

Metl Span CFR-42 Roof System
Allowable Uniform Load Chart

CFR Panel Thickness	Design Criteria	Allowable Load (psf)					
		Panel Span (ft)					
		2.5	3.0	4.0	5.0	6.0	7.0
42" wide 2" thick 2 fasteners/clip	Bending & Shear	143.8	118.0	86.2	67.7	55.7	47.3
	Deflection (L/240)	120.3	98.3	70.6	53.8	42.4	34.3
	Connection	58.5	53.5	46.8	42.5	34.5	28.5
42" wide 2.5" thick 2 fasteners/clip	Bending & Shear	165.5	135.8	99.3	77.9	64.0	54.3
	Deflection (L/240)	147.5	121.0	87.6	67.4	53.7	43.9
	Connection	65.0	58.5	50.3	45.1	36.6	30.4
42" wide 3" thick 2 fasteners/clip	Bending & Shear	184.9	152.0	111.2	87.2	71.5	60.6
	Deflection (L/240)	171.5	141.1	102.8	79.6	63.9	52.7
	Connection	71.3	63.5	53.6	47.6	38.7	32.2
42" wide 4" thick 2 fasteners/clip	Bending & Shear	196.2	161.6	118.6	93.0	76.2	64.5
	Deflection (L/240)	210.0	173.4	127.3	99.4	80.6	67.2
	Connection	84.0	73.4	59.9	51.8	42.4	35.7
42" wide 5" thick 3 fasteners/clip	Bending & Shear	223.1	184.2	135.6	106.5	87.3	73.8
	Deflection (L/240)	235.4	194.9	143.8	112.9	92.2	77.3
	Connection	86.5	75.5	61.8	53.4	44.4	37.9
42" wide 6" thick 3 fasteners/clip	Bending & Shear	247.2	204.5	151.0	118.9	97.6	82.5
	Deflection (L/240)	247.8	205.4	152.2	120.1	98.5	82.9
	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 strength, shear strength & deflection limit.
4. Allowable suction load is the lowest value of panel bending strength, shear strength, deflection limit and connection strength for each fastener pattern.
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/240 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.
10. For allowable snow loads please consult factory