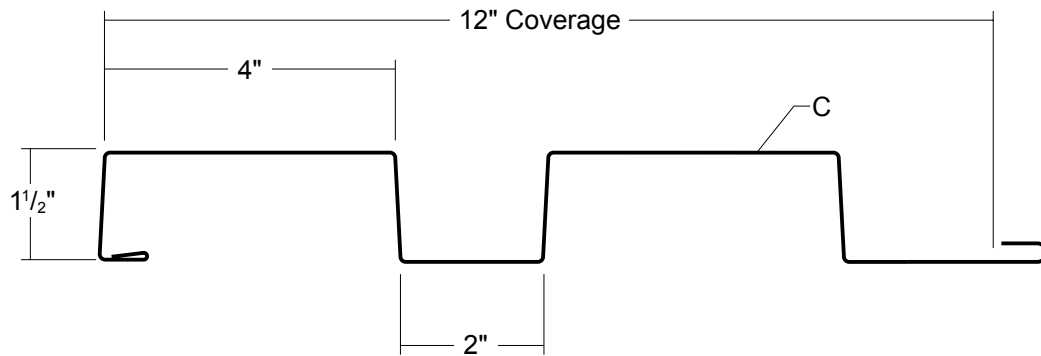


EM15-1224 WALL

Condensed
Technical
Reference

EMPIRE SERIES™



ARCHITECTURAL
COMMERCIAL
INDUSTRIAL
PANEL

CONCEALED
FASTENED

12"
COVERAGE

WALL AND
LINER PANEL

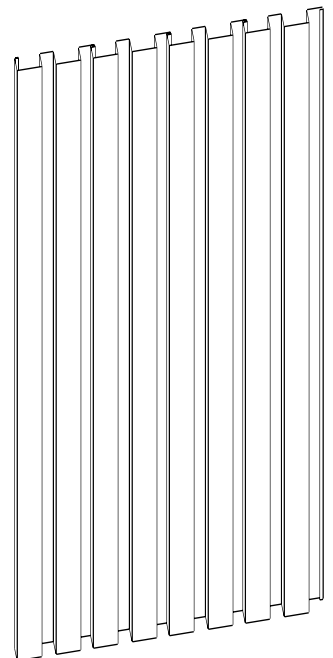
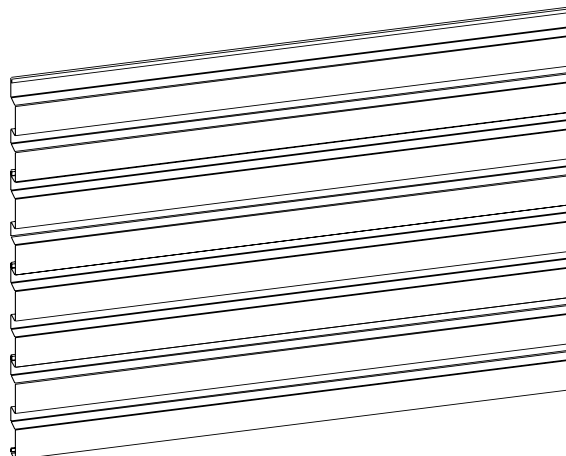
OPEN FRAMING OR
SOLID SUBSTRATE

PANEL OVERVIEW

- ▶ Finish: Standard: PVDF and Acrylic-Coated Galvalume®
Optional: multi-pass Kynar 500® and Fluoropon® 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 1/2" panel height, 6" rib spacing
- ▶ Clip-attached, concealed-fastened panel system
- ▶ Panel Length: 6' minimum, 30' maximum
- ▶ Use on single-skin or field-assembled wall systems

4 PANEL MOCKUP

- ▶ Horizontal or vertical application
- ▶ Concealed fastener



TESTING

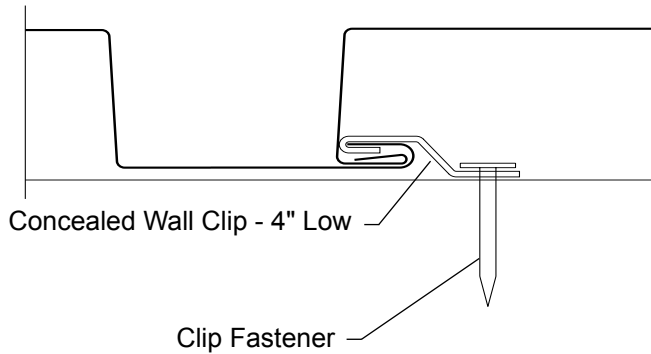
- ▶ ASTM E 283 Air Leakage, with building wrap
- ▶ ASTM E 331 Water Penetration, with building wrap
- ▶ ASTM E 330 Load Test
- ▶ ASTM E 1592 Load Test

MS Metal Sales™

EM15-1224 WALL

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PANEL ATTACHMENT



FASTENING INFORMATION

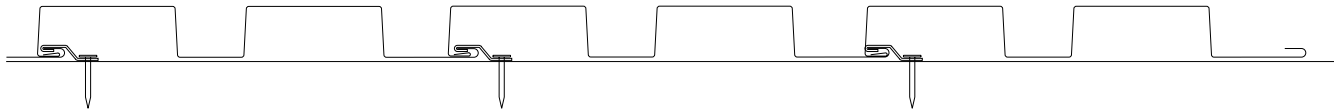
- Concealed Wall Clip - 4" Low is 1-3/4" x 4" x 3/8", from 16 ga, G90 material with 2 fastener holes.
- Clip Fastener(s) should be driven just to contact between fastener head / clip / support. Over-driven fasteners can cause panel distortions.
- Fasteners should extend 1/2" or more past the inside face 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 Driller
 - > 12 ga: 1/4"-14 Self Driller, No Washer

INSTALLATION DIRECTION

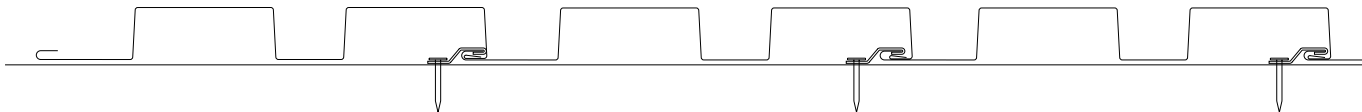
Horizontally-oriented panels must be installed from the bottom to the top.

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 clip spacings

| Ga | Width in | Yield ksi | Weight psf | Top In Compression | | Bottom In Compression | | Inward Load | | | | | Outward Load | | | | |
|----|-------------|--------------|---------------|----------------------------|----------------------------|----------------------------|----------------------------|-------------|----|----|----|----|--------------|----|----|----|----|
| | | | | Ixx in ⁴ /ft | Sxx in ³ /ft | Ixx in ⁴ /ft | Sxx in ³ /ft | 2' | 3' | 4' | 5' | 6' | 2' | 3' | 4' | 5' | 6' |
| | | | | | | | | | | | | | | | | | |
| 24 | 12 | 50 | 1.54 | 0.1079 | 0.1127 | 0.1459 | 0.1574 | 117 | 60 | 38 | 27 | 21 | 78 | 43 | 29 | 21 | 17 |
| 22 | 12 | 50 | 2.01 | 0.1543 | 0.1678 | 0.2031 | 0.2266 | 117 | 60 | 38 | 27 | 21 | 78 | 43 | 29 | 21 | 17 |
| 20 | 12 | 33 | 2.43 | 0.2150 | 0.2508 | 0.2690 | 0.3164 | 117 | 60 | 38 | 27 | 21 | 78 | 43 | 29 | 21 | 17 |

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 loads are calculated in accordance with AISI 2016 specifications considering bending, shear, combined bending & shear, deflection and load testing on 16 ga girts of comparable profiles. Panel weight is not considered. Allowable loads do not consider other support conditions including web crippling, fasteners or support materials.
3. Allowable loads consider the 3 or more equal spans condition.
4. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
5. Allowable loads do not include a 1/3 stress increase for wind.

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