

Structural Stud (s)



MATERIAL

Web (in)	8
Flange (in)	1 $\frac{3}{8}$
Lip (in)	0.375
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)	1.71
Cross Sectional Area: A (in ²)	0.503
Moment of Inertia: Ix (in ⁴)	4.135
Section Modulus: Sx (in ³)	1.034
Radius of Gyration: Rx (in)	2.866
Moment of Inertia: Iy (in ⁴)	0.093
Radius of Gyration: Ry (in)	0.430

EFFECTIVE SECTION PROPERTIES

Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: Ixe (in ⁴)	4.007	3.585
Section Modulus: Sxe (in ³)	0.876	0.796
Local Buckling Allowable Moment: Mal (in-k)	17.32	23.84
Distortional Buckling Allowable Moment: Mad (in-k)	14.99	
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

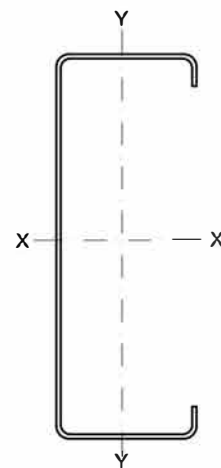
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.341
Torsional Warping Constant: Cw (in ⁶)	1.214
Shear Center to Centroid on Principal X-axis: Xo (in)	-0.687
Radius of Gyration on the Centroid Principal axis: Ro (in)	2.979

PRODUCT ID

800S 137-43 (8x1 $\frac{3}{8}$ x18ga)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data