

Structural Stud (s)



MATERIAL

Web (in)	8
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)	2.47
Cross Sectional Area: A (in ²)	0.726
Moment of Inertia: I_x (in ⁴)	6.574
Section Modulus: S_x (in ³)	1.644
Radius of Gyration: R_x (in)	3.009
Moment of Inertia: I_y (in ⁴)	0.357
Radius of Gyration: R_y (in)	0.701

EFFECTIVE SECTION PROPERTIES

Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: I_{xe} (in ⁴)	6.573	6.573
Section Modulus: S_{xe} (in ³)	1.639	1.483
Local Buckling Allowable Moment: M_{al} (in-k)	35.67	44.41
Distortional Buckling Allowable Moment: M_{ad} (in-k)	29.35	36.01
Allowable strong axis shear away from punch: V_{ag} (lb)	2091	2091
Allowable strong axis shear at punch: V_{anet} (lb)	2091	2091

(check web crippling)

TORSIONAL SECTION PROPERTIES

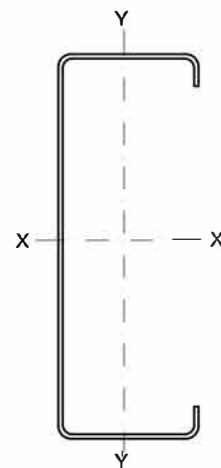
St. Venant Torsional Constant: J_{x1000} (in ⁴)	0.775
Torsional Warping Constant: C_w (in ⁶)	4.663
Shear Center to Centroid on Principal X-axis: X_o (in)	-1.265
Radius of Gyration on the Centroid Principal axis: R_o (in)	3.338

PRODUCT ID

800S 200-54 (8x2x16ga)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data