



**Eco-ficient™ 42" CFR Panel**  
(Allowable Loads in PSF)

Panel Depth	Span Type	Load Type	Span in Feet										
			2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5
2"	Three Span or more	Bending & Shear	143.80	118.00	99.70	86.20	75.80	67.70	61.10	55.70	51.20	47.30	44.00
		Deflection (L/240)	120.30	98.30	82.70	70.60	61.40	53.80	47.70	42.40	38.10	34.30	31.00
		Pattern FP1	58.50	53.50	49.90	46.80	44.50	42.50	38.20	34.50	31.30	28.50	26.10
		Pattern FP2	-	-	-	-	-	51.90	47.60	44.00	40.90	38.20	35.80
2.5"	Three Span or more	Bending & Shear	165.50	135.80	114.80	99.30	87.30	77.90	70.20	64.00	58.70	54.30	50.40
		Deflection (L/240)	147.50	121.00	102.20	87.60	76.60	67.40	60.10	53.70	48.60	43.90	40.00
		Pattern FP1	65.00	58.50	53.90	50.30	47.40	45.10	40.50	36.60	33.30	30.40	27.80
		Pattern FP2	-	-	-	-	-	56.70	52.00	48.10	44.80	41.80	39.10
3"	Three Span or more	Bending & Shear	184.90	152.00	128.60	111.20	97.80	87.20	78.60	71.50	65.60	60.60	56.30
		Deflection (L/240)	171.50	141.10	119.50	102.80	90.10	79.60	71.20	63.90	58.00	52.70	48.20
		Pattern FP1	71.30	63.50	57.80	53.60	50.30	47.60	42.80	38.70	35.20	32.20	29.50
		Pattern FP2	-	-	-	-	-	61.10	56.10	51.90	47.90	44.30	41.30
4"	Three Span or more	Bending & Shear	196.20	161.60	137.00	118.60	104.30	93.00	83.80	76.20	69.90	64.50	59.80
		Deflection (L/240)	210.00	173.40	147.40	127.30	112.10	99.40	89.40	80.60	73.60	67.20	61.90
		Pattern FP1	84.00	73.40	65.70	59.90	55.40	51.80	46.70	42.40	38.90	35.70	32.80
		Pattern FP2	-	-	-	-	-	66.00	60.70	56.10	51.60	47.80	44.50
5"	Three Span or more	Bending & Shear	223.10	184.20	156.40	135.60	119.40	106.50	96.00	87.30	80.00	73.80	68.50
		Deflection (L/240)	235.40	194.90	166.10	143.80	127.00	112.90	101.90	92.20	84.40	77.30	71.50
		Pattern FP1	86.50	75.50	67.70	61.80	57.10	53.40	48.50	44.40	40.90	37.90	35.40
		Pattern FP2	-	-	-	-	-	64.80	59.50	55.10	51.30	48.00	44.80
6"	Three Span or more	Bending & Shear	247.20	204.50	174.00	151.00	133.20	118.90	107.30	97.60	89.50	82.50	76.50
		Deflection (L/240)	247.80	205.40	175.40	152.20	134.70	120.10	108.50	98.50	90.30	82.90	76.90
		Pattern FP1	88.80	77.60	69.60	63.50	58.80	55.00	50.20	46.30	42.90	40.00	37.50
		Pattern FP2	-	-	-	-	-	63.80	58.50	54.10	50.40	47.10	44.30

Notes:

1. Based on 42" CFR Panels panel with 24 ga. exterior face (Fy=50 ksi& 26 ga. Light Mesa interior face (min Fy=33 ksi).
2. The above load table is based on 3 or more span conditions.
3. Allowable positive load is the lowest value of the panel bending and shear strength or deflection limit.
4. Allowable suction load is the lowest value of the panel bending, shear strength, deflection limited and connection strength for each fastener pattern.  
Loads based on panel stress, deflection and connection design criteria are derived from ASTM E-72 testing.
5. Allowable loads are calculated with a factor of safety of 2.5 for bending, 3.0 for shear and 2.0 for connection.
6. For pattern FP1, CF panel clips are fastened to minimum 14 gage steel with (2) 1/4"-14 SDS Tek 3 at interior and end supports.  
For 12 gage or thicker steel, #12-24 SDS or 1/4-14 SDS Tek 5's may be used. In lieu of self-drilling screws, self-tapping screws may be used.
7. FP1 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.
8. FP2 based on adding one Fab-Lok 9" from un-supported edge to pattern FP1. 3 fasteners per clip at interior supports and two fasteners per clip at end supports  
in 14 gage steel. 12 gage and thicker steel will only require 2 at all supports.
9. The clip fastener capacity was determined from manufacturer fastener pullout data and the allowable loads are calculated with a factory of safety of 3.0.
10. The structural capacity of the support members are not considered and must be examined independently.
11. This information is subject to change without notice. Please contact MBCI for most current information.