

V.M. engineering, Inc.
Structural Engineering Services
11278 SW 153 PL
Miami, FL. 33196

C. of A. 27633
Phone: (786) 281-6968
Fax: (305) 383-5896

PRODUCT EVALUATION REPORT

Date: September 23, 2020
Product Name: RS-1 Aluminum Shutter
Product Category: Hurricane Shutter
Product Sub-Category: Accordion

Report No.: 06-0814.01
From Fenestration Testing
Laboratory, Inc.

Submitted by: Rollingshield, Inc.
9875 N.W. 79th Avenue
Hialeah, FL. 33016

1. PURPOSE OF EVALUATION

This is a Product Evaluation Report performed by V.M. engineering, Inc. Certification of Authorization No. 27633 to the Manufacturer "Rollingshield, Inc.", base on rule chapter Nos. 9B-72.070, method 1d and 9B-72.090 method 1b of the State of Florida Approval, Department of Community Affairs-Florida Building Commission. This product is being issued an Evaluation Report as described herein, and has been verified for compliance in accordance with the Florida Building Code edition 2020, and to verify that the product is for the purpose intended at least equivalent to that required by the code.

2. DOCUMENTS SUBMITTED

a) Product Documents:

Drawings No. 169-2020 (RS1-20), titled "RS-1 Aluminum Shutter", sheets 1 thru 9, prepared by V.M. engineering, Inc. and signed and sealed by me, Morgan Villanueva, P.E.

b) Engineering Calculations:

Calculations showing the maximum shutter span with wind load, maximum anchor spacing with wind load for installation in concrete and concrete block with fill cells and unique spacing for installation in wood, the calculation and analysis was performed according section 16 of the Florida Building Code 2017. Calculations prepared by V.M. engineering, Inc. and signed and sealed by me, Morgan Villanueva, P.E.

c) Test Reports:

Test report prepared by Fenestration Testing Laboratory, Inc. report No. 01, authorization No. FTL 06091 dated July 28, 2006 signed and sealed by Edmundo Largaespada, P.E., large missile impact, cyclic loading under ASTM E-1886 and ASTM E-1996 as well as uniform static loads in accordance with ASTM E-330 and tensile test as per Florida Building Code 2010, TAS 201, TAS 202 and TAS 203.

3. WIND LOAD RESISTANCE:

This accordion shutter has been tested to sustain wind pressures according by ASCE 7-16 and Florida Building Code 2020. The maximum shutter span is indicated in sheet 6 of 9 of the product approval documents, and maximum anchor spacing for concrete and concrete block is indicated in sheet 7 of 9, and anchor spacing for wood structure is unique 6" center to center as shown in sheet 8 of 9 and 9 of 9.

4. INSTALLATION:

The installation of this shutter SHALL BE in accordance with the details showing in sheets 3, 4, 5, 8 and 9 of 9 and the minimum separation to glass is indicated in sheet 6 of 9 all sheets in the Florida Approval Documents.

5. MATERIAL SPECIFICATIONS:

As indicated in sheet 1 of 9 (General Notes) of this Florida Approval Documents.

6. RS-1 Aluminum Shutter:

The use of this product shall be strictly in compliance with this Florida Approval Documents prepared by V.M. engineering, Inc. and shall be signed and sealed by Morgan Villanueva, P.E. this product shall install only into concrete, concrete block in fill cell with grout and wood substrate.

This product can be installed in both zones, High Velocity Hurricane Zones and Non-High Velocity Hurricane Zones, as defined in the Florida Building Code 2020, section 1620.

This product evaluation report was prepared by Morgan Villanueva, P.E. with Florida License No. 60292, president of V.M. engineering, Inc. certificate of authorization No. 27633



Morgan Villanueva, P.E., S.I., S.E.C.B.
Structural Engineer
FL. License No. 60292
Special Inspector No. 7012720