

Product Submittal Sheet

Technical Services: 888-437-3244 Engineering Services: 877-832-3206 Sales: 800-543-7140 clarkdietrich.com

Product category: S250 (2-1/2" Flange Structural Stud) **Product name:** 800S250-33 (33ksi, CP60) P - Punched

33mils (20ga) Coating: CP60 per ASTM C955

Color coding: White

Geometric Properties

Web depth 8.000 in Flange width 2.500 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 Fy with Cold-Work, Fya 33.0 ksi 33 ksi

Ultimate, Fu 45.0 ksi

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.483 in ²
Member weight per foot of length	1.64 lb/ft
Moment of inertia (Ix)	4.646 in ⁴
Section modulus (Sx)	1.161 in ³
Radius of gyration (Rx)	3.102 in
Gross moment of inertia (ly)	0.389 in⁴
Gross radius of gyration (Ry)	0.897 in

Effective Section Properties, Strong Axis

Effective Area (Ae)	0.204 in ²
Moment of inertia for deflection (lx)	4.527 in ⁴
Section modulus (Sx)	0.858 in ³
Allowable bending moment (Ma)	16.95 in-k
Allowable moment based on distortion buckling (Mad)	15.22 in-k
Allowable shear force in web (solid section)	474 lb
Allowable shear force in web (perforated section)	474 lb
Unbraced length (Lu)	61 7 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) 0.193 in^4 Warping constant (Cw) 4.974 in^6 Distance from shear center to neutral axis (Xo) -1.686 in Distance between shear center and web centerline (m) 1.048 in Radii of gyration (Ro) 3.643 in Torsional flexural constant (Beta) 0.786

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 CCRR-0206
- For installation & storage information refer to ASTM C1007

SSSSin Brindyce Certification Information is available at itools.clarkdietrich.com

For more details and LEED letters contact Technical Services at 888-437-3244 or visit 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).

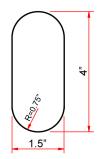
LEED 2009 Credit MR 2 & MR 4 -- ClarkDietrich's steel products are 100% recyclable and have a national average recycled content of 34.2% (19.8% post-consumer and 14.4% pre-consumer). If seeking a higher number to meet Credit MR 5, please contact us at (info@clarkdietrich.com / 888-437-3244)

Structural Stud

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	Contractor Information	Architect Information
Name:	Name:	Name:
Address:	Contact:	Contact:
	Phone:	Phone:
	Fax:	Fax:
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