

**Product category:** S250 (2-1/2" Flange Structural Stud)  
**Product name:** 1150S250-97 (50ksi, CP60) P - Punched  
 97mils (12ga) Coating: CP60 per ASTM C955  
 Color coding: Red

### Geometric Properties

Web depth	11.500 in		
Flange width	2.500 in	Punchout width	1.50 in
Stiffening lip	0.625 in	Punchout length	4.00 in
Design thickness	0.1017 in	Min. steel thickness	0.0966 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	50.0 ksi
Ultimate, Fu	65.0 ksi		

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

Cross sectional area (A)	1.728 in <sup>2</sup>
Member weight per foot of length	5.88 lb/ft
Moment of inertia (Ix)	30.661 in <sup>4</sup>
Section modulus (Sx)	5.332 in <sup>3</sup>
Radius of gyration (Rx)	4.212 in
Gross moment of inertia (Iy)	1.111 in <sup>4</sup>
Gross radius of gyration (Ry)	0.802 in

### Effective Section Properties, Strong Axis

Effective Area (Ae)	0.854 in <sup>2</sup>
Moment of inertia for deflection (Ix)	30.604 in <sup>4</sup>
Section modulus (Sx)	4.794 in <sup>3</sup>
Allowable bending moment (Ma)	143.55 in-k
Allowable moment based on distortion buckling (Mad)	129.54 in-k
Allowable shear force in web (solid section)	8518 lb
Allowable shear force in web (perforated section)	7361 lb
Unbraced length (Lu)	47.7 in

### Torsional Properties

St. Venant torsion constant (J x 1000)	5.959 in <sup>4</sup>
Warping constant (Cw)	29.711 in <sup>6</sup>
Distance from shear center to neutral axis (Xo)	-1.358 in
Distance between shear center and web centerline (m)	0.879 in
Radii of gyration (Ro)	4.497 in
Torsional flexural constant (Beta)	0.909

### 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 CCRR-0206
- For installation & storage information refer to ASTM C1007
- SDS & Product Certification Information is available at [tools.clarkdietrich.com](http://tools.clarkdietrich.com)

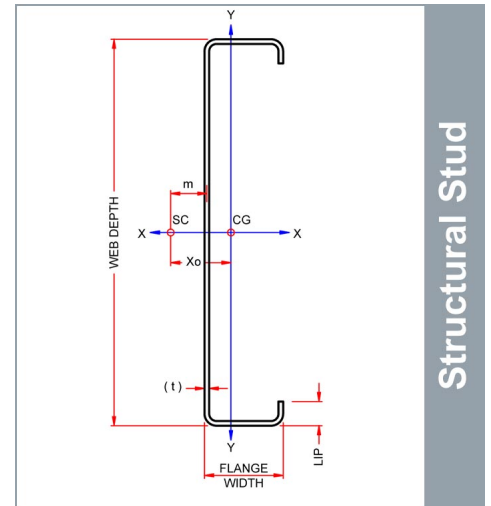
### Sustainability Credits:

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)

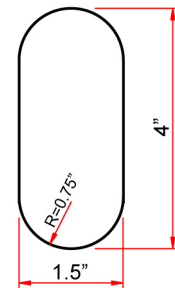
### 05.40.00 (Cold-Formed Metal Framing)



Structural Stud

### 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: