

Structural Stud (s)



MATERIAL

Web (in)	6
Flange (in)	3
Lip (in)	0.625
Yield Strength F_y (KSI)	50
Tensile Strength F_u (KSI)	65
Design Thickness (in)	0.1017
Minimum Thickness (mil)	97
Gauge	12
Available Finish G60, G90	

GROSS SECTION PROPERTIES

Weight of Member: (lb/ft)	4.32
Cross Sectional Area: A (in ²)	1.271
Moment of Inertia: I_x (in ⁴)	7.383
Section Modulus: S_x (in ³)	2.461
Radius of Gyration: R_x (in)	2.41
Moment of Inertia: I_y (in ⁴)	1.454
Radius of Gyration: R_y (in)	1.070

EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: I_{xe} (in ⁴)	7.294
Section Modulus: S_{xe} (in ³)	2.237
Local Buckling Allowable Moment: M_{al} (in-k)	66.97
Distortional Buckling Allowable Moment: M_{ad} (in-k)	62.32
Allowable strong axis shear away from punch: V_{ag} (lb)	10472
Allowable strong axis shear at punch: V_{anet} (lb)	3805
(check web crippling)	

TORSIONAL SECTION PROPERTIES

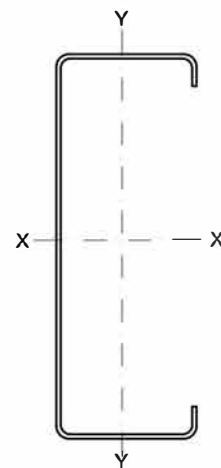
St. Venant Torsional Constant: J_{x1000} (in ⁴)	4.381
Torsional Warping Constant: C_w (in ⁶)	10.776
Shear Center to Centroid on Principal X-axis: X_o (in)	-2.241
Radius of Gyration on the Centroid Principal axis: R_o (in)	3.461

PRODUCT ID

600S 300-97 (6x3x12ga) (Grade 50)

CODES & STANDARDS

- ASTM A 1003, A 653, & C 955
- AISI S100-16



See Hermes/Hephaistos Technical Manual
for complete design data