

Structural Stud (s)



MATERIAL	
Web (in)	8
Flange (in)	1 $\frac{5}{8}$
Lip (in)	0.500
Yield Strength Fy (KSI)	33, 50
Tensile Strength Fu (KSI)	45, 65
Design Thickness (in)	0.0451
Minimum Thickness (mil)	43
Gauge	18
Available Finish G60, G90	

GROSS SECTION PROPERTIES	
Weight of Member: (lb/ft)	1.83
Cross Sectional Area: A (in ²)	0.537
Moment of Inertia: Ix (in ⁴)	4.635
Section Modulus: Sx (in ³)	1.159
Radius of Gyration: Rx (in)	2.938
Moment of Inertia: Iy (in ⁴)	0.160
Radius of Gyration: Ry (in)	0.546

EFFECTIVE SECTION PROPERTIES		
Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: Ixe (in ⁴)	4.505	3.945
Section Modulus: Sxe (in ³)	1.001	0.868
Local Buckling Allowable Moment: Mal (in-k)	19.78	25.98
Distortional Buckling Allowable Moment: Mad (in-k)	17.62	
Allowable strong axis shear away from punch: Vag (lb)	1051	1767
Allowable strong axis shear at punch: Vanet (lb)	1051	1568

(check web crippling)

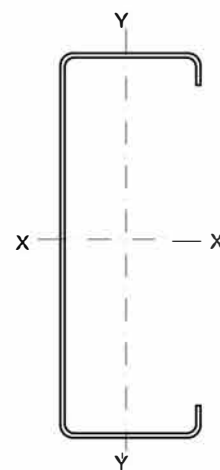
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.364
Torsional Warping Constant: Cw (in ⁶)	2.076
Shear Center to Centroid on Principal X-axis: Xo (in)	-0.926
Radius of Gyration on the Centroid Principal axis: Ro (in)	3.128

PRODUCT ID

800S 162-43 (8x1 $\frac{5}{8}$ x18ga)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data