

## Product Evaluation

LVR31 | 0123

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:** LVR-31

**Effective Date:** January 1, 2023

**Re-evaluation Date:** January 2027

**Product Name:** Model ECD-545-MD Extruded Aluminum Louver, Impact Resistant

**Manufacturer:** Pottorff  
5101 Blue Mount Road  
Fort Worth, TX 76106  
(817) 509-2300

### General Description:

The ECD-545-MD louver design consists of horizontal 0.063" thick 6063-T5 aluminum blades fastened within a 5" deep perimeter frame made from 6063-T5 aluminum channel. The frame has a wall thickness of 0.125" for the side pieces and 0.081" for the top and bottom. Blades are spaced a maximum of 2" apart and mechanically fastened to the sides of the frame. Frame components are butted together and mechanically fastened at the corners. The ECD-545-MD has a maximum single-section size of 60" x 144" or 72" x 120" and a minimum size of 6" x 6". A multi-section assembly may include an unlimited number of sections arranged side-by-side or one above the other, but louver assemblies may not include both multiple sections high and wide unless additional supporting structure is designed and installed. Vertical joints between adjacent sections are reinforced with a 6" x 2" x 1/4" A500 steel tube fastened to the louver frame via continuous attachment angles.

As an optional accessory, a model CD-51 control damper may be attached to the rear of the louver. When installed, this damper provides protection against AMCA 550 high-velocity rain. The damper design consists of horizontal 0.070"-thick 6063-T5 aluminum airfoil blades spaced 5-7/8" apart, set within a 5" deep perimeter frame made from 0.125"-thick 6063-T5 aluminum hat channel. Damper blades ride on steel hex axles and bushings and are operated via a steel linkage concealed in the frame. Blades must be rotated to the closed position and locked in place in order to achieve full rain resistance. The damper is installed within a flanged 0.080" thick 5052-H32 aluminum sleeve which mechanically fastens to the louver frame.

**Design Drawings:**

"ECD-545-MD;" manufactured by Pottorff; Drawing No. ECD-545-MD TDI; Sheets 1–19 of 19; dated June 28, 2022; Rev 1 dated December 8, 2022; signed, sealed, and dated December 9, 2022, by Chad Loritz, P.E. The stated drawings will be referred to as approved drawings in this evaluation report.

**Limitations:****Configurations:**

- Single Units
- Shaped Units
- Multiple Units Horizontally
- Multiple Units Vertically
- Units with CD-51 Damper

**Mounting Conditions:**

- Wall Mount
- Trapped Mount

**Wall Construction:** The louvers may be mounted to the following types of wall framing:

- Pre-cast concrete, cast-in-place concrete (minimum compressive strength 4,000 psi)
- Grout-filled concrete masonry units (CMU) (minimum compressive strength 1,500 psi)
- Wood (minimum S.G. = 0.43)
- Steel (minimum 12-gauge thickness with minimum yield strength 50 ksi or minimum 3/16" thickness with minimum yield strength 36 ksi)

**Allowable Design Pressure:** The maximum allowable design pressure is +/-150.0 psf.

**Maximum Width and Maximum Height:** The maximum width and maximum height for single units is either 60" x 144" or 72" x 120".

**Multiple Units:** Single louver units may be placed side by side utilizing mullions to achieve an unlimited overall width. Single louver units may be stacked vertically by utilizing mullions to achieve an unlimited overall height.

**Product Identification:** The louvers must have a manufacturer-produced label that indicates the manufacturer: "Pottorff;" the name of the product: "ECD-545-MD;" compliance with TAS-201, TAS-202, and TAS-203 and AMCA 540; and the missile level (Missile level E; 80 FPS).

**Compliance:** The shutter assemblies passed test criteria equivalent to ASTM E 330-14, ASTM E 1886-13a, ASTM E 1996-14a.

**Impact Resistance:** This louver assembly has been tested for protection from windborne debris. The assembly has passed a missile test equivalent to Missile Level E specified in ASTM E 1996-14a. The assembly may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded.

**Installation:**

**General Installation Requirements:** The louvers must be installed in accordance with the manufacturer's installation instructions, the approved drawings, and this product evaluation report. Copies of the approved drawings must be available on the jobsite during inspection of the louver assembly.

**Anchorage:** The louver must be anchored to the structure in accordance with the approved drawings. Anchorage of the louvers to concrete, grout-filled concrete masonry units (CMU), wood wall framing, and steel wall framing must follow the mounting conditions, fastener options, and fastener placement specified on the approved drawings.

**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.