

Structural Stud (s)



MATERIAL

Web (in)	8
Flange (in)	2
Lip (in)	0.625
Yield Strength F_y (KSI)	33
Tensile Strength F_u (KSI)	45
Design Thickness (in)	0.0346
Minimum Thickness (mil)	33
Gauge	20S
Available Finish G60, G90	

GROSS SECTION PROPERTIES

Weight of Member: (lb/ft)	1.52
Cross Sectional Area: A (in ²)	0.448
Moment of Inertia: I_x (in ⁴)	4.097
Section Modulus: S_x (in ³)	1.024
Radius of Gyration: R_x (in)	3.024
Moment of Inertia: I_y (in ⁴)	0.227
Radius of Gyration: R_y (in)	0.712

EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: I_{xe} (in ⁴)	4.096
Section Modulus: S_{xe} (in ³)	0.792
Local Buckling Allowable Moment: M_{al} (in-k)	13.06
Distortional Buckling Allowable Moment: M_{ad} (in-k)	11.76
Allowable strong axis shear away from punch: V_{ag} (lb)	379
Allowable strong axis shear at punch: V_{anet} (lb)	379
(check web crippling)	

TORSIONAL SECTION PROPERTIES

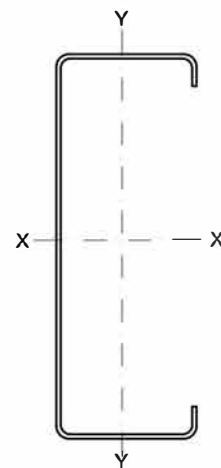
St. Venant Torsional Constant: J_{x1000} (in ⁴)	0.179
Torsional Warping Constant: C_w (in ⁶)	2.971
Shear Center to Centroid on Principal X-axis: X_o (in)	-1.288
Radius of Gyration on the Centroid Principal axis: R_o (in)	3.363

PRODUCT ID

800S 200-33 (8x2x20Sga) (Grade 33)

CODES & STANDARDS

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



See Hermes/Hephaistos Technical Manual
for complete design data