

C – Joists with Small Punchout (J)



MATERIAL	
Web (in)	10
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)	2.29
Cross Sectional Area: A (in ²)	0.672
Moment of Inertia: Ix (in ⁴)	9.088
Section Modulus: Sx (in ³)	1.818
Radius of Gyration: Rx (in)	3.676
Moment of Inertia: Iy (in ⁴)	0.309
Radius of Gyration: Ry (in)	0.677

EFFECTIVE SECTION PROPERTIES	
Moment of Inertia-Deflection: Ixe (in ⁴)	8.094
Section Modulus: Sxe (in ³)	1.440
Local Buckling Allowable Moment: Mal (in-k)	23.76
Distortional Buckling Allowable Moment: Mad (in-k)	21.21
Allowable strong axis shear away from punch: Vag (lb)	836
Allowable strong axis shear at punch: Vanet (lb)	669

(check web crippling)

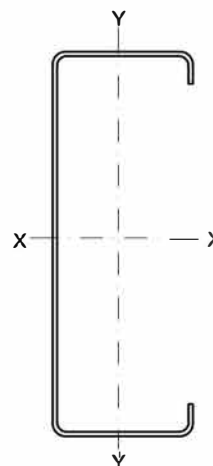
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in ⁴)	0.456
Torsional Warping Constant: Cw (in ⁶)	6.236
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.147
Radius of Gyration on the Centroid Principal axis: Ro (in)	3.910

PRODUCT ID

1000 J 200-43 (10x2x18ga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data