

Structural Stud (s)



MATERIAL

Web (in)	8
Flange (in)	1 $\frac{3}{8}$
Lip (in)	0.375
Yield Strength Fy (KSI)	33
Tensile Strength Fu (KSI)	50
Design Thickness (in)	0.0346
Minimum Thickness (mil)	33
Gauge	20S
Available Finish G60, G90	

GROSS SECTION PROPERTIES

Weight of Member: (lb/ft)	1.32
Cross Sectional Area: A (in ²)	0.388
Moment of Inertia: Ix (in ⁴)	3.199
Section Modulus: Sx (in ³)	0.800
Radius of Gyration: Rx (in)	2.873
Moment of Inertia: Iy (in ⁴)	0.073
Radius of Gyration: Ry (in)	0.435

EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: Ixe (in ⁴)	3.004
Section Modulus: Sxe (in ³)	0.606
Local Buckling Allowable Moment: Mal (in-k)	10.01
Distortional Buckling Allowable Moment: Mad (in-k)	8.53
Allowable strong axis shear away from punch: Vag (lb)	379
Allowable strong axis shear at punch: Vanet (lb)	379
(check web crippling)	

TORSIONAL SECTION PROPERTIES

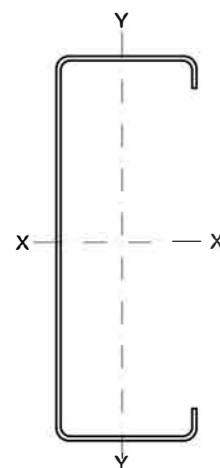
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.155
Torsional Warping Constant: Cw (in ⁶)	0.957
Shear Center to Centroid on Principal X-axis: Xo (in)	-0.696
Radius of Gyration on the Centroid Principal axis: Ro (in)	2.988

PRODUCT ID

800S 137-33 (8x1 $\frac{3}{8}$ x20Sga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data