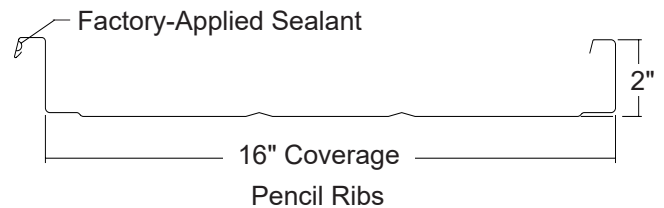
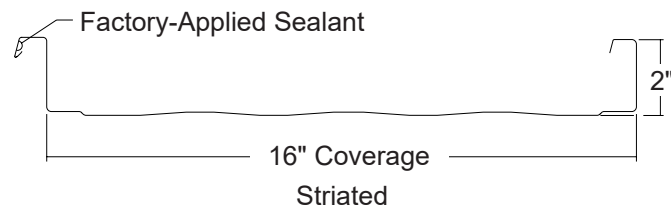
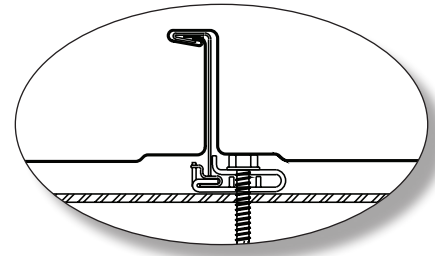
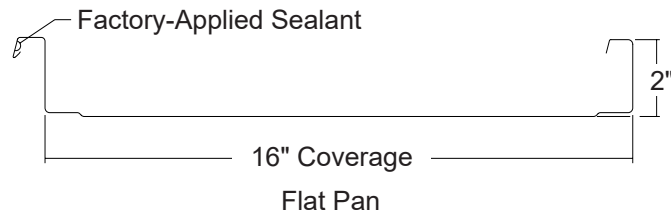


MAGNA-LOC 90 - Aluminum

**Condensed
Technical
Reference**



**ARCHITECTURAL
COMMERCIAL
INDUSTRIAL
PANEL**

**CONCEALED
FASTENED**

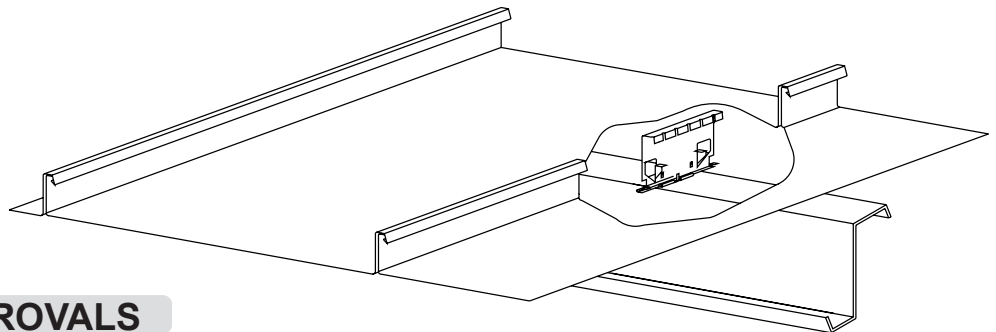
**16"
COVERAGE**

**MINIMUM
1/2:12 SLOPE**

**OPEN FRAMING OR
SOLID SUBSTRATE**

PANEL OVERVIEW

- ▶ Finish: PVDF
- ▶ Material: 3003-H14 Aluminum per ASTM B 209
- ▶ Thickness: 0.032"
- ▶ 16" panel coverage, 2" rib height
- ▶ Panels can be factory notched and punched for end laps
- ▶ Architectural/structural flat pan standing seam panel
- ▶ Applies over open framing or solid substrate
- ▶ Concealed clip designed to accommodate thermal movement, 1.5" each way
- ▶ Integral, mechanically seamed side lap
- ▶ Accommodates 1/2" to 6" blanket insulation
- ▶ Factory-applied side lap sealant
- ▶ Minimum roof slope: 1/2 :12



TESTING AND APPROVALS

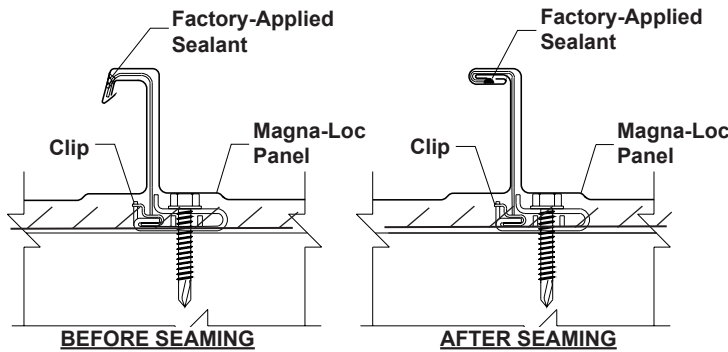
- ▶ UL 2218, Class 4, Impact Resistance
- ▶ UL 790, Class A, Fire Resistance
- ▶ UL 263, Fire Resistance
- ▶ ASTM E 1680 Air Penetration - 0.0016 cfm/ft² leakage at 12 psf
- ▶ ASTM E 1646 Water Infiltration - No Leakage at 30 psf
- ▶ ASTM E 2140 Standing Water - No Leakage at 6" of water
- ▶ ASTM E 1592 Wind Uplift
- ▶ 2023 FBC Approval, FL10999.2

MS Metal Sales™

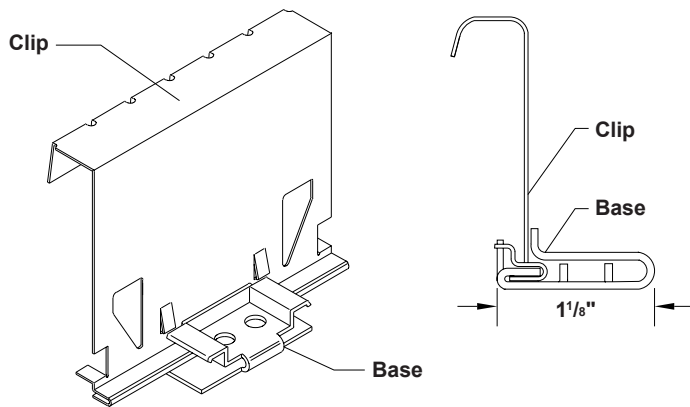
MAGNA-LOC 90 - Aluminum

**Condensed
Technical
Reference**

ATTACHMENT DETAILS



PANEL CLIP



GENERAL INFORMATION

► Length

Minimum factory cut length is 5'-0" with striations and 7'-0" without striations.
Maximum recommended panel length is 45'-0".
Please inquire about longer panels.

► Clips

Clip spacing is based upon the spacing of structural framing members and loading requirements. Clips with Galvanized tabs are standard. Clips with Stainless Steel tabs are also available.

► Fasteners

Overdriven fasteners will cause panel distortions.

Panel and Clip fasteners should extend 1/2" or more past the inside face of the support material.

Type 304 Stainless Steel fasteners are recommended for applications exposed to corrosive environments.

Type of fastener material is shown in parenthesis.

Clip Fasteners:

Attaching to Wood:

#12-11 x 1.5" Wood Screw (Carbon Steel)

Attaching to Steel:

<18 ga: 1/4"-13 Deck Screw (Carbon Steel)

>= 18 ga, <= 12 ga: 1/4"-14 Driller (Carbon Steel)

> 12 ga: 1/4"-24 Driller, No Washer (Carbon Steel)

Exposed End Fasteners (Attaching to Eave Plate):

#12-14 Driller (Stainless Steel)

#12-14 Driller XL (Carbon Steel)

Concealed End Fasteners (Attaching to Eave Plate):

#12-14 Driller (Stainless Steel)

#12-14 Driller, No Washer (Carbon Steel)

Trim Fasteners:

1/8" x 3/16" Pop Rivets (Stainless Steel)

#14-11 x 1" Stitch Screw (Stainless Steel)

1/4"-14 x 7/8" Stitch Screw (Carbon Steel)

SECTION PROPERTIES

Thick in	Width in	Yield ksi	Weight psf	I in ⁴ /ft	S _{Top} in ³ /ft	S _{Bottom} in ³ /ft	Z in ³ /ft	ALLOWABLE UNIFORM LOADS, psf for various clip spacings											
								Inward Load						Outward Load					
								1'	2'	2.5'	3'	4'	5'	1'	2'	2.5'	3'	4'	5'
0.032	16	17	0.60	0.2723	0.1568	0.6351	0.219	210	105	84	49	20	10	87	73	60	50	37	30

- Theoretical section properties have been calculated per 2015 Aluminum Design Manual. I, S and Z are section properties for deflection and bending.
- Allowable load is calculated in accordance with 2015 Aluminum Design Manual specifications considering bending, shear, combined bending & shear, deflection and uplift testing per ASTM E 1592. Allowable load does not consider other support conditions such as web crippling, fasteners or support material. Panel weight is not considered.
- Allowable load considers the three or more equal span case.
- Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
- Allowable loads do not include a 1/3 stress increase in uplift.

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Anchorage, AK 866.640.7663
Bay City, MI 888.777.7640
Deer Lake, PA 800.544.2577
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