

Structural Stud 400S200-97

Product Description 12 GA GALV 4.00" WEB X 2.00" FLANGE C-STUD .097 MIN GAUGE

Coating G60

Physical Properties

Design Thickness (in) 0.1017
 Minimum Thickness (in) 0.0966
 Web Width (in) 4.0000
 Flange Width (in) 2.0000
 Stiffening Lip (in) 0.6250
 Yield Strength (ksi) 50.0000



Gross Section Properties	
Cross Sectional Area (A)	0.864
Weight of Member (lb/ft)	2.94
Section Modulus (Sx)	1.078
Moment of Inertia (Ix)	2.156
Radius of Gyration (Rx)	1.580
Gross Moment of Inertia (Iy)	0.463
Gross Radium of Gyration (Ry)	0.732

Effective Section Properties	
Moment of Inertia for deflection (Ixe)	2.156
Section Modulus (Sxe)	1.064
Allowable Bending moment (Ma)	36.69
Allowable shear force in web (U)(Vag)	6658
Allowable shear at punch (Vanet)	1207

Torsional Properties	
St. Venant torsion constant (J x 1000)	2.978
Warping constant (Cw)	1.749
Distance from shear center to neutral axis (Xo)	-1.605
Radii of gyration (Ro)	2.368
Torsional flexural constant (Beta)	0.541

Punch Out



ASTM & Code Standards

- AISI S100-12 & ICC ES ESR-4062
- Framing meets ASTM A1003, A653 & C955

Notes

1. Calculated properties are based on AISI S100-16, North American Specification for Design of Cold-Formed Steel Structural Members.
2. The centerline bend radius is based on inside corner radii shown in thickness chart.
3. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A3.3.2.
4. Tabulated gross properties are based on full-unreduced cross section of the studs, away from punch outs.
5. For deflection calculations, use the effective moment of inertia.
6. Allowable moment includes cold-work of forming.

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- MR Credit 2** • ConstructionWaste Management – Mill Steel Framing steel framing is 100% recyclable
- MR Credit 4** • Recycled Content – Mill Steel Framing products contain no less than 25.5% post-consumer and 6.8% pre-consumer recycled content
- MR Credit 5** • Regional Materials – Mill Steel Framing has manufacturing facilities in Indiana, Alabama & Texas
- V4 MR Credits** • Building Product Disclosure and Optimization EPD (1 point)
- Materials Ingredients (1 point) – Construction and Demolition Waste Management (1 point)

