Structural Stud (S)

MATERIAL	
Web (in)	4
Flange (in)	2
Lip (in)	0.625
Yield Strength Fy (KSI)	50
Tensile Strength Fu (KSI)	65
Design Thickness (in)	0.1017
Minimum Thickness (mil)	97
Gauge	12
Available Finish G60, G90	

GROSS SECTION PROPERTIES	
Weight of Member: (lb/ft)	2.94
Cross Sectional Area: A (in^2)	0.864
Moment of Inertia: Ix (in^4)	2.156
Section Modulus: Sx (in^3)	1.078
Radius of Gyration: Rx (in)	1.580
Moment of Inertia: Iy (in^4)	0.463
Radius of Gyration: Ry (in)	0.732

EFFECTIVE SECTION PROPERTIES	
Moment of Inertia-Deflection: Ixe (in^4)	2.157
Section Modulus: Sxe (in^3)	1.064
Local Buckling Allowable Moment: Mal (in-k)	36.71
Distortional Buckling Allowable Moment: Mad (in-k)	36.38
Allowable strong axis shear away from punch: Vag (lb)	6658
Allowable strong axis shear at punch: Vanet (lb)	1207
(check web crippling)	

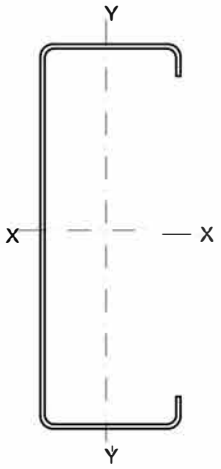
TORSIONAL SECTION PROPERTIES	
St. Venant Torsional Constant: Jx1000 (in^4)	2.978
Torsional Warping Constant: Cw (in^6)	1.749
Shear Center to Centroid on Principal X-axis: Xo (in)	-1.605
Radius of Gyration on the Centroid Principal axis: Ro (in)	2.368

PRODUCT ID

400S 200-97 (4x2x12ga) (Grade 50)

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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