

# **Product Submittal Sheet**

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

**Product category:** S300 (3" Flange Structural Stud) **Product name:** 

600S300-54 (50ksi, CP60) P - Punched

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

Color coding: Green

# **Geometric Properties**

Web depth 6.000 in

Flange width 3.000 in Punchout width 1.50 in Stiffening lip 0.625 in Punchout length 4.00 in Design thickness 0.0566 in Min. steel thickness 0.0538 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)	0.726 in <sup>2</sup>
Member weight per foot of length	2.47 lb/ft
Moment of inertia (Ix)	4.320 in <sup>4</sup>
Section modulus (Sx)	1.440 in <sup>3</sup>
Radius of gyration (Rx)	2.439 in
Gross moment of inertia (Iy)	0.875 in⁴
Gross radius of gyration (Ry)	1.098 in

# **Effective Section Properties, Strong Axis**

Effective Area (Ae)	0.347 in <sup>2</sup>
Moment of inertia for deflection (Ix)	4.015 in⁴
Section modulus (Sx)	1.106 in <sup>3</sup>
Allowable bending moment (Ma)	33.13 in-k
Allowable moment based on distortion buckling (Mad)	29.63 in-k
Allowable shear force in web (solid section)	2823 lb
Allowable shear force in web (perforated section)	1947 lb
Unbraced length (Lu)	59.1 in

# **Torsional Properties**

St. Venant torsion constant (J x 1000)	0.775 in⁴
Warping constant (Cw)	6.452 in <sup>6</sup>
Distance from shear center to neutral axis (Xo)	-2.299 in
Distance between shear center and web centerline (m)	1.372 in
Radii of gyration (Ro)	3.527 in
Torsional flexural constant (Beta)	0.575

### **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

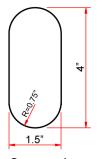
LEED v4 MR Credit -- Building Product Disclosure and Optimization: EPD (1 point) - Sourcing of Raw Materials (1 point) - Material Ingredients (1 point) - Construction and Demolition Waste Management (up to 2 points) - Innovation Credit (up to 2 points).

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



**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	<b>Contractor Information</b>	Architect Information
Name:	Name:	Name:
Address:	Contact:	Contact:
	Phone:	Phone:
	Fax:	Fax:
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