C – Joists
with Small Punchout (J)

MATERIAL	
Web (in)	16
Flange (in)	2½
Lip (in)	0.625
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)	7.44
Cross Sectional Area: A (in^2)	2.186
Moment of Inertia: Ix (in^4)	69.503
Section Modulus: Sx (in^3)	8.688
Radius of Gyration: Rx (in)	5.639
Moment of Inertia: Iy (in^4)	1.193
Radius of Gyration: Ry (in)	0.739

EFFECTIVE SECTION PROPERTIES		
Yield Stress (ksi)	**33**	**50**
Moment of Inertia-Deflection: Ixe (in^4)	65.389	66.649
Section Modulus: Sxe (in^3)	**7.673**	6.888
Local Buckling Allowable Moment:Mal (in-k)	151.61	206.22
Distortional Buckling Allowable Moment: Mad (in-k)	133.72	172.62
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

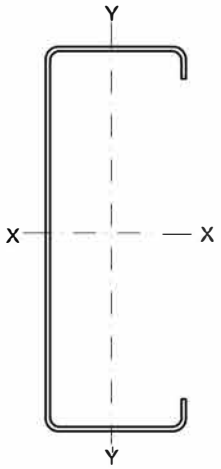
(check web crippling)

TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in^4)	7.356
Torsional Warping Constant: Cw (in^6)	63.082
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.138
Radius of Gyration on the Centroid Principal axis: Ro (in)	5.800

PRODUCT ID
1600 J 250-97 (16x2½x12ga)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual for complete design data

Phone: (718) 482-0800
Email: info@hermeshardware.com
Address: 24-02 37th Ave, LIC, NY 11101

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