

Structural Stud (s)



MATERIAL

Web (in)	8
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)	5.01
Cross Sectional Area: A (in ²)	1.474
Moment of Inertia: I_x (in ⁴)	14.379
Section Modulus: S_x (in ³)	3.595
Radius of Gyration: R_x (in)	3.123
Moment of Inertia: I_y (in ⁴)	1.595
Radius of Gyration: R_y (in)	1.040

EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: I_{xe} (in ⁴)	14.189
Section Modulus: S_{xe} (in ³)	3.295
Local Buckling Allowable Moment: M_{al} (in-k)	98.64
Distortional Buckling Allowable Moment: M_{ad} (in-k)	86.69
Allowable strong axis shear away from punch: V_{ag} (lb)	10888
Allowable strong axis shear at punch: V_{anet} (lb)	5940
(check web crippling)	

TORSIONAL SECTION PROPERTIES

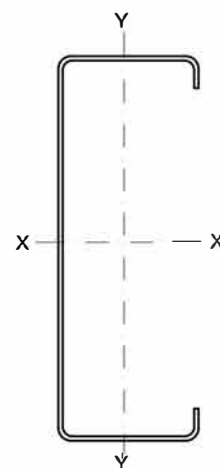
St. Venant Torsional Constant: J_{x1000} (in ⁴)	5.082
Torsional Warping Constant: C_w (in ⁶)	20.304
Shear Center to Centroid on Principal X-axis: X_o (in)	-2.017
Radius of Gyration on the Centroid Principal axis: R_o (in)	3.861

PRODUCT ID

800S 300-97 (8x3x12ga) (Grade 50)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data