

2 3/8" T-ARMOR ALUMINUM

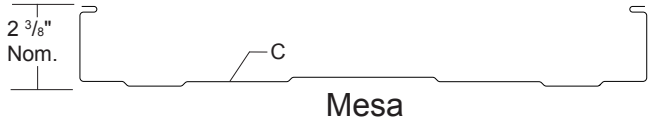
Condensed
Technical
Reference



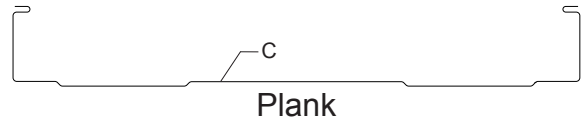
Flat



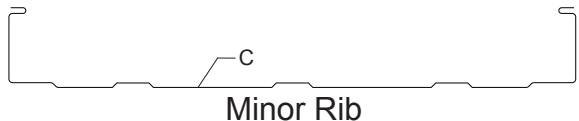
Pencil Rib



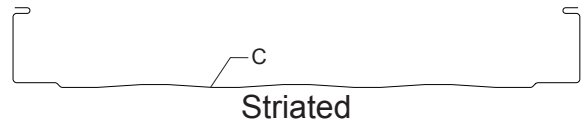
Mesa



Plank



Minor Rib



Striated

*Profiles are shown for 16" wide panels. Other width panels are similar.

ARCHITECTURAL
COMMERCIAL
INDUSTRIAL
PANEL

CONCEALED
FASTENED

12", 16" OR 18"
COVERAGE

MINIMUM
SLOPE
1/2:12

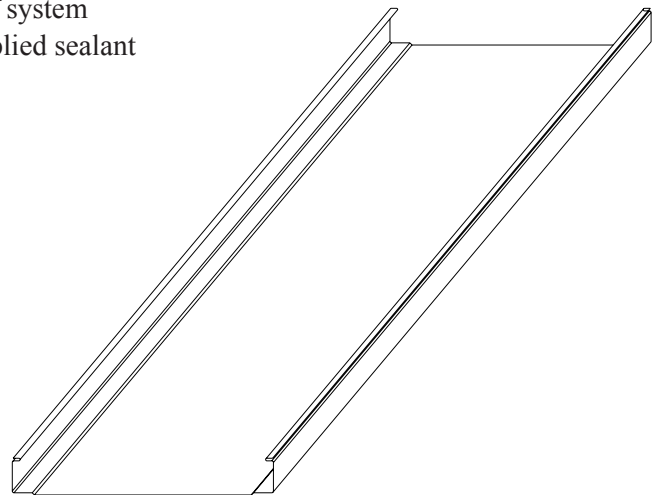
OPEN FRAMING OR
SOLID SUBSTRATE

PANEL OVERVIEW

- ▶ Finishes: PVDF and Mill Finish
- ▶ Material: 3003-H14 Aluminum per ASTM B 209
- ▶ Thickness: 0.032" and 0.040"
- ▶ 12", 16" or 18" panel coverage, 2 3/8" rib height
- ▶ Panel Length: Minimum: 6', Maximum: 80'
- ▶ Architectural, structural vertical rib standing seam roof system
- ▶ Integral mechanically seamed side lap with factory-applied sealant
- ▶ Minimum roof slope: 1/2:12
- ▶ Accommodates 1/2" to 6" blanket insulation

TESTING AND APPROVALS

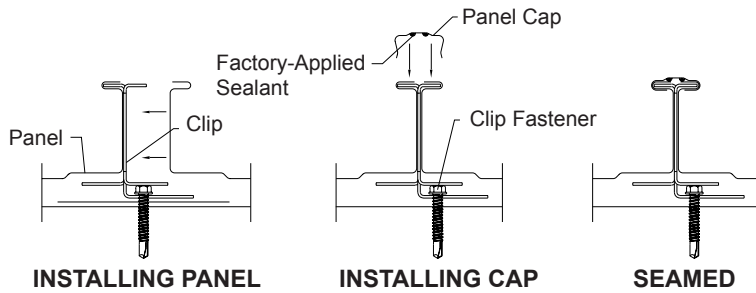
- ▶ UL 2218 Impact Resistance - Class 4
- ▶ UL 790 Fire Resistance Rating - Class A, per building code
- ▶ UL 263 Fire Resistance Rating - per assembly
- ▶ ASTM E 1680 Air Leakage
- ▶ ASTM E 1646 Water Penetration - None
- ▶ ASTM E 1592 Structural Performance
- ▶ UL 580 Uplift Resistance - Class 90 Constructions: #268, #268A and #268B
- ▶ ICC Evaluation Report - ESR-3743
- ▶ FM 4471 Roof Approval 1-90



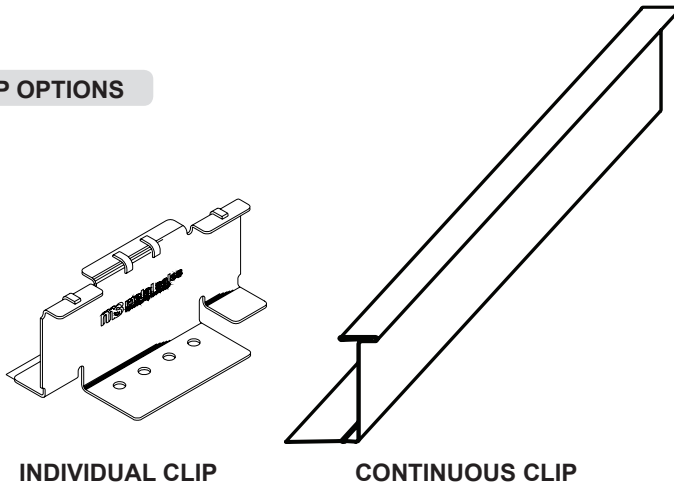
2 3/8" T-ARMOR ALUMINUM

**Condensed
Technical
Reference**

ATTACHMENT DETAILS



CLIP OPTIONS



FASTENING INFORMATION

► Clips

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

Individual clips are 0.060" thick, G90 is standard, 410 stainless is optional. Continuous clips are 24 or 22 ga.

Both individual and continuous clips can accommodate practically unlimited thermal movement in each direction.

► 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:

At Eave Plate or Back-Up Channel:

#12-14 BiMetal Driller (Stainless Steel)

Concealed End Fasteners:

At Eave Plate or Back-Up Channel:

#12-14 BiMetal Driller (Stainless Steel)

Trim Fasteners:

#14-11x1" Stitch Screw (Stainless Steel)

1/8" x 3/16" Pop Rivet

SECTION PROPERTIES

ALLOWABLE UNIFORM LOADS, psf (3 or More Equal Spans)

Thick in	Width in	Yield ksi	Weight psf	I in ⁴ /ft	S _{Top} in ³ /ft	S _{Bottom} in ³ /ft	Inward Load						Outward Load					
							2'	2.5'	3'	3.5'	4'	5'	2'	2.5'	3'	3.5'	4'	5'
							0.032	12	17	0.73	0.5110	0.3093	0.7391	144	94	65	48	31
0.040	12	17	0.91	0.6350	0.3857	0.9163	221	144	101	75	58	37	121	109	98	87	75	53
0.032	16	17	0.65	0.4200	0.2378	0.7261	106	69	48	35	27	18	93	84	76	67	59	42
0.040	16	17	0.82	0.5228	0.2960	0.9012	162	106	74	55	42	27	117	105	94	82	71	48
0.032	18	17	0.63	0.3867	0.2129	0.7222	93	61	42	31	24	15	82	74	67	59	51	35
0.040	18	17	0.79	0.4793	0.2655	0.8939	143	93	66	48	37	24	90	83	76	69	61	47

- Theoretical section properties have been calculated per Aluminum Association's 2010 'Aluminum Design Manual'. I, S_{Top} and S_{Bottom} are section properties for deflection and bending.
- Allowable loads are calculated in accordance with ADM 2010 specification considering bending, shear, combined bending and shear, deflection and ASTM E 1592 uplift load testing on 16 ga purlins. Allowable loads consider the 3 or more equal spans condition. 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.

ms metal salesTM
manufacturing corporation

metalsales.us.com

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