

C – Joists

with Small Punchout (J)



MATERIAL	
Web (in)	16
Flange (in)	3
Lip (in)	1
Yield Strength Fy (KSI)	33, 50
Tensile Strength Fu (KSI)	45, 65
Design Thickness (in)	0.1017
Minimum Thickness (mil)	97
Gauge	12
Available Finish G60, G90	

GROSS SECTION PROPERTIES	
Weight of Member: (lb/ft)	7.78
Cross Sectional Area: A (in ²)	2.288
Moment of Inertia: Ix (in ⁴)	75.929
Section Modulus: Sx (in ³)	9.491
Radius of Gyration: Rx (in)	5.761
Moment of Inertia: Iy (in ⁴)	1.910
Radius of Gyration: Ry (in)	0.914

EFFECTIVE SECTION PROPERTIES		
Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: Ixe (in ⁴)	75.855	72.942
Section Modulus: Sxe (in ³)	8.959	7.291
Local Buckling Allowable Moment: Mal (in-k)	177.03	218.29
Distortional Buckling Allowable Moment: Mad (in-k)	165.02	182.59
Allowable strong axis shear away from punch: Vag (lb)	6,042	6,042
Allowable strong axis shear at punch: Va net (lb)	6,042	6,042

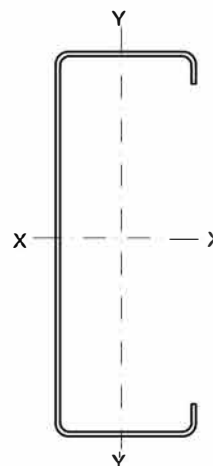
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in ⁴)	7.887
Torsional Warping Constant: Cw (in ⁶)	98.275
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.463
Radius of Gyration on the Centroid Principal axis: Ro (in)	6.014

PRODUCT ID

1600 J 300-97 (16x3x12ga)

CODES & STANDARDS

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



(check web crippling)

See Hermes/Hephaistos Technical Manual
for complete design data