

**Product category:** S300 (3" Flange Structural Stud)  
**Product name:** **800S300-33 (33ksi, CP60) P - Punched**  
 33mils (20ga) Coating: CP60 per ASTM C955  
 Color coding: White

### Geometric Properties

Web depth	8.000 in		
Flange width	3.000 in	Punchout width	1.50 in
Stiffening lip	0.625 in	Punchout length	4.00 in
Design thickness	0.0346 in	Min. steel thickness	0.0329 in
Yield strength, Fy	33 ksi	Fy with Cold-Work, Fya	33.0 ksi
Ultimate, Fu	45.0 ksi		

### Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.517 in <sup>2</sup>
Member weight per foot of length	1.76 lb/ft
Moment of inertia (Ix)	5.195 in <sup>4</sup>
Section modulus (Sx)	1.299 in <sup>3</sup>
Radius of gyration (Rx)	3.169 in
Gross moment of inertia (Iy)	0.604 in <sup>4</sup>
Gross radius of gyration (Ry)	1.081 in

### Effective Section Properties, Strong Axis

Effective Area (Ae)	0.210 in <sup>2</sup>
Moment of inertia for deflection (Ix)	4.898 in <sup>4</sup>
Section modulus (Sx)	0.881 in <sup>3</sup>
Allowable bending moment (Ma)	17.41 in-k
Allowable moment based on distortion buckling (Mad)	15.65 in-k
Allowable shear force in web (solid section)	474 lb
Allowable shear force in web (perforated section)	474 lb
Unbraced length (Lu)	72.5 in

This section does not meet the requirements of AISI North American Specifications. Increase the thickness or contact ClarkDietrich Technical Services @ 888-437-3244 for design solutions.

### Torsional Properties

St. Venant torsion constant (J x 1000)	0.206 in <sup>4</sup>
Warping constant (Cw)	7.623 in <sup>6</sup>
Distance from shear center to neutral axis (Xo)	-2.098 in
Distance between shear center and web centerline (m)	1.284 in
Radii of gyration (Ro)	3.951 in
Torsional flexural constant (Beta)	0.718

Web-depth to thickness ratio exceeds 200. Web Stiffeners are required at all support points and concentrated loads.

### ASTM & Code Standards:

- AISI North American Specification [NASPEC] S100-12
- \* Effective properties incorporate the strength increase from the cold work of forming
- Gross properties are based on the cross section away from the punchouts
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- ClarkDietrich's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program, ICC-ES ESR-1166P and Intertek CCR-0206
- For installation & storage information refer to ASTM C1007

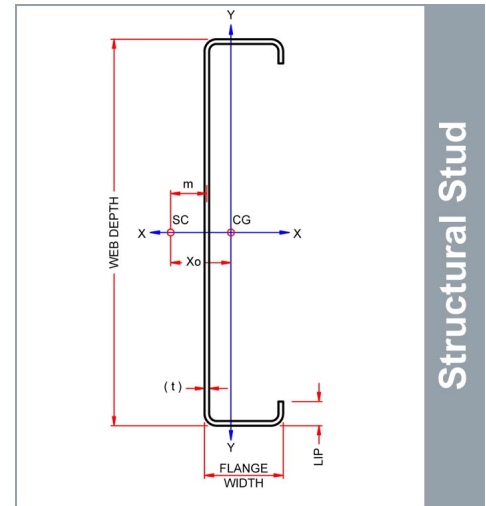
**Sustainability Credits:** SDS & Product Certification Information is available at [tools.clarkdietrich.com](http://tools.clarkdietrich.com)

For more details and LEED letters contact Technical Services at 888-437-3244 or visit [www.clarkdietrich.com/LEED](http://www.clarkdietrich.com/LEED)

**LEED v4 MR Credit** -- Building Product Disclosure and Optimization: EPD (1 point) - Sourcing of Raw Materials (1 point) - Material Ingredients (1 point) - Construction and Demolition Waste Management (up to 2 points) - Innovation Credit (up to 2 points).

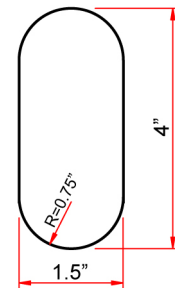
**LEED 2009 Credit MR 2 & MR 4** -- ClarkDietrich's steel products are 100% recyclable and have a national average recycled content of 34.2% (19.8% post-consumer and 14.4% pre-consumer). If seeking a higher number to meet Credit MR 5, please contact us at ([info@clarkdietrich.com](mailto:info@clarkdietrich.com) / 888-437-3244)

### 05.40.00 (Cold-Formed Metal Framing)



### Used in framing applications:

- Load-bearing walls
- Curtain walls
- Tall interior walls
- Floor & ceiling joists
- Trusses



**Structural Punchout**

East market punchout spacing:  
 12" from lead end then 24" o.c.

West market punchout spacing:  
 24" from lead end then 24" o.c.

### Project Information

Name:  
 Address:

### Contractor Information

Name:  
 Contact:  
 Phone:  
 Fax:

### Architect Information

Name:  
 Contact:  
 Phone:  
 Fax: