

Structural Stud (s)



MATERIAL

Web (in)	4
Flange (in)	1 $\frac{5}{8}$
Lip (in)	0.500
Yield Strength Fy (KSI)	33
Tensile Strength Fu (KSI)	45
Design Thickness (in)	0.346
Minimum Thickness (mil)	33
Gauge	20S
Available Finish G60, G90	

GROSS SECTION PROPERTIES

Weight of Member: (lb/ft)	0.94
Cross Sectional Area: A (in ²)	0.275
Moment of Inertia: Ix (in ⁴)	0.692
Section Modulus: Sx (in ³)	0.346
Radius of Gyration: Rx (in)	1.586
Moment of Inertia: Iy (in ⁴)	0.103
Radius of Gyration: Ry (in)	0.611

EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: Ixe (in ⁴)	0.692
Section Modulus: Sxe (in ³)	0.309
Local Buckling Allowable Moment: Mal (in-k)	6.11
Distortional Buckling Allowable Moment: Mad (in-k)	5.81
Allowable strong axis shear away from punch: Vag (lb)	976
Allowable strong axis shear at punch: Vanet (lb)	595
(check web crippling)	

TORSIONAL SECTION PROPERTIES

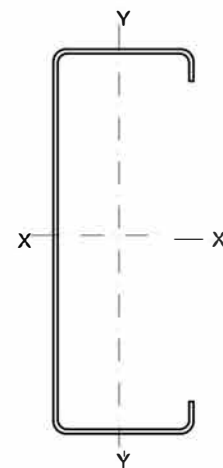
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.110
Torsional Warping Constant: Cw (in ⁶)	0.363
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.263
Radius of Gyration on the Centroid Principal axis: Ro (in)	2.118

PRODUCT ID

400S 162-33 (4x1 $\frac{5}{8}$ x20Sga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data