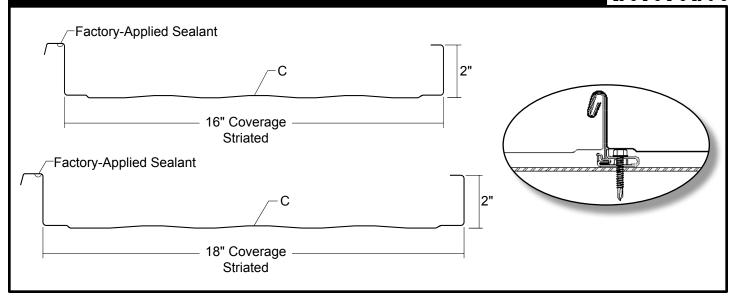
# **CURVED MAGNA-LOC**

Condensed Technical Reference



ARCHITECTURAL COMMERCIAL INDUSTRIAL PANEL

CONCEALED FASTENED

16" OR 18" COVERAGE MINIMUM RADIUS 20'

OPEN FRAMING OR SOLID SUBSTRATE

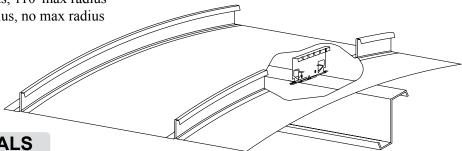
### **PANEL OVERVIEW**

- ► Finishes: PVDF and Acrylic-Coated Galvalume®
- Corrosion Protection: AZ55 per ASTM A 792 for unpainted Galvalume<sup>®</sup> AZ50 per ASTM A 792 for painted Galvalume<sup>®</sup>

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 <sup>1</sup>/<sub>2</sub>" 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



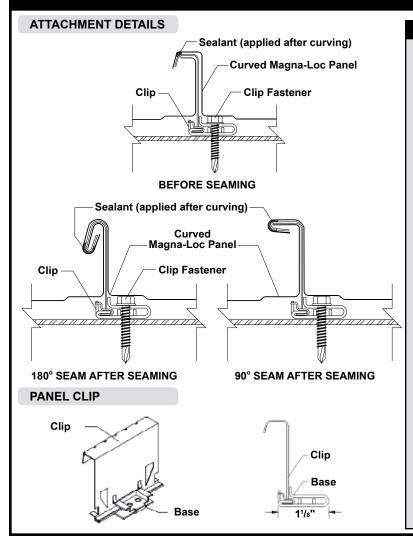
### **TESTING AND APPROVALS**

- ▶ 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/ft² 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



## CURVED MAGNA-LOC



#### **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 accomodate 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	<b>Width</b> in	<b>Yield</b> ksi	Weight psf			Bottom in Compression		Inward Load					Outward Load							
					lxx in⁴/ft	Sxx in³/ft	lxx in⁴/ft	Sxx in³/ft													
									2'	2.5'	3'	3.5'	4'	5'	2'	2.5'	3'	3.5'	4'	5'	
24	180°	16"	50	1.24	0.1418	0.0779	0.0720	0.0656	352	232	164	121	94	60	95	85	75	65	55	35	
24	180°	18"	50	1.21	0.1287	0.0695	0.0640	0.0582	313	206	145	108	83	54	100	90	80	70	59	39	
24	90°	16"	50	1.24	0.1553	0.0858	0.0885	0.0772	403	268	190	141	109	71	61	57	54	50	47	40	

- 1. Theoretical section properties have been calculated per AISI 2012 '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 2012 specifications considering bending, shear, combined bending and shear, deflection and uplift testing on 16 ga purlins. Allowable loads consider the 3 or more equal spans condition. Allowable loads do not address web crippling, fasteners or support material. 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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