

Structural Stud (s)



MATERIAL

Web (in)	8
Flange (in)	2½
Lip (in)	0.625
Yield Strength Fy (KSI)	33
Tensile Strength Fu (KSI)	45
Design Thickness (in)	0.0451
Minimum Thickness (mil)	43
Gauge	18
Available Finish G60, G90	

GROSS SECTION PROPERTIES

Weight of Member: (lb/ft)	2.13
Cross Sectional Area: A (in ²)	0.627
Moment of Inertia: Ix (in ⁴)	6.017
Section Modulus: Sx (in ³)	1.504
Radius of Gyration: Rx (in)	3.097
Moment of Inertia: Iy (in ⁴)	0.500
Radius of Gyration: Ry (in)	0.893

EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: Ixe (in ⁴)	6.016
Section Modulus: Sxe (in ³)	1.294
Local Buckling Allowable Moment: Mal (in-k)	25.57
Distortional Buckling Allowable Moment: Mad (in-k)	21.41
Allowable strong axis shear away from punch: Vag (lb)	1051
Allowable strong axis shear at punch: Vanet (lb)	1051
(check web crippling)	

TORSIONAL SECTION PROPERTIES

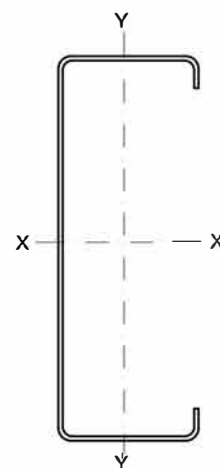
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.425
Torsional Warping Constant: Cw (in ⁶)	6.374
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.675
Radius of Gyration on the Centroid Principal axis: Ro (in)	3.632

PRODUCT ID

800S 250-43 (8x2½x18ga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data