

# Marino\WARE® Product Submittal Data

**PRODUCT NAME:** 1200S200-97

**MARINO\WARE PART #** 120SJ12

05.40.00 Cold-Formed Metal Framing

## PROPERTIES:

|                         |      |                                  |        |
|-------------------------|------|----------------------------------|--------|
| <b>A. Web (in)</b>      | 12"  | <b>Yield Strength Fy (KSI)</b>   | 50     |
| <b>B. Flange (in)</b>   | 2"   | <b>Tensile Strength Fu (KSI)</b> | 65     |
| <b>C. Lip (in)</b>      | 5/8" | <b>Design Thickness (in)</b>     | 0.1017 |
| <b>Mils</b>             | 97   | <b>Minimum Thickness (in)</b>    | 0.0966 |
| <b>Available Finish</b> | G90  | <b>Gauge</b>                     | 12     |

## SECTION PROPERTIES

### GROSS SECTION PROPERTIES

|  |        |
|--|--------|
| Cross Sectional Area: <b>A</b> (in <sup>2</sup> )                | 1.68   |
| Weight of Member: (lb/ft)  | 5.708  |
| Moment of Inertia: <b>I<sub>x</sub></b> (in <sup>4</sup> )       | 30.425 |
| Section Modulus: <b>S<sub>x</sub></b> (in <sup>3</sup> )         | 5.071  |
| Radius of Gyration: <b>R<sub>x</sub></b> (in)                    | 4.259  |
| Gross Moment of Inertia: <b>I<sub>y</sub></b> (in <sup>4</sup> ) | 0.635  |
| Gross Radius of Gyration: <b>R<sub>y</sub></b> (in)              | 0.615  |

### EFFECTIVE SECTION PROPERTIES

|   |        |
|---|--------|
| Moment of Inertia-Deflection: <b>I<sub>xe</sub></b> (in <sup>4</sup> )  | 30.066 |
| Section Modulus: <b>S<sub>xe</sub></b> (in <sup>3</sup> )               | 4.660  |
| Allowable Local Bending Moment: <b>M<sub>al</sub></b> (in-k)            | 139.51 |
| Allowable Distortional Bending Moment: <b>M<sub>ad</sub></b> (in-k)     | 122.00 |
| Allowable strong axis shear away from punch: <b>V<sub>ag</sub></b> (lb) | 8145   |
| Allowable strong axis shear at punch: <b>V<sub>anet</sub></b> (lb)      | 7410   |

### TORSIONAL SECTION PROPERTIES

|   |        |
|---|--------|
| St. Venant Torsional Constant: <b>J<sub>x1000</sub></b> (in <sup>4</sup> )        | 5.783  |
| Torsional Warping Constant: <b>C<sub>w</sub></b> (in <sup>6</sup> )               | 19.150 |
| Shear Center to Centroid on Principal X-axis: <b>X<sub>o</sub></b> (in)           | -0.987 |
| Shear Center to Mid-Plane of the Web: <b>m</b> (in)                               | 0.656  |
| Radius of Gyration on the Centroid Principal axis: <b>R<sub>o</sub></b> (in)      | 4.415  |
| Torsional Flexural Constant: <b>β 1-(x<sub>o</sub>/R<sub>o</sub>)<sup>2</sup></b> | 0.950  |

## CODES & STANDARDS

- AISI S100, S240 & ICC ES ESR-4062
- ASTM A 1003, A 653, & C 955
- IBC 2012, 2015, 2018, 2021 & FBC 2020, 2023

## GREEN INFO

- LEED credits available
- Contact Technical Services for more information.

