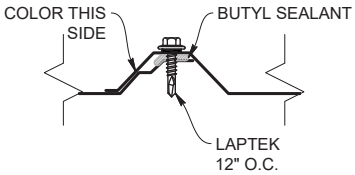
TAYLOR METAL PRODUCTS

GR-7™ Roof & Wall Panel Technical Data Resource

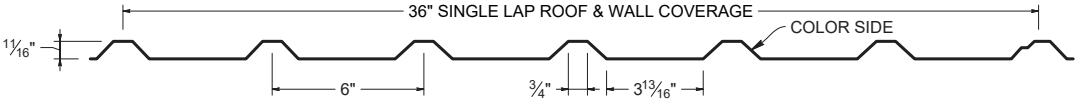
ICC EVALUATION SERVICE®

ICC-ES EVALUATION REPORT #5045 AND #5046 with CBC-CRC Supplement

LAP DETAIL



ROOF & WALL PROFILE



GR-7™ manufactured in 29 gauge does not include a purlin bearing leg on the underlap rib.

KEY FEATURES

- 36” Coverage Option
- 29, 26, 24 and 22 Tru-Gauge™ and Rusteel Plus and .032” Aluminum
- Custom 20 & 18 Tru-Gauge™ and .040”, .050” & .063” Aluminum *(please inquire)*
- 11/16” Vertical Rib
- 1:12 minimum pitch recommended when installed with butyl sealant
- Custom lengths 1’ to 45’ *(For longer length panels, please inquire)*
- Long length flashings available up to 20’ 11” *(For longer length flashing, please inquire)*
- Standard trim, custom trim and accessory packages available
- Color matched neoprene washered screws
- Roof and Vertical or Horizontal Wall application
- Perforated options available (*please inquire*)
- Fiberglass panels available to match profile
- Manufactured in Salem OR and Riverside CA
- OverEZee™ retro-fit systems available

TESTING

- ICC EVALUATION SERVICE® ICC #5045 and #5046 with CBC-CRC Supplement
- UL Code compliance UL Evaluation Report UL ER #25913-01. Construction No. 137, 244
- UL 790 Class A (ASTM E108) - Fire rated
- UL 2218 Class 4 - Impact (hail) rated
- ASTM A653/A924 - G90 Galvanized
- ASTM A792 - ZINCALUME/Galvalume AZ-50/55
- ASTM E1592 - Negative structural uniform static air pressure
- ASTM E1680 - Air infiltration (roof)
- ASTM E1646 - Water infiltration (roof)
- ASTM E331 - Water infiltration (wall)
- ASTM E283 - Air infiltration (wall)
- ASTM E455-19 - Shear and Diaphragm. *(For engineering data, please inquire)*

WEIGHT CHART

GR-7	WIDTH	29 GA STEEL	26 GA STEEL	24 GA STEEL	22 GA STEEL	.032 ALUM	.040 ALUM
THICKNESS		0.0136”	0.019”	0.0236”	0.0285”	0.032”	0.040”
WEIGHT/LINFT	36”	1.89 LBS	2.713 LBS	3.37 LBS	4.069 LBS	1.597 LBS	1.996 LBS
WEIGHT/LSQFT	36”	0.63 LBS	0.904 LBS	1.123 LBS	1.356 LBS	0.532 LBS	0.665 LBS

ASTM E 1680/E283 Air Penetration	ASTM E 1646/E331 Water Penetration
25 PSF<0.01 CFM/ft²-PASS	50 PSF - Pass
Intertek Test Result M3024.01-901-44	
Intertek Test Result R0846.02-301-44 R0	

NEGATIVE LOAD CHART WITH 6 SCREWS

				SECTION PROPERTIES						ALLOWABLE UNIFORM LOADS, psf For various clip spacings (i.e. span values)								
				Top in Compression			Bottom in Compression			Negative Load								
Width, in.	Gauge	Yield ksi	Weight psf	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'
36	26	80	0.833	0.0150	0.0133	0.0304	0.0090	0.0107	0.0260	185.0	170.0	155.0	140.0	125.0	110.0	95.0	80.0	65.0
36	24	50	1.06	0.0197	0.0178	0.0395	0.0133	0.0151	0.0348	185.0	170.0	155.0	140.0	125.0	110.0	95.0	80.0	65.0
36	22	50	1.25	0.0233	0.0215	0.0467	0.0170	0.0188	0.0422	185.0	170.0	155.0	140.0	125.0	110.0	95.0	80.0	65.0
36	20	33	1.53	0.0300	0.0281	0.0567	0.0233	0.0252	0.0542	185.0	170.0	155.0	140.0	125.0	110.0	95.0	80.0	65.0
36	18	33	2.00	0.0367	0.0367	0.0731	0.0367	0.0367	0.0719	185.0	170.0	155.0	140.0	125.0	110.0	95.0	80.0	65.0

1. Theoretical section properties for steel panels have been calculated per AISI S100 Specification for Design of Cold-Formed Steel Structural Members.
2. Charted load/Span values are based on ASTM E1592-05 (2017) testing protodcol.
3. Charted allowable uniform loads are based on the ultimate uniform load (per ASTM E1592-05 testing) divded by 2.00 factor-of-safety
4. Panel substrate (structure) may include: open-framing, plywood/OSB, or metal deck.

POSITIVE LOAD CHART WITH 6 SCREWS

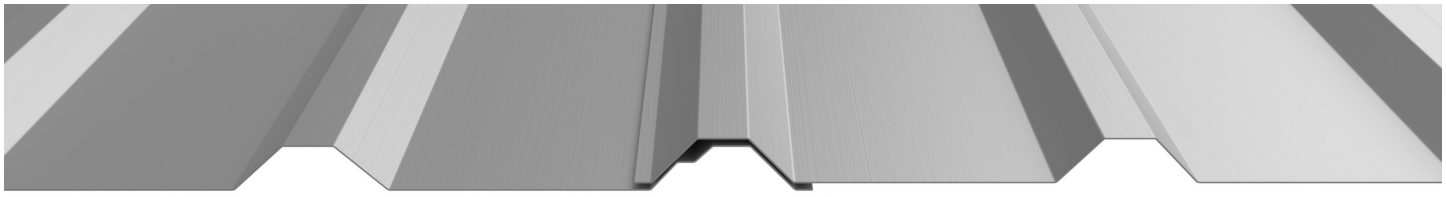
				SECTION PROPERTIES						ALLOWABLE UNIFORM LOADS, psf For various clip spacings (i.e. span values)									
				Top in Compression			Bottom in Compression			Positive Load									
Width, in.	Gauge	Yield ksi	Weight psf	I_{xx} $in^4/ft.$	$I_{xx\ (eff)}$ $in^4/ft.$	S_{xx} in^3/ft	I_{xx} $in^4/ft.$	$I_{xx\ (eff)}$ $in^4/ft.$	S_{xx} in^3/ft	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'
36	26	80	0.833	0.0150	0.0133	0.0304	0.0090	0.0107	0.0260	660.0	165.0	73.3	41.3	26.4	18.3	13.5	10.3		
36	24	50	1.06	0.0197	0.0178	0.0395	0.0133	0.0151	0.0348	870.0	217.5	96.7	54.4	34.8	24.2	17.76	13.6	10.7	
36	22	50	1.25	0.0233	0.0215	0.0467	0.0170	0.0188	0.0422	1055.0	263.8	117.22	65.9	42.2	29.3	21.53	16.5	13.0	10.6
36	20	33	1.53	0.0300	0.0281	0.0567	0.0233	0.0252	0.0542	903.3	225.8	100.37	56.5	36.1	25.1	18.44	14.1	11.2	
36	18	33	2.00	0.0367	0.0367	0.0731	0.0367	0.0367	0.0719	1198.3	299.6	133.2	74.9	47.9	33.3	24.46	18.72	14.8	12.0
36	0.032"	19	0.53	0.0267	0.0267	0.0527	0.0267	0.0267	0.1350	123.4	30.9	13.7							
36	0.040"	19	0.67	0.0330	0.0330	0.0653	0.0330	0.0330	0.1660	191.6	47.9	21.3	12.0						
36	0.050"	19	0.85	0.0400	0.0400	0.0807	0.0400	0.0400	0.2020	295.9	74.0	32.9	18.5	11.8					

1. Theoretical section properties for steel panels have been calculated per 2020 AISI S100 Specification for the Design of Cold-Formed Steel Structural Members.
2. Theoretical section properties for aluminum panels have been calculated per the latest edition of the aluminum association design manual.
3. Allowable load is calculated in accordance with 2020 AISI S100 specifications considering bending, shear, combined bending and shear deflection. Allowabe load considers a 3 or more equal span condition.
4. Allowable load includes web crippling.

FASTENER DIAGRAM

29 gauge does not include the purlin bearing leg on the underlap rib

PANEL ATTACHMENT



Fastener Notes:

- When possible, lap panels away from prevailing wind direction.
- 15/32” OSB: #14 GP Neoprene Washered fastener. Screws should be long enough to penetrate through the bottom of the plywood by 3/8”.
- 15/32” Plywood: #14 GP Neoprene Washered fastener. Screws should be long enough to penetrate through the bottom of the plywood by 3/8”.
- Dimensional lumber: #10 GP. Screws should penetrate the lumber 1”.
- 16GA (or less) steel furring: #12 Fastener with DP-1
- Sidelaps fasten with #14 LapTek screws.
- All trim screws used for roof or wall applications should have EPDM sealing washers.
- Fastener spacing is based on project specific structural requirements. Consulant a licensed engineer.

Rev. Date 05-26