

C – Joists with Small Punchout (J)



MATERIAL	
Web (in)	8
Flange (in)	1 $\frac{3}{8}$
Lip (in)	0.375
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)	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	
Moment of Inertia-Deflection: Ixe (in ⁴)	4.007
Section Modulus: Sxe (in ³)	0.876
Local Buckling Allowable Moment: Mal (in-k)	17.32
Distortional Buckling Allowable Moment: Mad (in-k)	14.99
Allowable strong axis shear away from punch: Vag (lb)	1051
Allowable strong axis shear at punch: Vanet (lb)	1051

(check web crippling)

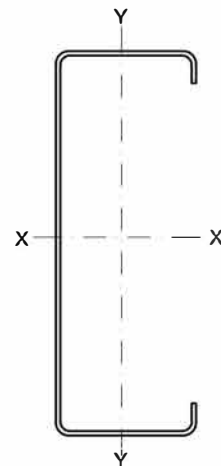
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.341
Torsional Warping Constant: Cw (in ⁶)	1.214
Shear Center to Centroid on Principal X-axis: Xo (in)	-0.687
Radius of Gyration on the Centroid Principal axis: Ro (in)	2.979

PRODUCT ID

800 J 137-43 (8x1 $\frac{3}{8}$ x18ga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data