

Structural Stud 400S300-54G90

Product Description 16 GA GALV 4.00" WEB X 3.00"
FLANGE C-STUD .054 MIN
GAUGE G90

Coating

G90

Physical Properties

Design Thickness (in)	0.0566
Minimum Thickness (in)	0.0538
Web Width (in)	4.0000
Flange Width (in)	3.0000
Stiffening Lip (in)	0.6250
Yield Strength (ksi)	50.0000



Gross Section Properties

Cross Sectional Area (A)	0.613
Weight of Member (lb/ft)	2.09
Section Modulus (Sx)	0.866
Moment of Inertia (Ix)	1.732
Radius of Gyration (Rx)	1.681
Gross Moment of Inertia (Iy)	0.760
Gross Radium of Gyration (Ry)	1.114

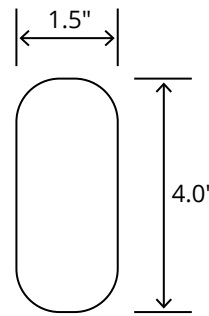
Effective Section Properties

Moment of Inertia for deflection (Ixe)	1.612
Section Modulus (Sxe)	0.592
Allowable Bending moment (Ma)	17.72
Allowable shear force in web (U)(Vag)	3372
Allowable shear at punch (Vanet)	1223

Torsional Properties

St. Venant torsion constant (J x 1000)	0.655
Warping constant (Cw)	2.802
Distance from shear center to neutral axis (Xo)	-2.594
Radii of gyration (Ro)	3.285
Torsional flexural constant (Beta)	0.377

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)

