

## Product Evaluation

DR186 | 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-186

**Effective Date:** June 1, 2021

**Re-evaluation Date:** June 2025

**Product Name:** Wood Edge Steel Glazed and Opaque Inswing and Outswing Hinged Doors with Non-Impact Resistant Sidelites, Impact and Non-Impact Resistant

**Manufacturer:** Masonite International  
1955 Powis Road  
West Chicago, IL 60185  
(630) 584-6330

### General Description:

System	Description	Design Pressure Rating	Impact Rated
1	8'-0" Opaque Outswing Single Door; X	+70 / -70 psf	Yes
2	8'-0" Opaque Inswing Single Door; X	+70 / -70 psf	Yes
3	8'-0" Opaque Inswing Double Door w/ Sidelites; OXXO	+45 / -50 psf	Yes (Doors ONLY)
4	8'-0" Opaque Outswing Double Door w/ Sidelites; OXXO	+50 / -45 psf	Yes (Doors ONLY)
5	6'-8" Opaque Inswing Double Door; ADA Sill; XX	+55 / -55 psf	Yes
6	6'-8" Opaque Outswing Double Door w/ Sidelites; OXXO	+55 / -55 psf	Yes (Doors ONLY)

**General Description:**

System	Description	Design Pressure Rating	Impact Rated
7	6'-8" Opaque Inswing Double Door w/ Sidelites; OXXO	+55 / -55 psf	Yes (Doors ONLY)
8	8'-0" Full Lite Glazed Inswing Double Door with Sidelites; OXXO	+40 / -40 psf	No
9	8'-0" Full Lite Glazed Outswing Double Door with Sidelites; OXXO	+40 / -40 psf	No
10	6'-8" Full Lite Glazed Inswing Double Door; Surface Bolts; XX	+50.5 / -50.5 psf	No
11	6'-8" Full Lite Glazed Outswing Double Door; Surface Bolts; XX	+50.5 / -50.5 psf	No
12	6'-8" Opaque Inswing Single Door with Sidelite; XO	+55 / -55 psf	No
13	6'-8" Opaque Outswing Single Door with Sidelite; XO	+55 / -55 psf	No
14	6'-8" Full Lite Glazed Inswing Double Door with Sidelites; OXXO	+40 / -45 psf	No
15	6'-8" Full Lite Glazed Outswing Double Door with Sidelites; OXXO	+45 / -40 psf	No
16	6'-8" Glazed (22" x 48") Inswing Double Door with Sidelites; OXXO	+50 / -50 psf	No
17	6'-8" Glazed (22" x 48") Outswing Double Door with Sidelites; OXXO	+50 / -50 psf	No

**Product Dimensions:**

System	Overall Size	Maximum Panel Size	Panel Daylight Opening Size
1	37-3/4" x 96-3/4"	35-3/4" x 95-5/16"	N/A
2	37-3/4" x 96-3/4"	35-3/4" x 95-3/16"	N/A
3	150" x 97-7/8"	36-3/8" x 95-1/4"	Door: N/A Sidelite: 21" x 79"
4	150" x 96-5/8"	36-3/8" x 95-1/4"	Door: N/A Sidelite: 21" x 79"
5	74-1/2" x 81-3/4"	36-3/8" x 79-1/4"	N/A
6	105" x 80-3/4"	36-3/8" x 79-1/4"	Door: N/A Sidelite: 5-7/8" x 63"
7	105" x 81-3/4"	36-3/8" x 79-1/4"	Door: N/A Sidelite: 5-7/8" x 63"
8	148-7/8" x 97-3/4"	36-3/8" x 95-1/4"	Door & Sidelite: 21" x 79"

**Product Dimensions:**

System	Overall Size	Maximum Panel Size	Panel Daylight Opening Size
9	148-7/8" x 96-5/8"	36-3/8" x 95-1/4"	Door & Sidelite: 21" x 79"
10	71-1/8" x 79-1/2"	34-7/16" x 76-7/8"	Door: 21" x 63" Sidelite: N/A
11	71-1/4" x 78-1/4"	34-7/16" x 76-7/8"	Door: 21" x 63" Sidelite: N/A
12	53" x 81-3/4"	35-3/4" x 79-1/4"	Door: N/A Sidelite: 5-7/8" x 63"
13	53" x 80-3/4"	35-3/4" x 79-1/4"	Door: N/A Sidelite: 5-7/8" x 63"
14	148-1/2" x 81-5/8"	35-3/8" x 79"	Door & Sidelite: 21" x 62-7/8"
15	148-1/2" x 81-3/16"	35-3/4" x 79"	Door & Sidelite: 21" x 62-7/8"
16	148-5/8" x 81-5/8"	35-3/4" x 79"	Door: 20-7/8" x 46-7/8" Sidelite: 20-7/8" x 62-7/8"
17	148-1/2" x 80-1/2"	35-3/4" x 79"	Door: 20-7/8" x 46-7/8" Sidelite: 20-7/8" x 62-7/8"

**Components and Hardware:****Systems 1-2:**

- **Hinges:** four required; secure to the door panel with four No. 10 x 1" PFH screws. Secure to the door jamb with two No. 10 x 5/8" PFH screws and two No. 10 x 2-1/2" PFH screws.
- **Kwikset Series 400 Lockset:** locate on the active door panel.
- **Kwikset Series 980 deadbolt:** locate on the active door panel.
- **Strike plate – Lockset:** one required; locate on the door jamb; secured with two No. 8 x 2" PFH screws.
- **Strike plate – Deadbolt (System 1):** one required; locate on the door jamb; secured with two No. 10 x 2" PFH screws.
- **Strike plate – Deadbolt (System 2):** one required; locate on the door jamb; secured with two No. 8 x 2" PFH screws and two No. 10 x 2" PFH screws.

**Systems 3-7**

- **Hinges:** six required (three per door panel); secure to the door panel with two No. 10 x 3/4" PFH screws and two No. 10 x 1-1/4" PFH screws; secure to the door jamb with two No. 10 x 3/4" PFH screws and two No. 10 x 2-1/2" PFH screws
- **Kwikset Series 400 Lockset:** located on the active door panel
- **Kwikset Series 980 deadbolt:** located on the active door panel
- **Strike plate – Lockset:** one required; locate on the door astragal; secured with two No. 8 x 2" PFH screws
- **Strike plate – Deadbolt:** one required; locate on the door astragal; secure with two No. 8 x 2" PFH screws
- **Astragal strike – strike plate at head:** Secure with two No. 8 x 2" PFH screws
- **Astragal strike – sill retainer hole:** drill hole through sill deep enough for a 1-3/8" screw extension bolt throw

**Systems 8-9:**

- **Hinges:** six required (three per door panel); secure to the door panel with two No. 10 x 3/4" PFH screws and two No. 10 x 1-1/4" PFH screws; secure to the door jamb with two No. 10 x 3/4" PFH screws and two No. 10 x 2-1/2" PFH screws
- **Lockset:** minimum grade 3 rating as defined by ANSI/BHMA A156.2; located on the active door panel
- **Deadbolt:** grade 1 rating as defined by ANSI/BHMA A156.36; located on the active door panel
- **Strike plate – Lockset:** one required; locate on the door astragal; secured with two No. 8 x 2" PFH screws
- **Strike plate – Deadbolt:** one required; locate on the door astragal; secure with two No. 8 x 2" PFH screws
- **Astragal strike – strike plate at head:** Secure with two No. 8 x 2" PFH screws
- **Astragal strike – sill retainer hole:** drill hole through sill deep enough for a 1-3/8" screw extension bolt throw

**Systems 10-11:**

- **Hinges:** six required (three per door panel); secure to the door panel with two No. 10 x 3/4" PFH screws and two No. 10 x 1-1/4" PFH screws; secure to the door jamb with two No. 10 x 3/4" PFH screws and two No. 10 x 2-1/2" PFH screws
- **Lockset:** minimum grade 3 rating as defined by ANSI/BHMA A156.2; located on the active door panel
- **Deadbolt:** grade 1 rating as defined by ANSI/BHMA A156.36; located on the active door panel
- **Strike plate – Lockset:** one required; locate on the door astragal; secured with two No. 8 x 2" PFH screws
- **Strike plate – Deadbolt:** one required; located on the door astragal; secure with two No. 8 x 2" PFH screws
- **Astragal strike – strike plate at head:** Secure with two No. 8 x 2" PFH screws

- **Astragal strike – sill retainer hole:** drill hole through sill deep enough for a 1-3/8" screw extension bolt throw
- **8" Surface bolts:** located at the top and bottom of the active door panel

#### Systems 12-13:

- **Hinges:** three required; secure to the door panel with four No. 10 x 1" PFH screws; secure to the door jamb with two No. 10 x 5/8" PFH screws and two No. 10 x 2-1/2" PFH screws.
- **Lockset:** minimum grade 3 rating as defined by ANSI/BHMA A156.2; located on the active door panel
- **Deadbolt:** grade 1 rating as defined by ANSI/BHMA A156.36; located on the active door panel
- **Strike plate – Lockset:** one required; locate on the door jamb; secured with two No. 8 x 2" PFH screws.
- **Strike plate – Deadbolt:** one required; locate on the door jamb; secured with two No. 10 x 2" PFH screws
- **Tru-Lock- MPL Assembly (4007).** Located in active door panel.
- **Multi-Point Lock – strike plate:** one required; located on the door jamb; secure with two No. 8 x 2" PFH screws and two No. 8 x 3/4" PFH screws

#### Systems 14-17:

- **Hinges:** six required (three per door panel); secured to the door panel with four No. 10 x 1" PFH screws; secured to the door jamb with two No. 10 x 5/8" PFH screws and two No. 10 x 2-1/2" PFH screws.
- **Lockset:** minimum grade 3 rating as defined by ANSI/BHMA A156.2; located on the active door panel
- **Deadbolt:** grade 1 rating as defined by ANSI/BHMA A156.36; located on the active door panel
- **Strike plate – Lockset:** one required; locate on the door jamb; secured with two, No. 8 x 2" PFH screws.
- **Strike plate – Deadbolt:** one required; locate on the door jamb; secured with two No. 8 x 2" PFH screws.
- **Astragal strike – strike plate at head:** Secure with two No. 8 x 2" PFH screws
- **Astragal strike – sill retainer hole:** drill hole through sill deep enough for a 1-3/8" screw extension bolt throw.

#### Thresholds:

- 0.962" high aluminum adjustable threshold (System 1, 4, 6, 10, 13, 15, 17)
- 1.375" high aluminum adjustable threshold (System 2, 3, 7-8, 11-12, 14, 16)
- 0.50" high aluminum handicap threshold (System 5)
- 1.48" high aluminum adjustable threshold (System 9)

**Product Identification (Manufacturer Label on Door):**

System		
1-2	Manufacturer's name	Masonite
	Product name	Wood Edge Steel Opaque Door Unit Inswing or Outswing Config: X Max. Nominal Size: 3'0" x 8'0"
	Test standards	ASTM E330-02/E1886-05/E1996-09; Missile Level D
3-4	Manufacturer's name	Masonite
	Product name	Wood Edge Steel Opaque Door Unit w/ or w/o Sidelites Inswing or Outswing Config: X, XX, XO, OX, OXO, OXXO Max. Nominal Size: 12'0" x 8'0"
	Test standards	ASTM E330-02/E1886-05/E1996-09; Missile Level D
5	Manufacturer's name	Masonite
	Product name	Wood Edge Steel Opaque Door Unit w/ ADA Sill Inswing Config: X, XX Max. Nominal Size: 6'0" x 6'8"
	Test standards	ASTM E330-02/E1886-05/E1996-09; Missile Level D
6-7	Manufacturer's name	Masonite
	Product name	Wood Edge Steel Opaque Door Unit w/ or w/o Sidelites Inswing or Outswing Config: X, XX, OX, XO, OXO, OXXO Max. Nominal Size: 12'0" x 6'8"
	Test standards	ASTM E330-02/E1886-05/E1996-09; Missile Level D
8-9	Manufacturer's name	Masonite
	Product name	Wood Edge Steel Glazed Door Unit w/ or w/o Sidelites Inswing or Outswing Config: X, XX, OX, XO, OXO, OXXO Max. Nominal Size: 12'0" x 8'0" Full Lite Glazed
	Test standards	ASTM E330-02
10-11	Manufacturer's name	Masonite
	Product name	Wood Edge Steel Glazed Door Unit Inswing or Outswing; Surface Bolts Config: XX Max. Nominal Size: 6'0" x 6'8" Full Lite Glazed
	Test standards	ASTM E330-02

**Product Identification (Manufacturer Label on Door):**

System		
12-13	Manufacturer's name	Masonite
	Product name	Wood Edge Steel Opaque Door Unit Inswing or Outswing Config: OX, XO Max. Nominal Size: 4'5" x 6'8"
	Test standards	ASTM E330-02
14-15	Manufacturer's name	Masonite
	Product name	Wood Edge Steel Glazed Door Unit w/ or w/o Sidelites Inswing or Outswing Config: X, XX, OX, XO, OXO, OXXO Max. Nominal Size: 12'0" x 6'8" Full Lite Glazed
	Test standards	ASTM E330-02
16-17	Manufacturer's name	Masonite
	Product name	Wood Edge Steel Glazed Door Unit w/ or w/o Sidelites Inswing or Outswing Config: X, XX, OX, XO, OXO, OXXO Max. Nominal Size: 12'0" x 6'8" Glazed 22 x 48
	Test standards	ASTM E330-02

**Compliance:** The products comply with ASTM E 330-14 as reference in the 2018 IRC and 2018 IBC.

**Impact Resistance:**

System	Impact Resistant	Requirement
1-7	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.
3-4, 6-7 Sidelites	No	Provide an impact protective system when installing the product in areas that require windborne debris.
8-17	No	Provide an impact protective system when installing the product in areas that require windborne debris.

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

**Sidelites:** Only use sidelites with doors. Do not install sidelites individually.

**Installation:**

**Systems 1-2:** The wood wall framing members must be minimum Spruce-Pine-Fir dimension lumber. The door assembly is secured to the wall framing with No. 10 x 2-1/2" wood screws. Along the side jambs, locate the screws approximately 6" from each corner and spaced evenly thereafter, totaling six screws per side jamb. Along the head, locate the screws approximately 6" from each corner. Along the sill, locate No. 8 x 2" wood screws approximately 6" from each corner. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

**Systems 3-4, 6-9, 14-17:** The wood wall framing members must be minimum Spruce-Pine-Fir dimension lumber. The door assembly is secured to the wall framing with No. 10 x 2-1/2" wood screws. Along the side jambs, locate the screws approximately 6" from each corner and spaced evenly thereafter, totaling six screws per side jamb. Along the head and sill, locate the screws approximately 3" from each outside corner, 3" and 6" on each side of the mullion and astragal, and one at the centerline of each door panel. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

**System 5:** The wood wall framing members must be minimum Spruce-Pine-Fir dimension lumber. The door assembly is secured to the wall framing with No. 10 x 2-1/2" wood screws. Along the side jambs, locate the screws approximately 6" from each corner and spaced evenly thereafter, totaling six screws per side jamb. Along the head and sill, locate the screws approximately 3" from each outside corner, 3" and 6" on each side of the astragal, and one at the centerline of each door panel. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

**Systems 10-11:** The wood wall framing members must be minimum Spruce-Pine-Fir dimension lumber. The door assembly is secured to the wall framing with minimum No. 10 x 2-1/2" wood screws. Along the side jambs, locate the screws approximately 6" from each corner and spaced evenly thereafter, totaling six screws. Along the head and sill, locate the screws approximately 6" from each outside corner, 3" and 6" on each side of the astragal, and one at the centerline of each door panel. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

**Systems 12-13:** The wood wall framing members must be minimum Spruce-Pine-Fir dimension lumber. The door assembly is secured to the wall framing with minimum No. 10 x 2-1/2" screws. Along the side jambs, locate the screws approximately 6" from each corner and spaced evenly thereafter, totaling five screws per jamb. Along the head, locate the screws approximately 6" from each outside corner, 3" and 6" on each side of the mullion and astragal, and one at the centerline of each door panel. Along the sill, locate the screws approximately 3" from each outside corner of the sidelite, 6" from each outside corner of the door, and 3" and 6" on each side of the mullion. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

**Concrete framing:** If the frame is attached to concrete, substitute minimum 3/16" diameter flat head concrete anchors. Embed the anchor a minimum of 1-1/4" into the concrete.



**Note:** An illustration of anchor location along the perimeter of the assembly is provided in drawing "Structural Performance Anchor Detail." Rev. 050217. An illustration of anchor placement on the frame and sill members is provided in Drawing "Anchor Placement Detail."

**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.