

## 1600S300-118 (Standard Punch)

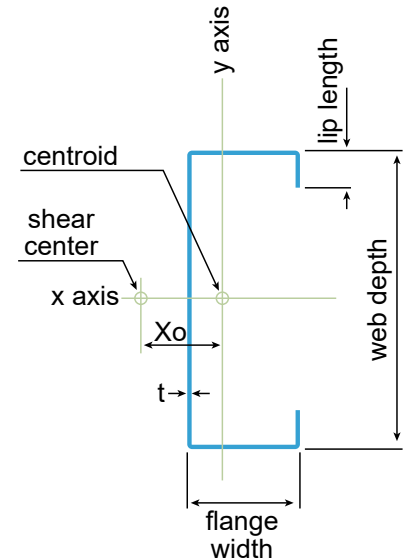
Product Description: 16" Stud 10GA (3" Flange, 118 mil)

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

Specification Section: 05.40.00 (Cold-Formed Metal Framing)

| GEOMETRIC PROPERTIES |           |                       |            |
|----------------------|-----------|-----------------------|------------|
| Web Depth            | 16 in.    | Yield Strength, $F_y$ | 50 ksi     |
| Flange Width         | 3 in.     | Design Thickness      | 0.1242 in. |
| Lip Length           | 0.625 in. | Min. Steel Thickness  | 0.1180 in. |

| GROSS PROPERTIES                   |                                                    |         |
|------------------------------------|----------------------------------------------------|---------|
| Area (in <sup>2</sup> )            | Total cross-sectional steel area                   | 2.773   |
| Weight (lb/ft)                     | Linear weight per foot                             | 9.43    |
| $I_x$ (in <sup>4</sup> )           | Moment of inertia about the x-axis                 | 91.284  |
| $S_x$ (in <sup>3</sup> )           | Section modulus about the x-axis                   | 11.411  |
| $R_x$ (in)                         | Radius of gyration about the x-axis                | 5.738   |
| $I_y$ (in <sup>4</sup> )           | Moment of inertia about the y-axis                 | 2.240   |
| $R_y$ (in)                         | Radius of gyration about the y-axis                | 0.899   |
| EFFECTIVE PROPERTIES               |                                                    |         |
| $I_x$ (in <sup>3</sup> )           | Effective moment of inertia (x-axis)               | 89.961  |
| $S_x$ (in <sup>3</sup> )           | Effective section modulus (x-axis)                 | 9.756   |
| $M_a$ (in-k)                       | Allowable bending moment-effective section modulus | 292.10  |
| $M_{ad}$ (in-k)                    | Allowable bending moment-distortional buckling     | 244.86  |
| $V_a$ (lb)                         | Allowable shear force in web                       | 11086   |
| $V_{a_{net}}$ (lb)                 | Allowable strong axis sheer at punchout            | 11086   |
| TORSIONAL PROPERTIES               |                                                    |         |
| $J \times 1000$ (in <sup>4</sup> ) | St. Venant torsional constant                      | 14.258  |
| $C_w$ (in <sup>6</sup> )           | Warping constant                                   | 116.606 |
| $X_o$ (in)                         | Distance from shear center to centroid             | -1.439  |
| $m$ (in)                           | Distance from shear center to mid-plane of web     | 0.951   |
| $R_o$ (in)                         | Polar radius of gyration                           | 5.983   |
| Beta                               | Torsional Flexural Constant                        | 0.942   |



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/EB Metal US products comply with the applicable provisions of the following:

- International Building Code (IBC): 2006–2024
- AISI S100-16 (2020) w/S2-20
- 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

For LEED Letter requests please submit through:  
[www.buysuperstud.com](http://www.buysuperstud.com) or [www.ebmetal.us](http://www.ebmetal.us)

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