

## Product Evaluation

RC222 | 0220

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-222

**Effective Date:** February 1, 2020

**Re-evaluation Date:** February 2024

**Product Name:** DMC 200S 24 Gauge Steel Standing Seam Roofing Panels Installed Over a Plywood Deck

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

### General Description:

The steel standing seam metal roofing panels have 16 inches of coverage. The standing seam metal roofing panels have a 2" rib height and a 180 degree mechanically seamed side lap. The metal roofing panels are manufactured from 24-gauge galvalume steel. Refer to Figure 1 for an illustration of the DMC 200S standing seam panel.

### Limitations:

**Roof Framing:** The metal roofing panels must be installed over a solidly sheathed minimum 15/32" plywood roof deck.

**New Roof Framing Attachment:** The roof framing must meet or exceed the uplift requirements of the IRC or IBC and must be installed as required for resistance to wind loads. Roof framing spaced a maximum of 24" on center.

**Design Wind Pressures:** The design pressure uplift load resistance must be as specified in Table 1.

**Roof Slope:** The metal roofing panels may be installed on roofs with a roof slope as low as 1/4:12.

**Table 1.** Attachment of DMC 200S Steel Standing Seam Roofs over a Plywood Deck

Design Wind Pressure	Clip Fastener	Clip Spacing
-67.5 psf	Two (2) No. 10 x 1"	24" o.c.

**Installation Over an Existing Roof Covering:** Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles, wood shingles or shakes, built-up roofing, or roll roofing applied over an existing, solid roof deck of minimum 15/32" plywood. Note: Inspection of the existing roof deck must be made prior to the installation of the roof panels. The condition of the existing roof deck must be acceptable to receive the metal roofing panels before the metal roofing panel installation proceeds. NOTE: Underlayment is required to be installed.

**Installation:**

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

**Panels:** The metal roofing panels must be secured to the roof framing as specified in Table 1 and in accordance with this section.

**Roof Deck:** The roof deck must be solidly sheathed with minimum 15/32" plywood.

**Underlayment:** Minimum of one layer of No. 30 (Type II) asphalt felt must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment must be installed with minimum 4" side laps and 6" end laps. The underlayment must be applied with corrosion resistant tin caps and minimum 12-gauge 1-1/4" annular ring shank nails. The fasteners must be spaced 6" on center at all end laps and two staggered rows 12" on center in the field.

**Alternative Underlayment:** Either a synthetic underlayment or a peel and stick ice and water shield that complies with the requirements for underlayment as specified in the IRC and the IBC. The underlayment must be installed per the manufacturer's installation instructions.

**Attachment of Metal Roof Panels to the Roof Deck:** The metal roofing panels must be secured to the roof deck with DMC 200S butterfly clips. The butterfly clips consist of a "base" and a "butterfly." Refer to Figure 2 for an illustration of the butterfly clip. The "base" is 18-gauge L-shaped galvanized steel that is 2" wide, 1-3/4" high, and 4-1/2" long. The base has a 1/4" wide by 3" long slot located 1/2" from the top for the "butterfly." The "butterfly" is 22-gauge galvanized steel that is 5.045" long by 0.929" tall with two return flaps. Each DMC 200S butterfly clip is

secured to the roof deck with two (2) minimum No. 10 x 1" long pancake head screws as indicated in Table 1. The fasteners must be long enough to ensure a minimum penetration of 1/4" below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length must be increased so that the fasteners are long enough to ensure a minimum penetration of 1/4" below the existing plywood roof decking.) The butterfly fly clips must be located approximately 3 inches from each end and 24 inches on center as indicated in Table 1. The female rib of the panel is placed over the male/clip assembly and seamed 180 degrees.

**Panel Ends and End Laps:** 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.

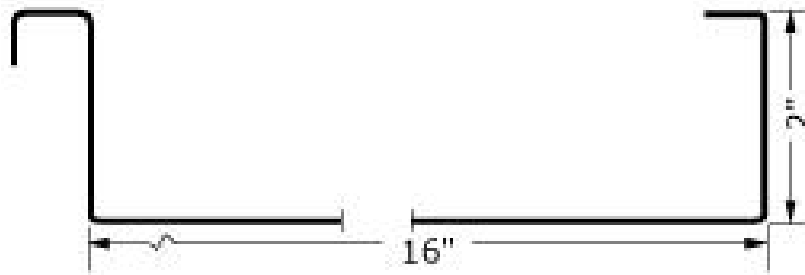


Figure 1. DMC 200S Standing Seam Panel Profile

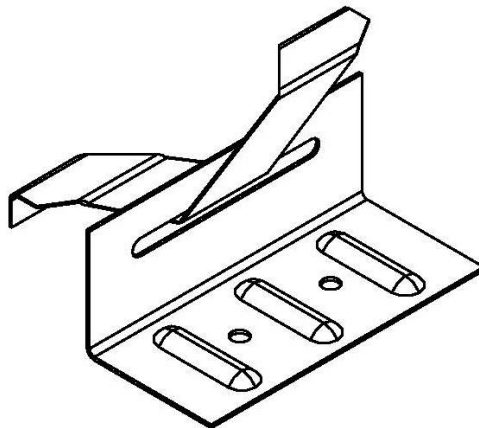


Figure 2. DMC 200S Butterfly Clip