

PRODUCT EVALUATION REPORT
Corle Building Systems, Inc.

Vertical-Lok Standing Seam Metal Roof Assembly

Florida Product Approval Number: FL6278.5

Category: Structural Components
Sub-Category: Roof Deck

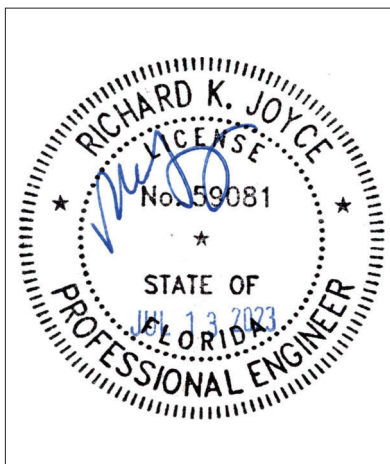
Compliance Method: 61G20-3.005 (1)(D)

Product Manufacturer:
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Contents
Evaluation Report Pages 1-6 Dated 07-03-2023



Compliance Statement

The product described in this report has demonstrated compliance with the 2023 (8th Edition) Florida Building Code Sections 1504.3.2, 1504.7, 1507.4 and 2210.1.

Product Description

Vertical-Lok Roof Deck panels applied over open framing using concealed clips:

1. Vertical-Lok 16" - 24 gauge (0.0236" steel thickness) with a minimum $F_y = 50$ ksi, $F_u = 65$ ksi

Panel Material Standard

Formed steel in compliance with the 2023 (8th Edition) Florida Building Code Section 1507.4.3 with optional painted finish.

Roof Panel Clips

Product Name: KC-480 or KC-485
Type: Sliding Standing Seam Clips
Corrosion Resistance: Per 2023 (8th Edition) Florida Building Code 1507.4.3(2)

Panel Fastener

(2) 1/4 – 14 HWH SD per clip as indicated in the **Load Tables** of this Evaluation Report

Substrate Description

Minimum 16 gauge (0.0596 steel thickness) open framing.
Framing must be designed in accordance with the 2023 (8th Edition) Florida Building Code

Scope of Evaluation Report

This Product Evaluation is limited to compliance with the 2023 (8th Edition) Florida Building Code wind load as it relates to Rule 61G20-3.005(3)

Reference Data

1. ASTM E1592-05
Farabaugh Engineering and Testing Report Number T192-13
2. FM4470 Section 5.5 Foot Traffic Resistance Test

Minimum Roof Slope

Minimum roof slope shall be ¼:12 in compliance with the 2023 (8th Edition) Florida Building Code, Including Section 1507.4.2 and in accordance with the Manufacturers recommendations.

Insulation

Manufacturer's approved products (optional)

Fire Classification

Fire Classification is outside the scope of this evaluation

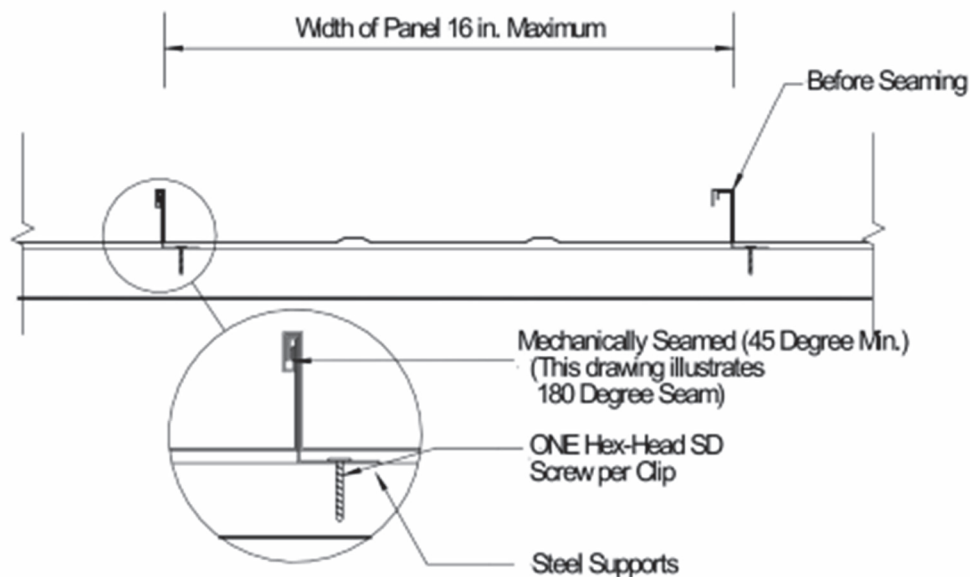
Shear Diaphragm

Shear Diaphragm is outside the scope of this evaluation

Design Procedure

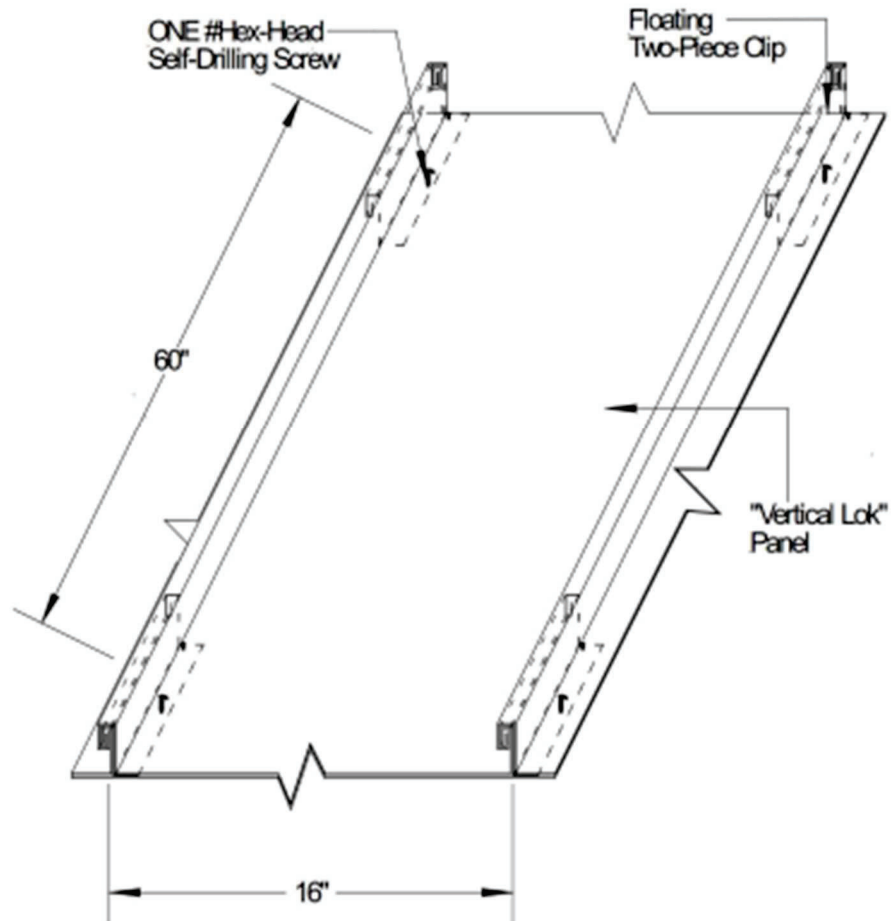
Based on dimensions of the structure, appropriate wind loads are determined using chapter 16 of the 2023 (8th Edition) Florida Building Code for component loading of roof cladding. These component wind loads are compared to the allowable load listed in the **Load Tables** of this evaluation report. The design professional shall select appropriate fastener pattern and panel gauge to reference in the construction documents for proper installation. Design of support framing must be in compliance with the 2023 (8th Edition) Florida Building Code.

Installation Method Corle Building Systems "Vertical Lok" (24 gauge Steel) Roof Panel attached to Steel Purlins

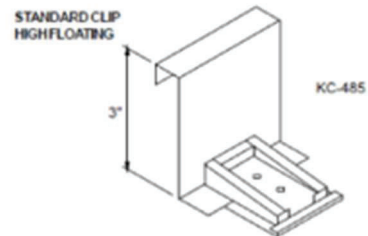
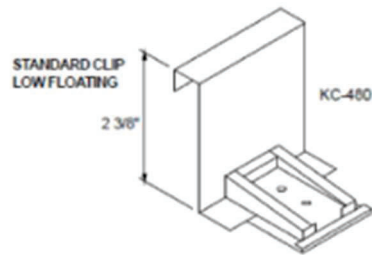
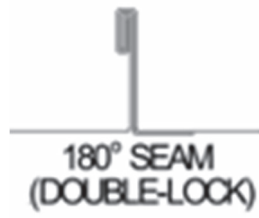


**Typical Panel Assembly
Section View**

Installation Method
Corle Building Systems
"Vertical Lok" (24 gauge Steel) Roof Panel attached to Steel Purlins

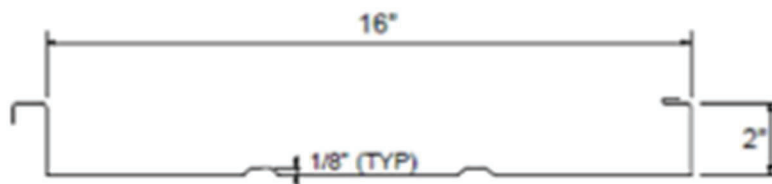


Typical Roof Assembly
Isometric View



Panel Clip

Corle Two-Piece "Low Floating Clip" (Part # KC-480), or
"High Floating Clip" (Part # KC-485)



Typical Panel Profile

Vertical-Lok 18" Panel				Section Properties					
Panel Gauge	Fy	Fu	Weight	Negative Bending			Positive Bending		
	ksi	Ksi		Ixe	Sxe	Maxo	Ixe	Sxe	Maxo
				In ⁴	In ³	Kip-in	In ⁴	In ³	Kip-in
24	50	65	1.32	0.108	0.1010	3.025	0.215	0.1056	3.161

Note: Section Properties shown are for one full panel width (16").

Vertical-Lok Panel (24 Gauge)			Allowable Gravity Load				
Span Type	Span (ft)						
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"
Single	331	228	158	116	89	70	57
2 Span	155	102	72	53	41	33	27
3-Span	187	125	88	66	51	40	33

Notes:

1. Allowable loads are based on uniform span length and uniformly distributed load.
2. Allowable gravity load is limited by bending, shear or deflection.
3. Allowable gravity loads are computed for a maximum total load deflection of L/60.
4. Weight of the panel must be included with gravity load combinations as appropriate.
5. This material is subject to change without notice

This material has been developed in accordance with the 2016 North American Specification for Cold-Formed Structural Steel Members with Supplement 2 (2020).

Vertical-Lok Panel (24 Gauge)		Allowable Uplift Load (180 Degree Seam)	
Span	ASTM E1592 Test Value (PSF)	Allowable Uplift (PSF)	
2'-0"	197.8	98.9	
2'-6"		82.7	
3'-0"		66.5	
3'-6"	100.6	50.3	
4'-0"		47.0	
4'-6"		43.7	
5'-0"	80.8	40.4	

Notes:

1. Test Results are highlighted.
2. Allowable loads are based on uniform span length and uniformly distributed load.
3. Weight of the panel has already been included in the above allowable uplift loads.
4. This material is subject to change without notice

The engineering data contained herein is for the express use of the customers of Corle Building Inc. and qualified design professionals