

# Marino\WARE® Product Submittal Data

**PRODUCT NAME:** 250T200-33

**05.40.00 Cold-Formed Metal Framing**

**MARINO\WARE PART #** 212T220

## PROPERTIES:

<b>A. Web (in)</b>	2-1/2"	<b>Yield Strength Fy (KSI)</b>	33
<b>B. Flange (in)</b>	2"	<b>Tensile Strength Fu (KSI)</b>	45
<b>Mils</b>	33	<b>Design Thickness (in)</b>	0.0346
<b>Available Finish</b>	G90	<b>Minimum Thickness (in)</b>	0.0329
		<b>Gauge</b>	20

## SECTION PROPERTIES

### GROSS SECTION PROPERTIES

Cross Sectional Area: <b>A</b> (in <sup>2</sup> )	0.225
Weight of Member: (lb/ft)	0.76
Moment of Inertia: <b>Ix</b> (in <sup>4</sup> )	0.280
Section Modulus: <b>Sx</b> (in <sup>3</sup> )	0.212
Radius of Gyration: <b>Rx</b> (in)	1.117
Gross Moment of Inertia: <b>Iy</b> (in <sup>4</sup> )	0.097
Gross Radius of Gyration: <b>Ry</b> (in)	0.658

### EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: <b>Ix</b> (in <sup>4</sup> )	0.203
Section Modulus: <b>Sx</b> (in <sup>3</sup> )	0.112
Allowable Bending Moment: <b>Ma</b> (in-k)	2.220
Allowable strong axis shear away from punch: <b>Vag</b> (lb)	1024

### TORSIONAL SECTION PROPERTIES

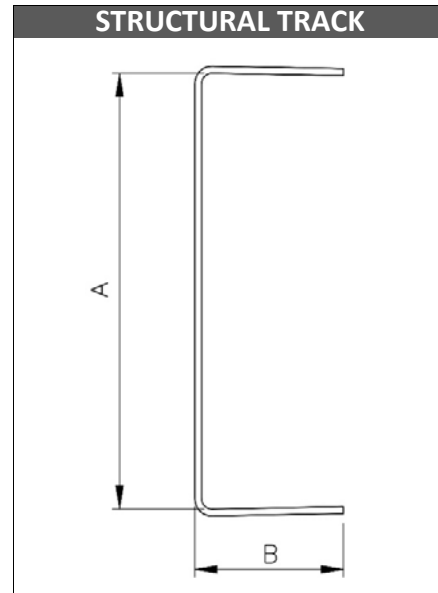
St. Venant Torsional Constant: <b>Jx1000</b> (in <sup>4</sup> )	0.090
Torsional Warping Constant: <b>Cw</b> (in <sup>6</sup> )	0.118
Shear Center to Centroid on Principal X-axis: <b>Xo</b> (in)	-1.418
Shear Center to Mid-Plane of the Web: <b>m</b> (in)	0.813
Radius of Gyration on the Centroid Principal axis: <b>Ro</b> (in)	1.921
Torsional Flexural Constant: <b>β</b> [1-(xo/Ro) <sup>2</sup> ]	0.455

## CODES & STANDARDS

- AISI S100-12 & ICC ES ESR-4062
- Meets IBC 2012, 2015 & FBC 2014
- Framing meets ASTM A 1003, A 653, C 645 & C 955

## GREEN INFO

- LEED v3 & LEED v4 credits available
- Contact Technical Services for more information.



For more information, please contact Marino\WARE Technical Services at 866-545-1545.

This technical information reflects the most current information available and supersedes any and all publications, effective 1/5/2017.  
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