

TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION SHU-137

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.

Extruded Aluminum Accordion Shutters, Impact Resistant, manufactured by

Croci North America
11600 Adelmo Lane
Fort Myers, Florida 33966
Telephone: (239) 278-3066

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

PRODUCT DESCRIPTION

The accordion shutters are manufactured from extruded aluminum. The accordion shutters are assembled using interlocking extruded aluminum accordion blades. The components of the accordion shutter system are as follows:

Accordion blades: Manufactured from extruded aluminum, 6063-T6 aluminum alloy; thickness of 0.054"; overall length of 4.58".

Wall mount tracks: Manufactured from 6063-T6 aluminum alloy; thickness range of 0.09" to 0.14"; depth range 2.56" to 2.60"; and widths of 3.12", 4.12", and 5.12".

Ceiling track: Manufactured from 6063-T6 aluminum alloy; thickness of 0.110"; depth of 1.960"; and width of 3.12".

Built-out angles: Manufactured from 6063-T6 aluminum alloy; thickness of 0.13"; 2.0" wall mounting leg; 2", 3", 4", or 5" ceiling track mounting leg.

Male lock stile: Manufactured from 6063-T6 aluminum alloy; thickness of 0.06"; depth of 2.13"; and width of 2.26".

Female lock stile: Manufactured from 6063-T6 aluminum alloy; thickness of 0.06"; depth of 2.13"; and width of 2.22".

Adjustable sill track: Manufactured from 6063-T6 aluminum alloy; thickness of 0.070"; depth of 1.38"; and width of 3.12".

Adjustable sill channel: Manufactured from 6063-T6 aluminum alloy; thickness range of 0.070" to 0.090"; depth of 1.30"; and width range of 2.81" to 2.83".

LIMITATIONS

Design Drawings: "Extruded Aluminum Accordion Shutter," Drawing No. 13-071, sheets 1 through 9 of 9, dated March 18, 2013, and signed and sealed by Pedro Figueiredo, P.E. on March 17, 2014. 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.

Wall Framing Construction: The shutters may be mounted to cast-in-place or pre-cast concrete (minimum compressive strength specified on approved design drawings); hollow or grout-filled concrete block, minimum Douglas Fir-Larch dimension lumber, minimum 0.125" thick 6063-T6 aluminum, or minimum 0.125" thick A36 steel.

Mounting Configurations: The shutters may be mounted directly to the wall system, built out from the wall system, or inset from the wall system. Refer to the approved drawings for illustrations of allowable mounting configurations.

Design Pressure Rating: The design pressure rating for the accordion shutters is varies as a function of blade span, mounting condition, anchor spacing, and anchor type. Refer to the approved drawings to determine the appropriate allowable design pressure rating. The maximum allowable design pressure is +/-188 psf.

Shutter Width: There is no limitation on the shutter width.

Maximum Blade Spans: The maximum allowable vertical blade spans for a given design pressure are specified in Table 1 of the approved drawings. The maximum allowable blade span is 150".

Separation Distance from Glazed Openings: This product has no required minimum separation distance from glazed openings except as noted in the approved drawings.

Product Identification: The shutters shall be labeled with the manufacturer's name, the name of the product, the design pressure rating for the shutter installed, and the test standards: ASTM E 330-02, ASTM E 1886-04, and ASTM E 1996-04.

Impact Resistance: These accordion shutter assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The shutter assemblies passed Missile Level D specified in ASTM E 1996-04. The shutter assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded.

INSTALLATION INSTRUCTIONS

General Installation Requirements: The extruded aluminum accordion shutters shall be installed in accordance with the 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 jobsite 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.