

## Product Evaluation

RC437 | 0320

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:** RC-437

**Effective Date:** March 1, 2020

**Re-evaluation Date:** March 2024

**Product Name:** DMC 150SS 24-Gauge Steel Standing Seam Roofing Panels Installed Over a Steel Deck

**Manufacturer:** Drexel Metals Inc  
1234 Gardiner Lane  
Louisville, KY 40213  
(888) 321-9630

### General Description:

This evaluation report is for the DMC 150SS 24-gauge steel, preformed, standing seam metal roofing panels installed over a steel deck. The steel standing seam roofing panels have 16" of coverage. The standing seam metal roof panels have a 1.5" standing seam rib. The metal roofing panels are manufactured from 24-gauge galvalume steel, minimum Fy = 50 ksi min.

### Limitations:

**Roof Framing:** The metal roofing panels must be installed over a 22-gauge, 1.5" B-deck, Grade 80 ksi steel deck. The steel deck is secured to steel purlins.

**New Roof Framing Attachment:** The roof framing must meet or exceed the uplift requirements of the IRC or IBC. Install as required for resistance to wind loads.

**Design Wind Pressures:** Table 1 specifies the design pressure uplift load resistance.

**Limitations (continued):**

**Roof Slope:** Install the metal roofing panels on roofs with a roof slope as low as 2:12.

**Table 1.** DMC 150SS 24-Gauge Steel Standing Seam Roofing Panels Installed Over a Steel Deck

<b>Design Wind Pressure</b>	<b>Purlins</b>	<b>Steel Deck</b>	<b>Attachment of Panel to Steel Deck</b>
-52.5 psf	Minimum 12-gauge, double 8x2.5 CEE12 spaced a max. of 5'-0" o.c.	Minimum 22-gauge, 1.5" B-deck, Grade 80 ksi	DMC 150SS butterfly clip consists of a base and butterfly. The base is 22-gauge L-shaped galvanized steel, 1" wide x 1.25" high x 4.5" long; and the butterfly is 24-gauge galvanized steel measuring 5.045" long x 0.929" tall with two return flaps. The butterfly secures the panel to the base. The butterfly clip secures to the roof deck with two, No. 14-13 x 4.5" long DP1 Concealor by TFC screws per clip. Space the clips 36" o.c. The panel seam is a double lock, 180-degree seam on the panel.
-176.0 psf	Minimum 12-gauge, double 8x2.5 CEE12 spaced a max. of 5'-0" o.c.	Minimum 22-gauge, 1.5" B-deck, Grade 80 ksi	DMC 150SS butterfly clip consists of a base and butterfly. The base is 22-gauge L-shaped galvanized steel, 1" wide x 1.25" high x 4.5" long; and the butterfly is 24-gauge galvanized steel measuring 5.045" long x 0.929" tall with two return flaps. The butterfly secures the panel to the base. The butterfly clip is secured to the roof deck with two, No. 14-13 x 4.5" long DP1 Concealor by TFC screws per clip. Space the clips 6" o.c. The panel seam is a double lock, 180-degree seam on the panel.
-78.5 psf	Minimum 12-gauge, double 8x2.5 CEE12 spaced a max. of 5'-0" o.c.	Minimum 22-gauge, 1.5" B-deck, Grade 80 ksi	24-gauge, 2.25" x 1.625" DMC 150SS clip; and two, No. 14-13 x 4.5" long DP1 Concealor by TFC screws per clip. A 1/8" diameter bead of Bostik Chem-Calk 915 on top of male rib and 1/4" diameter bead of Bostik Chem-Calk 915 on side of male leg and both sides of clip. Space the clips 16" o.c. The panel seam is a single lock, 90-degree seam on the panel.

**Installation:**

**General:** Install the metal roofing panels in accordance with the manufacturer's recommended installation instructions and this evaluation report.

**Steel Purlins:** Table 1 specifies the minimum thickness of the steel and the maximum spacing of the purlins.

**Structural Steel Deck:** Minimum 22-gauge ASTM A653 steel "B" deck with a G90 galvanized coating. Secure the steel deck to the steel purlins with 1/4 - 14 x 1.25" long, hex washer head self-drilling screws. Locate the fasteners in a 36/7 fastener pattern.

**Substrate:** Place minimum 2" thick insulation with polyisocyanurate foam core with fiber reinforced facers on top of the steel deck. Fasten the insulation to the steel deck with five, No. 14-13 x 4.5" DP1 Concealor and 3" steel disk per sheet.

**Underlayment (System No. 3 only):** One layer of MetShield high temperature protection self-adhering roof underlayment, 40 mils thick, applied to the top layer of the rigid insulation.

**Attachment of Metal Roof Panels to the Roof Deck:** Secure the panels to the roof deck with the clip and fastener type as specified in Table 1. Use fasteners long enough to ensure a minimum penetration of 3 pitches of thread below the steel deck.

**Panel Ends and End Laps:** As required by the manufacturer.

**Panel Edges:** As required by the manufacturer.

**Trims, Closures, and Accessories:** Install components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim as required by the manufacturer.

**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.