

Marino\WARE® Product Submittal Data

PRODUCT NAME: 400S162-33

MARINO\WARE PART # 400SS20

05.40.00 Cold-Formed Metal Framing

PROPERTIES:

A. Web (in)	4"	Yield Strength Fy (KSI)	33
B. Flange (in)	1-5/8"	Tensile Strength Fu (KSI)	45
C. Lip (in)	1/2"	Design Thickness (in)	0.0346
Mils	33	Minimum Thickness (in)	0.0329
Available Finish	G90	Gauge	20 STR

SECTION PROPERTIES

GROSS SECTION PROPERTIES

Cross Sectional Area: A (in ²)	0.275
Weight of Member: (lb/ft)	0.94
Moment of Inertia: I_x (in ⁴)	0.692
Section Modulus: S_x (in ³)	0.346
Radius of Gyration: R_x (in)	1.586
Gross Moment of Inertia: I_y (in ⁴)	0.103
Gross Radius of Gyration: R_y (in)	0.611

EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: I_{xe} (in ⁴)	0.69
Section Modulus: S_{xe} (in ³)	0.30
Allowable Local Bending Moment: M_{al} (in-k)	5.91
Allowable Distortional Bending Moment: M_{ad} (in-k)	5.80
Allowable strong axis shear away from punch: V_{ag} (lb)	976
Allowable strong axis shear at punch: V_{anet} (lb)	595

TORSIONAL SECTION PROPERTIES

St. Venant Torsional Constant: J_{x1000} (in ⁴)	0.110
Torsional Warping Constant: C_w (in ⁶)	0.363
Shear Center to Centroid on Principal X-axis: X_o (in)	-1.263
Shear Center to Mid-Plane of the Web: m (in)	0.768
Radius of Gyration on the Centroid Principal axis: R_o (in)	2.118
Torsional Flexural Constant: β 1-(x _o /R _o) ²	0.644

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.

