

Structural Stud (s)



MATERIAL

Web (in)	4
Flange (in)	2
Lip (in)	0.625
Yield Strength F_y (KSI)	33, 50
Tensile Strength F_u (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)	1.70
Cross Sectional Area: A (in ²)	0.500
Moment of Inertia: I_x (in ⁴)	1.292
Section Modulus: S_x (in ³)	0.646
Radius of Gyration: R_x (in)	1.608
Moment of Inertia: I_y (in ⁴)	0.287
Radius of Gyration: R_y (in)	0.758

EFFECTIVE SECTION PROPERTIES

Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: I_{xe} (in ⁴)	1.292	1.292
Section Modulus: S_{xe} (in ³)	0.635	0.566
Local Buckling Allowable Moment: M_{al} (in-k)	12.54	16.94
Distortional Buckling Allowable Moment: M_{ad} (in-k)	11.67	16.60
Allowable strong axis shear away from punch: V_{ag} (lb)	2603	3372
Allowable strong axis shear at punch: V_{anet} (lb)	944	1223

(check web crippling)

TORSIONAL SECTION PROPERTIES

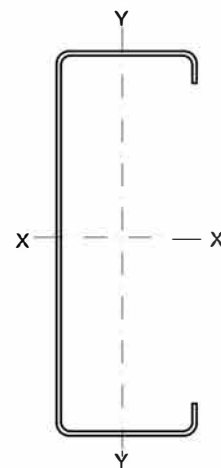
St. Venant Torsional Constant: J_{x1000} (in ⁴)	0.534
Torsional Warping Constant: C_w (in ⁶)	1.083
Shear Center to Centroid on Principal X-axis: X_o (in)	-1.662
Radius of Gyration on the Centroid Principal axis: R_o (in)	2.433

PRODUCT ID

400S 200-54 (4x2x16ga)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data