

## Super Stud Building Products - Product Submittal

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Specification Section: 05.40.00 (Cold-Formed Metal Framing)

# 1000S300-97 (50ksi) Standard Punch

97mil (12 ga) Coating: G60 (standard), G90 (special order)

#### **Geometric Properties**

Web Depth	10 in	Yield Strength, F <sub>y</sub>	50 ksi	
Flange Width	3 in	Ultimate, F <sub>u</sub>	65 ksi	
Lip Length	0.625 in	<b>Punchout Width</b>	1.5 in	
Design Thickness	0.1017 in	Punchout Length	4.0 in	
Min. Steel Thickness 0.0966 in				

## **Gross Section Properties**

Cross Sectional Area (A)	1.6774 in <sup>2</sup>
Product Weight per Linear Foot	5.7032 lb/ft
Moment of Inertia (I <sub>x</sub> )	24.3225 in <sup>4</sup>
Section Modulus (S <sub>x</sub> )	4.8645 in <sup>3</sup>
Radius of Gyration (r <sub>x</sub> )	3.8079 in
Weak Axis Moment of Inertia (I <sub>y</sub> )	1.7045 in <sup>4</sup>
Weak Axis Radius of Gyration (r <sub>y</sub> )	1.0080 in
Depth-to-Thickness Ratio (h/t)	93

## **Effective Section Properties, Strong Axis**

Effective Area (A <sub>e</sub> )	0.8963 in <sup>2</sup>
Moment of Inertia for Deflection (I <sub>xe</sub> )	23.1613 in <sup>4</sup>
Section Modulus (S <sub>xe</sub> )	4.4898 in <sup>3</sup>
Allowable Bending Moment (M <sub>a</sub> )	134.4263 in-k
Allowable Shear Force in Web (at Punchout) (V <sub>y</sub> )	7,175 lb

## **Torsional Properties**

St. Venant Torsion Constant (J x 1000)	5.7832 in <sup>4</sup>
Warping Constant (C <sub>w</sub> )	31.5099 in <sup>6</sup>
Distance from Shear Center to Neutral Axis (X <sub>o</sub> )	1.8256 in
Radius of Gyration (r <sub>o</sub> )	4.3415 in
Torsional Flexural Constant (Beta)	0.8232

## **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

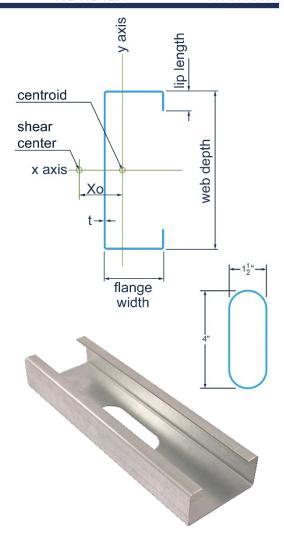
Galvanized coating: ASTM A653/A653M

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.

3<sup>rd</sup> 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.

