of 2 inches from each corner, 2 inches on either side of the fixed astragals and center mullion, and at the mid-span of the fixed and operable panels. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ " into the wall framing members. For concrete/masonry, minimum $\frac{3}{16}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of $1\frac{1}{2}$ " into the masonry/concrete.

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.