

## Product Evaluation

SHU218 | 0121

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-218

**Effective Date:** January 1, 2021

**Re-evaluation Date:** January 2025

**Product Name:** Nautilus End Retention Roll-Up Shutters

**Manufacturer:** Expert Shutter Services, Inc.  
1626 S.W. Biltmore Street  
Port St. Lucie, FL 34984  
(800) 749-9056

### General Description:

The Nautilus End Retention extruded aluminum roll-up shutters specified in this evaluation report are permanently mounted impact protective systems. The roll-up shutter system is constructed with the following extruded aluminum slat sizes:

### Slats:

Slat Part Number	Slate Size
1	2.141" x 0.588" x 0.050"
2	2.350" x 0.601" x 0.050"
3	2.543" x 0.623" x 0.050"
4	2.721" x 0.654" x 0.050"
5	2.890" x 0.679" x 0.050"
6	3.053" x 0.703" x 0.050"
7	3.210" x 0.729" x 0.050"

**Slats (continued):**

Slat Part Number	Slate Size
8	3.359" x 0.751" x 0.050"
9	3.508" x 0.781" x 0.050"
10	3.657" x 0.807" x 0.050"

The slats are mounted with the following components: the header, the mullions, storm bars, track, and the reel box. Consecutive single spans and multiple spans are connected by mullions and storm bars. All aluminum extrusions shall be 6063-T6 or 6061-T6 aluminum alloy unless otherwise noted on the approved drawings. The shutters may be mounted in accordance with the approved drawings.

**Product Identification:** The roll-up shutter assemblies have a permanently mounted label that indicates the manufacturer (Expert Shutter Services, Inc.); the name of the product (Nautilus End Retention Rolling Shutter); the drawing number (20-068); the missile level (Large Missile Rated); and the test standards: TAS 201-94, TAS 202-94, and TAS 203-94.

**Limitations:**

**Mounting Conditions:** The shutters may be wall mounted, trap mounted, or build-out mounted. Refer to the approved drawings for the acceptable 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 (Spruce-Pine-Fir-South  $G \geq 0.36$ ; Douglas-Fir-South  $G \geq 0.46$  or Southern Pine  $G \geq 0.55$ )

**Design Drawings:** The roll-up shutters are installed in accordance with Expert Shutter Services Inc., Drawing No. 20-068, Sheets 1-26 of 26, dated June 09, 2020, with each sheet signed, sealed, and dated by Walter A. Tillit Jr., P.E. on June 11, 2020. 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.

**Allowable Design Pressure:** The allowable design pressure is a function of several items including but not limited to the slat slip, anchor spacing, mounting condition, substrate, storm bars, mullions, and the minimum separation from the glass. Refer to the approved drawings for the allowable design pressure. The maximum allowable design pressure is  $\pm 160$  psf.

**Minimum Separation from Glass:** The shutter must be separated from the glass as specified on sheet 15, 16, and 20 of the approved drawings.

**Maximum Allowable Slat Span:** The maximum slat span is 20'-0" at a design pressure of 30 psf for concrete construction.

**Impact Resistance:** These products satisfy TDI's criteria for protection from windborne debris. The shutter assemblies may be installed at any 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 and this product evaluation.

**Anchorage:** The shutters are anchored to the structure in accordance with the approved drawings. Anchorage of the shutters must 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 the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.