

Structural Stud (s)



MATERIAL

Web (in)	3½
Flange (in)	1⅝
Lip (in)	0.500
Yield Strength Fy (KSI)	33, 50
Tensile Strength Fu (KSI)	45, 65
Design Thickness (in)	0.566
Minimum Thickness (mil)	54
Gauge	16
Available Finish G60, G90	

GROSS SECTION PROPERTIES

Weight of Member: (lb/ft)	1.41
Cross Sectional Area: A (in²)	0.415
Moment of Inertia: Ix (in⁴)	0.805
Section Modulus: Sx (in³)	0.460
Radius of Gyration: Rx (in)	1.393
Moment of Inertia: Iy (in⁴)	0.152
Radius of Gyration: Ry (in)	0.606

EFFECTIVE SECTION PROPERTIES

Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: Ixe (in⁴)	0.805	0.805
Section Modulus: Sxe (in³)	0.451	0.435
Local Buckling Allowable Moment: Mal (in-k)	10.01	13.02
Distortional Buckling Allowable Moment: Mad (in-k)	9.82	12.40
Allowable strong axis shear away from punch: Vag (lb)	2253	3372
Allowable strong axis shear at punch: Vanet (lb)	633	947

(check web crippling)

TORSIONAL SECTION PROPERTIES

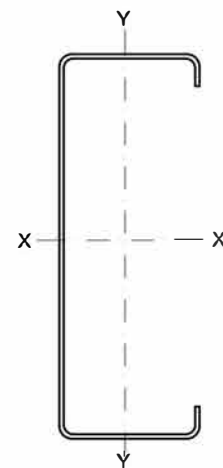
St. Venant Torsional Constant: Jx1000 (in⁴)	0.443
Torsional Warping Constant: Cw (in⁶)	0.426
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.298
Radius of Gyration on the Centroid Principal axis: Ro (in)	1.998

PRODUCT ID

350S 162-54(3½x1⅝x16ga)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data