

Structural Stud (s)



MATERIAL

Web (in)	8
Flange (in)	2½
Lip (in)	0.625
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)	2.66
Cross Sectional Area: A (in ²)	0.783
Moment of Inertia: Ix (in ⁴)	7.467
Section Modulus: Sx (in ³)	1.867
Radius of Gyration: Rx (in)	3.089
Moment of Inertia: Iy (in ⁴)	0.614
Radius of Gyration: Ry (in)	0.886

EFFECTIVE SECTION PROPERTIES

Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: Ixe (in ⁴)	7.466	7.399
Section Modulus: Sxe (in ³)	1.703	1.49
Local Buckling Allowable Moment: Mal (in-k)	33.65	44.61
Distortional Buckling Allowable Moment: Mad (in-k)	29.16	37.84
Allowable strong axis shear away from punch: Vag (lb)	2091	2091
Allowable strong axis shear at punch: Vanet (lb)	2091	2091

(check web crippling)

TORSIONAL SECTION PROPERTIES

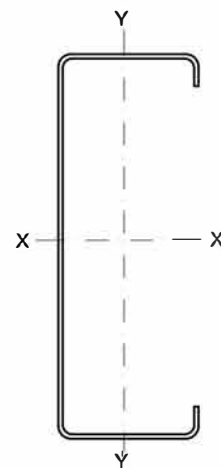
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.836
Torsional Warping Constant: Cw (in ⁶)	7.850
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.661
Radius of Gyration on the Centroid Principal axis: Ro (in)	3.617

PRODUCT ID

800S 250-54 (8x2½x16ga)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data