

# **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: 1000S250-54 (50ksi, CP60) P - Punched

54mils (16ga) Coating: CP60 per ASTM C955

Color coding: Green

# **Geometric Properties**

Web depth 10.000 in

Flange width 2.500 in Punchout width 1.50 in 4.00 in Stiffening lip 0.625 in Punchout length Design thickness 0.0566 in Min. steel thickness 0.0538 in Yield strength, Fy Fy with Cold-Work, Fya 50.0 ksi 50 ksi

Ultimate, Fu 65.0 ksi

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

Cross sectional area (A)	0.896 in <sup>2</sup>
Member weight per foot of length	3.05 lb/ft
Moment of inertia (Ix)	12.681 in⁴
Section modulus (Sx)	2.536 in <sup>3</sup>
Radius of gyration (Rx)	3.762 in
Gross moment of inertia (Iy)	0.653 in⁴
Gross radius of gyration (Ry)	0.854 in

## **Effective Section Properties, Strong Axis**

Effective Area (Ae)	0.346 in <sup>2</sup>
Moment of inertia for deflection (Ix)	12.661 in⁴
Section modulus (Sx)	1.879 in <sup>3</sup>
Allowable bending moment (Ma)	56.27 in-k
Allowable moment based on distortion buckling (Mad)	49.19 in-k
Allowable shear force in web (solid section)	1661 lb
Allowable shear force in web (perforated section)	1661 lb
Unbraced length (Lu)	49.1 in

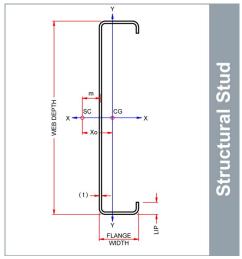
## **Torsional Properties**

St. Venant torsion constant (J x 1000)	0.957 in⁴
Warping constant (Cw)	12.922 in <sup>6</sup>
Distance from shear center to neutral axis (Xo)	-1.505 in
Distance between shear center and web centerline (m)	0.958 in
Radii of gyration (Ro)	4.141 in
Torsional flexural constant (Beta)	0.868

#### **ASTM & Code Standards:**

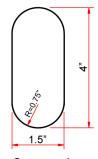
- AISI North American Specification [NASPEC] S100-12
- \* Effective properties incorporate the strength increase from the cold work of forming
- Gross properties are based on the cross section away from the punchouts
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or 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

# 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.

#### **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:
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