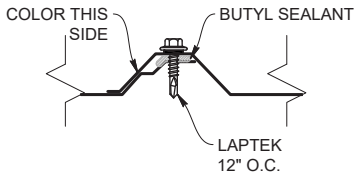


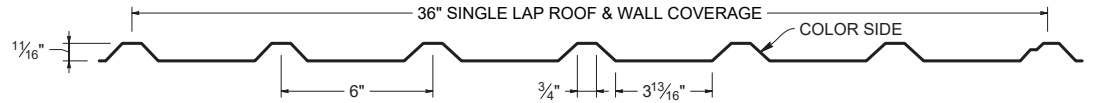


ICC EVALUATION SERVICE® ICC-ES EVALUATION REPORT #5045 AND #5046 with CBC-CRC Supplement coming 2024

LAP DETAIL



ROOF & WALL PROFILE




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

KEY FEATURES

- 29, 26, 24 and 22 Tru-Gauge™ and Rusteel Plus and .032" Aluminum
- 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"
- 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

-  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 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/ft ² -PASS	50 PSF - Pass

POSITIVE & NEGATIVE LOAD CHART

SECTION PROPERTIES				ALLOWABLE UNIFORM LOADS, psf For various clip spacings (i.e. span values)																					
				Top In Compression			Bottom in Compression			Inward Load (Negative)						Outward Load (Positive)									
				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	2.5'	3'	3.5'	4'	4.5'	5'	5.5'	6'	2.5'	3'	3.5'	4'	4.5'	5'	5.5'	6'
29	36	80	0.67	0.0093	0.0083	0.0180	0.0060	0.0070	0.0170	108.8	75.6	55.5	42.5	33.6	27.2	22.5	18.9	115.2	80.0	58.8	45.0	35.6	28.8	23.8	20.0
26	36	80	1.02	0.0143	0.0127	0.0289	0.0087	0.0103	0.0257	164.5	114.2	83.9	64.3	50.8	41.1	34.0	28.6	185.0	128.4	94.4	72.3	57.1	46.2	38.2	32.1
24	36	50	1.14	0.0203	0.0185	0.0414	0.0140	0.0158	0.0363	145.2	100.8	74.1	56.7	44.8	36.3	30.0	25.2	165.6	115.0	84.5	64.7	51.1	41.4	34.2	28.8
22	36	50	1.42	0.0267	0.0248	0.0516	0.0200	0.0219	0.0469	187.6	130.3	95.7	73.3	57.9	46.9	38.8	32.6	206.4	143.3	105.3	80.6	63.7	51.6	42.6	35.8

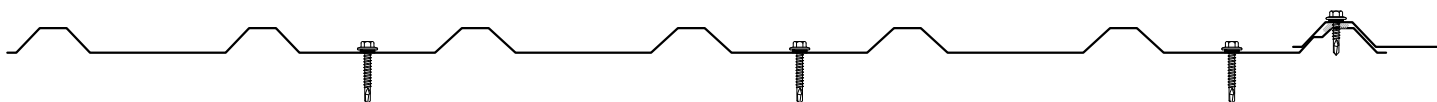
- Theoretical section properties have been calculated per AISI 2012 North American Specifications for Design of Cold-Formed Steel Structural Members.
- Allowable load is calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear and deflection. Allowable load considers a 3 or more equal span condition.
- Allowable load does not address web crippling, fasteners, connection strength or support material.
- Panel weight is not considered.
- Load/Span values are based on theoretical computations and not load testing.
- Deflection is not considered.
- Allowable loads do not include a 1/3 stress increase for wind.

POSITIVE & NEGATIVE LOAD CHART

SECTION PROPERTIES				ALLOWABLE UNIFORM LOADS, psf For various clip spacings (i.e. span values)																					
				Top In Compression			Bottom in Compression			Inward Load (Negative)						Outward Load (Positive)									
				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	2.5'	3'	3.5'	4'	4.5'	5'	5.5'	6'	2.5'	3'	3.5'	4'	4.5'	5'	5.5'	6'
29	36	80	0.67	0.0093	0.0083	0.0180	0.0060	0.0070	0.0170	108.8	75.6	51.2	34.3	24.1	17.6	13.2	10.2	115.2	67.9	42.7	28.6	20.1	14.7	11.0	8.5
26	36	80	1.02	0.0143	0.0127	0.0289	0.0087	0.0103	0.0257	164.5	114.2	78.0	52.3	36.7	26.8	20.1	15.5	173.6	100.5	63.3	42.4	29.8	21.7	16.3	12.6
24	36	50	1.14	0.0203	0.0185	0.0414	0.0140	0.0158	0.0363	145.2	100.8	74.1	56.7	44.8	36.3	29.3	22.6	165.6	115.0	84.5	64.7	45.7	33.3	25.0	19.3
22	36	50	1.42	0.0267	0.0248	0.0516	0.0200	0.0219	0.0469	187.6	130.3	95.7	73.3	57.9	46.9	38.8	30.2	206.4	143.3	105.3	80.6	63.3	46.1	34.7	26.7

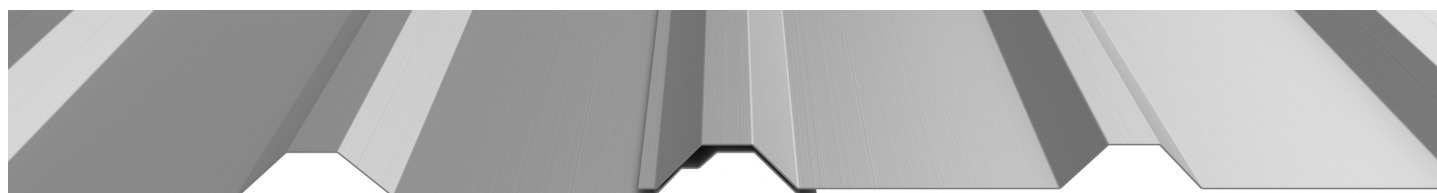
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- Load/Span values are based on theoretical computations and not load testing.
- Deflection consideration is limited by a maximum deflection ratio of L/120 of span.
- Allowable loads do not include a 1/3 stress increase for wind.

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. Consult a licensed engineer.

POSITIVE & NEGATIVE LOAD CHART

SECTION PROPERTIES				ALLOWABLE UNIFORM LOADS, psf For various clip spacings (i.e. span values)																							
				Top In Compression						Bottom In Compression						Inward Load (Negative)						Outward Load (Positive)					
				I_{xx} in ⁴ /ft.	I_{xx} in ⁴ /ft.	S_{xx} in ³ /ft.	I_{xx} in ⁴ /ft.	I_{xx} in ⁴ /ft.	S_{xx} in ³ /ft.	2.5'	3'	3.5'	4'	4.5'	5'	5.5'	6'	2.5'	3'	3.5'	4'	4.5'	5'	5.5'	6'		
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26	36	80	1.02	0.0143	0.0127	0.0289	0.0087	0.0103	0.0257	142.7	82.6	52.0	34.8	24.5	17.8	13.4	10.3	115.7	67.0	42.2	28.3	19.8	14.5	10.9	8.4		
24	36	50	1.14	0.0203	0.0185	0.0414	0.0140	0.0158	0.0363	145.2	100.8	74.1	50.7	35.6	26.0	19.5	15.0	165.6	102.7	64.7	43.3	30.4	22.2	16.7	12.8		
22	36	50	1.42	0.0267	0.0248	0.0516	0.0200	0.0219	0.0469	187.6	130.3	95.7	68.0	47.8	34.8	26.2	20.2	206.4	143.4	89.7	60.1	42.2	30.8	23.1	17.8		

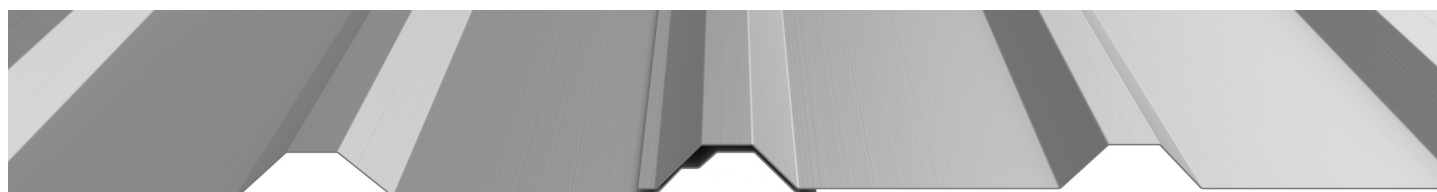
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3. Allowable load does not address web crippling, fasteners, connection strength or support material.
4. Panel weight is not considered.
5. Load/Span values are based on theoretical computations and not load testing.
6. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
7. Allowable loads do not include a 1/3 stress increase for wind.

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".
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- 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. Consult a licensed engineer.

SHEAR LOAD AND STIFFNESS CHART

Shear load test results for GR-7 panels at support spacing of 4' 0"

Test No.	Ga.	Span (ft)	L (ft)	b (ft)	0.4P _{max} (lb)	Shear Deflection Δ _n (in)	Max. Shear Load P _u (lb)	Ultimate Shear S _u (lb/ft)	Shear Stiffness G' (lb/in)
1	26	4' 0"	16	15	3826	0.185	9566	637.7	22062
2			16	15	3833	0.188	9583	638.9	21749
Average							9575	638.3	21905
3	29	4' 0"	16	15	2214	0.174	5535	369.0	13572
4			16	15	2170	0.177	5426	361.7	13080
Average							5481	365.4	13326

Notes:

- P_u = Maximum applied load in the cantilever beam test (lb)
- P = 0.4P_u in the cantilever beam test (lb)
- Δ_n = Net shear deflection of diaphragm (in) at 0.4P_u load
- G' = Shear stiffness of the diaphragm as determined from test measurements
- L = Length of diaphragm test frame = 16 ft
- b = Depth of diaphragm test frame = 15 ft