

## Product Evaluation

DR1129 | 0221

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 1-800-248-6032.

**Evaluation ID:** DR-1129

**Effective Date:** February 1, 2021

**Re-evaluation Date:** January 2025

**Product Name:** ForceFront Storm Monumental Aluminum Outswing Side Hinged Doors, Impact Resistant

**Manufacturer:** Tubelite, Inc.  
3056 Walker Ridge Dr. N.W.  
Suite G  
Walker, MI 49544  
(800) 866-2227

**General Description:** The ForceFront Storm Monumental aluminum outswing side hinged doors are used for commercial installations. This evaluation report includes the following door configurations:

Single Outswing Doors

Double Outswing Doors

**Product Identification:** A Tubelite label will be affixed to the assembly. The label includes the manufacturer's name: (Tubelite, Inc.); the product name: (ForceFront Storm Monumental WZ3); the test standards (ASTM E 330-14, ASTM E 1886-13a, ASTM E 1996-14a); design pressure; and Drawing #19-92T.

**Limitations:****Design Drawings:**

The door assemblies must comply with and be installed in accordance with the following design drawing:

Drawing No. 19-92T; titled "Monumental Entrance Series Aluminum Out-Swing Door" Sheets 1 thru 15 of 15; dated August 22, 2019; Rev. A, dated October 27, 2020; signed and sealed by Jalal Farooq, P.E on December 17, 2020. This evaluation report refers to the stated drawings as the approved drawings.

**Fabrication and Assembly:** Tubelite, Inc. door systems are fabricated in the factory. The aluminum door systems are assembled and glazed at the jobsite. The approved drawing referenced in this evaluation report indicates the options for the glazing construction.

**Design Pressure (DP):**

The aluminum door systems have a maximum design pressure rating of +70/-70 psf. Refer to approved drawing for specific design pressure requirements.

**Hardware:** Requirements for door hardware are specified on the approved drawing. Strike plates are holes in the aluminum door frames.

**Impact Resistance:**

These assemblies satisfy TDI's criteria for protection from windborne debris. The products have passed Missile Level C, D, and E. The missile level is specified on the design drawing. For assemblies that have passed Missile Level C, they may be used for Basic Protection in areas where the basic ultimate wind speed is less than 150 mph. Install the assemblies at a height on the structure that does not exceed the design pressure rating for the assembly. These assemblies do not require an impact protective system when installed in areas where windborne debris protection is required.

**Installation:**

**General:** Prepare and install the assembly in accordance with the manufacturers recommended installation instructions. Detailed installation instructions and drawings are available in the approved drawings.

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

- Concrete (minimum compressive strength: 3,000 psi)
- Wood: Minimum specific gravity of 0.55
- Masonry: Hollow or Grout Filled Block Per ASTM C90 with  $f'm = 2,000$  psi minimum.
- Steel (minimum 1/8 thick,  $FY=36$  ksi)
- Metal Studs (18-gauge,  $FY=33$  ksi minimum)
- Aluminum (minimum 1/8" thick, 6063-T5)

**Fastener Requirements:**

Refer to the approved drawings for the anchor layout and notes.

Refer to the approved drawings for the minimum embedment depths for the fasteners and the minimum edge distances (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.