

C – Joists

with Small Punchout (J)



MATERIAL	
Web (in)	10
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)	2.44
Cross Sectional Area: A (in²)	0.717
Moment of Inertia: Ix (in⁴)	10.205
Section Modulus: Sx (in³)	2.041
Radius of Gyration: Rx (in)	3.771
Moment of Inertia: Iy (in⁴)	0.531
Radius of Gyration: Ry (in)	0.860

EFFECTIVE SECTION PROPERTIES	
Moment of Inertia-Deflection: Ixe (in⁴)	8.838
Section Modulus: Sxe (in³)	1.579
Local Buckling Allowable Moment: Mal (in-k)	26.06
Distortional Buckling Allowable Moment: Mad (in-k)	22.43
Allowable strong axis shear away from punch: Vag (lb)	836
Allowable strong axis shear at punch: Vanet (lb)	669

(check web crippling)

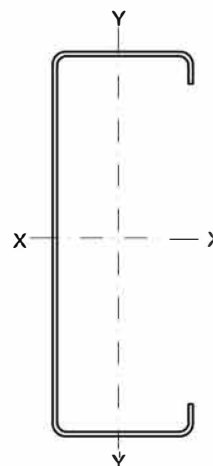
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in⁴)	0.486
Torsional Warping Constant: Cw (in⁶)	10.481
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.518
Radius of Gyration on the Centroid Principal axis: Ro (in)	4.155

PRODUCT ID

1000 J 250-43 (10x2½x18ga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data