

SPECIFICATIONS

FIGURE 7880  
STRUT CHANNEL



1-5/8" x 3-1/4" 12 GA–HALF SLOT

FEATURES

- 1-5/8" x 3-1/4"
- 12 Gauge channel
- Half slot
- Material: Pre-galvanized steel
- Load data calculated based on ANSI/AISC 360-2016
- Available in 10 ft and 20 ft lengths
- Available finishes: Pre-galvanized, green powder coat

| Catalog Number   | Finish    | Size          |         | Length |       | Gauge |
|------------------|-----------|---------------|---------|--------|-------|-------|
|                  |           | in.           | mm      | ft     | m     |       |
| FNWST7880S12Z2S1 | Pre-Galv. | 1-5/8 x 3-1/4 | 41 x 83 | 10     | 3.048 | 12    |
| FNWST7880S12Z2S2 | Pre-Galv. | 1-5/8 x 3-1/4 | 41 x 83 | 20     | 6.096 | 12    |
| FNWST7880S12G2S2 | Green     | 1-5/8 x 3-1/4 | 41 x 83 | 20     | 6.096 | 12    |

SECTION PROPERTIES

| Wt/Ft<br>Lbs | Area of<br>Section<br>Sq. In. | X-X Axis          |                   |       | Y-Y Axis          |                   |       |
|--------------|-------------------------------|-------------------|-------------------|-------|-------------------|-------------------|-------|
|              |                               | I in <sup>4</sup> | S in <sup>3</sup> | r in  | I in <sup>4</sup> | S in <sup>3</sup> | r in  |
| 2.82         | 0.858                         | 1.075             | 0.618             | 1.119 | 0.416             | 0.512             | 0.697 |

I = Moment of Inertia S = Section Modulus r = Radius of Gyration

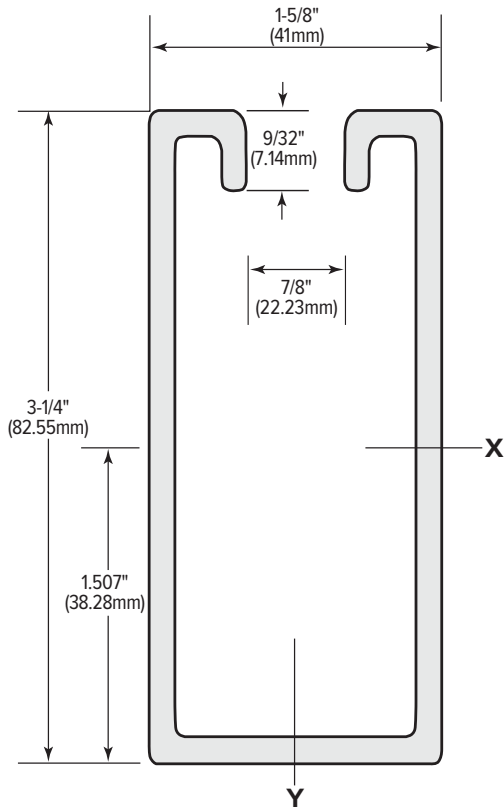


FIGURE 7880  
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1-5/8" x 3-1/4" 12 GA-HALF SLOT



| Span<br>or<br>Unbraced<br>Height<br>(in.) | Static Beam Load (X-X Axis)                  |                                              |                                 |                                 |                                 | Max<br>Allowable<br>Load at<br>Slot Face<br>(lbs) | Column Loading Data |                |                |                | Weight<br>of<br>Channel<br>(lbs) |
|-------------------------------------------|----------------------------------------------|----------------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------------------------|---------------------|----------------|----------------|----------------|----------------------------------|
|                                           | Max<br>Allowable<br>Uniform<br>Load<br>(lbs) | Deflection<br>at<br>Uniform<br>Load<br>(in.) | Uniform Load at Deflection      |                                 |                                 |                                                   | Max Column Load     |                |                |                |                                  |
|                                           |                                              |                                              | Span/180<br>Deflection<br>(lbs) | Span/240<br>Deflection<br>(lbs) | Span/360<br>Deflection<br>(lbs) |                                                   | k=.65<br>(lbs)      | k=.80<br>(lbs) | k=1.0<br>(lbs) | k=1.2<br>(lbs) |                                  |
| 12                                        | 17467                                        | 0.01                                         | 17467                           | 17467                           | 17467                           | 3458                                              | 10824               | 10718          | 10498          | 10252          | 2.82                             |
| 18                                        | 11689                                        | 0.03                                         | 11689                           | 11689                           | 11689                           | 3467                                              | 10569               | 10252          | 9768           | 9196           | 4.24                             |
| 24                                        | 8766                                         | 0.06                                         | 8766                            | 8766                            | 8766                            | 3432                                              | 10058               | 9574           | 8932           | 8307           | 5.64                             |
| 30                                        | 7036                                         | 0.09                                         | 7036                            | 7036                            | 6513                            | 3414                                              | 9478                | 8932           | 8131           | 7471           | 7.06                             |
| 36                                        | 5885                                         | 0.13                                         | 5885                            | 5885                            | 4530                            | 3362                                              | 9020                | 8307           | 7471           | 6618           | 8.47                             |
| 42                                        | 4987                                         | 0.17                                         | 4987                            | 4987                            | 3330                            | 3300                                              | 8474                | 7709           | 6758           | 5914           | 9.88                             |
| 48                                        | 4391                                         | 0.23                                         | 4391                            | 3820                            | 2547                            | 3230                                              | 8043                | 7146           | 6107           | 5271           | 11.29                            |
| 60                                        | 3469                                         | 0.35                                         | 3257                            | 2449                            | 1632                            | 3045                                              | 7075                | 6107           | 5025           | 4206           | 14.11                            |
| 72                                        | 2889                                         | 0.51                                         | 2269                            | 1697                            | 1134                            | 2825                                              | 6257                | 5271           | 4206           | 3467           | 16.93                            |
| 84                                        | 2481                                         | 0.69                                         | 1665                            | 1248                            | 833                             | 2517                                              | 5509                | 4479           | 3564           | 2842           | 19.76                            |
| 96                                        | 2146                                         | 0.9                                          | 1273                            | 955                             | 636                             | 2297                                              | 4858                | 3942           | 3045           | 2385           | 22.58                            |
| 108                                       | 1926                                         | 1.14                                         | 1012                            | 759                             | 506                             | 2077                                              | 4277                | 3467           | 2605           | 1998           | 25.40                            |
| 120                                       | 1738                                         | 1.41                                         | 816                             | 612                             | 408                             | 1866                                              | 3872                | 3045           | 2235           | **             | 28.22                            |
| 144                                       | 1445                                         | 2.03                                         | 571                             | 425                             | 286                             | 1514                                              | 3159                | 2385           | **             | **             | 33.87                            |
| 168                                       | 1241                                         | 2.77                                         | 416                             | 318                             | 212                             | 1232                                              | 2561                | 1883           | **             | **             | 39.51                            |
| 180                                       | 1151                                         | 3.18                                         | 367                             | 277                             | 187                             | **                                                | 2323                | **             | **             | **             | 42.33                            |
| 192                                       | 1102                                         | 3.61                                         | 318                             | 245                             | 163                             | **                                                | 2121                | **             | **             | **             | 45.16                            |
| 216                                       | 963                                          | 4.57                                         | 253                             | 196                             | 131                             | **                                                | **                  | **             | **             | **             | 50.80                            |
| 240                                       | 865                                          | 5.65                                         | 204                             | 155                             | 106                             | **                                                | **                  | **             | **             | **             | 56.44                            |

NR = Not Recommended  
\*\* Not recommended - KL/r exceeds 200

NOTE: 1. Allowable beam loads are based on a uniformly loaded, simply supported beam. For capacities of a beam loaded at midspan at a single point, multiply the beam capacity by 50% and deflection by 80%. 2. The section properties (excluding quality) are in the absence of holes.