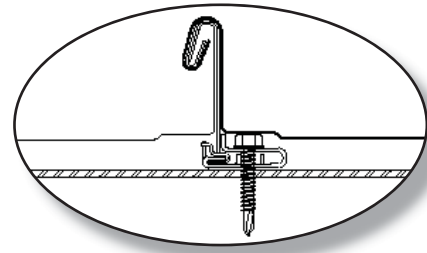
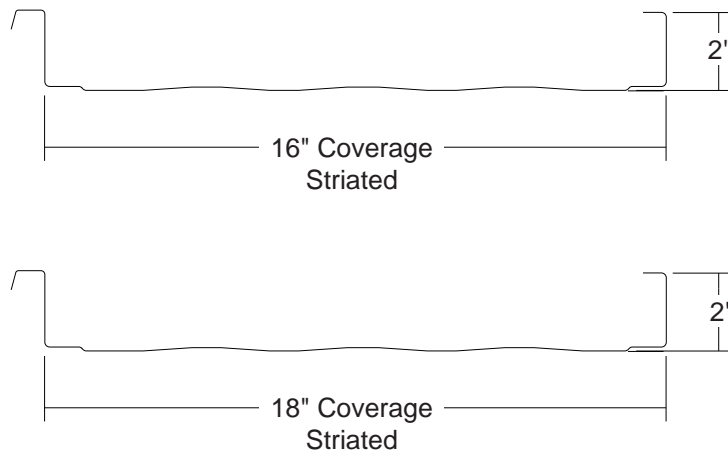


# CURVED MAGNA-LOC

CONDENSED  
TECHNICAL  
REFERENCE



ARCHITECTURAL  
COMMERCIAL  
INDUSTRIAL  
PANEL

CONCEALED  
FASTENED

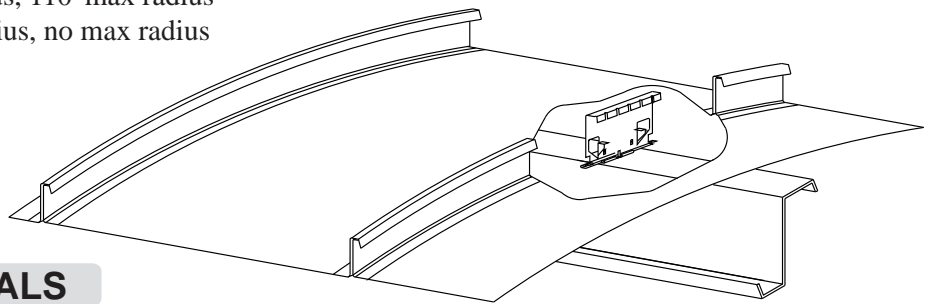
16" OR 18"  
COVERAGE

MINIMUM  
RADIUS  
20'

OPEN FRAMING OR  
SOLID SUBSTRATE

## PANEL OVERVIEW

- ▶ Finishes: PVDF (Kynar 500®) and Acrylic Coated Galvalume®
- ▶ Corrosion Protection: AZ55 per ASTM A 792 for unpainted Galvalume®  
AZ50 per ASTM A 792 for painted Galvalume®  
G90 per ASTM A 653 for Galvanized
- ▶ Gauges: 24 ga standard; 22 ga and 20 ga optional
- ▶ 16" or 18" panel coverage, 2" rib height
- ▶ Panel Length: Minimum: 5' for striated, 7' for non-striated; Maximum: 45' recommended
- ▶ Architectural, structural vertical rib standing seam roof system
- ▶ Integral mechanically seamed side lap with factory-applied sealant
- ▶ Panels can be factory-notched and punched
- ▶ Accommodates 1/2" to 6" blanket insulation
- ▶ For 90° seam - 20' minimum radius, 110' max radius
- ▶ For 180° seam - 50' minimum radius, no max radius
- ▶ Convex curves only



## TESTING AND APPROVALS

- ▶ UL 2218 Impact Resistance - Class 4
- ▶ UL 790 Fire Resistance Rating - Class A, per building code
- ▶ UL 263 Fire Resistance Rating - per assembly
- ▶ ASTM E 1680 Air Leakage - 0.015 cfm/ft<sup>2</sup> at 6.24 psf\*
- ▶ ASTM E 1646 Water Penetration - none at 12 psf\*
- ▶ UL 580 Uplift Resistance - Class 90 Constructions: #576, #577 and #583

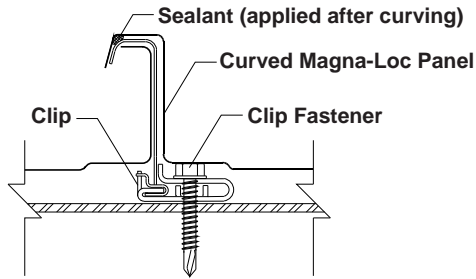
\* with tube sealant at clip locations

**ms** metal sales  
manufacturing corporation

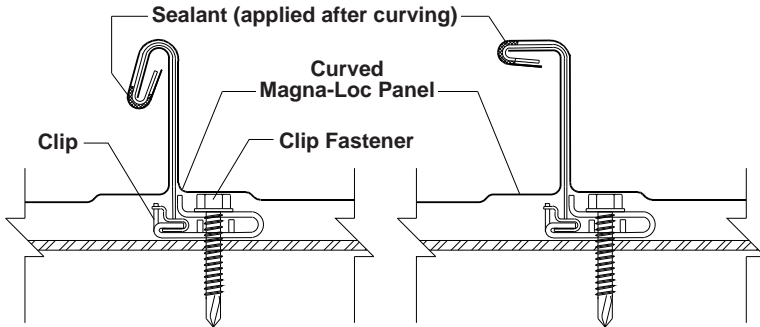
# CURVED MAGNA-LOC

## CONDENSED TECHNICAL REFERENCE

### ATTACHMENT DETAILS



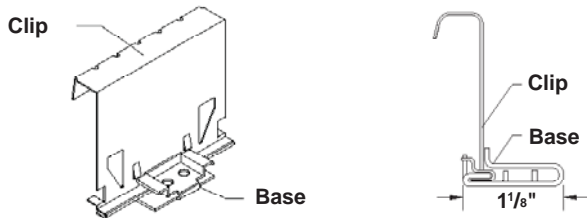
BEFORE SEAMING



180° SEAM AFTER SEAMING

90° SEAM AFTER SEAMING

### PANEL CLIP



### FASTENING INFORMATION

#### ► Clips

Clip spacing is based upon the design loads, the spanning capacity of the panels, the fasteners and the support members.

Clip Tabs are 0.034" thick, G90 is standard, 410 stainless is optional. Clip base is 0.060" thick, G60.

Floating Clips can accommodate 1-1/2" of thermal movement each way.

#### ► Fasteners

Overdriven fasteners will cause panel distortions.

Fasteners should extend 1/2" or more past the inside face of the support material.

#### Clip Fasteners:

Attaching to Wood:

#12-11 x 1-1/2" Wood Screw

Attaching to Steel:

<18 ga: 1/4"-14 Deck Screw

>=18 ga, <=12 ga: 1/4"-14 Driller, No Washer

>12 ga: 1/4"-24 Driller, No Washer

#### Exposed End Fasteners:

Attaching to Eave Plate or Back-Up Channel:

#12-14 XL Driller

#### Concealed End Fasteners

Attaching to Eave Plate or Back-Up Channel:

#12-14 Driller, No Washer

#### Trim Fasteners:

1/4"-14 x 7/8" XL Stitch Screw

1/8" x 3/16" Pop Rivet

### SECTION PROPERTIES

### ALLOWABLE UNIFORM LIVE LOADS, psf For various clip spacings

| Ga | Seam | Width<br>in | Yield<br>ksi | Weight<br>psf | Top in Compression  |                     |                     |                     | Inward Load |     |     |     |      |    | Outward Load |     |      |     |    |    |
|----|------|-------------|--------------|---------------|---------------------|---------------------|---------------------|---------------------|-------------|-----|-----|-----|------|----|--------------|-----|------|-----|----|----|
|    |      |             |              |               | Ixx                 |                     | Sxx                 |                     | 2.5'        |     | 3'  |     | 3.5' |    | 4'           |     | 4.5' |     | 5' |    |
|    |      |             |              |               | in <sup>4</sup> /ft | in <sup>3</sup> /ft | in <sup>4</sup> /ft | in <sup>3</sup> /ft |             |     |     |     |      |    |              |     |      |     |    |    |
| 24 | 180° | 16"         | 50           | 1.24          | 0.1418              | 0.0779              | 0.0720              | 0.0656              | 232         | 164 | 121 | 94  | 74   | 60 | 270          | 192 | 143  | 110 | 88 | 71 |
| 24 | 180° | 18"         | 50           | 1.21          | 0.1287              | 0.0695              | 0.0640              | 0.0582              | 206         | 145 | 108 | 83  | 66   | 54 | 241          | 171 | 127  | 98  | 78 | 64 |
| 24 | 90°  | 16"         | 50           | 1.25          | 0.1553              | 0.0858              | 0.0885              | 0.0772              | 261         | 187 | 140 | 108 | 86   | 70 | 52           | 52  | 52   | 52  | 52 | 52 |

- Theoretical section properties have been calculated per AISI 2007 'North American Specification for the Design of Cold-Formed Steel Structural Members'. Ixx and Sxx are effective section properties for deflection and bending.
- Allowable loads are calculated in accordance with AISI 2007 specifications considering bending, shear, combined bending and shear and deflection. Allowable loads consider the 3 or more equal spans condition. Allowable loads do not address web crippling, fasteners, support material or load testing. Panel weight is not considered.
- Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
- Allowable loads do not include a 1/3 stress increase for wind.

**metal sales**  
manufacturing corporation



Anchorage, AK 866.640.7663  
Bay City, MI 888.777.7640  
Deer Lake, PA 800.544.2577  
Denver, CO 800.289.7663  
Detroit Lakes, MN 888.594.1394  
Fontana, CA 800.782.7953  
Fort Smith, AR 877.452.3915

Independence, MO 800.747.0012  
Jacksonville, FL 800.394.4419  
Jefferson, OH 800.321.5833  
Mocksville, NC 800.228.6119  
Nashville, TN 800.251.8508  
Rock Island, IL 800.747.1206  
Rogers, MN 800.328.9316

Seattle, WA 800.431.3470  
Sellersburg, IN 800.999.7777  
Sioux Falls, SD 888.902.8320  
Spokane, WA 800.572.6565  
Temple, TX 800.543.4415  
Woodland, CA 800.759.6019

[www.metalsales.us.com](http://www.metalsales.us.com)