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# **Product Evaluation Report**

of

The Folding Sliding Door Company FSD Works HD82-70 MM Folding Outfolding Door System

for

Florida Product Approval

FL# FL16291

Report No. 6333

# **Current Florida Building Code**

Method: 1 – D (Engineering Evaluation)

**Category:** Exterior Doors

Sub – Category: Swinging Exterior Door Assemblies

Product: HD82-70 MM Folding Outfolding Door System

Material: Aluminum 6063-T5

Product Dimensions: 223.75" x 96.0625" (Tested Size)

### **Prepared for:**

The Folding Sliding Door Company FSD Works
Hopbine Avenue, West Bowling
Bradford, West Yorkshire, BD5 8ER, UK

## **Prepared by:**

Hermes F. Norero, P.E.

Florida Professional Engineer # 73778 Date: 07/03/2019

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FL#: FL16291
Date: 07/03/2019
Report No: 6333

Manufacturer: The Folding Sliding Door Company FSD Works

**Product Category:** Exterior Doors

**Product Sub-Category:** Swinging Exterior Door Assemblies

Certificate of Authorization: 29578

**Compliance Method:** State Product Approval Method (1)(d)

Product Name: HD82-70 MM Folding Outfolding Door System

223.75" x 96.0625" (Tested Size)

(Impact)

Scope:

This is a Product Evaluation Report issued by Hermes F. Norero, P.E. (FL # 73778) for **The Folding Sliding Door Company FSD Works** based on <u>Method 1d</u> of the State of Florida Product Approval, Florida Department of Business and Professional Regulation - Florida Building Commission.

Hermes F. Norero, P.E. does not have nor will acquire financial interest in the company manufacturing or distributing the product or in any other entity involved in the approval process of the product named herein.

This product has been evaluated for use in locations adhering to the Florida Building Code.

See Installation Instructions **FSD002**, signed and sealed by Hermes F. Norero, P.E. (FL # 73778) for specific use parameters.

#### Limits of Use:

- 1. This product has been evaluated and is in compliance with the Florida Building Code, including the "High Velocity Hurricane Zone" (HVHZ).
- 2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment into substrate material shall be beyond wall dressing or stucco.
- 3. When used in areas requiring wind borne debris protection this product complies with Chapter 16 of the Florida Building Code and <u>does not require</u> an impact resistant covering. This product has been rated for Large & Small Missile Impact protection.
- 4. Site conditions that deviate from the details of drawing **FSD002**, require further engineering analysis by a licensed engineer or registered architect.
- 5. See Installation Instructions **FSD002**, for size and design pressure limitations.

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Quality Assurance:

The manufacturer has demonstrated compliance of door products in accordance with the Florida Building Code for manufacturing under a quality assurance program audited by an approved quality assurance entity through **National Accreditation**Management Institute. (FBC Organization # QUA1789)

**Performance Standards:** 

The product described herein has been tested per:

- TAS 201-94
- TAS 202-94
- TAS 203-94

Referenced Data:

1. Product Testing performed by National Certified Testing Laboratory, Inc.

(FBC Organization # TST9341)

Report #: NCTL-210-3846-1, Report Date: 02/01/2013 Signed and Sealed by Gerard Ferrara P.E. #11985

2. Quality Assurance

**National Accreditation Management Institute** 

(FBC Organization #: QUA1789)

3. Material Certification

Miami-Dade RER - Product Control Section NOA

SentryGlas Interlayer – Kuraray America (Previously Dupont)

4. Component Testing – Thermal Break

**ETC Laboratories** 

 Standard: ASTM D638
 Report #: ETC-07-1043-19094.0

 Standard: Tensile Test
 Report #: ETC-07-1043-20048.0

 Standard: ASTM D1929
 Report #: ETC-08-1043-20974.0

Architectural Testing, Inc.

Standard: ASTM D2843 & D635 Report #: 61261.01-106-18

5. Component Testing – Door Gaskets

Akron Rubber Development Laboratory & LMI Custom Mixing, LLC

Standard: ASTM C864

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#### Installation:

1. Approved anchor types and substrates are as follows:

### **Through Frame Installation:**

- A. For two by (2X) wood buck substrate, use **#12 Wood Screw** type installation anchors of sufficient length to achieve a minimum embedment of 3" into the wood substrate.
- B. For concrete or masonry substrate where one by (1X), non-structural, wood bucking is employed **OR** where wood bucking is not employed, use **3/16" diameter ITW Tapcon or Elco Ultracons** type concrete screw anchors of sufficient length to achieve minimum embedment of 1 ¾" into concrete or masonry.
- C. Alternatively, for concrete/masonry substrates, anchors may be **7.5 mm (5/16" Nominal) Timco T30 Torx Concrete Screws**, of sufficient length to achieve 1 ¾" minimum embedment with a minimum 2 ½" edge distance.
- D. For steel substrate (Min. 18 ga. steel, min.  $f_y$ = 33 ksi), use **#12 TEK Screw** type steel stud anchors of sufficient length to achieve minimum 3 threads penetration beyond steel structure.

Refer to Installation Instructions (**FSD002**) for anchor spacing and more details of the installation requirements.

### **Design Pressure:**

DESIGN PRESSURE RATING			
GLAZE TYPE	DESIGN PRESSURE		MISSILE IMPACT RATING
1 & 2	+70.0 / -70.0 PSF	WITH WATER INFILTRATION (WATER BARRIER THRESHOLD ABOVE SUBSTRATE)	LARGE AND SMALL MISSILE IMPACT RATED
	+70.0 / -70.0 PSF *	WITHOUT WATER INFILTRATION (WATER BARRIER & RECESS THRESHOLDS)*	

<sup>\*</sup>WHERE WATER INFILTRATION IS REQUIRED, UNIT SHALL BE INSTALLED AT LOCATIONS PROTECTED BY OVERHANG SUCH THAT THE OVERHANG RATIO (OH) = OH LENGTH/OH HEIGHT GREATER THAN 1.0.

#### **Installation Method:**

Refer to Installation Instructions (**FSD002**) for anchor spacing, methods, locations, and more details of the installation requirements.