

Structural Stud 400S200-43G90

Product Description 18 GA GALV 4.00" WEB X 2.00" FLANGE C-STUD .043 MIN GAUGE G90

Coating G90

Physical Properties

Design Thickness (in) 0.0451
 Minimum Thickness (in) 0.0428
 Web Width (in) 4.0000
 Flange Width (in) 2.0000
 Stiffening Lip (in) 0.6250
 Yield Strength (ksi) 33.0000



Gross Section Properties	
Cross Sectional Area (A)	0.402
Weight of Member (lb/ft)	1.37
Section Modulus (Sx)	0.524
Moment of Inertia (Ix)	1.048
Radius of Gyration (Rx)	1.615
Gross Moment of Inertia (Iy)	0.235
Gross Radium of Gyration (Ry)	0.764

Effective Section Properties	
Moment of Inertia for deflection (Ixe)	1.048
Section Modulus (Sxe)	0.478
Allowable Bending moment (Ma)	9.45
Allowable shear force in web (U)(Vag)	1739
Allowable shear at punch (Vanet)	810

Torsional Properties	
St. Venant torsion constant (J x 1000)	0.272
Warping constant (Cw)	0.886
Distance from shear center to neutral axis (Xo)	-1.676
Radii of gyration (Ro)	2.450
Torsional flexural constant (Beta)	0.532

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.

Mill Steel Framing LEED Green Credits

- 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)

