Metl Span CFR-42 Roof System
Allowable Load Chart

CFR Panel Dimensions	Design Criteria	Long Term Allowable Load (psf)					
		Panel Span (ft)					
		2.5	3.0	4.0	5.0	6.0	7.0
42" wide	Bending & Shear	147.7	121.5	88.9	69.7	57.2	48.4
2" thick	Deflection (L/180)	82.2	67.7	49.5	38.5	31.0	25.7
2 fasteners/clip	Connection	58.5	53.5	46.8	42.5	34.5	28.5
42" wide	Bending & Shear	169.3	139.6	102.4	80.3	65.8	55.7
2.5" thick	Deflection (L/180)	100.3	82.8	60.8	47.5	38.6	32.2
2 fasteners/clip	Connection	65.0	58.5	50.3	45.1	36.6	30.4
42" wide	Bending & Shear	188.7	155.7	114.5	89.9	73.7	62.3
3" thick	Deflection (L/180)	116.2	96.2	70.9	55.6	45.3	38.0
2 fasteners/clip	Connection	71.3	63.5	53.6	47.6	38.7	32.2
42" wide	Bending & Shear	199.2	164.8	121.7	95.8	78.7	66.5
4" thick	Deflection (L/180)	141.6	117.4	87.0	68.6	56.3	47.4
2 fasteners/clip	Connection	84.0	73.4	59.9	51.8	42.4	35.7
42" wide	Bending & Shear	225.7	187.1	138.6	109.4	90.0	76.2
5" thick	Deflection (L/180)	158.2	131.4	97.7	77.3	63.6	53.8
3 fasteners/clip	Connection	86.5	75.5	61.8	53.4	44.4	37.9
42" wide	Bending & Shear	249.4	207.0	153.8	121.7	100.3	85.0
6" thick	Deflection (L/180)	166.2	138.1	102.9	81.7	67.4	57.2
3 fasteners/clip	Connection	88.8	77.6	63.5	55.0	46.3	40.0

Notes

1. Based on CFR-42 panel with 24 ga. exterior face (min Fy = 50 ksi) and 26 ga. interior face (min Fy = 33 ksi).
2. Based on attachment at interior supports with CFR panel clip and (2 or 3 as shown above) 1/4"-14 Self-Drilling Tek 3 screws in min. 14 gage steel or (2) 1/4"-14 Self-Drilling Tek 3 screws in min. 12 gage steel. Two fasteners per clip are required at end supports. In lieu of self-drilling screws, self-tapping screws may be used.
3. Allowable positive load is the lowest value of panel bending and shear strength & deflection limit for 50% Shear Modulus.
4. Allowable suction load is the lowest value of panel bending strength, shear strength, deflection limit and connection strength for 100% Shear Modulus.
5. Connection loads may be increased with Fablok. Consult Metl Span for additional loads.
6. The loads based on panel stress and deflection design criteria are derived from ASTM E-72 structural testing. The allowable loads are calculated with a factor of safety of 2.5 and 3.0 for bending and shear stresses, respectively, deflection limitation of L/180 and with with a factor of safety of 2.0 for connection strength.
7. The clip fastener capacity was determined from manufacturer fastener pullout data and the allowable loads are calculated with a factor of safety of 3.0.
8. The structural capacity of the purlins are not considered and must be examined independently.
9. Multiple spans are based on 3 or more spans conditions.