

C – Joists with Small Punchout (J)



MATERIAL	
Web (in)	12
Flange (in)	2½
Lip (in)	0.625
Yield Strength Fy (KSI)	33, 50
Tensile Strength Fu (KSI)	45, 65
Design Thickness (in)	0.0566
Minimum Thickness (mil)	54
Gauge	16
Available Finish G60, G90	

GROSS SECTION PROPERTIES	
Weight of Member: (lb/ft)	3.43
Cross Sectional Area: A (in ²)	1.009
Moment of Inertia: Ix (in ⁴)	19.687
Section Modulus: Sx (in ³)	3.281
Radius of Gyration: Rx (in)	4.417
Moment of Inertia: Iy (in ⁴)	0.683
Radius of Gyration: Ry (in)	0.823

EFFECTIVE SECTION PROPERTIES		
Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: Ixe (in ⁴)	18.858	18.511
Section Modulus: Sxe (in ³)	2.429	2.108
Local Buckling Allowable Moment: Mal (in-k)	40.08	52.69
Distortional Buckling Allowable Moment: Mad (in-k)	36.91	47.35
Allowable strong axis shear away from punch: Vag (lb)	1377	1377
Allowable strong axis shear at punch: Va net (lb)	1102	1102

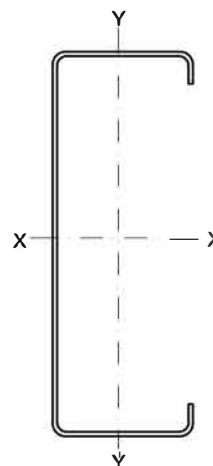
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in ⁴)	1.078
Torsional Warping Constant: Cw (in ⁶)	19.505
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.378
Radius of Gyration on the Centroid Principal axis: Ro (in)	4.699

PRODUCT ID

1200 J 250-54 (12x2½x16ga)

CODES & STANDARDS

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



(check web crippling)

See Hermes/Hephaistos Technical Manual
for complete design data