



Super Stud Building Products - Product Submittal

Technical Services: technical@buysuperstud.com

800-477-7883
buysuperstud.com

New Jersey
2960 Woodbridge Avenue
Edison, NJ 08837
732-662-6200

Mississippi
53 W L Runnels Industrial Dr
Hattiesburg, MS 39401
601-584-7550

Specification Section: 05.40.00 (Cold-Formed Metal Framing)

400S300-54 (50ksi) Standard Punch

54mil (16 ga) Coating: G60 (standard), G90 (special order)

Geometric Properties

Web Depth	4 in	Yield Strength, F_y	50 ksi
Flange Width	3 in	Ultimate, F_u	65 ksi
Lip Length	0.625 in	Punchout Width	1.5 in
Design Thickness	0.0566 in	Punchout Length	4.0 in
Min. Steel Thickness	0.0538 in		

Gross Section Properties

Cross Sectional Area (A)	0.6129 in ²
Product Weight per Linear Foot	2.0839 lb/ft
Moment of Inertia (I_x)	1.7325 in ⁴
Section Modulus (S_x)	0.8662 in ³
Radius of Gyration (r_x)	1.6812 in
Weak Axis Moment of Inertia (I_y)	0.7605 in ⁴
Weak Axis Radius of Gyration (r_y)	1.1139 in
Depth-to-Thickness Ratio (h/t)	66

Effective Section Properties, Strong Axis

Effective Area (A_e)	0.3395 in ²
Moment of Inertia for Deflection (I_{xe})	1.4121 in ⁴
Section Modulus (S_{xe})	0.6076 in ³
Allowable Bending Moment (M_a)	18.1922 in-k
Allowable Shear Force in Web (at Punchout) (V_y)	1,223 lb

Torsional Properties

St. Venant Torsion Constant ($J \times 1000$)	0.6545 in ⁴
Warping Constant (C_w)	2.7028 in ⁶
Distance from Shear Center to Neutral Axis (X_o)	2.5921 in
Radius of Gyration (r_o)	3.2842 in
Torsional Flexural Constant (Beta)	0.3771

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

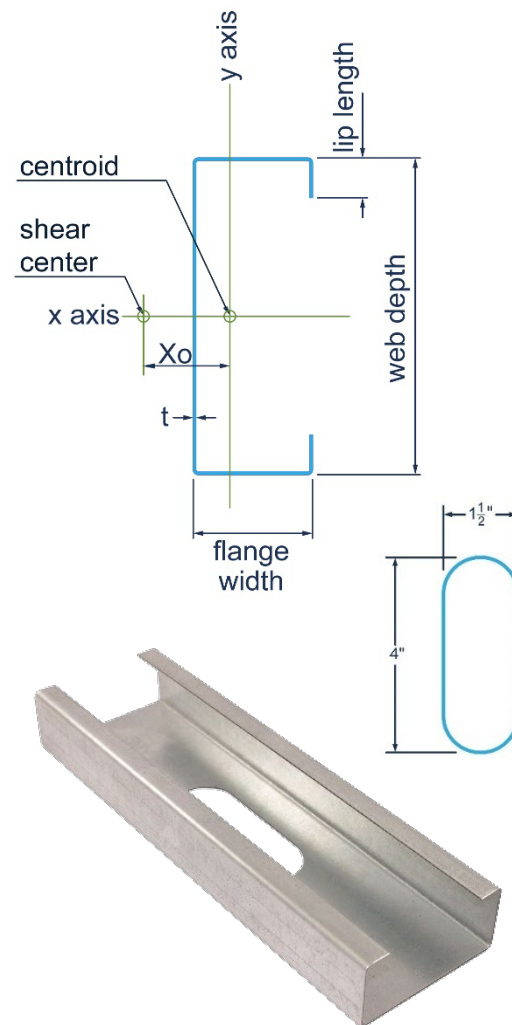
Nonstructural: Members and tolerances: ASTM C645; AISI S220, AISI S201, AISI S202

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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