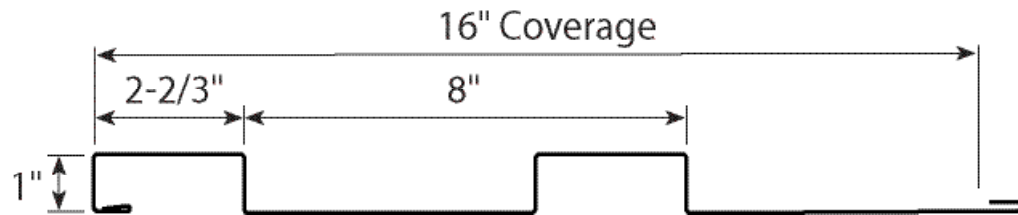


# EM1-168 WALL

Condensed  
Technical  
Reference

EM1 SERIES



ARCHITECTURAL  
COMMERCIAL  
INDUSTRIAL  
PANEL

CONCEALED  
FASTENERS

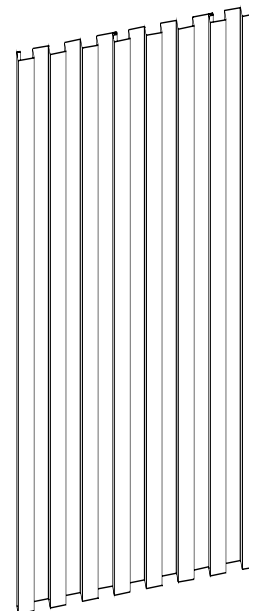
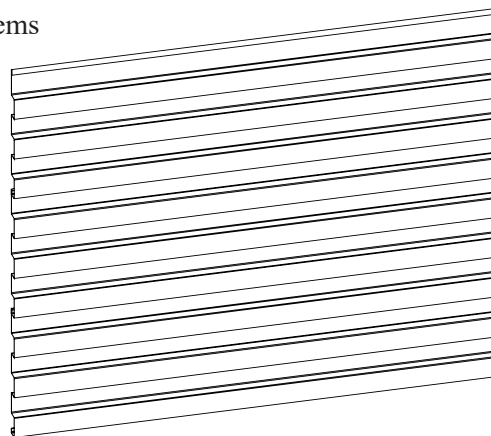
16"  
COVERAGE

WALL AND  
LINER PANEL

OPEN FRAMING OR  
SOLID SUBSTRATE

## PANEL OVERVIEW

- ▶ Finish: Standard: PVDF and Acrylic-Coated Galvalume®  
Optional: multi-pass PVDF and Fluoropolymer® PURE
- ▶ Corrosion Protection: AZ50 per ASTM A 792 for Painted Galvalume®  
AZ55 per ASTM A 792 for Acrylic-Coated Galvalume®  
G90 per ASTM A 653 for Painted Galvanized
- ▶ Gauges: 24 ga standard; 22 ga and 20 ga optional
- ▶ 16" panel coverage, 1" panel height, box ribs on 8" centers
- ▶ Clip-attached, concealed-fastened panel system
- ▶ Panel Length: 5' minimum, 30' maximum
- ▶ Panels can be installed horizontally or vertically
- ▶ Panels are interchangeable for accent effects
- ▶ Use on single-skin or field-assembled wall systems



## TESTING

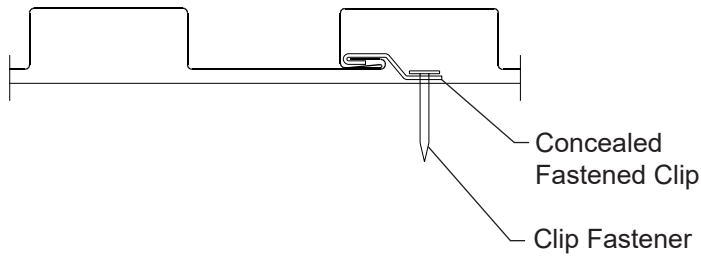
- ▶ ASTM E 283 Air Leakage, with building wrap
- ▶ ASTM E 331 Water Penetration, with building wrap
- ▶ ASTM E 330 Load Test
- ▶ ASTM E 1592 Load Test
- ▶ 2023 FBC Approval - FL34027.3

**Metal Sales**™

# EM1-168 WALL

**Condensed  
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Reference**

## PANEL ATTACHMENT



## FASTENING INFORMATION

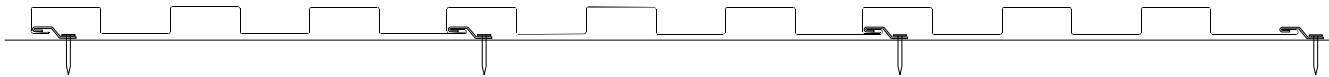
- Concealed Wall Clip - 4" Low is 1-3/4" x 4" x 3/8", from 16 ga, G90 material with 2 fastener holes.
- Clip Fastener(s) should be driven just to contact between fastener head / clip / panel / support. Overdriven fasteners will cause panel distortions.
- Fasteners should extend 1/2" or more past the inside face of the support material for steel and wood sheathing support materials.
- Clip Fasteners:
  - Attaching to Wood:
    - #12-11 Low Profile Wood Screw
  - Attaching to Steel:
    - < 18 ga: 1/4"-13 Deck Screw
    - ≥ 18 ga, ≤ 12 ga: #10-16 Pancake Head Drill
    - > 12 ga: 1/4"-14 Self Driller, No Washer

## INSTALLATION DIRECTION

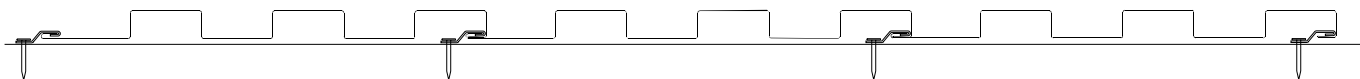
Horizontally-oriented panels must be installed from the bottom to the top.

Vertically-oriented panels may be installed from the right-to-left or left-to-right.

Left-to-Right Installation of Vertically-Oriented Panels



Right-to-Left Installation of Vertically-Oriented Panels



## SECTION PROPERTIES

## ALLOWABLE UNIFORM LOADS, psf For various fastener spacings

Ga	Width in	Yield ksi	Weight psf	Top In Compression		Bottom In Compression		Inward Load					Outward Load				
				Ixx in <sup>4</sup> /ft	Sxx in <sup>3</sup> /ft	Ixx in <sup>4</sup> /ft	Sxx in <sup>3</sup> /ft	2'	3'	4'	5'	6'	2'	3'	4'	5'	6'
24	16	50	1.39	0.0495	0.0729	0.0533	0.0911	120	97	71	47	23	70	58	45	33	21
22	16	50	1.81	0.0713	0.1094	0.0750	0.1340	120	97	71	47	23	70	58	45	33	21
20	16	33	2.21	0.1005	0.1658	0.1020	0.1967	120	97	71	47	23	70	58	45	33	21

1. Theoretical section properties have been calculated per AISI 2016 'North American Specification for the Design of Cold-Formed Steel Structural Members'. Ixx and Sxx are effective section properties for deflection and bending.
2. Allowable load is calculated in accordance with AISI 2016 specifications considering bending, shear, combined bending and shear and deflection. Allowable load considers the 3 or more equal spans condition. Allowable load does not address web crippling, fasteners, support material or load testing. Panel weight is not considered.
3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
4. Allowable loads do not include a 1/3 stress increase for wind.

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