

# **Product Submittal Sheet**

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

S250 (2-1/2" Flange Structural Stud) **Product category: Product name:** 250S250-97 (50ksi, CP60) P - Punched

> 97mils (12ga) Coating: CP60 per ASTM C955

> > Fy with Cold-Work, Fya

Color coding: Red

56.2 ksi

### **Geometric Properties**

Web depth 2.500 in Flange width 2.500 in Stiffening lip 0.625 in Design thickness 0.1017 in Min. steel thickness

Yield strength, Fy 50 ksi Ultimate, Fu 65.0 ksi

#### Punchout width 0.75 in Punchout length 4.00 in 0.0966 in

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

Cross sectional area (A)	0.813 in <sup>2</sup>
Member weight per foot of length	2.77 lb/ft
Moment of inertia (Ix)	0.865 in⁴
Section modulus (Sx)	0.692 in <sup>3</sup>
Radius of gyration (Rx)	1.031 in
Gross moment of inertia (ly)	0.670 in⁴
Gross radius of gyration (Ry)	0.908 in

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

Effective Area (Ae)	0.689 in <sup>2</sup>
Moment of inertia for deflection (Ix)	0.865 in <sup>4</sup>
Section modulus (Sx)	$0.664 \text{ in}^3$
Allowable bending moment (Ma)	22.34 in-k
Allowable moment based on distortion buckling (Mad)	23.27 in-k
Allowable shear force in web (solid section)	3798 lb
Allowable shear force in web (perforated section)	429 lb
Unbraced length (Lu)	52.4 in

#### **Torsional Properties**

St. Venant torsion constant (J x 1000)	2.803 in⁴
Warping constant (Cw)	1.245 in <sup>6</sup>
Distance from shear center to neutral axis (Xo)	-2.332 in
Distance between shear center and web centerline (m)	1.317 in
Radii of gyration (Ro)	2.707 in
Torsional flexural constant (Beta)	0.258

#### **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)

05.40.00 (Cold-Formed Metal Framing)

## **Used in framing applications:**

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



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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