

## 550S162-97 (Standard Punch)

Product Description: 5-1/2" Stud 12GA (1-5/8" Flange, 97 mil)

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

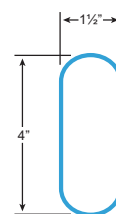
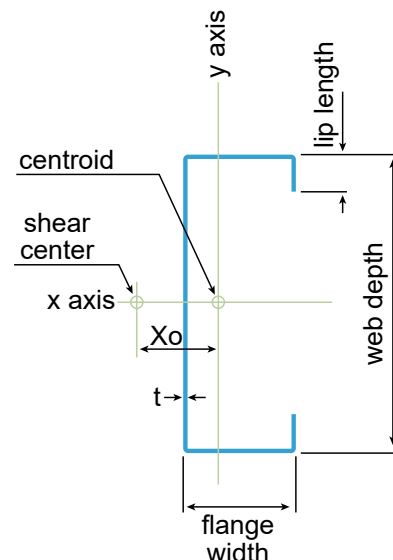
Specification Section: 05.40.00 (Cold-Formed Metal Framing)

| GEOMETRIC PROPERTIES |           |                       |            |
|----------------------|-----------|-----------------------|------------|
| Web Depth            | 5.5 in.   | Yield Strength, $F_y$ | 50 ksi     |
| Flange Width         | 1.625 in. | Design Thickness      | 0.1017 in. |
| Lip Length           | 0.500 in. | Min. Steel Thickness  | 0.0966 in. |

| GROSS PROPERTIES         |                                     |       |
|--------------------------|-------------------------------------|-------|
| Area (in <sup>2</sup> )  | Total cross-sectional steel area    | 0.915 |
| Weight (lb/ft)           | Linear weight per foot              | 3.11  |
| $I_x$ (in <sup>4</sup> ) | Moment of inertia about the x-axis  | 3.887 |
| $S_x$ (in <sup>3</sup> ) | Section modulus about the x-axis    | 1.414 |
| $R_x$ (in)               | Radius of gyration about the x-axis | 2.062 |
| $I_y$ (in <sup>4</sup> ) | Moment of inertia about the y-axis  | 0.276 |
| $R_y$ (in)               | Radius of gyration about the y-axis | 0.550 |

| EFFECTIVE PROPERTIES     |                                                    |       |
|--------------------------|----------------------------------------------------|-------|
| $I_x$ (in <sup>3</sup> ) | Effective moment of inertia (x-axis)               | 3.889 |
| $S_x$ (in <sup>3</sup> ) | Effective section modulus (x-axis)                 | 1.404 |
| $M_a$ (in-k)             | Allowable bending moment-effective section modulus | 49.79 |
| $M_{ad}$ (in-k)          | Allowable bending moment-distortional buckling     | 48.69 |
| $V_a$ (lb)               | Allowable shear force in web                       | 9518  |
| $V_{a_{net}}$ (lb)       | Allowable strong axis shear at punchout            | 3026  |

| TORSIONAL PROPERTIES               |                                                |        |
|------------------------------------|------------------------------------------------|--------|
| $J \times 1000$ (in <sup>4</sup> ) | St. Venant torsional constant                  | 3.154  |
| $C_w$ (in <sup>6</sup> )           | Warping constant                               | 1.775  |
| $X_o$ (in)                         | Distance from shear center to centroid         | -1.037 |
| $m$ (in)                           | Distance from shear center to mid-plane of web | 0.656  |
| $R_o$ (in)                         | Polar radius of gyration                       | 2.372  |
| Beta                               | Torsional Flexural Constant                    | 0.809  |



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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