

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION SHU-181

Effective May 1, 2014

*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 shall be subject to reevaluation **May 2018**.*

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.

Force 12 Series 700 Rolling Fabric Shutter System, Impact Resistant, manufactured by

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will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with this product evaluation and with the approved drawings that are referenced in this evaluation report.

PRODUCT DESCRIPTION

The Force 12 Series 700 rolling fabric shutter system is a flexible wind abatement and impact protection system. The system consists of a fabric storm panel that is held in place by side tracks and is rolled down from a top operator box over an exterior opening.

The Force 12 Series 700 rolling fabric shutter system consists of the following components:

Fabric: 100% polypropylene, 3/4 basketweave, minimum thickness of 0.021", warp - 60 ends per inch, fill - 50 ends per inch, calendered finish, 7.6 oz per square yard.

Reinforcement: Each corner of the fabric is reinforced with two (2) layers of fabric. At the top, bottom and side edges, the fabric is lock stitches with a 2" hem that is double folded.

Keder: A 6mm (0.24") keder made of polyvinyl chloride is sewn to the fabric. The keder is located along the side edges of the fabric and along the bottom edge of the fabric. There is a maximum 1/4" inch separation from the edge of the fabric to the top edge of the keder. Refer to the approved drawings for locations of the keder.

Top Operator Box: The components of the top operator box shall be as specified in the approved drawings. The top box is mounted to the top of the side tracks using the top box end plates. The back hood of the top box is secured to the wall as specified in the approved drawings.

Product Identification: Each fabric panel shall have a label that identifies the manufacturer, the name of the product, allowable design pressure, and compliance with ASTM E330, ASTM E 1886-04, and ASTM E 1996-04.

LIMITATIONS

Design Drawings: Force 12 700 Series Rolling Shutters, Sheets 1-3 of 3, Rev. 0, dated October 31, 2012. Each sheet is signed and sealed by James R. Bailey, P.E on June 08, 2013. The stated drawings will be referred to as “approved drawings” in this evaluation report. A copy of the approved drawings shall be available at the job site during inspection.

Wall Framing Construction: The wind abatement system may be mounted to several types of wall framing construction. The types of wall framing construction allowed included pre-cast or cast-in-place concrete (minimum 3,500 psi) and grout-filled CMU. The wind abatement system shall be anchored to the wall substrate as specified on the approved drawings.

Mounting Conditions: The following mounting conditions are permitted: Direct Mount and Trap Mount.

Design Pressure Rating: The maximum design pressure rating is ± 60 psf. The design pressure rating varies as a function of the wall construction, mounting condition, side track anchor spacing, and panel span. Refer to the approved drawings for allowable design pressures.

Maximum Panel Span: For direct mount installations, the maximum panel span is 198.5”. For trap mount installations, the maximum panel span is 189.5”.

Maximum Panel Height: For both direct mount and trap mount installations, the maximum panel height (non-span direction) is unlimited.

Separation Distance from Glazed Openings: The minimum separation distance from glazed openings shall be as specified in the approved drawings.

Impact Resistance: This assembly satisfies the Texas Department of Insurance’s criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The wind abatement system passed Missile Level D specified in ASTM E 1886-04 and 1996-04.

INSTALLATION INSTRUCTIONS

Installation Requirements: The Force 12 Series 700 rolling fabric shutter system wind abatement system shall be installed in accordance with manufacturer’s installation instructions, the approved drawings, and this product evaluation report.

Note: The manufacturer’s installation instructions and the approved drawings shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.