

## Product Evaluation

DR1078 | 0621

Engineering Services Program

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.

For more information, contact TDI Engineering Services Program at 800-248-6032.

**Evaluation ID:** DR-1078

**Effective Date:** June 1, 2021

**Re-evaluation Date:** January 2024

**Product Name:** FeelSafe Aluminum Clad Wood Bi-Fold Hinged Patio Folding Doors, Outswing, 4 and 6 panels, Impact Resistant

**Manufacturer:** Sierra Pacific Windows  
575 South Whelen Ave  
Medford, WI 54451  
(715) 748-2011

### General Description:

System	Description	Label Rating	Design Pressure
1	FeelSafe Aluminum Clad Wood Bi-Fold Hinged Patio Doors; Outswing; 6 panels (Type E, 3L-3R)	LC-PG50 (220 x 126)-SP Missile Level D	+50 / -55 psf
2	FeelSafe Aluminum Clad Wood Bi-Fold Hinged Patio Doors; Outswing; 4 panels (Type A, 4L)	LC-PG50 (147 x 126)-SP Missile Level D	+50 / -55 psf
3	FeelSafe Aluminum Clad Wood Bi-Fold Hinged Patio Doors; Outswing; 4 panels (Type D, 2L-2R)	LC-PG50 (147 x 126)-SP Missile Level D	+50 / -55 psf

**Component Dimensions:**

System	Overall Size	Panel Size	Glass Daylight Opening Size
1	Outswing: 219.88" x 125.68"	36" x 119.50"	28" x 107-1/4"
2-3	Outswing: 147.25" x 125.68"	36" x 119.50"	28" x 107-1/4"

**Applicable Panel Configurations:** The number of panels in the installed assembly may exceed the number of panels listed in the Systems specified in this evaluation report. Individual panel height and width and glass daylight opening size in the installed assembly must not exceed the height and width of the panel sizes and the glass daylight opening sizes listed in the Component Dimensions section of this evaluation report. For acceptable configurations, refer to the document "Sierra Pacific Windows Feel-Safe Aluminum Clad Wood Bi-Fold Doors Applicable Panel Configurations (2, 3, 4, 5, 6, 7 & 8 Panel Wide Doors;" signed, sealed, and dated May 13, 2021 by Warren W, Shaeffer. The doors must bear the WDMA Hallmark performance label specified in this evaluation report.

**Hardware:****Hoppe Active 5-point Locking System (System 1) (1):**

Shoot bolts located at the top and bottom of active panel, tongues located approximately 45-3/4" from the top rail and 11-3/4" from the bottom rail.

**Hoppe Active 3-point Locking System (System 2-3) (1):**

Tongues located approximately 45-3/4" from the top rail and 11-3/4" from the bottom rail.

**Hoppe Handle Assembly (Systems 1-3) (1):**

Handle latch approximately 82-1/2" from top rail.  
Left locking panel (from exterior) on System 1 and 3

**Centor Head Flushbolts (5 for System 1, 4 for Systems 2 and 3):**

Attach at the top of outside hinging panel stiles and passive lock stile on System 2 using minimum No. 8 x 1-1/4" PFH screws.

**Centor Sill Flushbolts (5 for System 1, 4 for Systems 2 and 3):**

Attach at the bottom of outside hinging panel stiles and passive lock stile on System 2 using minimum No. 8 x 1-1/4" PFH screws.

**Centor Straight Hinge (6 for System 1 and 3, 3 for System 2):**

Attach inside hinging stiles approximately 32-1/2" and 60-3/4" from the top rail using minimum No. 8 x 1-1/4" PFH screws

**Centor Straight Hinge with Handle (4 for System 2):**

Attach inside hinging stiles approximately 89-1/4" from the top rail using minimum No. 8 x 1-1/4" PFH screws

**Centor Offset Hinge (6 for Systems 1 and 3):**

Attach outside hinging stiles approximately 32-1/2" and 60-3/4" from the top rail using minimum No. 8 x 1-1/4" PFH screws

**Centor Offset Hinge with Handle (4 for Systems 1 and 3):**

Attach outside hinging stiles approximately 89-1/4" from the top rail using minimum No. 8 x 1-1/4" PFH screws

**Centor Head Flushbolt Strike (5 for System 1, 4 for Systems 2-3):**

Locate head at outside hinging stiles and passive panel. Attach using minimum No. 10 x 3" PFH screws

**Product Identification (Certification Agency Label on Door):**

System		
1-3	Certification agency	WDMA
	Manufacturer's name or code name	Sierra Pacific Windows
	Product name	FeelSafe Clad Bi-Fold Outswing Door
	Test standards	AAMA/WDMA/CSA 101/I.S.2/A440-11, -17 ASTM E 1886-13a; ASTM E 1996-14; Missile Level D

**Impact Resistance:**

System	Impact Resistant	Requirement
1-3	Yes	These products satisfy TDI's criteria for protection from windborne debris. Install the assemblies at a height on the structure that does not exceed the design pressure rating for the assemblies.

**Installation:****Wall Framing:**

The door may be anchored to the following types of substrates:

- Wood wall framing; minimum Southern Yellow Pine (S.G.=0.55)
- Aluminum; minimum 1/8" thick, 6063-T5
- Steel; minimum 1/8" thick, A36 steel
- Concrete; minimum 2,500 psi compressive strength)

**Anchorage:**

The door nail fin along the head and sill is secured to the wall framing with fasteners located within 3" of each corner and spaced a maximum of 5" on center.

Fasteners:

- Wood Wall Framing: Minimum No. 8 x 1-1/4" SMS (minimum 1" embedment)
- Aluminum or Steel: Minimum No. 8 GR. 5 screws (full embedment)

The door head and sill blocks are anchored to the wall framing with one (1) row of fasteners spaced approximately 4-1/2", 12-1/2", and 20-1/2" from the side jambs and a maximum of 12" on center.

Fasteners:

- Wood: Minimum 1/4" x 4" hex head lag screws (minimum 1-3/4" embedment)
- Aluminum or Steel: Minimum 1/4" GR. 5 screws (full embedment)
- Concrete: Minimum 1/4" diameter concrete anchors (minimum 1-3/4" embedment; minimum 2" edge distance)

The door head track is anchored to the wall framing with two (2) rows of fasteners spaced approximately 4-1/2", 12-1/2", and 20-1/2" from the side jambs and a maximum of 12" on center.

Fasteners:

- Wood: Minimum 1/4" x 4" hex head lag screws (minimum 2-1/4" embedment)
- Aluminum or Steel: Minimum 1/4" GR. 5 screws (full embedment)
- Concrete: Minimum 1/4" diameter concrete anchors (minimum 2-1/4" embedment; minimum 2" edge distance)

The door sill track is anchored to the wall framing with two (2) rows of fasteners spaced approximately 4-1/2", 12-1/2", and 20-1/2" from the side jambs and a maximum of 12" on center.

Fasteners:

- Wood: Minimum No. 12 x 3" PPH screws (minimum 1-3/4" embedment)
- Aluminum or Steel: Minimum No. 12 GR. 5 screws (full embedment)
- Concrete: Minimum 1/4" diameter concrete anchors (minimum 1-3/4" embedment; minimum 2" edge distance)

**Note:** Keep the manufacturer's installation instructions available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.