

Product Evaluation

RC718 | 0623

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-718

Effective Date: June 1, 2023

Re-evaluation Date: June 2027

Product Name: 275 New Lock Panel Installed Over Steel Purlins

Manufacturer: Select Management Systems, Inc.
DBA Superior Metal Services
17 Scenic Loop Road
Boerne, TX 78006
Phone: (830) 388-7640

General Description:

The 275 New Lock standing seam metal roof panels have maximum 17-3/4" of coverage. The 24-gauge steel panels are a maximum of 17.5" wide. The 22-gauge steel panels are a maximum of 17-3/4" wide. The metal roof panels have a 2" rib height and a mechanical seamed side lap. The panels are manufactured from 24 or 22-gauge Galvalume coated steel that conform to ASTM A792, Grade 50, with a minimum yield strength of 50,000 psi. An optional paint finish is available. The panel rollformer is manufactured by New Tech Machinery Corp. with 275 Panel Profile.

Limitations:

Framing: The metal panels must be installed over open 16-gauge steel purlins.

New Framing Attachment: The roof framing must meet or exceed the wind pressure requirements of the IRC or IBC and must be installed as required for resistance to wind loads.

Design Wind Pressures: The design pressure negative wind load resistance must be as specified in Tables 1 & 2.

Installation Over an Existing Roof Covering: Not permitted.

Roof Slope: The metal roofing panels may be installed on roofs with a roof slope as low as 1/2:12.

Table 1: Attachment of 24-gauge, 17.5" wide 275 New Lock roof panels to minimum 16-gauge steel purlins

Design Wind Pressure (psf)	Purlins	Panel Clip Spacing
-39.0	Minimum 16-gauge 5'-0" on center	5'-0" on center
-51.0	Minimum 16-gauge 4'-6" on center	4'-6" on center
-63.0	Minimum 16-gauge 4'-0" on center	4'-0" on center
-75.1	Minimum 16-gauge 3'-6" on center	3'-6" on center
-87.1	Minimum 16-gauge 3'-0" on center	3'-0" on center
-99.1	Minimum 16-gauge 2'-5" on center	2'-6" on center
-111.1	Minimum 16-gauge 2'-0" on center	2'-0" on center
-123.1	Minimum 16-gauge 1'-6" on center	1'-6" on center
-135.2	Minimum 16-gauge 1'-0" on center	1'-0" on center

Table 2: Attachment of 22-gauge, 17.5" wide 275 New Lock roof panels to minimum 16-gauge steel purlins

Design Wind Pressure (psf)	Purlins	Panel Clip Spacing
-52.1	Minimum 16-gauge 5'-0" on center	5'-0" on center
-66.2	Minimum 16-gauge 4'-6" on center	4'-6" on center
-80.3	Minimum 16-gauge 4'-0" on center	4'-0" on center
-94.4	Minimum 16-gauge 3'-6" on center	3'-6" on center
-108.5	Minimum 16-gauge 3'-0" on center	3'-0" on center
-122.6	Minimum 16-gauge 2'-5" on center	2'-6" on center
-136.8	Minimum 16-gauge 2'-0" on center	2'-0" on center
-150.9	Minimum 16-gauge 1'-6" on center	1'-6" on center
-165.0	Minimum 16-gauge 1'-0" on center	1'-0" on center

Installation:

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

Steel Purlins: The minimum thickness of steel and the maximum spacing of the purlins must be as specified in Tables 1 & 2.

Attachment of Metal Roof Panels to the Steel Purlins: The metal roof panels must be secured to the steel purlins with sliding clips using 1/4"-14 x 1-1/2" HWH SD3 screws. Two screws per clip are required. The fasteners must be long enough to ensure a minimum penetration of 3 pitches of thread below the steel purlin.

Panel Clip: NC-33003 sliding clips (2-1/2" tall; 22-gauge top; 16-gauge base; 50 ksi steel, G90 galvanized steel) by Logan Stamping, Inc.

Panel Seam: Adjacent panels are seamed together mechanically along the side laps with a mechanical seamer to a 90-degree seam.

Trims, Closures, and Accessories: Components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim must be installed 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.