



Product Evaluation

SHU193 | 0615

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 (800) 248-6032.

Evaluation ID: SHU-193

Effective Date: June 1, 2015

Re-evaluation Date: September 2018

Product Name: Bertha HV™ Accordion Shutter System HV Blade #3 with or without HV Window Blade #3

Manufacturer: American Shutter Systems Association and Eastern Metal Supply
4268 Westroads Drive 9400 Teige Road
West Palm Beach, FL 33407 Houston, TX 77095
(877) 999-ASSA (800) 996-6061

General:

- **Product Description:** The HV 3 blade of the HV accordion shutter measures 4.371" wide x 0.043" thick, constructed as indicated in the approved drawings using extruded aluminum alloy 6063-T6. The HV 3 window blade has 3" diameter openings to accommodate polycarbonate windows in the blade. The window blades are permitted to have a maximum of five windows and are located a minimum of 12" from each end of the blades. The accordion blades may be mounted to the opening using the extrusions illustrated in the approved drawings. All aluminum extrusions shall be constructed using extruded aluminum alloy as noted on the drawings. The accordion shutter is a permanently mounted impact protection system.
- **Mounting Conditions:** The shutters may be wall mounted concrete, concrete block, metal studs or wood framing. Refer to the approved drawings for the mounting conditions.
- **Wall Construction:** The accordion shutters may be mounted to the following types of wall framing:
 - Cast-in-place concrete (minimum 3,000 psi)
 - Grout-filled concrete masonry units (CMU), C-90
 - Wood (minimum Spruce-Pine-Fir dimension lumber or 1/2" thick plywood)
 - Metal studs, 6" x 1-1/2" x 0.035" thick minimum ASTM A-653 Grade 40, G-60 galvanized steel metal studs.
- **Product Identification:** Each unit must bear a permanent label containing the product evaluation holder, the evaluation number and contact information for the authorized dealer-fabricator of the

installed product. Each shutter shall bear a permanent label in a visible place with the warning note: During periods of hurricane warnings, the owner, tenant or others must properly close all HV and HD centermates and engage or lock all HV and HD locks.

Limitations:

- **Design Drawings:** Install the accordion shutters in accordance with American Shutter Systems Association (ASSA) Bertha HV Accordion System HV Blade #3 with or without HV Window Blade #3, Drawing No. 14-038, Sheets 1–3, 3A, 4-10, 10A, 11-18 of 18, dated April 2, 2013, Revision 1 dated May 6, 2014, with each sheet signed, sealed, and dated by Walter A. Tillit Jr., P.E. on May 17, 2014. The stated drawings will be referred to as approved drawings in this report. A copy of the approved drawings shall be available at the job site. This evaluation report refers to the stated drawings as the approved drawings.
- **Allowable Design Pressure:** The allowable design pressure is a function of the slat span, anchor spacing, mounting condition, substrate and the minimum separation from the glass. Refer to the approved drawings for the allowable design pressure. The maximum allowable design pressure is ± 110 psf.
- **Minimum Separation From Glass:** Sheet 5 of 18 of the approved drawings specifies the minimum separation from the glass.
- **Maximum Allowable Slat Span:** The maximum slat span is 13'-0" at a negative design pressure of 35 psf.
- **Impact Resistance:** These products satisfy TDI's criteria for protection from windborne debris in the Inland I and Seaward zone. Install the assemblies at a height on the structure that does not exceed the design pressure rating for the assemblies.

Installation:

- **General Installation Instructions:** Install shutters in accordance with the approved drawings. During a high wind event, lock and close the shutters.
- **Anchorage:** The accordion shutters shall be anchored to the structure in accordance with the approved drawings. Anchorage of the accordion shutters shall follow the mounting details on the drawings and the fasteners specified in the mounting details and fastener schedules.

Note: Keep the manufacturer's installation instructions available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.