

## Structural Stud 800S250-43G90

**Product Description** 18 GA GALV 8.00" WEB x 2.50" FLANGE C-STUD .043 MIN GAUGE G90

**Coating** G90

**Physical Properties**

Design Thickness (in) 0.0451  
 Minimum Thickness (in) 0.0428  
 Web Width (in) 8.0000  
 Flange Width (in) 2.5000  
 Stiffening Lip (in) 0.6250  
 Yield Strength (ksi) 33.0000



Gross Section Properties	
Cross Sectional Area (A)	0.627
Weight of Member (lb/ft)	2.13
Section Modulus (Sx)	1.504
Moment of Inertia (Ix)	6.017
Radius of Gyration (Rx)	3.097
Gross Moment of Inertia (Iy)	0.500
Gross Radium of Gyration (Ry)	0.893

Effective Section Properties	
Moment of Inertia for deflection (Ixe)	6.015
Section Modulus (Sxe)	1.314
Allowable Bending moment (Ma)	25.96
Allowable shear force in web (U)(Vag)	1051
Allowable shear at punch (Vanet)	1051

Torsional Properties	
St. Venant torsion constant (J x 1000)	0.425
Warping constant (Cw)	6.374
Distance from shear center to neutral axis (Xo)	-1.675
Radii of gyration (Ro)	3.632
Torsional flexural constant (Beta)	0.787

### 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)

