

Structural Stud 400S162-43G90

Product Description 18 GA GALV 4.00" WEB x 1.62" 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)	1.6250
Stiffening Lip (in)	0.5000
Yield Strength (ksi)	33.0000



Gross Section Properties

Cross Sectional Area (A)	0.357
Weight of Member (lb/ft)	1.21
Section Modulus (Sx)	0.446
Moment of Inertia (Ix)	0.892
Radius of Gyration (Rx)	1.581
Gross Moment of Inertia (Iy)	0.131
Gross Radium of Gyration (Ry)	0.606

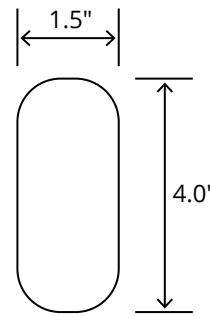
Effective Section Properties

Moment of Inertia for deflection (Ixe)	0.892
Section Modulus (Sxe)	0.417
Allowable Bending moment (Ma)	8.23
Allowable shear force in web (U)(Vag)	1739
Allowable shear at punch (Vanet)	810

Torsional Properties

St. Venant torsion constant (J x 1000)	0.242
Warping constant (Cw)	0.460
Distance from shear center to neutral axis (Xo)	-1.252
Radii of gyration (Ro)	2.106
Torsional flexural constant (Beta)	0.647

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)

