



# Tuff-Rib Panel



| SECTION PROPERTIES |          |              |                        |                            |                            | TOP IN COMPRESSION                     |  |                            | BOTTOM IN COMPRESSION                  |  |                            |
|--------------------|----------|--------------|------------------------|----------------------------|----------------------------|--|--|----------------------------|--|--|----------------------------|
| GAUGE              | FY (KSI) | WEIGHT (PSF) | V <sub>a</sub> kip/ft. | P <sub>a_end</sub> lbs/ft. | P <sub>a_int</sub> lbs/ft. | I <sub>x</sub> (in. <sup>4</sup> /ft.) | S <sub>e</sub> (in. <sup>3</sup> /ft.) | M <sub>a</sub> kip-in./ft. | I <sub>x</sub> (in. <sup>4</sup> /ft.) | S <sub>e</sub> (in. <sup>3</sup> /ft.) | M <sub>a</sub> kip-in./ft. |
| 29                 | 80.0     | 0.66         | 0.3990                 | 178.90                     | 233.60                     | 0.0100                                 | 0.0165                                 | 0.5910                     | 0.0050                                 | 0.0163                                 | 0.4870                     |

1. Section properties are calculated in accordance with the 2001 AISI North American Specification for the Design of Cold-Formed Steel Structural Members.
2. V<sub>a</sub> is the allowable shear.
3. P<sub>a</sub> is the allowable load for web crippling on end & interior supports.
4. I<sub>x</sub> is for deflection determination.
5. S<sub>e</sub> is for bending.
6. M<sub>a</sub> is the allowable bending moment.
7. All values are for one foot of panel width.

## Allowable Uniform Loads (PSF)

|           |                    | Span in Feet |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------|--------------------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Span Type | Load Type          | 1.50         | 2.00 | 2.50 | 3.00 | 3.50 | 4.00 | 4.50 | 5.00 | 5.50 | 6.00 | 6.50 | 7.00 | 7.50 | 8.00 | 8.50 | 9.00 |
| Single    | Positive Wind      | 175          | 98   | 63   | 43   | 32   | 24   | 19   | 15   | 13   | 10   | 9    | 8    | 7    | 6    | 5    | 4    |
|           | Negative Wind      | 144          | 81   | 51   | 36   | 26   | 20   | 16   | 12   | 10   | 9    | 7    | 6    | 5    | 5    | 4    | 4    |
|           | Live               | 175          | 98   | 63   | 43   | 32   | 24   | 19   | 15   | 13   | 10   | 9    | 8    | 7    | 6    | 5    | 4    |
|           | Deflection (L/180) | 258          | 109  | 55   | 32   | 20   | 13   | 9    | 6    | 5    | 4    | 3    | 2    | 2    | 1    | 1    | 1    |
|           | Deflection (L/240) | 194          | 81   | 41   | 24   | 15   | 10   | 7    | 5    | 3    | 3    | 2    | 1    | 1    | 1    | 1    | 0    |
| 2 Span    | Positive Wind      | 136          | 78   | 50   | 35   | 26   | 20   | 15   | 12   | 10   | 8    | 7    | 6    | 5    | 5    | 4    | 4    |
|           | Negative Wind      | 161          | 94   | 61   | 42   | 31   | 24   | 19   | 15   | 12   | 10   | 9    | 8    | 6    | 6    | 5    | 4    |
|           | Live               | 136          | 78   | 50   | 35   | 26   | 20   | 15   | 12   | 10   | 8    | 7    | 6    | 5    | 5    | 4    | 4    |
|           | Deflection (L/180) | 467          | 197  | 101  | 58   | 36   | 24   | 17   | 12   | 9    | 7    | 5    | 4    | 3    | 3    | 2    | 2    |
|           | Deflection (L/240) | 350          | 148  | 75   | 43   | 27   | 18   | 12   | 9    | 7    | 5    | 4    | 3    | 2    | 2    | 1    | 1    |
| 3 Span    | Positive Wind      | 167          | 97   | 63   | 44   | 32   | 25   | 19   | 16   | 13   | 11   | 9    | 8    | 7    | 6    | 5    | 4    |
|           | Negative Wind      | 196          | 115  | 75   | 53   | 39   | 30   | 23   | 19   | 16   | 13   | 11   | 9    | 8    | 7    | 6    | 6    |
|           | Live               | 167          | 97   | 63   | 44   | 32   | 25   | 19   | 16   | 13   | 11   | 9    | 8    | 7    | 6    | 5    | 4    |
|           | Deflection (L/180) | 366          | 154  | 79   | 45   | 28   | 19   | 13   | 9    | 7    | 5    | 4    | 3    | 2    | 2    | 2    | 1    |
|           | Deflection (L/240) | 274          | 115  | 59   | 34   | 21   | 14   | 10   | 7    | 5    | 4    | 3    | 2    | 2    | 1    | 1    | 1    |
| 4 Span    | Positive Wind      | 157          | 90   | 59   | 41   | 30   | 23   | 18   | 15   | 12   | 10   | 8    | 7    | 6    | 5    | 5    | 4    |
|           | Negative Wind      | 185          | 108  | 70   | 49   | 36   | 28   | 22   | 18   | 15   | 12   | 10   | 9    | 8    | 7    | 6    | 5    |
|           | Live               | 157          | 90   | 59   | 41   | 30   | 23   | 18   | 15   | 12   | 10   | 8    | 7    | 6    | 5    | 5    | 4    |
|           | Deflection (L/180) | 389          | 164  | 84   | 48   | 30   | 20   | 14   | 10   | 7    | 6    | 4    | 3    | 3    | 2    | 2    | 1    |
|           | Deflection (L/240) | 291          | 123  | 63   | 36   | 22   | 15   | 10   | 7    | 5    | 4    | 3    | 2    | 2    | 1    | 1    | 1    |

### Notes:

1. Allowable uniform loads are based upon equal span lengths.
2. Positive Wind is wind pressure and is **NOT** increased by 33 1/3 %.
3. Negative Wind is wind suction or uplift and is **NOT** increased by 33 1/3%.
4. Live is the allowable live or snow load.
5. Deflection (L/180) is the allowable load that limits the panel's deflection to L/180 while under positive or live load.
6. Deflection (L/240) is the allowable load that limits the panel's deflection to L/240 while under positive or live load.
7. The weight of the panel has **NOT** been deducted from the allowable loads.
8. Positive Wind, Negative Wind, and Live Load values are limited to combined shear & bending using Eq. C3.3.1-1 of the AISI Specification.
9. Positive Wind and Live Load values are limited by web crippling using a bearing length of 2".
10. Web crippling values are determined using a ratio of the uniform load **actually** supported by the top flanges of the section.
11. Load Tables are limited to a maximum allowable load of 500 psf.