

C – Joists with Small Punchout (J)



MATERIAL	
Web (in)	12
Flange (in)	3½
Lip (in)	1
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)	3.96
Cross Sectional Area: A (in²)	1.165
Moment of Inertia: Ix (in⁴)	24.866
Section Modulus: Sx (in³)	4.144
Radius of Gyration: Rx (in)	4.620
Moment of Inertia: Iy (in⁴)	1.866
Radius of Gyration: Ry (in)	1.266

EFFECTIVE SECTION PROPERTIES		
Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: Ixe (in⁴)	24.649	24.159
Section Modulus: Sxe (in³)	3.244	2.707
Local Buckling Allowable Moment: Mal (in-k)	53.52	67.67
Distortional Buckling Allowable Moment: Mad (in-k)	47.72	61.32
Allowable strong axis shear away from punch: Vag (lb)	1377	1377
Allowable strong axis shear at punch: Va net (lb)	1102	1102

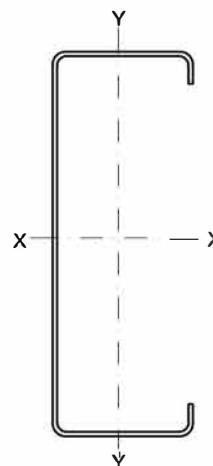
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in⁴)	1.244
Torsional Warping Constant: Cw (in⁶)	54.279
Shear Center to Centroid on Principal X-axis: Xo (in)	-2.363
Radius of Gyration on the Centroid Principal axis: Ro (in)	5.342

PRODUCT ID

1200 J 350-54 (12x3½x16ga)

CODES & STANDARDS

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



(check web crippling)

See Hermes/Hephaistos Technical Manual
for complete design data