

# **Product Submittal Sheet**

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

Product category: ProSTUD® 20 Drywall Stud

Product name: 362PDS125-19 65ksi G40EQ - Punched

3-5/8" ProSTUD 20 (19mil)

Coating: G40EQ

Color coding: Pink

#### **Geometric Properties**

Yield stress, Fy

Web depth	3.625 in	Weight	0.448 lb/ft
Flange width	1.250 in	Punchout width	1.500 in
Stiffening lip	0.315 in	Punchout length	2.500 in
Design thickness	0.0200 in	Minimum thickness	0.0190 in

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

Cross sectional area (A)	0.132 in <sup>2</sup>
Moment of inertia (Ix)	0.266 in⁴
Radius of gyration (Rx)	1.420 in
Gross moment of inertia (ly)	0.027 in⁴
Gross radius of gyration (Ry)	0.454 in

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

65 ksi

Effective area (Ae)	0.048 in <sup>2</sup>
Moment of inertia for deflection (Ixe)	0.254 in⁴
Section modulus (Sxe)	0.080 in <sup>3</sup>
Allowable bending moment (Ma)	3,103 in-lbs
Allowable shear force in web (Unpunched) (Vag)	203 lb
Allowable shear force in web (Punched) (Vanet)	189 lb

## **Torsional Properties**

St. Venant torsion constant (J x 1000)	0.0176 in <sup>4</sup>
Warping constant (Cw)	0.072 in <sup>6</sup>
Distance from shear center to neutral axis (Xo)	-0.876 in
Radii of gyration (Ro)	1.729 in
Torsional flexural constant (Beta)	0.743

Unbraced Length (Lu) 22.1 in

### 09.22.16 (Non-Structural Metal Framing)



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

#### **ASTM & Code Standards:**

- AISI S100-12 & S220-15
- Meets or exceeds ASTM C645 & C754
- ASTM E119, E72 & E90
- ATI CCRR-0207, LA RR 26019
- ProSTUD complies with the SFIA Code Compliance Certification Program
- Multiple UL® Design Listing including: V438, V450 & U419
- SDS & Product Certification Information available at www.clarkdietrich.com
- U.S. Patent No. 9,010,070



## Notes:

- Calculated properties are based on AISI S100-12, North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-15, North American Standard for Cold-Formed Steel Framing Nonstructural 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.
- 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 minimum 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)

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Project Information	Contractor Information	Architect Information	
Name:	Name:	Name:	
Address:	Contact:	Contact:	
	Phone:	Phone:	
	Fax:	Fax:	



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3-5/8" ProSTUD 20 (19mil)

## 3-5/8" ProSTUD 20 (19mil) Drywall Stud - COMPOSITE Limiting Heights (AC86-2015)

### (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	23'-3"	18'-5"	16'-1"	20'-4"	16'-1"	14'-1"	18'-5"	14'-8"	12'-10"
16	21'-1"	16'-9"	14'-8"	18'-5"	14'-8"	12'-10"	16'-7"f	13'-4"	11'-7"
24	18'-5"	14'-8"	12'-10"	15'-8"f	12'-10"	11'-1"	13'-7"f	11'-7"	9'-11"

#### Composite Table Notes:

- · Allowable composite limiting heights were determined in accordance with ICC-ES AC86-2015.
- · 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, 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 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.
- 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.

## 3-5/8" ProSTUD 20 (19mil) 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	18'-10"	14'-11"	13'-0"	16'-5"	13'-0"	11'-5"	14'-5"	11'-10"	10'-4"
16	17'-1"	13'-7"	11'-10"	14'-5"	11'-10"	10'-4"	12'-5"	10'-9"	9'-5"
24	14'-5"	11'-10"	10'-4"	11'-9"	10'-4"	9'-0"	10'-2"	9'-5"	8'-3"

#### Non-Composite Table Notes:

- Heights are based on AISI S100-12, 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).
- Heights labeled with a "\*" can achieve higher heights by using end-bearing stiffeners. See full ProSTUD non-composite charts at clarkdietrich.com.

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Project Information	Contractor Information	Architect Information
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Address:	Contact:	Contact:
	Phone:	Phone:
	Fax:	Fax: