

Product category: ProSTUD® 25 Drywall Stud
Product name: 400PDS125-15 50ksi G40EQ - Punched
4" ProSTUD 25 (15mil)

Finish: G40EQ
Color coding: None

Geometric Properties

Web depth	4.000 in	Weight	0.368 lb/ft
Flange width	1.250 in	Punchout width	1.500 in
Stiffening lip	0.250 in	Punchout length	2.250 in
Design thickness	0.0158 in	Minimum thickness	0.0150 in
Yield stress, Fy	50 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.108 in ²
Moment of inertia (Ix)	0.260 in ⁴
Radius of gyration (Rx)	1.549 in
Gross moment of inertia (Iy)	0.021 in ⁴
Gross radius of gyration (Ry)	0.436 in

Effective Section Properties, Strong Axis

Effective area (Ae)	0.034 in ²
Moment of inertia for deflection (Ixe)	0.233 in ⁴
Section modulus (Sxe)	0.062 in ³
Allowable bending moment (Ma)	1,870 in-lbs
Allowable shear force in web (Unpunched) (Vag)	90 lb
Allowable shear force in web (Punched) (Vanet)	90 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.0090 in ⁴
Warping constant (Cw)	0.064 in ⁶
Distance from shear center to neutral axis (Xo)	-0.803 in
Radii of gyration (Ro)	1.798 in
Torsional flexural constant (Beta)	0.800

Unbraced Length (Lu) 24.2 in

Notes:

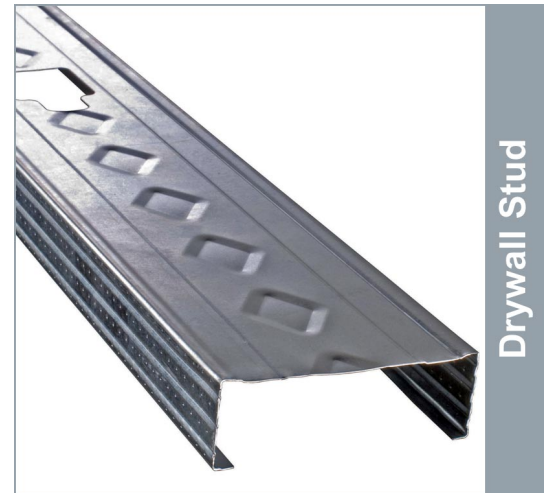
- Calculated properties are based on AISI S100-07, North American Specification for Design of Cold-Formed Steel Structural Members.
- Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
- Tabulated gross properties, including torsional properties, are based on full-unreduced cross section of the studs, away from punchouts.
- For deflection calculations, use the effective moment of inertia.
- Allowable moment includes cold work of forming.
- Allowable moment is taken as the lowest value based on local or distortional buckling. Distortional buckling strength is based on a k-phi = 0.
- **Web-height to thickness ratio exceeds 200. Web Stiffeners are required at bearing points.**
- East Coast Punch Pattern: Center of knockouts are 12" from the leading edge then 48" o.c.
- West Coast Punch Pattern: Center of knockouts are 24" from the leading edge then 24" o.c.

GREEN Benefits and Recycled Content:

LEED Credit MR 2 - ClarkDietrich products are manufactured from cold-formed steel. Steel is 100% recyclable, which helps divert debris from the waste stream. The contribution to LEED must be calculated by the contractor based on weight or volume.

LEED Credit MR 4 - ClarkDietrich's steel products have a minimum recycled content of 34.9%, of which 24.3% is post-consumer, and 9.4% is pre-consumer. To report a higher number for your project or seek Credit MR 5, contact Technical Services at 888-437-3244 or visit www.clarkdietrich.com.

09.22.16 (Non-Structural Metal Framing)



Drywall Stud

* Embossments in web are only placed on sections 2-1/2" and wider.

ASTM & Code Standards:

- AISI-NASPEC 2007
- Meets or exceeds ASTM C645 & C754
- ASTM E119, E72 & E90
- IAPMO #0171 & #0189
- Multiple UL® Design Listing including: V438, V450 & U419
- MSDS & Product Certification Information available at www.clarkdietrich.com



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Project Information

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Contractor Information

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Architect Information

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Product category: ProSTUD® 25 Drywall Stud
Product name: 400PDS125-15 50ksi G40EQ - Punched
4" ProSTUD 25 (15mil)

4" ProSTUD 25 (15mil) Drywall Stud - COMPOSITE Limiting Heights (AC86-2010)

(1 layer) 5/8" Type X Gypsum Board

Spacing (inches)	5 psf			7.5 psf			10 psf		
	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
12	22'-8"	18'-0"	15'-9"	19'-1" f	15'-9"	13'-9"	16'-6" f	14'-4"	12'-6"
16	20'-3" f	16'-4"	14'-4"	16'-6" f	14'-4"	12'-6"	14'-4" f	13'-0"	11'-3"
24	16'-6" f	14'-4"	12'-6"	13'-6" f	12'-6"	10'-8"	11'-8" f	11'-3"	9'-6"

Composite Table Notes:

- Allowable composite limiting heights were determined in accordance with ICC-ES AC86-2010.
 - Additional composite wall testing and analysis requirements of the SFIA Code Compliance Certification Program were observed.
 - In accordance with current building codes and AISI design standards, the 1/3 Stress Increase for strength was not used.
 - The composite limiting heights provided in the tables are based on a single layer of type X gypsum board from the following manufacturers: American, CertainTeed, Georgia Pacific, Lafarge, National, Temple Inland, and USG.
 - The gypsum board must be applied full height in the vertical orientation to each stud flange and installed in accordance with ASTM C754-2004 using minimum No. 6 Type S Drywall screws spaced as listed below:
 - Screws spaced a minimum of 16 in on-center to framing members spaced at 16 in or 12 in on-center.
 - Screws spaced a minimum of 12 in on-center to framing members spaced at 24 in on-center.
 - No fasteners are required for attaching the stud to the track except as detailed in ASTM C754-2004.
 - Stud end bearing must be a minimum of 1 inch.
- f Adjacent to the height value indicates that flexural stress controls the allowable wall height.
s Adjacent to the height value indicates that shear/end reaction controls the allowable wall height.

4" ProSTUD 25 (15mil) Drywall Stud - NON-COMPOSITE Limiting Heights (FULLY BRACED)

Spacing (inches)	5 psf			7.5 psf			10 psf		
	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
12	15'-9"	14'-6"	12'-8"	12'-6"	12'-6"	11'-1"	9'-4"	9'-4"	9'-4"
16	13'-8"	13'-2"	11'-6"	9'-4"	9'-4"	9'-4"	7'-0"	7'-0"	7'-0"
24	9'-4"	9'-4"	9'-4"	6'-3"	6'-3"	6'-3"	4'-8"	4'-8"	4'-8"

Non-Composite Table Notes:

- Heights are based on 2007 North American Specification S100-07 using steel properties alone.
- Above listed Non-Composite Limiting Heights are applicable when the unbraced length is less than or equal to Lu.
- Heights are limited by moment, deflection, shear, and web crippling (assuming 1" end reaction bearing).
- * Heights labeled with a "*" can achieve higher heights by using end-bearing stiffeners. See full ProSTUD non-composite charts at clarkdietrich.com.
- Web-height to thickness ratio exceeds 200. Web Stiffeners are required at bearing points.

Project Information

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Contractor Information

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Architect Information

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