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Product Evaluation

DR1197 | 0322 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-1197

Effective Date: March 1, 2022
Re-evaluation Date: March 2026

Product Name: 350/500 Heavy Wall IR Aluminum Entrance Doors, Impact Resistant

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

General Description: The 350/500 Heavy Wall IR aluminum entrance doors are used for commercial installation. This evaluation report includes the following assemblies:

- Outswing Single Doors with Trifab 450, 451, or IR500/501 Framing
- Outswing Double Doors with Trifab 450, 451, or IR500/501 Framing
- Outswing Double Door within 1600 System 1 Curtain Wall

Product Identification: A Kawneer label will be affixed to the window assembly. The label includes the following information:

350/500 Heavy Wall IR Entrance Doors (Outswing)-Wet and Tape Glazing: The label includes the manufacturer's name (Kawneer); the product name (350/500 Heavy Wall IF Entrances (Outswing)); the design pressures and assembly size are per TDI drawing 1821T; the test standards

(ASTM E330, ASTM E1886, ASTM E1996, TAS 201, TAS 202, TAS 203); and the Missile Level (Large Missile Impact Rated-Zone 4, Level D, E).

350/500 Heavy Wall IR Entrance Doors (Outswing)-Wet and Tape Glazing: The label includes the manufacturer's name (Kawneer); the product name (350/500 Heavy Wall IR Entrances (Outswing)); the design pressures (+/-50 psf); the assembly size per TDI drawing 1822T; the test standards (ASTM E330, ASTM E1886, ASTM E1996, TAS 201, TAS 202, TAS 203); and the Missile Level (Large Missile Impact Rated-Zone 3, Level D).

Compliance: The door assemblies passed test criteria equivalent to ASTM E330-14, 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. 1821T, titled "IR350/500 HW Wind Zone 4 L.M.I. Out-Swing Doors;" Sheets 1 thru 12 of 12; dated March 19, 2013; revision B1 dated February 10, 2021; signed and sealed by Warren W. Schaefer, P.E. on February 10, 2021. This evaluation report refers to the stated drawing as the approved drawing.

Drawing No. 1822T, titled "IR350/500 HW Wind Zone 3 L.M.I. Out-Swing Doors;" Sheets 1 thru 11 of 11; dated February 11, 2021; signed and sealed by Warren W. Schaefer, P.E. on February 11, 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 window 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):

350/500 Heavy Wall IR Entrance Doors (Outswing)-Wet and Tape Glazing; Zone 4: The aluminum door system has a maximum design pressure rating of +110 / -110 psf for doors in 450, 451, or 1600 Frames, and +90 / -90 psf for doors in IR500/501 Frames. Refer to the approved drawings for specific design pressure requirements.

350/500 Heavy Wall IR Entrance Doors (Outswing)-Wet and Tape Glazing; Zone 3: The aluminum door system has a maximum design pressure rating of +50 / -50 psf. Refer to the approved drawings for specific design pressure requirements.

Impact Resistance:
Missile Level D: 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.

Missile Level E: The door systems satisfy TDI's criteria for protection from windborne debris. These assemblies passed the Equivalent of Missile Level E specified in ASTM E 1996-14a. The assemblies may be installed at any height on the structure that does not exceed the assembly's design pressure rating. The assembly may be installed at any height on essential facilities as defined in ASCE 7-16.

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: 3,000 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 0.100" thick, 6063-T5)

Refer to the appropriate 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.