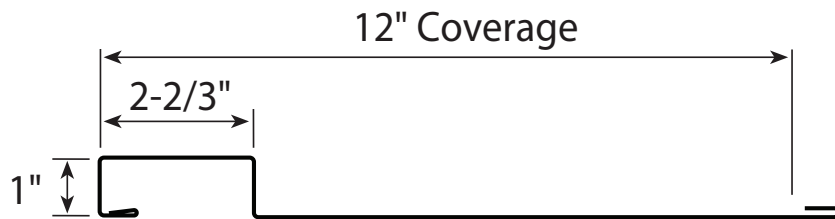


# EM1-1212 WALL

Condensed  
Technical  
Reference

EM1 SERIES



ARCHITECTURAL  
COMMERCIAL  
INDUSTRIAL  
PANEL

CONCEALED  
FASTENERS

12"  
COVERAGE

WALL AND  
LINER PANEL

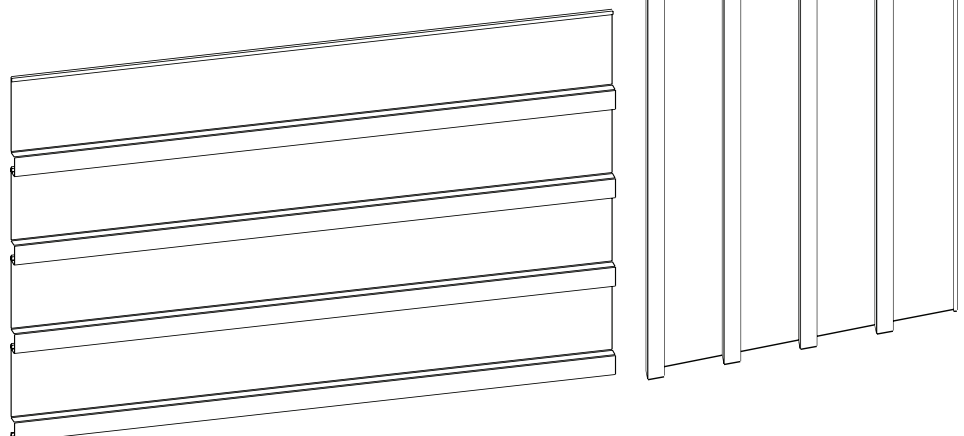
OPEN FRAMING OR  
SOLID SUBSTRATE

## PANEL OVERVIEW

- ▶ Finish: Standard: PVDF and Acrylic-Coated Galvalume®  
Optional: multi-pass Kynar 500® 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
- ▶ 12" panel coverage, 1" panel height, 12" rib spacing
- ▶ Clip-attached, concealed-fastened panel system
- ▶ Panel Length: 5' minimum, 30' maximum
- ▶ Panels are interchangeable for accent effects
- ▶ Use on single-skin or field-assembled wall systems

## 4 PANEL ASSEMBLY

- ▶ Horizontal or vertical application
- ▶ Concealed fastener



## TESTING

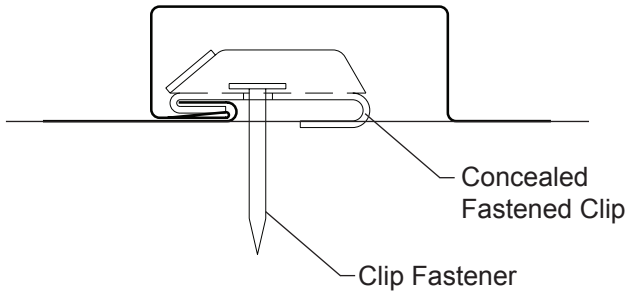
- ▶ ASTM E 283 Air Leakage
- ▶ ASTM E 331 Water Penetration
- ▶ ASTM E 330 Load Test
- ▶ ASTM E 1592 Load Test

**MSS Metal Sales**™

# EM1-1212 WALL

**Condensed  
Technical  
Reference**

## PANEL ATTACHMENT



## FASTENING INFORMATION

- Concealed Fastened Clip is 3" x 1-3/4" x 3/4", from 16 ga, G90 material with 2 fastener holes.
- Clip Fasteners should be driven just to contact between fastener head / clip / panel / support. Beyond contact, the clip can crush the open hem of the panel and make engagement of the next panel difficult. 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

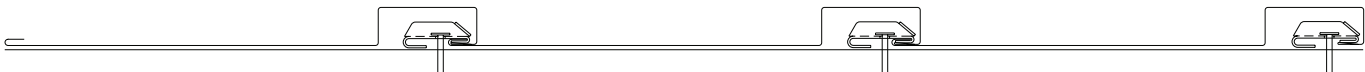
## INSTALLATION DIRECTION

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				
				Top In Compression		Bottom In Compression		Inward Load					Outward Load								
				I <sub>xx</sub> in <sup>4</sup> /ft	S <sub>xx</sub> in <sup>3</sup> /ft	I <sub>xx</sub> in <sup>4</sup> /ft	S <sub>xx</sub> in <sup>3</sup> /ft	2'	3'	4'	5'	6'	2'	3'	4'	5'	6'				
24	12	50	1.25	0.0297	0.0355	0.0291	0.0574	120	97	69	44	23	70	58	45	33	21				
22	12	50	1.66	0.0442	0.0538	0.0410	0.0783	120	97	71	47	23	70	58	45	33	21				
20	12	33	2.00	0.0635	0.0799	0.0550	0.0966	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'. I<sub>xx</sub> and S<sub>xx</sub> 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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