C – Joists
with Small Punchout (J)

MATERIAL	
Web (in)	10
Flange (in)	1⅝
Lip (in)	0.500
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)	2.66
Cross Sectional Area: A (in^2)	0.783
Moment of Inertia: Ix (in^4)	9.954
Section Modulus: Sx (in^3)	1.991
Radius of Gyration: Rx (in)	3.566
Moment of Inertia: Iy (in^4)	0.204
Radius of Gyration: Ry (in)	0.511

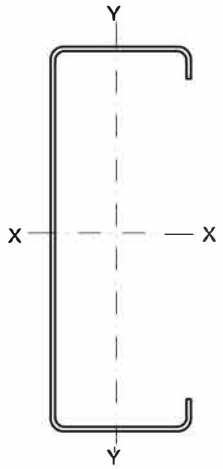
EFFECTIVE SECTION PROPERTIES		
Yield Stress (ksi)	33	50
Moment of Inertia-Deflection: Ixe (in^4)	9.205	8.706
Section Modulus: Sxe (in^3)	**1.694**	1.531
Local Buckling Allowable Moment:Mal (in-k)	33.47	45.83
Distortional Buckling Allowable Moment: Mad (in-k)	29.91	38.68
Allowable strong axis shear away from punch: Vag (lb)	1660	1660
Allowable strong axis shear at punch: Va net (lb)	1660	1660

(check web crippling)

TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in^4)	0.836
Torsional Warping Constant: Cw (in^6)	4.198
Shear Center to Centroid on Principal X-axis: Xo (in)	-0.812
Radius of Gyration on the Centroid Principal axis: Ro (in)	3.693

PRODUCT ID
1000 J 162-54 (10x1⅝x16ga)

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



See Hermes/Hephaistos Technical Manual for complete design data

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