

Structural Stud (s)



MATERIAL

Web (in)	3½
Flange (in)	1⅝
Lip (in)	0.500
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)	0.88
Cross Sectional Area: A (in ²)	0.258
Moment of Inertia: Ix (in ⁴)	0.508
Section Modulus: Sx (in ³)	0.291
Radius of Gyration: Rx (in)	1.404
Moment of Inertia: Iy (in ⁴)	0.098
Radius of Gyration: Ry (in)	0.617

EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: Ixe (in ⁴)	0.508
Section Modulus: Sxe (in ³)	0.264
Local Buckling Allowable Moment: Mal (in-k)	5.22
Distortional Buckling Allowable Moment: Mad (in-k)	4.99
Allowable strong axis shear away from punch: Vag (lb)	1024
Allowable strong axis shear at punch: Vanet (lb)	487
(check web crippling)	

TORSIONAL SECTION PROPERTIES

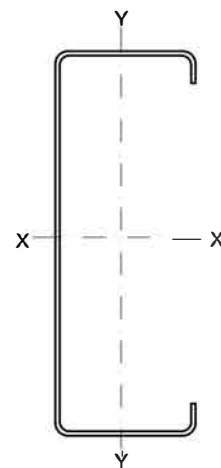
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.103
Torsional Warping Constant: Cw (in ⁶)	0.277
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.324
Radius of Gyration on the Centroid Principal axis: Ro (in)	2.026

PRODUCT ID

350S 162-33(3½x1⅝x20Sga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data