



Super Stud Building Products - Product Submittal

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Specification Section: 05.40.00 (Cold-Formed Metal Framing)

400S162-33 (33ksi) Standard Punch

33mil (STR 20 ga) Coating: G60 (standard), G90 (special order)

Geometric Properties

Web Depth	4 in	Yield Strength, F_y	33 ksi
Flange Width	1.625 in	Ultimate, F_u	45 ksi
Lip Length	0.500 in	Punchout Width	1.5 in
Design Thickness	0.0346 in	Punchout Length	4.0 in
Min. Steel Thickness	0.0329 in		

Gross Section Properties

Cross Sectional Area (A)	0.2751 in ²
Product Weight per Linear Foot	0.9353 lb/ft
Moment of Inertia (I_x)	0.6922 in ⁴
Section Modulus (S_x)	0.3461 in ³
Radius of Gyration (r_x)	1.5863 in
Weak Axis Moment of Inertia (I_y)	0.1027 in ⁴
Weak Axis Radius of Gyration (r_y)	0.6110 in
Depth-to-Thickness Ratio (h/t)	109

Effective Section Properties, Strong Axis

Effective Area (A_e)	0.1744 in ²
Moment of Inertia for Deflection (I_{xe})	0.6512 in ⁴
Section Modulus (S_{xe})	0.3091 in ³
Allowable Bending Moment (M_a)	6.1076 in-k
Allowable Shear Force in Web (at Punchout) (V_y)	595 lb

Torsional Properties

St. Venant Torsion Constant ($J \times 1000$)	0.1098 in ⁴
Warping Constant (C_w)	0.3475 in ⁶
Distance from Shear Center to Neutral Axis (X_o)	1.2611 in
Radius of Gyration (r_o)	2.1166 in
Torsional Flexural Constant (Beta)	0.6450

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

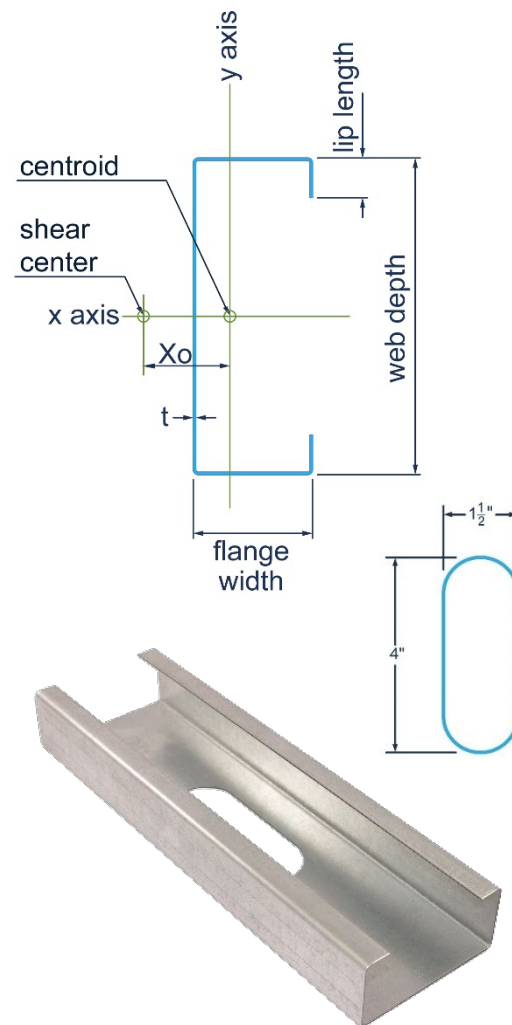
Nonstructural: Members and tolerances: ASTM C645; AISI S220, AISI S201, AISI S202

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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