

## 400S125-33 DW33 (Standard Punch)

Product Description: 4" Track 20GA (1 1/4" Leg, 33mil)

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

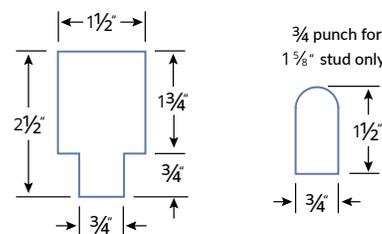
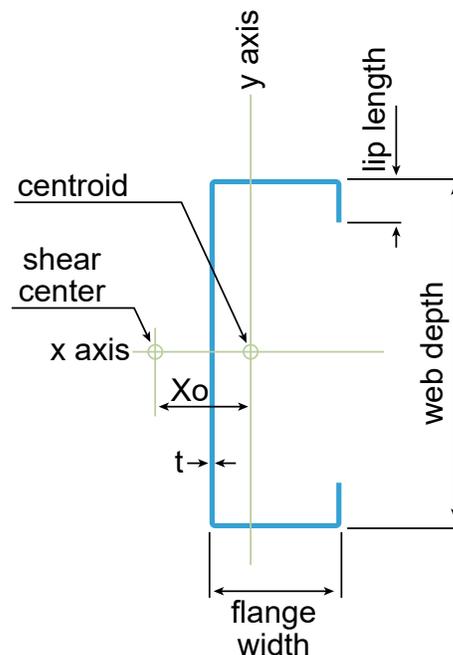
Specification Section: 09.22.16 (Non-Structural Metal Framing)

GEOMETRIC PROPERTIES			
Web Depth	4 in.	Yield Strength, Fy	33 ksi
Flange Width	1.25 in.	Design Thickness	0.0346 in.
Lip Length	0.188 in.	Min. Design Thickness	0.0329 in.

GROSS PROPERTIES		
Area (in <sup>2</sup> )	Total cross-sectional steel area	0.228
Weight (lb/ft)	Linear weight per foot	0.77
I <sub>x</sub> (in <sup>4</sup> )	Moment of inertia about the x-axis	0.531
S <sub>x</sub> (in <sup>3</sup> )	Section modulus about the x-axis	0.265
R <sub>x</sub> (in)	Radius of gyration about the x-axis	1.527
I <sub>y</sub> (in <sup>4</sup> )	Moment of inertia about the y-axis	0.038
R <sub>y</sub> (in)	Radius of gyration about the y-axis	0.407

EFFECTIVE PROPERTIES		
I <sub>x</sub> (in <sup>3</sup> )	Effective moment of inertia (x-axis)	0.524
S <sub>x</sub> (in <sup>3</sup> )	Effective section modulus (x-axis)	0.213
M <sub>a</sub> (in-k)	Allowable bending moment-effective section modulus	4.20
M <sub>ad</sub> (in-k)	Allowable bending moment-distortional buckling	3.66
V <sub>g</sub> (lb)	Allowable shear force in web	976
V <sub>net</sub> (lb)	Allowable strong axis shear at punchout	595

TORSIONAL PROPERTIES		
J x 1000 (in <sup>4</sup> )	St. Venant torsional constant	0.091
C <sub>w</sub> (in <sup>6</sup> )	Warping constant	0.118
X <sub>o</sub> (in)	Distance from shear center to centroid	-0.738
m (in)	Distance from shear center to mid-plane of web	0.465
R <sub>o</sub> (in)	Polar radius of gyration	1.745
Beta	Torsional Flexural Constant	0.821



Non-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.

### 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 or equivalent
- UL Designs: U419, V438, V489, V498, W433, W440
- Tested in accordance with ASTM E119; ANSI/UL 263
- Members and tolerances: ASTM C645; AISI S220, AISI S201, AISI S202
- Meets ASTM C754 when installed properly in structure

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