

# Marino\WARE® Product Submittal Data

**PRODUCT NAME:** 1000S162-33

**MARINO\WARE PART #** 100SS20

**05.40.00 Cold-Formed Metal Framing**

## PROPERTIES:

<b>A. Web (in)</b>	10"	<b>Yield Strength Fy (KSI)</b>	33
<b>B. Flange (in)</b>	1-5/8"	<b>Tensile Strength Fu (KSI)</b>	45
<b>C. Lip (in)</b>	1/2"	<b>Design Thickness (in)</b>	0.0346
<b>Mils</b>	33	<b>Minimum Thickness (in)</b>	0.0329
<b>Available Finish</b>	G90	<b>Gauge</b>	20 STR

## SECTION PROPERTIES

### GROSS SECTION PROPERTIES

Cross Sectional Area: <b>A</b> (in <sup>2</sup> )	0.483
Weight of Member: (lb/ft)	1.642
Moment of Inertia: <b>I<sub>x</sub></b> (in <sup>4</sup> )	6.200
Section Modulus: <b>S<sub>x</sub></b> (in <sup>3</sup> )	1.240
Radius of Gyration: <b>R<sub>x</sub></b> (in)	3.584
Gross Moment of Inertia: <b>I<sub>y</sub></b> (in <sup>4</sup> )	0.132
Gross Radius of Gyration: <b>R<sub>y</sub></b> (in)	0.522

### EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: <b>I<sub>xe</sub></b> (in <sup>4</sup> )	5.558
Section Modulus: <b>S<sub>xe</sub></b> (in <sup>3</sup> )	0.900
Allowable Local Bending Moment: <b>M<sub>al</sub></b> (in-k)	17.79
Allowable Distortional Bending Moment: <b>M<sub>ad</sub></b> (in-k)	14.80
Allowable strong axis shear away from punch: <b>V<sub>ag</sub></b> (lb)	377
Allowable strong axis shear at punch: <b>V<sub>anet</sub></b> (lb)	377

### TORSIONAL SECTION PROPERTIES

St. Venant Torsional Constant: <b>J<sub>x1000</sub></b> (in <sup>4</sup> )	0.193
Torsional Warping Constant: <b>C<sub>w</sub></b> (in <sup>6</sup> )	2.692
Shear Center to Centroid on Principal X-axis: <b>X<sub>o</sub></b> (in)	-0.832
Shear Center to Mid-Plane of the Web: <b>m</b> (in)	0.550
Radius of Gyration on the Centroid Principal axis: <b>R<sub>o</sub></b> (in)	3.716
Torsional Flexural Constant: <b>β</b> 1-(x <sub>o</sub> /R <sub>o</sub> ) <sup>2</sup>	0.950

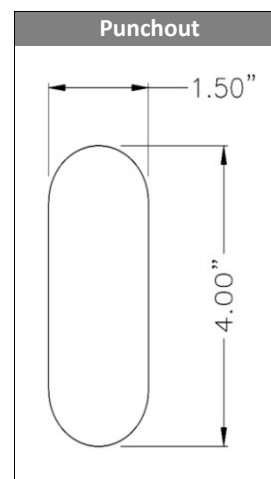
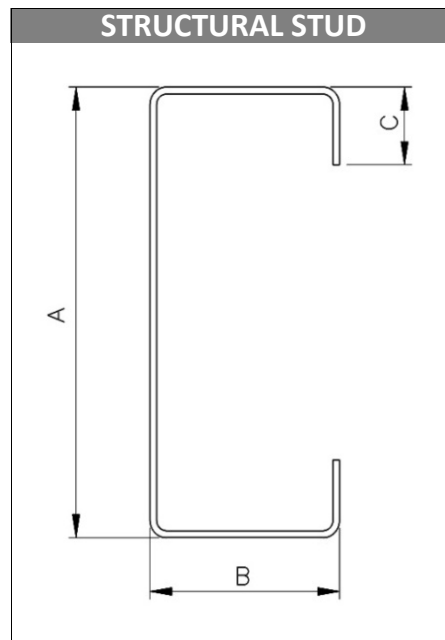
## CODES & STANDARDS

- AISI S100 & S240
- 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.

Note: Web depth to thickness ratio (h/t) exceeds 200. Web stiffeners required at all support points and concentrated loads.



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 11/5/2023  
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