Product Name: 600S400-97



Product Category: 05.40.00 - Cold-Formed Metal Framing

Available Finish:	G60, G90
*Other standard coatings refe	erenced in ASTM A1003
Web Depth:	6 in

Flange Width: 4 in

Design Thickness: 0.1017 in

Gauge: 97 mils or 12G

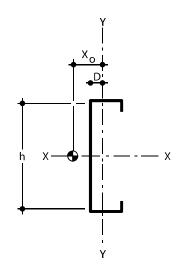
Yield stress, Fy: 50 ksi

Weight: 5.28 lb/ft

- Calculated properties are based on AISI S100-16/S240-20, North American Specification for Design of Cold-Formed Steel Structural Members and meets the requirements of the IBC 2021 Building Code.
- The centerline bend radius is based on inside corner radii shown in thickness chart.
- Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
- Tabulated gross properties are based on full-unreduced cross section of the studs, away from punchouts.
- For deflection calculations, use the effective moment of inertia.
- Allowable moment includes coldwork of forming.
- For the steels that have both 33 and 50 ksi listing, if the design is based on 50 ksi, the 50 ksi steel needs to be specified. (ex. 3.625S137 16-50 (50 ksi))

Gross Section Properties

Cross sectional area (A)	1.550 in ²
Moment of inertia (Ix)	9.516 in⁴
Section Modulus (Sx)	3.172 in ³
Radius of gyration (Rx)	2.478 in
Gross moment of inertia (ly)	3.471 in ⁴
Gross Radius of gyration (Rv)	1.496 in



Effective Section Properties

Moment of inertia for deflection (Ix)	9.466 in⁴
Section modulus (Sx)	2.668 in ³
Allowable bending moment (Ma)	79.890 In-k
Allowable bending moment from distortional buckling (Mad)	81.61 ln-k
Allowable strong axis shear away from punch-out (Vag)	10472 lb
Allowable strong axis shear at punch out (Vanet)	3805 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	5.345 in⁴
Warping constant (Cw)	29.825 in ⁶
Distance from shear center to neutral axis (Xo)	-3.448 in
Distance from shear center to mid-plane of web (m)	2.010 in
Radii of gyration (Ro)	4.501 in
Torsional flexural constant (β)	0.413
Unbraced Length (Lu)	83.0 in

Additional Information