

Structural Stud (s)



MATERIAL	
Web (in)	2½
Flange (in)	1⅝
Lip (in)	0.500
Yield Strength Fy (KSI)	33, 50
Tensile Strength Fu (KSI)	45, 65
Design Thickness (in)	0.0566
Minimum Thickness (mil)	54
Gauge	16
Available Finish G60, G90	

GROSS SECTION PROPERTIES	
Weight of Member: (lb/ft)	1.22
Cross Sectional Area: A (in ²)	0.358
Moment of Inertia: Ix (in ⁴)	0.370
Section Modulus: Sx (in ³)	0.296
Radius of Gyration: Rx (in)	1.016
Moment of Inertia: Iy (in ⁴)	0.135
Radius of Gyration: Ry (in)	0.613

EFFECTIVE SECTION PROPERTIES		
Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: Ixe (in ⁴)	0.370	0.370
Section Modulus: Sxe (in ³)	0.294	0.287
Local Buckling Allowable Moment: Mal (in-k)	6.53	8.60
Distortional Buckling Allowable Moment: Mad (in-k)	6.53	8.32
Allowable strong axis shear away from punch: Vag (lb)	1533	2353
Allowable strong axis shear at punch: Vanet (lb)	373	565

(check web crippling)

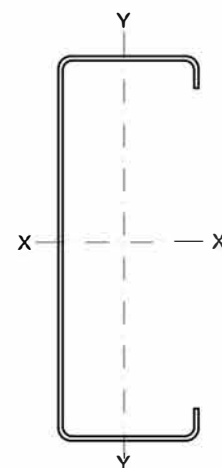
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.383
Torsional Warping Constant: Cw (in ⁶)	0.223
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.443
Radius of Gyration on the Centroid Principal axis: Ro (in)	1.868

PRODUCT ID

250S 162-54 (2½x1⅝x16ga)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data