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**Product Category:** 092216 - Non-Structural Framing

**Product Name:** 400S125-18

### Important Properties Notes:

- Calculated properties are based on AISI S100-12 with S2-10 Supplement, North American Specification for Design of Cold-Formed Steel Structural Members.
- The centerline bend radius is based on inside corner radii shown in thickness chart.
- Effective properties incorporate the strength cold work of forming as applicable per AISI A7.2.
- Tabulated gross properties are based on full-section of the studs, away from punchouts.
- For deflection calculations, use the effective
- Allowable moment includes cold-work of forming.
- For the steels that have both 33 and 50 ksi listing, if the design is based on 50 ksi, the 50 ksi steel needs to be specified. (ex. 362S162-43 (50 ksi))

### Project Information

Name:

Address:

### Contractor Information

Name:

Contact:

Phone:

Fax:

### Architect Information

Name:

Contact:

Phone:

Fax:

### Distributor/Rep Information

Name:

Contact:

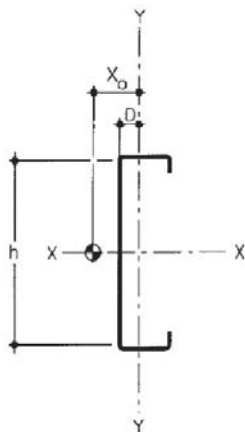
Phone:

Email /Web:

## Properties

### 400S125-18 Properties

Finish:	G90
Web Depth	4" in
Flange Width	1-1/4" in
Design Thickness	0.0188 in
Yield stress, Fy	33 ksi
Weight	0.425 lb/ft



### 400S125-18 Section Properties

#### Gross Section Properties

Cross sectional area (A)	0.125 in <sup>2</sup>
Moment of inertia (Ix)	0.294 in <sup>4</sup>
Section Modulus (Sx)	0.147 in
Radius of gyration (Rx)	1.536 in <sup>4</sup>
Gross moment of inertia (Iy)	0.021 in
Gross Radius of gyration (Ry)	0.415 in <sup>2</sup>

#### Effective Section Properties

Moment of inertia for deflection (Ixe)	- in <sup>4</sup>
Section modulus (Sxe)	- in <sup>3</sup>
Allowable bending moment (Ma)	- in-lbs
Allowable bending moment (Ma-D)	- in-k
(Vag)	- lb
(Vanet)	- lb
Ycg	- in
Fya	33 ksi

#### Torsional Properties

St. Venant torsion constant (J x 1000)	0.015 in <sup>6</sup>
Warping constant (Cw)	0.068 in
Distance from shear center to neutral axis (Xo)	-0.755 in
m	0.475
Radii of gyration (Ro)	1.761
Torsional flexural constant (Beta)	0.816
Unbraced Length (Lu)	28.7



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## Limiting Heights Properties

### Non-Composite Limiting Heights - Fully Braced

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

### Fully Braced Non-Composite Limiting Heights Table Notes

- All curtain wall studs above based on  $F_y=33$  KSI.
- Lateral loads do not include 0.7 reduction for deflection.
- Loads shown have NOT been reduced for strength or deflection design; full load is considered.
- Limiting heights are based on no composite action.
- Cold-rolled channel (CRC) or other AISI approved lateral bracing is required at 4'-0" on center, max.
- Limiting heights may be controlled by moment or deflection.

## Additional Specification Information

Studs Unlimited is an SFIA member. Studs Unlimited acts in accordance with the product and quality standards required by the SFIA program.

Studs Unlimited meets or exceeds ASTM C955, A653, and A1003.

## LEED Specification Information

**Materials & Resources Credit 2:** Construction Waste Management - Studs Unlimited Steel Framing Products are formed from steel and are 100% recyclable. **(1 point)**

**Materials & Resources Credit 4:** Recycled Content intends to increase demand for building products that incorporate recycled content materials, therefore reducing impacts resulting from extraction and processing of new virgin materials. As discussed and demonstrated below, North American steel building products contribute positively toward points under Credits 4.1 and 4.2. The following is required by LEED-NC Versions 2.2 and 2009:

**Credit 4.1 (1 point)** Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project.

**Credit 4.2 (1 point)** Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of pre-consumer content constitutes at least 20% of the total value of the materials in the project.

**Materials & Resources Credit 5:** Regional Materials - Contact Studs Unlimited directly for information at [bipowell@studsunlimited.com](mailto:bipowell@studsunlimited.com). Studs Unlimited is located in Oklahoma City, Oklahoma. **(1 point)**