

Structural Stud (s)



MATERIAL	
Web (in)	4
Flange (in)	1 $\frac{5}{8}$
Lip (in)	0.500
Yield Strength Fy (KSI)	50
Tensile Strength Fu (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)	2.59
Cross Sectional Area: A (in ²)	0.762
Moment of Inertia: Ix (in ⁴)	1.813
Section Modulus: Sx (in ³)	0.907
Radius of Gyration: Rx (in)	1.542
Moment of Inertia: Iy (in ⁴)	0.250
Radius of Gyration: Ry (in)	0.572

EFFECTIVE SECTION PROPERTIES	
Moment of Inertia-Deflection: Ixe (in ⁴)	1.815
Section Modulus: Sxe (in ³)	0.893
Local Buckling Allowable Moment: Mal (in-k)	31.68
Distortional Buckling Allowable Moment: Mad (in-k)	31.53
Allowable strong axis shear away from punch: Vag (lb)	6658
Allowable strong axis shear at punch: Vanet (lb)	1207
(check web crippling)	

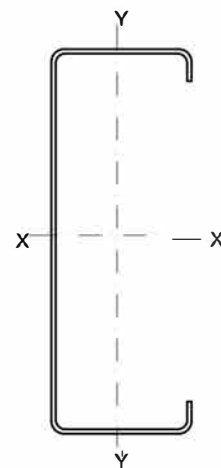
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in ⁴)	2.628
Torsional Warping Constant: Cw (in ⁶)	0.889
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.182
Radius of Gyration on the Centroid Principal axis: Ro (in)	2.026

PRODUCT ID

400S 162-97(4x1 $\frac{5}{8}$ x12ga) (Grade 50)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data