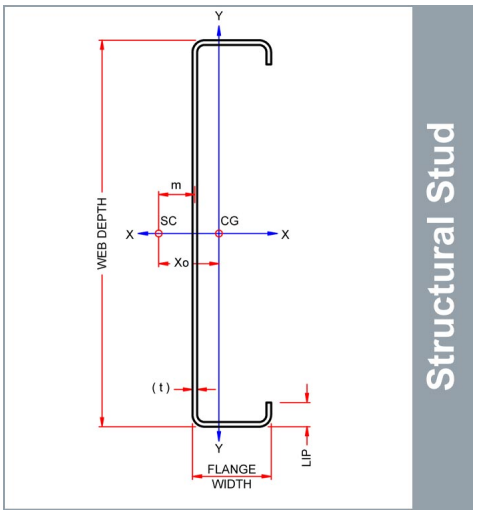
Product Submittal Sheet

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

05.40.00 (Cold-Formed Metal Framing)

Product category: S250 (2-1/2" Flange Structural Stud)
Product name: **1000S250-97 (50ksi, CP60) P - Punched**
97mils (12ga)

Coating: CP60 per ASTM C955
Color coding: Red



Geometric Properties

Web depth	10.000 in		
Flange width	2.500 in	Punchout width	1.50 in
Stiffening lip	0.625 in	Punchout length	4.00 in
Design thickness	0.1017 in	Min. steel thickness	0.0966 in
Yield strength, Fy	50 ksi	Fy with Cold-Work, Fya	56.2 ksi
Ultimate, Fu	65.0 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	1.576 in^2
Member weight per foot of length	5.36 lb/ft
Moment of inertia (Ix)	21.834 in^4
Section modulus (Sx)	4.367 in^3
Radius of gyration (Rx)	3.722 in
Gross moment of inertia (Iy)	1.073 in^4
Gross radius of gyration (Ry)	0.825 in

Effective Section Properties, Strong Axis

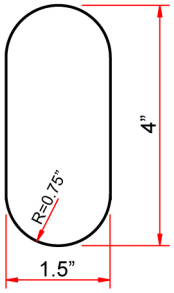
Effective Area (Ae)	0.849 in^2
Moment of inertia for deflection (Ix)	21.828 in^4
Section modulus (Sx)	4.181 in^3
Allowable bending moment (Ma)	140.63 in-k
Allowable moment based on distortion buckling (Mad)	120.20 in-k
Allowable shear force in web (solid section)	9864 lb
Allowable shear force in web (perforated section)	7177 lb
Unbraced length (Lu)	45.6 in

Torsional Properties

St. Venant torsion constant (J x 1000)	5.433 in^4
Warping constant (Cw)	21.632 in^6
Distance from shear center to neutral axis (Xo)	-1.454 in
Distance between shear center and web centerline (m)	0.932 in
Radii of gyration (Ro)	4.080 in
Torsional flexural constant (Beta)	0.873

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.

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 itools.clarkdietrich.com

Sustainability Credits:
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)

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

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