

Structural Stud (s)



MATERIAL	
Web (in)	5½
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)	1.11
Cross Sectional Area: A (in ²)	0.327
Moment of Inertia: Ix (in ⁴)	1.459
Section Modulus: Sx (in ³)	0.530
Radius of Gyration: Rx (in)	2.112
Moment of Inertia: Iy (in ⁴)	0.113
Radius of Gyration: Ry (in)	0.589

EFFECTIVE SECTION PROPERTIES	
Moment of Inertia-Deflection: Ixe (in ⁴)	1.459
Section Modulus: Sxe (in ³)	0.508
Local Buckling Allowable Moment: Mal (in-k)	10.03
Distortional Buckling Allowable Moment: Mad (in-k)	8.28
Allowable strong axis shear away from punch: Vag (lb)	698
Allowable strong axis shear at punch: Vanet (lb)	698
(check web crippling)	

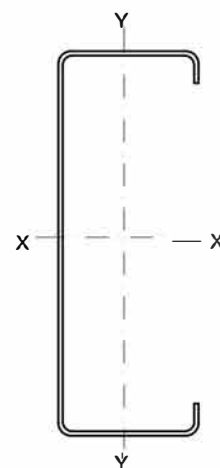
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.130
Torsional Warping Constant: Cw (in ⁶)	0.713
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.114
Radius of Gyration on the Centroid Principal axis: Ro (in)	2.459

PRODUCT ID

550S 162-33 (5½x1⅝x20Sga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data