

## Product Evaluation

DR1223 | 0222

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-1223

**Effective Date:** February 1, 2022

**Re-evaluation Date:** February 2026

**Product Name:** Series 350IR and 350HW Aluminum Outswing Entrance Swinging and Auto Showroom Bi-Fold Doors, Impact Resistant

**Manufacturer:** Kawneer Company, Inc.  
Technology Park/ Atlanta  
555 Guthridge Court  
Norcross, GA 30092-3503  
(770) 449-5555

**General Description:** The 350IR and 350 HW aluminum entrance swinging and bi-fold doors are used for commercial installation. This evaluation report includes the following assemblies:

- Outswing 3 panel Swinging and Bi-Fold Doors with Trifab 450 or 451 Frame
- Outswing Double Swinging Door with Trifab 450 or 451 Frame

**Product Identification:** A Kawneer label will be affixed to the door assembly. The label includes the manufacturer's name (Kawneer); the product name (350 Heavy Wall IR Entrance Auto Showroom Outswing Bi-Fold Door); the design pressures and assembly size are per TDI drawing 1902T; the test standards (ASTM E1886, ASTM E1996, TAS 201, TAS 202, TAS 203); and the Missile Level (Large Missile Impact Rated-Zone 4, Level D).

**Compliance:** The door assemblies passed test criteria equivalent to ASTM E1886-13a, and ASTM E1996-14a.

**Limitations:**

**Design Drawings:** The door assemblies must comply with and be installed in accordance with the following design drawings:

- Drawing No. 1902T, titled "350IR & 350HW Entrance Swinging & Auto Showroom Bi-Fold Impact Doors;" Sheets 1 thru 6 of 6; dated February 11, 2021; signed and sealed by Warren W. Schaefer, P.E. on May 13, 2021. This evaluation report refers to the stated drawing as the approved drawing.

**Fabrication and Assembly:** Kawneer door systems are fabricated in the factory. The aluminum door system is assembled and glazed at the jobsite. The approved drawings referenced in this evaluation report indicate the options for the glazing construction.

**Hardware:** Requirements for door hardware are specified on the approved drawings.

**Design Pressure (DP):** The aluminum door system has a maximum design pressure rating of +70 / -70 psf. Refer to the approved drawing for specific design pressure requirements.

**Impact Resistance:** The door systems satisfy TDI's criteria for protection from windborne debris. These assembly passed the equivalent of Missile Level D specified in ASTM E1996-14a. Install the assembly at any height on the structure that does not exceed the assembly's design pressure rating. For essential facilities, the assembly may not be installed below a height of 30 feet in Wind Zone 3 and may be installed at all heights in Wind Zone 2 as defined in ASTM E 1996-14a.

**Installation Instructions:**

**General:** Prepare and install the assembly in accordance with Kawneer's installation instructions and the approved drawing specified in this report. Detailed installation instructions are available from Kawneer.

**Wall Framing Construction:** The door systems may be mounted to several types of wall framing construction. The types of wall framing constructions allowed include:

- Concrete (minimum compressive strength: 2,500 psi)
- CMU (concrete filled)
- Wood (minimum specific gravity, SG=0.55)
- Steel (minimum 1/8" thick, Fy=36 ksi)
- Metal stud (minimum 16 gauge, 50 ksi)
- Aluminum (minimum 0.10" thick, 6063-T5)

Refer to the design drawing for specific wall construction requirements.

**Fastener Requirements:**

- Refer to the approved drawing for anchor layout and notes
- Refer to the approved drawing for the minimum embedment depths for the fasteners and the minimum edge distanced (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

**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.