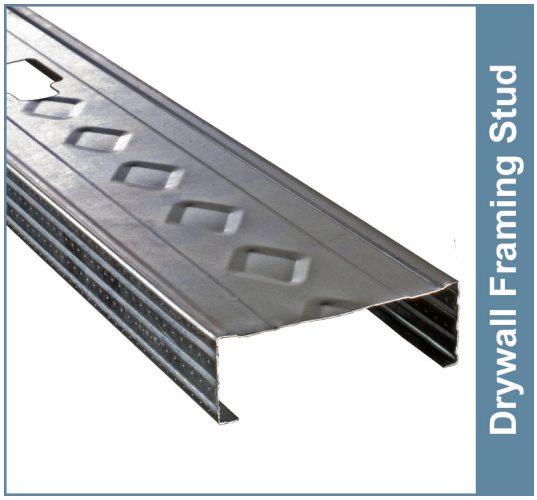
Product Submittal Sheet

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

Product category: ProSTUD® 33MIL Drywall Stud
Product name: **400PDS125-33 33ksi G40EQ - Punched**
4" ProSTUD 33MIL (33mil)
Coating: G40EQ
Color coding: White

09.22.16 (Non-Structural Metal Framing)



Geometric Properties

Web depth	4.000 in	Weight	0.796 lb/ft
Flange width	1.250 in	Punchout width	1.500 in
Stiffening lip	0.250 in	Punchout length	2.500 in
Design thickness	0.0346 in	Minimum thickness	0.0329 in
Yield stress, Fy	33 ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.234 in^2
Moment of inertia (Ix)	0.553 in^4
Radius of gyration (Rx)	1.538 in
Gross moment of inertia (Iy)	0.043 in^4
Gross radius of gyration (Ry)	0.426 in

Effective Section Properties, Strong Axis

Effective area (Ae)	0.128 in^2
Moment of inertia for deflection (Ixe)	0.553 in^4
Section modulus (Sxe)	0.222 in^3
Allowable bending moment (Ma)	4,394 in-lbs
Allowable shear force in web (Unpunched) (Vag)	957 lb
Allowable shear force in web (Punched) (Vanet)	602 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.0934 in^4
Warping constant (Cw)	0.132 in^6
Distance from shear center to neutral axis (Xo)	-0.783 in
Radii of gyration (Ro)	1.777 in
Torsional flexural constant (Beta)	0.806
Unbraced Length (Lu)	29.5 in

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

UL® Testing Standard

- UL® 263, ASTM E119
- Over 50 UL® design listings
- UL® file number R26512
- U.S. Patent No. 9,010,070

Code Approvals & Performance Standards

Calculated properties are based on:

AISI S100-16 North American Specification for the Design of CFS 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.

AISI S220-15 North American Standard for CFS Framing - Nonstructural Members

- Section A4 - Material - Chemical & mechanical requirements (Referencing ASTM A1003/A1003M)
- Section A5 - Corrosion Protection (Referencing ASTM A653/A653M)
- Section A6 - Products - Thickness, shapes, tolerances, identification
- Section C - Installation - (Referencing ASTM C754)

ClarkDietrich's nonstructural framing comply with:

- IBC-2018 - International Building Code
- Intertek CCRR-0207, LA RR #26019, NYC - OTCR
- SFIA Code Compliance Certification Program
- ASTM E72 Standard Test Methods of Conducting Strength Tests of Panels for Building Construction
- SDS & Product Certification Information is available at www.clarkdietrich.com/SupportDocs

Notes:

- 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.

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)

ClarkDietrich

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4" ProSTUD 33MIL (33mil)

4" ProSTUD 33MIL (33mil) Drywall Stud - COMPOSITE Limiting Heights (AC86-2019)

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

Spacing	5 psf			7.5 psf			10 psf		
(inches)	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
12	27'-10"	22'-9"	20'-1"	24'-3"	19'-11"	17'-7"	22'-1"	18'-1"	15'-11"
16	25'-3"	20'-8"	18'-3"	22'-1"	18'-1"	15'-11"	20'-1"	16'-5"	14'-6"
24	22'-1"	18'-1"	15'-11"	19'-3"	15'-10"	13'-11"	17'-6"	14'-4"	12'-8"

Composite Table Notes:

- Allowable composite limiting heights were determined in accordance with ICC-ES AC86-2019.
- 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 5/8" Type X gypsum board from the following manufacturers: American, CertainTeed, Georgia Pacific, Continental, National, PABCO, 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 using minimum No. 6 Type S Drywall screws spaced as listed below:
- Screws spaced a maximum of 16 in on-center to framing members (including top & bottom track) spaced at 16 in or 12 in on-center.
- Screws spaced a maximum of 12 in on-center to framing members (including top & bottom track) spaced at 24 in on-center.
- No fasteners are required for attaching the stud to the track except as detailed in ASTM C754.
- 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 33MIL (33mil) Drywall Stud - NON-COMPOSITE Limiting Heights (FULLY BRACED)

Spacing	5 psf			7.5 psf			10 psf		
(inches)	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
12	24'-2"	19'-4"	16'-11"	19'-9"	16'-11"	14'-9"	17'-1"	15'-4"	13'-5"
16	21'-0"	17'-7"	15'-4"	17'-1"	15'-4"	13'-5"	14'-10"	13'-11"	12'-2"
24	17'-1"	15'-4"	13'-5"	14'-0"	13'-5"	11'-9"	12'-1"	12'-1"	10'-8"

Non-Composite (Fully Braced) Table Notes:

- Heights are based on AISI S100-16, North American Specification, and AISI S220-15, North American Standard for Cold-Formed Steel Framing - Nonstructural Members, 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).

4" ProSTUD 33MIL (33mil) Drywall Stud - NON-COMPOSITE Limiting Heights (BRACED at 48" o.c.)

Spacing	5 psf			7.5 psf			10 psf		
(inches)	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
12	22'-5"	19'-4"	16'-11"	18'-4"	16'-11"	14'-9"	15'-10"	15'-4"	13'-5"
16	19'-5"	17'-7"	15'-4"	15'-10"	15'-4"	13'-5"	13'-9"	13'-9"	12'-2"
24	15'-10"	15'-4"	13'-5"	13'-0"	13'-0"	11'-9"	11'-3"	11'-3"	10'-8"

Non-Composite (Braced at 48" o.c.) Table Notes:

- Heights are based on AISI S100-16, North American Specification, and AISI S220-15, North American Standard for Cold-Formed Steel Framing - Nonstructural Members, using steel properties alone.
- Above listed Non-Composite Limiting Heights are based on discreet stud bracing at 4 ft o.c.
- Heights are limited by moment, deflection, shear, and web crippling (assuming 1" end reaction bearing).

Project Information
Name:
Address:

Contractor Information
Name:
Contact:
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Fax:

Architect Information
Name:
Contact:
Phone:
Fax: