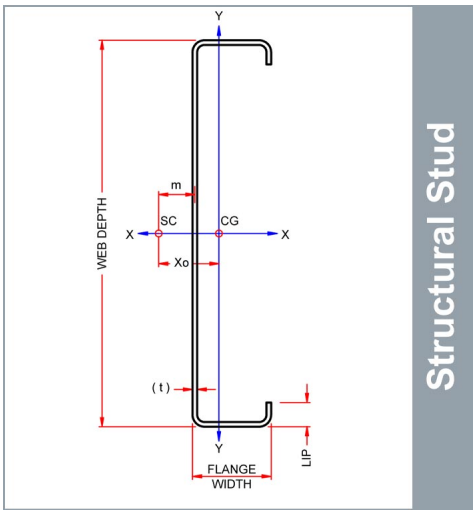
Product Submittal Sheet

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: **400S300-54 (50ksi, CP60) P - Punched**
54mils (16ga)

Coating: CP60 per ASTM C955
Color coding: Green

05.40.00 (Cold-Formed Metal Framing)



Geometric Properties

Web depth	4.000 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)	0.613 in^2
Member weight per foot of length	2.09 lb/ft
Moment of inertia (Ix)	1.732 in^4
Section modulus (Sx)	0.866 in^3
Radius of gyration (Rx)	1.681 in
Gross moment of inertia (Iy)	0.760 in^4
Gross radius of gyration (Ry)	1.114 in

Effective Section Properties, Strong Axis

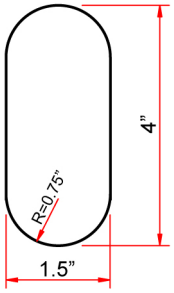
Effective Area (Ae)	0.339 in^2
Moment of inertia for deflection (Ix)	1.612 in^4
Section modulus (Sx)	0.592 in^3
Allowable bending moment (Ma)	17.72 in-k
Allowable moment based on distortion buckling (Mad)	19.25 in-k
Allowable shear force in web (solid section)	3372 lb
Allowable shear force in web (perforated section)	1223 lb
Unbraced length (Lu)	59.9 in

Torsional Properties

St. Venant torsion constant (J x 1000)	0.655 in^4
Warping constant (Cw)	2.802 in^6
Distance from shear center to neutral axis (Xo)	-2.594 in
Distance between shear center and web centerline (m)	1.496 in
Radii of gyration (Ro)	3.285 in
Torsional flexural constant (Beta)	0.377

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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