

Structural Stud 400S250-43

Product Description 18 GA GALV 4.00" WEB X 2.50" FLANGE C-STUD .043 MIN GAUGE

Coating G60

Physical Properties

Design Thickness (in) 0.0451
 Minimum Thickness (in) 0.0428
 Web Width (in) 4.0000
 Flange Width (in) 2.5000
 Stiffening Lip (in) 0.6250
 Yield Strength (ksi) 33.0000



Gross Section Properties

| | |
|-------------------------------|-------|
| Cross Sectional Area (A) | 0.447 |
| Weight of Member (lb/ft) | 1.52 |
| Section Modulus (Sx) | 0.612 |
| Moment of Inertia (Ix) | 1.224 |
| Radius of Gyration (Rx) | 1.655 |
| Gross Moment of Inertia (Iy) | 0.399 |
| Gross Radium of Gyration (Ry) | 0.945 |

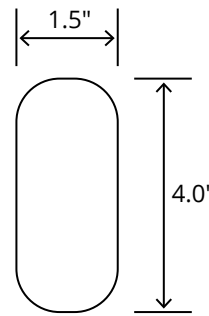
Effective Section Properties

| | |
|--|-------|
| Moment of Inertia for deflection (Ixe) | 1.224 |
| Section Modulus (Sxe) | 0.503 |
| Allowable Bending moment (Ma) | 9.93 |
| Allowable shear force in web (U)(Vag) | 1739 |
| Allowable shear at punch (Vanet) | 810 |

Torsional Properties

| | |
|---|--------|
| St. Venant torsion constant (J x 1000) | 0.303 |
| Warping constant (Cw) | 1.486 |
| Distance from shear center to neutral axis (Xo) | -2.139 |
| Radii of gyration (Ro) | 2.865 |
| Torsional flexural constant (Beta) | 0.443 |

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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 • Materials Ingredients (1 point) – Construction and Demolition Waste Management (1 point)

