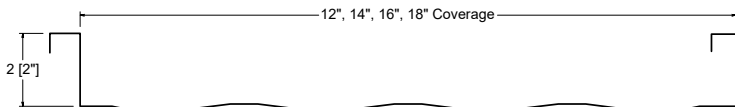
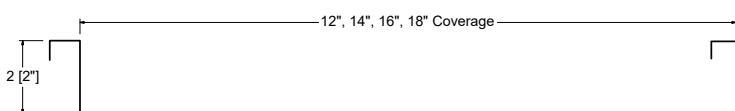


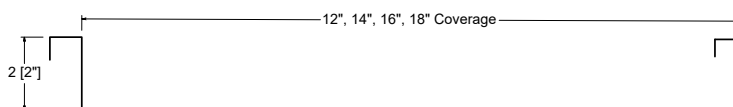
STRIATIONS



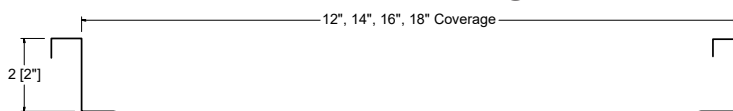
CLIP RELIEF



FLAT

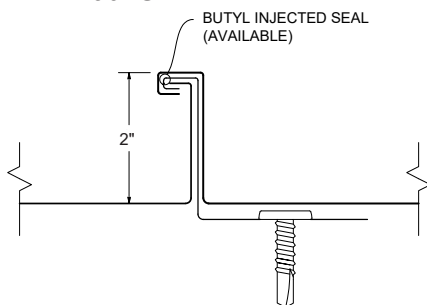


ACCENT RIBS

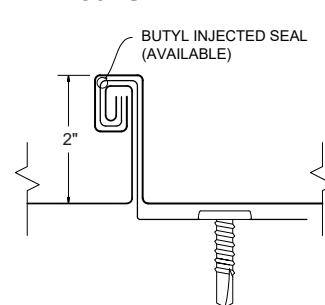


2 Accent ribs for 12" & 14" panels (Salem & Riverside)
3 Accent ribs for 16" & 18" panels (Salem & Riverside)
2 Accent ribs for all panels (Sacramento)

90° SEAM DETAIL





180° SEAM DETAIL



KEY FEATURES

- 12", 14", 16" & 18" coverage options
- 24 and 22 Tru-Gauge™ and .032" and .040 Aluminum
- Zinc Coil (inquire for thickness)
- Floating clip system: allows for expansion and contraction of panels in longer lengths
- 2" vertical rib, factory notching available
- 1/2:12 minimum pitch recommended (For lower pitches, please inquire)
- Standard panel lengths 1' to 60' (For longer length panels, please inquire)
- On-site roll forming available for longer panels
- Factory injected Butyl sealant available
- Clip Relief is not standard, available upon request
- Concealed fastener: fasteners cannot leak
- Weathertightness warranty available (Contact TMP representative for details)
- OverEZee retro-fit system available
- Panel options: Striations, Accent Rib, Flat Pan
- Manufactured in Salem OR, Riverside CA & Sacramento CA

TESTING

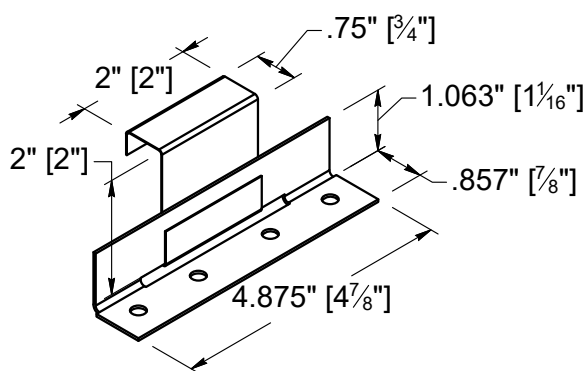
-  ICC EVALUATION SERVICE™ ICC-ESR #5046 with CBC-CRC Supplement
-  Code compliance UL Evaluation Report UL ER #25913-01
- UL Construction No. 90, 176, 180, 238, 238A, 238B, 238C, 312, 335, 403, 435, 435A, 437, 449, 451, 487, 506, 506A, 506B, 576, 577, 583, 608 & 610
- UL 580 Class 90 - Wind Uplift
- UL 790 Class A (ASTM E108) - Fire rated
- UL 2218 Class 4 - Impact (hail) rated
- FM Class 4471 - 1-75/120 wind uplift, Class A fire spread, severe hail & foot traffic
- ASTM E1680 - Air infiltration (roof)
- ASTM E1646 - Water infiltration (roof)
- ASTM E1592 - Structural uniform static air pressure
- ASTM E331 - Water infiltration (wall)
- ASTM E283 - Air infiltration (wall)
- ASTM A653/A924 - G90 Galvanized
- ASTM A792 - Zincalume/Galvalume AZ-50/55
- ASTM B209 - Aluminum Substrate
- ASTM E2140 - Standard Test Method for Water Penetration (full immersion)
- ASTM E1514 Standard for Structural Standing steel roof panels systems.

WEIGHT TABLE

MS-200	WEIGHT	24 GA STEEL	22 GA STEEL	.032" ALUM	.040" ALUM
THICKNESS		0.0236"	0.0285	0.032"	0.040"
WEIGHT/LINFT	12"	1.469 LBS	1.774 LBS	0.696 LBS	0.870 LBS
WEIGHT/SQFT	12"	1.469 LBS	1.774 LBS	0.696 LBS	0.870 LBS
WEIGHT/LINFT	14"	1.630 LBS	1.968 LBS	0.772 LBS	0.965 LBS
WEIGHT/SQFT	14"	1.397 LBS	1.687 LBS	0.662 LBS	0.827 LBS
WEIGHT/LINFT	16"	1.790 LBS	2.162 LBS	0.848 LBS	1.060 LBS
WEIGHT/SQFT	16"	1.343 LBS	1.621 LBS	0.636 LBS	0.795 LBS
WEIGHT/LINFT	18"	1.951 LBS	2.356 LBS	0.924 LBS	1.155 LBS
WEIGHT/SQFT	18"	1.300 LBS	1.570 LBS	0.616 LBS	0.770 LBS

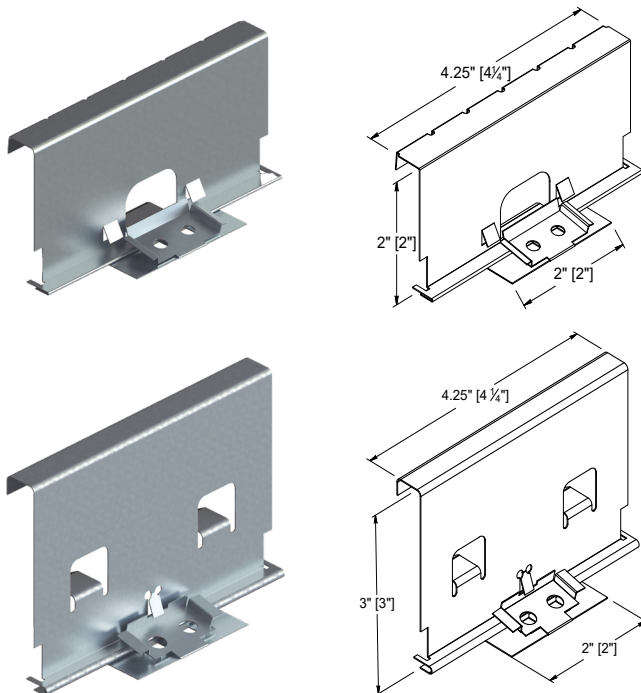
ASTM E 1680/E283 Air Penetration	ASTM E 1646/E331 Water Penetration
25 PSF < 0.01 CFM/ft ² -PASS	40 PSF - Pass
Force Engineering Test Result 696-0081T-21A-H	
Force Engineering Test Result 696-0003T-20A-D	
Force Engineering Test Result 696-0003T-20E-H	
Force Engineering Test Result 696-0003T-20I,J	
Intertek Test Result M0874.01-901-44	

Panel Clips



STANDARD CLIP: For UL rated non-engineered and solid deck applications

Accommodates for 1/2" of thermal movement in both directions.



STANDOFF CLIP: For engineered and open framing applications

Accommodates for 1-1/4" of thermal movement in both directions.

Clip Spacing

Panel clip spacing is based on structural design loads, engineered spanning capability of the panels and substrate.

Clips are fabricated from Grade 50 G90 base steel. The upper portion of the clip is 22ga thick, with a base of 16ga.

Floating clips will accommodate 1/2" and 1-1/4" of movement in both directions. This will allow the panel to easily expand and contract with thermal changes. Contact TMP rep. for applications requiring allowances for more movement.

Fasteners

All fasteners into steel and plywood must extend at least 3 full threads beyond the material. When attaching to dimensional lumber, 1" embedment is required.

90° Seam

OSB: #10 Burr Buster
Plywood and Dimensional Lumber: #10 Screw
16ga (or less) Steel deck: #10 or #12 Screw with DP-1

180° Seam

OSB: #10 Burr Buster
Plywood and Dimensional Lumber: #10 or #12 Screw
16ga (or less) Steel deck: #14 Screw with DP-1

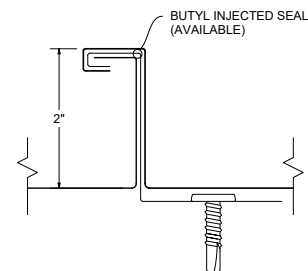
FM (Factory Mutual)

All fasteners #14

SINGLE LOCK NEGATIVE LOAD CHART

90° SEAM (SINGLE FOLD)

Width, in. Gauge Yield ksi Weight psf				SECTION PROPERTIES						ALLOWABLE UNIFORM LOADS, psf For various clip spacings (i.e. span values)						
				Top in Compression			Bottom in Compression			Negative Load						
				I_{xx} in ⁴ /ft.	I_{xx} (eff) in ⁴ /ft.	S_{xx} in ³ /ft.	I_{xx} in ⁴ /ft.	I_{xx} (eff) in ⁴ /ft.	S_{xx} in ³ /ft.	1'	1.5'	2'	2.5'	3'	3.5'	4'
18	24	50	1.33	0.2350	0.2100	0.1350	0.1478	0.1731	0.1488	59.9	53.4	46.9	40.4	33.8	27.3	20.8
18	22	50	1.67	0.2868	0.2560	0.1623	0.1821	0.2125	0.1824	98.9	88.1	77.2	66.4	55.5	44.7	33.8
18	0.032"	19	0.62	0.2070	0.2070	0.1220	0.2070	0.2070	0.5696	36.4	32.5	28.6	24.7	20.8	16.9	13.0
18	0.040"	19	0.76	0.2560	0.2560	0.1510	0.2560	0.2560	0.7010	46.9	42.6	38.2	33.4	29.5	25.2	20.8



- Charted Load/Span values are based on ASTM E1592-02 / ASTM E1592-05 testing protocol
- Charted Allowable Uniform Loads are based on the Ultimate Uniform Load (per ASTM E1592-05 testing) divided by 2.00 Factor-of-Safety.
- Minimum recommended substrate (structure) recommendations:
 - o Open-framing (i.e.purlins) -16ga (design thickness=0.0566")
 - o Plywood/OSB - 15/32" or thicker is recommend to assure an effective degree of fastener thread engagement.
 - o Metal deck - 22 ga. (design thickness=0.0283")

SINGLE LOCK POSITIVE LOAD CHART

90° SEAM (SINGLE FOLD)

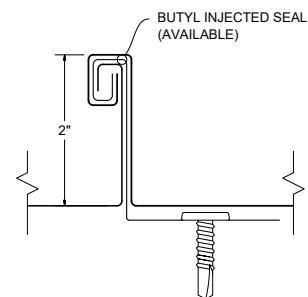
Width, in. Gauge Yield ksi Weight psf				SECTION PROPERTIES						ALLOWABLE UNIFORM LOADS, psf For various clip spacings (i.e. span values)									
				Top in Compression			Bottom in Compression			Positive load									
				I_{xx} in ⁴ /ft.	I_{xx} (eff) in ⁴ /ft.	S_{xx} in ³ /ft.	I_{xx} in ⁴ /ft.	I_{xx} (eff) in ⁴ /ft.	S_{xx} in ³ /ft.	2'	2.5'	3'	3.5'	4'	4.5'	5'	5.5'	6'	8'
12	24	50	1.47	0.2350	0.2100	0.1350	0.1478	0.1731	0.1488	276.4	221.1	184.2	157.9	138.2	122.8	110.6	100.5	92.1	52.7
12	22	50	1.875	0.2868	0.2560	0.1623	0.1821	0.2125	0.1824	400.3	320.4	267.0	228.8	200.2	178.0	160.2	134.1	112.7	63.4
12	0.032"	19	0.83	0.3290	0.3290	0.2102	0.3290	0.3290	0.6599	50.5	37.3	25.9	19.0	14.6	11.5	9.3	7.7	6.5	3.6
12	0.040"	19	1.01	0.4050	0.4050	0.2582	0.4050	0.4050	0.8133	74.1	57.5	39.9	29.3	22.5	17.7	14.4	11.9	10.0	5.6
16	24	50	1.36	0.1850	0.1640	0.1020	0.1110	0.1325	0.1100	207.3	165.8	138.2	118.4	103.6	92.1	82.9	75.4	69.1	39.8
16	22	50	1.71	0.2320	0.2050	0.1220	0.1380	0.1653	0.1394	300.5	240.4	200.3	171.7	150.2	133.5	120.2	100.8	84.7	47.7
16	0.032"	19	0.76	0.2660	0.2660	0.1610	0.2660	0.2660	0.6450	33.2	21.3	14.8	10.8	8.3	6.6	5.3	4.4	3.7	2.1
16	0.040"	19	0.92	0.3270	0.3270	0.1980	0.3270	0.3270	0.7940	51.6	33.0	22.9	16.8	12.9	10.2	8.3	6.8	5.7	3.2
18	24	50	1.28	0.1670	0.1470	0.0900	0.0990	0.1187	0.0970	184.1	147.3	122.7	105.2	92.1	81.8	73.6	66.9	61.4	35.2
18	22	50	1.61	0.2090	0.1840	0.1080	0.1220	0.1472	0.1236	266.8	213.5	177.9	152.5	133.4	118.6	106.7	89.3	75.0	42.2
18	0.032"	19	0.74	0.2420	0.2420	0.1430	0.2420	0.2420	0.6370	26.2	16.8	11.7	8.6	6.6	5.2	4.2	3.5	2.9	1.6
18	0.040"	19	0.90	0.2970	0.2970	0.1764	0.2970	0.2970	0.7840	40.8	26.1	18.1	13.3	10.2	8.1	6.5	5.4	4.5	2.6

- Allowable loads for Steel panels are calculated in accordance with 2020 AISI S100 specifications considering bending, shear, combined bending and shear and deflection. Allowable load considers a 3 or more equal span condition.
- The Versa-Span Panel when installed as a three-span condition with spans of 5 ft. on-center for Steel and 3.0 ft.on-center for Aluminum are capable of withstanding the minimum uniform distributed load of 20 psf (0.958 kPa) noted in Table 1607.1 of the IBC and a minimum concentrated load of 300 lbf (1.33 kN).
- When panels are installed over solid or closely fitted deck sheathing, the capacity is limited to the capacity of the underlying sheathing.

DOUBLE LOCK NEGATIVE LOAD CHART

180° SEAM (DOUBLE FOLD)

Width, in. Gauge Yield ksi Weight psf				SECTION PROPERTIES						ALLOWABLE UNIFORM LOADS, psf For various clip spacings (i.e. span values)								
				Top in Compression			Bottom in Compression			Negative Load								
				I_{xx} in ⁴ /ft.	I_{xx} (eff) in ⁴ /ft.	S_{xx} in ³ /ft.	I_{xx} in ⁴ /ft.	I_{xx} (eff) in ⁴ /ft.	S_{xx} in ³ /ft.	1'	1.5'	2'	2.5'	3'	3.5'	4'	4.5'	5'
16	24	50	1.36	0.1549	0.1370	0.0789	0.0925	0.1106	0.0908	161.3	147.6	134.0	120.3	106.7	93.0	79.4	67.7	52.1
16	22	50	1.71	0.2040	0.1800	0.1010	0.1210	0.1451	0.1213	163.9	150.9	137.9	124.9	111.9	98.9	85.9	72.9	59.9
18	24	50	1.28	0.1400	0.1230	0.0708	0.0820	0.0988	0.0809	109.3	101.1	93.0	84.9	76.7	68.6	60.5	52.3	44.2
18	22	50	1.61	0.1850	0.1620	0.0880	0.1070	0.1296	0.1079	156.1	143.4	130.7	118.0	105.4	92.7	80.0	67.3	54.7
18	0.032"	19	0.62	0.2070	0.2070	0.1220	0.2070	0.2070	0.5696	83.3	77.4	71.5	65.7	59.8	54.0	48.1	42.3	36.4



- Charted Load/Span values are based on ASTM E1592-02 / ASTM E1592-05 testing protocol
- Charted Allowable Uniform Loads are based on the Ultimate Uniform Load (per ASTM E1592-05 testing) divided by 2.00 Factor-of-Safety.
- Minimum recommended substrate (structure) recommendations:
 - o Open-framing (i.e.purlins) -16ga (design thickness=0.0566")
 - o Plywood/OSB - 15/32" or thicker is recommend to assure an effective degree of fastener thread engagement.
 - o Metal deck - 22 ga. (design thickness=0.0283")

DOUBLE LOCK POSITIVE LOAD CHART

180° SEAM (DOUBLE FOLD)

Width, in. Gauge Yield ksi Weight psf				SECTION PROPERTIES						ALLOWABLE UNIFORM LOADS, psf For various clip spacings (i.e. span values)									
				Top in Compression			Bottom in Compression			Positive load									
				I_{xx} in ⁴ /ft.	I_{xx} (eff) in ⁴ /ft.	S_{xx} in ³ /ft.	I_{xx} in ⁴ /ft.	I_{xx} (eff) in ⁴ /ft.	S_{xx} in ³ /ft.	2'	2.5'	3'	3.5'	4'	4.5'	5'	5.5'	6'	8'
12	24	50	1.47	0.2350	0.2100	0.1350	0.1478	0.1731	0.1488	276.4	221.1	184.2	157.9	138.2	122.8	110.6	100.5	92.1	52.7
12	22	50	1.875	0.2868	0.2560	0.1623	0.1821	0.2125	0.1824	400.3	320.4	267.0	228.8	200.2	178.0	160.2	134.1	112.7	63.4
12	0.032"	19	0.83	0.3290	0.3290	0.2102	0.3290	0.3290	0.6599	50.5	37.3	25.9	19.0	14.6	11.5	9.3	7.7	6.5	3.6
12	0.040"	19	1.01	0.4050	0.4050	0.2582	0.4050	0.4050	0.8133	74.1	57.5	39.9	29.3	22.5	17.7	14.4	11.9	10.0	5.6
16	24	50	1.36	0.1850	0.1640	0.1020	0.1110	0.1325	0.1100	207.3	165.8	138.2	118.4	103.6	92.1	82.9	75.4	69.1	39.8
16	22	50	1.71	0.2320	0.2050	0.1220	0.1380	0.1653	0.1394	300.5	240.4	200.3	171.7	150.2	133.5	120.2	100.8	84.7	47.7
16	0.032"	19	0.76	0.2660	0.2660	0.1610	0.2660	0.2660	0.6450	33.2	21.3	14.8	10.8	8.3	6.6	5.3	4.4	3.7	2.1
16	0.040"	19	0.92	0.3270	0.3270	0.1980	0.3270	0.3270	0.7940	51.6	33.0	22.9	16.8	12.9	10.2	8.3	6.8	5.7	3.2
18	24	50	1.28	0.1670	0.1470	0.0900	0.0990	0.1187	0.0970	184.1	147.3	122.7	105.2	92.1	81.8	73.6	66.9	61.4	35.2
18	22	50	1.61	0.2090	0.1840	0.1080	0.1220	0.1472	0.1236	266.8	213.5	177.9	152.5	133.4	118.6	106.7	89.3	75.0	42.2
18	0.032"	19	0.74	0.2420	0.2420	0.1430	0.2420	0.2420	0.6370	26.2	16.8	11.7	8.6	6.6	5.2	4.2	3.5	2.9	1.6
18	0.040"	19	0.90	0.2970	0.2970	0.1764	0.2970	0.2970	0.7840	40.8	26.1	18.1	13.3	10.2	8.1	6.5	5.4	4.5	2.6

- Allowable loads for Steel panels are calculated in accordance with 2020 AISI S100 specifications considering bending, shear, combined bending and shear and deflection. Allowable load considers a 3 or more equal span condition.
- The Versa-Span Panel when installed as a three-span condition with spans of 5 ft. on-center for Steel and 3.0 ft.on-center for Aluminum are capable of withstanding the minimum uniform distributed load of 20 psf (0.958 kPa) noted in Table 1607.1 of the IBC and a minimum concentrated load of 300 lbf (1.33 kN).
- When panels are installed over solid or closely fitted deck sheathing, the capacity is limited to the capacity of the underlying sheathing.