

## 400S200-118 (Standard Punch)

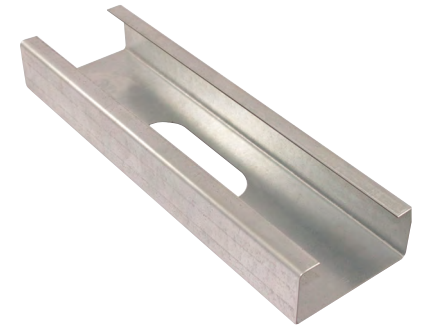
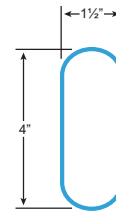
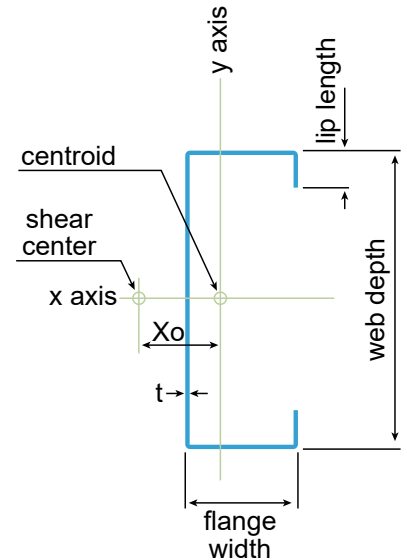
Product Description: 4" Stud 10GA (2" Flange, 118 mil)

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

Specification Section: 05.40.00 (Cold-Formed Metal Framing)

GEOMETRIC PROPERTIES			
Web Depth	4 in.	Yield Strength, $F_y$	50 ksi
Flange Width	2 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	1.0342
Weight (lb/ft)	Linear weight per foot	3.5163
$I_x$ (in <sup>4</sup> )	Moment of inertia about the x-axis	2.5356
$S_x$ (in <sup>3</sup> )	Section modulus about the x-axis	1.2678
$R_x$ (in)	Radius of gyration about the x-axis	1.5658
$I_y$ (in <sup>4</sup> )	Moment of inertia about the y-axis	0.5352
$R_y$ (in)	Radius of gyration about the y-axis	0.7194
EFFECTIVE PROPERTIES		
$I_x$ (in <sup>3</sup> )	Effective moment of inertia (x-axis)	2.5007
$S_x$ (in <sup>3</sup> )	Effective section modulus (x-axis)	2.2503
$M_a$ (in-k)	Allowable bending moment-effective section modulus	44.304
$M_{ad}$ (in-k)	Allowable bending moment-distortional buckling	44.304
$V_a$ (lb)	Allowable shear force in web	7.869
$V_{a_{net}}$ (lb)	Allowable strong axis shear at punchout	1.102
TORSIONAL PROPERTIES		
$J \times 1000$ (in <sup>4</sup> )	St. Venant torsional constant	5.3176
$C_w$ (in <sup>6</sup> )	Warping constant	1.8059
$X_o$ (in)	Distance from shear center to centroid	1.5672
$m$ (in)	Distance from shear center to mid-plane of web	-
$R_o$ (in)	Polar radius of gyration	2.3293
Beta	Torsional Flexural Constant	0.5473



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)