McElroy Metal

MAXIMA

STANDING SEAM ROOF SYSTEM

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Maxima is a vertical leg standing seam system that is mechanically seamed on the job site. Maxima is installed over open framing or solid decking and is available in a wide variety of panel configurations and widths.

DETAILS

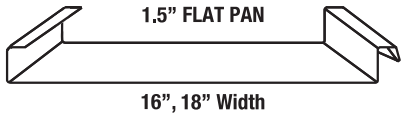
- Mechanically seamed profile
- Patented Triple-Lok® seam provides unsurpassed panel strength
- Substrate:
  - Galvalume and Aluminum
- Gauge:
  - 22 and 24 Gauge Steel
  - .032 and .040 Aluminum
- Coating: Kynar 500®
- 1:12 minimum slope for 1.5”
- 1/2: 12 minimum slope for 2”
- 1/4: 12 minimum slope for 3”
- Patented clip provides 3-1/2” of roof panel movement.
- Oil canning is a natural occurrence in metal panels and is not cause for panel rejection.

TESTING DATA

- Class A – Fire Rating
- UL 580 Class 90 - Uplift Test
- UL 90 – Uplift Test
- FM 4471 – Uplift Test (1-90 Rated)
- ASTM 1592 – Uplift Test
- ASTM 1680 – Air Infiltration
- ASTM 1646 – Water Infiltration
- UL 2218 – Class 4 Impact Resistance
- Florida State Approval: 1747.3 (2” & 3”), 1832.4 (2” & 3”)
- UL 263 Fire Resistance (2” & 3”)
- Miami-Dade Approved (216 Only) NOA 07-0905.08

* All testing conducted with galvalume substrate.

Panel Images



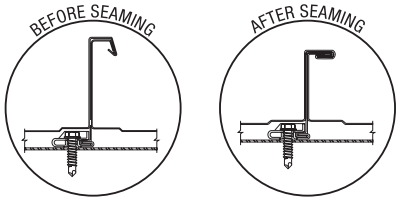
16”, 18” Width

18”, 24” Width

12”, 16”, 18” Width

12”, 16”, 18” Width

*Oil canning is a natural occurance in metal panels and is not a cause for panel rejection.To minimize the appearence of oil canning, McElroy markets embossed substrates and striated panels.



Maxima ADV is available with a 180 degree seam

Unparalleled Performance in Vertical Leg Standing Seam Roof Systems

PANEL OPTIONS

	1.5" seam height	2" seam height	3" seam height	90 degree seam	180 degree seam	curved	width
Maxima			✓		✓		12, 16, 18
Maxima				✓	✓		18, 24
Maxima ADV90			✓		✓		16, 18
Maxima ADV180			✓			✓	16, 18
Maxima ADV90C			✓		✓		✓ 16, 18
Maxima ADV180C			✓			✓	✓ 16, 18
Maxima 1.5 - 90	✓				✓		16, 18
Maxima 1.5 - 180	✓					✓	16, 18
Maxima 1.5 - 90C	✓				✓		✓ 16, 18
Maxima 1.5 - 180C	✓					✓	✓ 16, 18

*Oil canning (pan wave) is a natural occurrence in metal panels and is not cause for panel rejection.

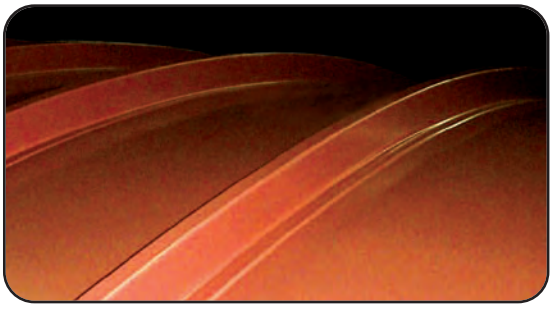
Maxima-Curved

For enhanced architectural styling, Maxima ADV and Maxima 1.5 panels are available curved. To improve accuracy and customize the installation, Maxima-ADV and Maxima 1.5 panels are fabricated to the required radius on the job site. Modified Maxima seamers are required.

Maxima ADV
Panel Height/Width:
2:16, 2:18
Minimum Radius:
25' for 22/24 Ga. Steel;
.032 Aluminum

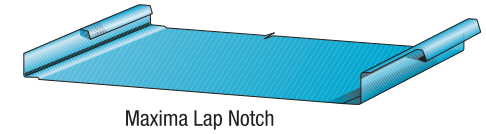
Maxima 1.5
Panel Height/Width:
1.5:16, 1.5:18
Minimum Radius:
12' for 22/24 Ga. Steel;
.032 Aluminum

Testing data: ASTM E1592
Note: Regular Maxima Panels cannot be curved.

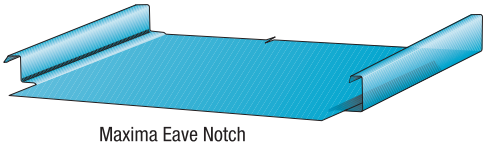


Factory Notching

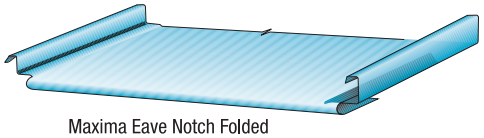
For enhanced aesthetics and improved installation efficiency, Maxima panels are available with factory fabricated notching. Notching enables contractors to bend the panel ends and eliminate unsightly fasteners along the building eave. And, factory notching eliminates the need for cumbersome and error-prone hand-notching on the job site. Lap notching also available.



Maxima Lap Notch



Maxima Eave Notch



Maxima Eave Notch Folded

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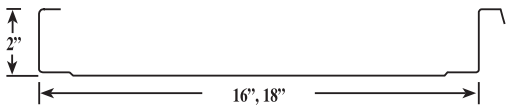
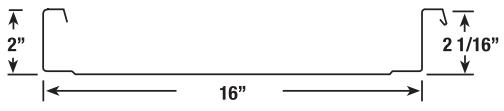
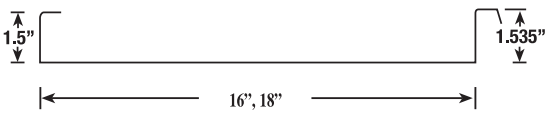
Panel Profiles



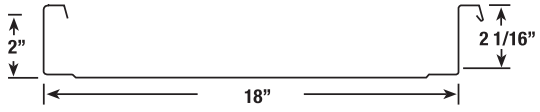
Maxima ADV



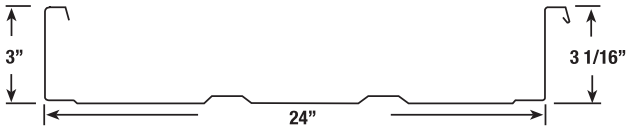
Maxima 2:16



Maxima 1.5



Maxima 2:18



Maxima 3:24

Section Properties

MAXIMA ADV 16" SECTION PROPERTIES

Ga.	Design Thick (inch)	Fy (ksi)	Wt. (psf)	Panel Top in Compression Ix (in4)	Se (in3)	Ma (k-in)	Panel Bottom in Compression Ix (in4)	Se (in3)	Ma (k-in)
24	0.023	50	1.26	0.1380	0.0779	2.3340	0.0760	0.0736	2.1620
22	0.030	50	1.63	0.2000	0.1159	3.4700	0.1050	0.1051	2.8820

MAXIMA ADV 18" SECTION PROPERTIES

Ga.	Design Thick (inch)	Fy (ksi)	Wt. (psf)	Panel Top in Compression Ix (in4)	Se (in3)	Ma (k-in)	Panel Bottom in Compression Ix (in4)	Se (in3)	Ma (k-in)
24	0.023	50	1.23	0.1240	0.0690	2.0670	0.0670	0.0653	1.9210
22	0.030	50	1.59	0.1810	0.1025	3.0670	0.0930	0.0934	2.5620

MAXIMA 2:16 SECTION PROPERTIES

Ga.	Design Thick (inch)	Fy (ksi)	Wt. (psf)	Panel Top in Compression Ix (in4)	Se (in3)	Ma (k-in)	Panel Bottom in Compression Ix (in4)	Se (in3)	Ma (k-in)
24	0.023	50	1.30	0.1730	0.1019	3.0510	0.0850	0.0755	2.2610
22	0.030	50	1.69	0.2400	0.1434	4.2940	0.1160	0.1064	3.1850

MAXIMA 2:18 SECTION PROPERTIES

Ga.	Design Thick (inch)	Fy (ksi)	Wt. (psf)	Panel Top in Compression Ix (in4)	Se (in3)	Ma (k-in)	Panel Bottom in Compression Ix (in4)	Se (in3)	Ma (k-in)
24	0.023	50	1.27	0.1570	0.0903	2.7030	0.0750	0.0670	2.0090
22	0.030	50	1.64	0.2180	0.1277	3.8220	0.1030	0.0946	2.8310

MAXIMA 3:24 SECTION PROPERTIES

Ga.	Design Thick (inch)	Fy (ksi)	Wt. (psf)	Panel Top in Compression Ix (in4)	Se (in3)	Ma (k-in)	Panel Bottom in Compression Ix (in4)	Se (in3)	Ma (k-in)
24	0.023	50	1.27	0.2870	0.1072	3.2080	0.1480	0.0895	2.6790
22	0.003	50	1.64	0.4030	0.1528	4.5750	0.2005	0.1247	3.7320

Load Tables

MAXIMA ADV 16" ALLOWABLE LOADS (PSF)*

Ga.	FY KSI	NEGATIVE WIND LOAD 3	3.5	4	4.5	5	LIVE LOAD 3	3.5	4	4.5	5	DEFLECTION L/180 3	3.5	4	4.5	5
24	50	67	59	51	43	35	181	136	106	84	69	500	411	275	193	141
22	50	NO TEST DATA AVAILABLE					250	187	144	115	93	500	500	393	276	201

MAXIMA ADV 18" ALLOWABLE LOADS (PSF)*

Ga.	FY KSI	NEGATIVE WIND LOAD 3	3.5	4	4.5	5	LIVE LOAD 3	3.5	4	4.5	5	DEFLECTION L/180 3	3.5	4	4.5	5
24	50	62	57	53	50	46	161	121	94	75	61	500	367	246	172	126
22	50	NO TEST DATA AVAILABLE					222	166	128	102	83	500	500	353	247	180

MAXIMA 2:16 ALLOWABLE LOADS (PSF)*

Ga.	FY KSI	NEGATIVE WIND LOAD 3	3.5	4	4.5	5	LIVE LOAD 3	3.5	4	4.5	5	DEFLECTION L/180 3	3.5	4	4.5	5
24	50	57	52	47	43	39	188	141	110	88	72	500	496	322	233	170
22	50	76	69	64	59	54	273	204	158	126	103	500	500	458	322	234

MAXIMA 2:18 ALLOWABLE LOADS (PSF)*

Ga.	FY KSI	NEGATIVE WIND LOAD 3	3.5	4	4.5	5	LIVE LOAD 3	3.5	4	4.5	5	DEFLECTION L/180 3	3.5	4	4.5	5
24	50	60	53	47	41	36	167	126	98	78	64	500	446	298	209	153
22	50	70	64	60	56	52	243	182	141	112	91	500	500	413	290	211

MAXIMA 3:24 ALLOWABLE LOADS (PSF)*

Ga.	FY KSI	NEGATIVE WIND LOAD 3	3.5	4	4.5	5	LIVE LOAD 3	3.5	4	4.5	5	DEFLECTION L/180 3	3.5	4	4.5	5
24	50	36	34	33	32	31	155	124	102	84	71	500	500	500	393	287
22	50	43	41	39	38	36	273	211	168	136	112	500	500	500	500	398

Note:
1. Allowable uniform loads are based upon 3 equal span lengths and are calculated in accordance with sound engineering principles and practices using the given section properties.
2. Wind Load is wind suction or uplift and is based upon ASTM E 1592 test data using a factor of safety of 2.00.
3. Wind Load has not been increased by 33 /3%. (Note: Increase is not allowed on military projects.)
4. Live Load is the allowable Live or Snow Load.
5. Deflection loads are limited by a maximum deflection of L/180.
6. The weight of the panel has not been deducted form the allowable loads.
7. Live load values are limited to combined shear & bending using Eq. C3.3.1-1 of the AISI Specification.
8. Web crippling values are determined using a ratio of the uniform load actually supported by the top flanges of the section.
9. Load Tables are limited to maximum allowable load of 500 psf.

McElroy Metal

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