

Marino\WARE® Product Submittal Data

PRODUCT NAME: 1200S300-97

MARINO\WARE PART # 120SX12

05.40.00 Cold-Formed Metal Framing

PROPERTIES:

A. Web (in)	12"	Yield Strength Fy (KSI)	50
B. Flange (in)	3"	Tensile Strength Fu (KSI)	65
C. Lip (in)	5/8"	Design Thickness (in)	0.1017
Mils	97	Minimum Thickness (in)	0.0966
Available Finish	G60	Gauge	12

SECTION PROPERTIES

GROSS SECTION PROPERTIES

Cross Sectional Area: A (in ²)	1.88
Weight of Member: (lb/ft)	6.400
Moment of Inertia: I_x (in ⁴)	37.624
Section Modulus: S_x (in ³)	6.271
Radius of Gyration: R_x (in)	4.473
Gross Moment of Inertia: I_y (in ⁴)	1.786
Gross Radius of Gyration: R_y (in)	0.975

EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: I_{xe} (in ⁴)	36.984
Section Modulus: S_{xe} (in ³)	5.830
Allowable Local Bending Moment: M_{al} (in-k)	174.56
Allowable Distortional Bending Moment: M_{ad} (in-k)	136.00
Allowable strong axis shear away from punch: V_{ag} (lb)	8145
Allowable strong axis shear at punch: V_{anet} (lb)	7410

TORSIONAL SECTION PROPERTIES

St. Venant Torsional Constant: J_{x1000} (in ⁴)	6.484
Torsional Warping Constant: C_w (in ⁶)	50.853
Shear Center to Centroid on Principal X-axis: X_o (in)	-1.691
Shear Center to Mid-Plane of the Web: m (in)	1.085
Radius of Gyration on the Centroid Principal axis: R_o (in)	4.880
Torsional Flexural Constant: β 1-(x_o/R_o)²	0.880

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.

