

Structural Stud (s)



MATERIAL

Web (in)	4
Flange (in)	1 $\frac{3}{8}$
Lip (in)	0.375
Yield Strength Fy (KSI)	33
Tensile Strength Fu (KSI)	45
Design Thickness (in)	0.0346
Minimum Thickness (mil)	33
Gauge	20S
Available Finish G60, G90	

GROSS SECTION PROPERTIES

Weight of Member: (lb/ft)	0.85
Cross Sectional Area: A (in ²)	0.249
Moment of Inertia: Ix (in ⁴)	0.603
Section Modulus: Sx (in ³)	0.302
Radius of Gyration: Rx (in)	1.556
Moment of Inertia: Iy (in ⁴)	0.061
Radius of Gyration: Ry (in)	0.496

EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: Ixe (in ⁴)	0.603
Section Modulus: Sxe (in ³)	0.269
Local Buckling Allowable Moment: Mal (in-k)	5.31
Distortional Buckling Allowable Moment: Mad (in-k)	4.98
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

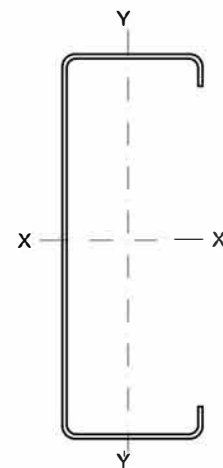
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.099
Torsional Warping Constant: Cw (in ⁶)	0.204
Shear Center to Centroid on Principal X-axis: Xo (in)	-0.965
Radius of Gyration on the Centroid Principal axis: Ro (in)	1.897

PRODUCT ID

400S 137-33 (4x1 $\frac{3}{8}$ x20Sga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data