



Super Stud Building Products - Product Submittal

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Specification Section: 05.40.00 (Cold-Formed Metal Framing) 1400S250-118 (50ksi) Standard Punch

118mil (10 ga) Coating: G60 (standard), G90 (special order)

Geometric Properties

Web Depth	14 in	Yield Strength, F_y	50 ksi
Flange Width	2.5 in	Ultimate, F_u	65 ksi
Lip Length	0.625 in	Punchout Width	1.5 in
Design Thickness	0.1242 in	Punchout Length	4.0 in
Min. Steel Thickness	0.1180 in		

Gross Section Properties

Cross Sectional Area (A)	2.4004 in ²
Product Weight per Linear Foot	8.1614 lb/ft
Moment of Inertia (I_x)	59.6869 in ⁴
Section Modulus (S_x)	8.5267 in ³
Radius of Gyration (r_x)	4.9865 in
Weak Axis Moment of Inertia (I_y)	1.3567 in ⁴
Weak Axis Radius of Gyration (r_y)	0.7518 in
Depth-to-Thickness Ratio (h/t)	108

Effective Section Properties, Strong Axis

Effective Area (A_e)	1.1616 in ²
Moment of Inertia for Deflection (I_{xe})	57.3494 in ⁴
Section Modulus (S_{xe})	7.8540 in ³
Allowable Bending Moment (M_a)	235.1491 in-k
Allowable Shear Force in Web (at Punchout) (V_y)	11,285 lb

Torsional Properties

St. Venant Torsion Constant ($J \times 1000$)	12.3425 in ⁴
Warping Constant (C_w)	50.5003 in ⁶
Distance from Shear Center to Neutral Axis (X_o)	1.1838 in
Radius of Gyration (r_o)	5.1800 in
Torsional Flexural Constant (Beta)	0.9478

Codes and Standards

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

International Building Code (IBC): 2006 – 2024

Complies with AISI S100-16 (2020) w/S2-20. Effective properties incorporate the strength increase from the cold work of forming

Sheet steel: ASTM A1003/A1003M; ASTM A653/A653M

Galvanized coating: ASTM A653/A653M

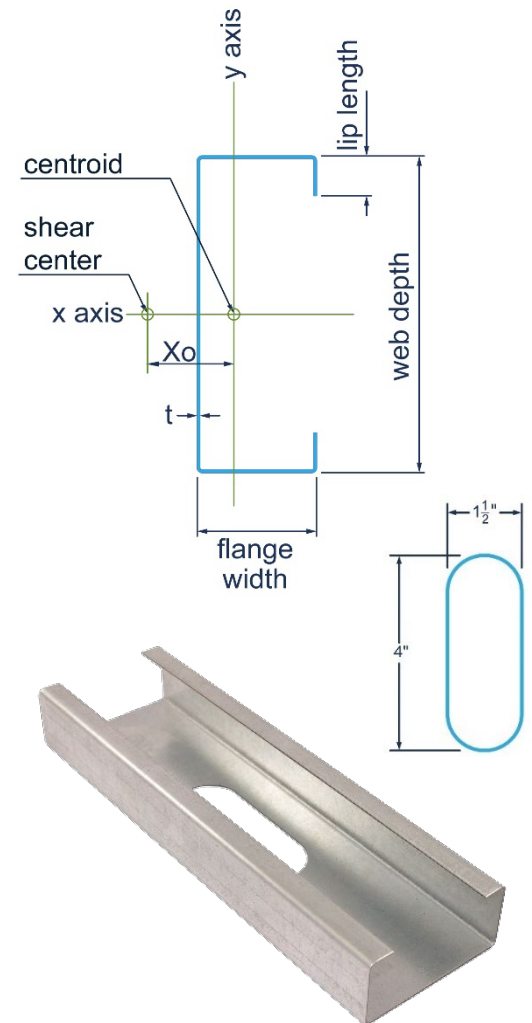
Nonstructural: Members and tolerances: ASTM C645; AISI S220, AISI S201, AISI S202

Meets ASTM C754 when installed properly in structure.

Structural: Members and tolerances: ASTM C955; AISI S240, AISI S201, AISI S202

Meets ASTM C1007 when installed properly in structure.

3rd party Certification



Structural Punchout

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.

Custom stiffened punchouts are available at tighter spacing to reduce thermal transmittance and increase accessibility. Contact Technical Services for additional punchout information.

Sustainability

For LEED letters contact Technical Services at technical@buysuperstud.com or visit



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