

## 600S250-54 (50ksi) (Standard Punch)

Product Description: 6" Stud 16GA (2-1/2" Flange, 54 mil)

Coating: G60 (standard), G90 (special order)

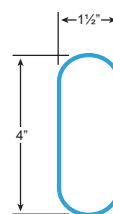
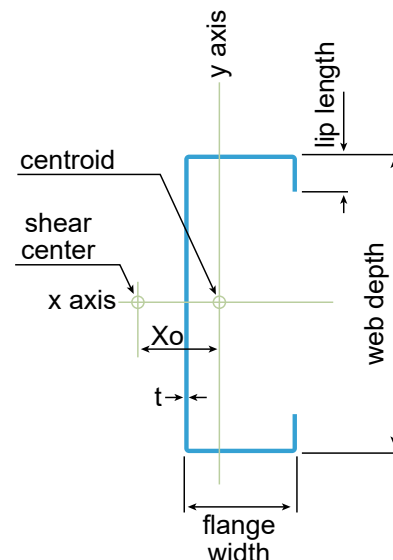
Specification Section: 05.40.00 (Cold-Formed Metal Framing)

GEOMETRIC PROPERTIES			
Web Depth	6 in.	Yield Strength, $F_y$	50 ksi
Flange Width	2.5 in.	Design Thickness	0.0566 in.
Lip Length	0.625 in.	Min. Steel Thickness	0.0538 in.

GROSS PROPERTIES		
Area (in <sup>2</sup> )	Total cross-sectional steel area	0.670
Weight (lb/ft)	Linear weight per foot	2.28
$I_x$ (in <sup>4</sup> )	Moment of inertia about the x-axis	3.820
$S_x$ (in <sup>3</sup> )	Section modulus about the x-axis	1.273
$R_x$ (in)	Radius of gyration about the x-axis	2.389
$I_y$ (in <sup>4</sup> )	Moment of inertia about the y-axis	0.562
$R_y$ (in)	Radius of gyration about the y-axis	0.917

EFFECTIVE PROPERTIES		
$I_x$ (in <sup>3</sup> )	Effective moment of inertia (x-axis)	3.774
$S_x$ (in <sup>3</sup> )	Effective section modulus (x-axis)	1.054
$M_a$ (in-k)	Allowable bending moment-effective section modulus	31.56
$M_{ad}$ (in-k)	Allowable bending moment-distortional buckling	27.70
$V_a$ (lb)	Allowable shear force in web	2822
$V_{a_{net}}$ (lb)	Allowable strong axis shear at punchout	1947

TORSIONAL PROPERTIES		
$J \times 1000$ (in <sup>4</sup> )	St. Venant torsional constant	0.715
$C_w$ (in <sup>6</sup> )	Warping constant	4.194
$X_o$ (in)	Distance from shear center to centroid	-1.860
$m$ (in)	Distance from shear center to mid-plane of web	1.129
$R_o$ (in)	Polar radius of gyration	3.163
Beta	Torsional Flexural Constant	0.654



First punchout is centered 12" from beginning of member; subsequent punchouts are 24" on center (o.c.). Center of last punchout is no less than 12" from end of member.

### CODES AND STANDARDS:

Super Stud products comply with the applicable provisions of the following:

- International Building Code (IBC): 2006–2024
- AISI S100-16 (2020) w/S2-20 (effective properties include cold-work strength increase)
- Sheet Steel: ASTM A1003/A1003M; ASTM A653/A653M
- Galvanized Coating: ASTM A653/A653M

### Structural Members:

- ASTM C955; AISI S240
- Installed per ASTM C1007

### Additional Standards:

- AISI S201; AISI S202

### 3rd Party Certification

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