



Eco-ficient™ 7.2 Panel  
(Allowable Loads in PSF)

| Panel Depth | Span Type           | Load Type          | Span in Feet |        |        |        |        |        |       |       |       |       |
|-------------|---------------------|--------------------|--------------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
|             |                     |                    | 4'           | 5'     | 6'     | 7'     | 8'     | 9'     | 10'   | 11'   | 12'   | 13'   |
| 2.5"        | Two Spans           | Bending & Shear    | 125.10       | 83.50  | 60.20  | 45.80  | 36.20  | 29.40  | 24.40 | 20.60 | 17.70 | 15.40 |
|             |                     | Deflection (L/180) | 509.90       | 285.60 | 180.80 | 124.20 | 90.20  | 68.30  | 53.30 | 42.60 | 34.70 | 28.60 |
|             |                     | Pattern FP1        | 27.10        | 24.20  | 22.20  | 20.70  | 19.60  | 18.80  | 18.10 | 17.50 | 17.00 | 15.40 |
|             |                     | Pattern FP11       | 125.10       | 83.50  | 60.20  | 45.80  | 36.20  | 29.40  | 24.40 | 20.60 | 17.70 | 15.40 |
|             | Three or More Spans | Bending & shear    | 149.40       | 98.80  | 70.90  | 53.70  | 42.40  | 34.40  | 28.60 | 24.20 | 20.80 | 18.10 |
|             |                     | Deflection (L/180) | 438.90       | 250.40 | 160.40 | 110.80 | 80.70  | 61.00  | 47.40 | 37.70 | 30.50 | 25.10 |
|             |                     | Pattern FP1        | 30.40        | 27.00  | 24.80  | 23.20  | 22.00  | 21.00  | 20.30 | 19.70 | 19.10 | 18.10 |
|             |                     | Pattern FP11       | 149.40       | 98.80  | 70.90  | 53.70  | 42.40  | 34.40  | 28.60 | 24.20 | 20.80 | 18.10 |
| 3"          | Two Spans           | Bending & Shear    | 129.40       | 87.60  | 64.00  | 49.30  | 39.30  | 32.20  | 27.00 | 23.00 | 19.80 | 17.30 |
|             |                     | Deflection (L/180) | 534.10       | 304.90 | 196.90 | 137.80 | 102.00 | 78.60  | 62.40 | 50.60 | 41.80 | 35.10 |
|             |                     | Pattern FP1        | 42.50        | 35.80  | 31.40  | 28.10  | 25.70  | 23.70  | 22.20 | 20.90 | 19.80 | 17.30 |
|             |                     | Pattern FP11       | 129.40       | 87.60  | 64.00  | 49.30  | 39.30  | 32.20  | 27.00 | 23.00 | 19.80 | 17.30 |
|             | Three or More Spans | Bending & Shear    | 153.20       | 102.40 | 74.20  | 56.80  | 45.20  | 37.10  | 31.10 | 26.50 | 22.90 | 20.00 |
|             |                     | Deflection (L/180) | 467.00       | 272.60 | 178.60 | 126.00 | 93.60  | 72.20  | 57.10 | 46.20 | 38.00 | 31.70 |
|             |                     | Pattern FP1        | 47.40        | 39.90  | 34.90  | 31.30  | 28.60  | 26.50  | 24.80 | 23.40 | 22.20 | 20.00 |
|             |                     | Pattern FP11       | 153.20       | 102.40 | 74.20  | 56.80  | 45.20  | 37.10  | 31.10 | 26.50 | 22.90 | 20.00 |
| 4"          | Two Spans           | Bending & Shear    | 135.60       | 93.50  | 69.60  | 54.50  | 44.20  | 36.70  | 31.10 | 26.80 | 23.30 | 20.50 |
|             |                     | Deflection (L/180) | 568.70       | 333.10 | 220.60 | 158.40 | 120.10 | 94.80  | 76.90 | 63.80 | 53.80 | 46.00 |
|             |                     | Pattern FP1        | 47.80        | 39.80  | 34.30  | 30.30  | 27.30  | 24.90  | 23.00 | 21.50 | 20.10 | 18.60 |
|             |                     | Pattern FP11       | 135.60       | 93.50  | 69.60  | 54.50  | 44.20  | 36.70  | 31.10 | 26.80 | 23.30 | 20.50 |
|             | Three or More Spans | Bending & Shear    | 158.80       | 107.70 | 79.20  | 61.40  | 49.50  | 41.10  | 34.80 | 30.00 | 26.20 | 23.10 |
|             |                     | Deflection (L/180) | 506.60       | 304.30 | 205.20 | 148.90 | 113.70 | 89.90  | 73.00 | 60.50 | 50.90 | 43.40 |
|             |                     | Pattern FP1        | 53.10        | 43.90  | 37.80  | 33.40  | 30.00  | 27.50  | 25.40 | 23.70 | 22.30 | 20.60 |
|             |                     | Pattern FP11       | 158.80       | 107.70 | 79.20  | 61.40  | 49.50  | 41.10  | 34.80 | 30.00 | 26.20 | 23.10 |
| 5"          | Two Spans           | Bending & Shear    | 143.10       | 100.40 | 75.90  | 60.10  | 49.30  | 41.30  | 35.30 | 30.60 | 26.80 | 23.80 |
|             |                     | Deflection (L/180) | 616.60       | 371.10 | 252.00 | 184.90 | 143.00 | 114.80 | 94.70 | 79.70 | 68.10 | 59.00 |
|             |                     | Pattern FP1        | 48.20        | 40.20  | 34.70  | 30.70  | 27.70  | 25.30  | 23.30 | 21.70 | 20.40 | 18.70 |
|             |                     | Pattern FP11       | 143.10       | 100.40 | 75.90  | 60.10  | 49.30  | 41.30  | 35.30 | 30.60 | 26.80 | 23.80 |
|             | Three or More Spans | Bending & Shear    | 165.50       | 113.90 | 84.80  | 66.60  | 54.20  | 45.40  | 38.70 | 33.60 | 29.50 | 26.20 |
|             |                     | Deflection (L/180) | 559.50       | 345.40 | 238.50 | 176.90 | 137.80 | 111.00 | 91.60 | 77.10 | 65.80 | 56.80 |
|             |                     | Pattern FP1        | 53.20        | 44.10  | 37.90  | 33.50  | 30.20  | 27.60  | 25.50 | 23.80 | 22.40 | 20.60 |
|             |                     | Pattern FP11       | 162.80       | 113.90 | 84.80  | 66.60  | 54.20  | 45.40  | 38.70 | 33.60 | 29.50 | 26.20 |
|             |                     | Bending & Shear    | 149.80       | 106.50 | 81.40  | 65.20  | 53.80  | 45.40  | 39.00 | 34.00 | 30.00 | 26.60 |

|    |                           |                        |        |        |        |        |        |        |        |       |       |       |
|----|---------------------------|------------------------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 6" | Two Spans                 | Deflectio<br>n (L/180) | 662.00 | 407.20 | 281.90 | 210.30 | 165.00 | 134.10 | 111.90 | 95.10 | 82.10 | 71.70 |
|    |                           | Pattern<br>FP1         | 48.60  | 40.50  | 35.10  | 31.00  | 28.00  | 25.50  | 23.60  | 21.90 | 20.60 | 18.90 |
|    |                           | Pattern<br>FP11        | 148.60 | 106.50 | 81.40  | 65.20  | 53.80  | 45.40  | 39.00  | 34.00 | 30.00 | 26.60 |
|    | Three or<br>More<br>Spans | Bending<br>& Shear     | 171.60 | 119.50 | 89.90  | 71.20  | 58.40  | 49.20  | 42.20  | 36.80 | 32.40 | 28.90 |
|    |                           | Deflectio<br>n (L/180) | 608.80 | 383.80 | 269.90 | 203.40 | 160.60 | 131.00 | 109.40 | 93.10 | 80.20 | 69.90 |
|    |                           | Pattern<br>FP1         | 53.40  | 44.20  | 38.00  | 33.60  | 30.30  | 27.60  | 25.60  | 23.80 | 22.40 | 20.70 |
|    |                           | Pattern<br>FP11        | 163.20 | 119.50 | 89.90  | 71.20  | 58.40  | 49.20  | 42.20  | 36.80 | 32.40 | 28.90 |

Notes:

1. Based on 7.2 panel with 24 Ga. exterior & 26 Ga. interior face (min Fy = 33 ksi) for loads listed above.
2. Allowable positive load is the lowest value of the panel bending and shear strength or deflection limit.
3. Allowable suction load is the lowest value of the panel bending and shear strength, deflection limited and connection strength for each fastener pattern.  
The numbers have been reduced to reflect the lowest value.
4. 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. Pattern FP1 is based on clip with (2) 1/4"-14 Tek III's in minimum 14 gage steel.
7. Pattern FP11 is based on five (7.2" on center, low cell of product), 1/4-14" Tek III's with 5/8" neoprene bonded washer in minnum 14 gage steel.
8. The structural capacity of the girts are not considered and must be examined independently.
9. This information is subject to change without notice. Please contact MBCI for most current information.