

C – Joists with Small Punchout (J)



MATERIAL	
Web (in)	8
Flange (in)	2
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)	1.98
Cross Sectional Area: A (in ²)	0.582
Moment of Inertia: Ix (in ⁴)	5.303
Section Modulus: Sx (in ³)	1.326
Radius of Gyration: Rx (in)	3.018
Moment of Inertia: Iy (in ⁴)	0.292
Radius of Gyration: Ry (in)	0.708

EFFECTIVE SECTION PROPERTIES	
Moment of Inertia-Deflection: Ixe (in ⁴)	5.302
Section Modulus: Sxe (in ³)	1.288
Local Buckling Allowable Moment: Mal (in-k)	25.45
Distortional Buckling Allowable Moment: Mad (in-k)	20.34
Allowable strong axis shear away from punch: Vag (lb)	1051
Allowable strong axis shear at punch: Vanet (lb)	1051

(check web crippling)

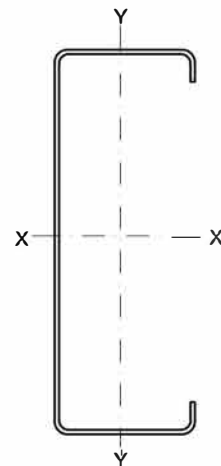
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.395
Torsional Warping Constant: Cw (in ⁶)	3.797
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.277
Radius of Gyration on the Centroid Principal axis: Ro (in)	3.353

PRODUCT ID

800 J 200-43 (8x2x18ga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data