



Product Category: 09.22.16 - Non-Structural Metal Framing

Product Name: 600S125-33

Available Finish: G60

(G40/G90 coatings available upon request)

*Other standard coatings referenced in ASTM A1003

Web Depth: 6 in

Flange Width: 1-1/4 in

Design Thickness: 0.0346 in

Gauge: 33 mils or 20G ST

Yield stress, Fy: 33 ksi

Weight: 1.01 lb/ft

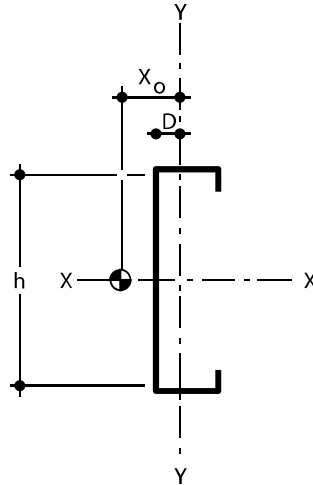
Gross Section Properties

Cross sectional area (A)	0.297 in ²
Moment of inertia (Ix)	1.410 in ⁴
Section Modulus (Sx)	0.470 in ³
Radius of gyration (Rx)	2.180 in
Gross moment of inertia (Iy)	0.042 in ⁴
Gross Radius of gyration (Ry)	0.375 in

Effective Section Properties

Moment of inertia for deflection (Ix)	1.361 in ⁴
Section modulus (Sx)	0.370 in ³
Allowable bending moment (Ma)	7.310 In-k
Allowable bending moment from distortional buckling (Mad)	5.82 In-k
Allowable strong axis shear away from punch-out (Vag)	638 lb
Allowable strong axis shear at punch out (Vanet)	638 lb

- Calculated properties are based on AISI S100-16/S2-20, North American Specification for Design of Cold-Formed Steel Structural Members and meets the requirements of the IBC 2021 Building Code.
- The centerline bend radius is based on inside corner radii shown in thickness chart.
- Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
- Tabulated gross 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.



Torsional Properties

St. Venant torsion constant (J x 1000)	0.118 in ⁴
Warping constant (Cw)	0.300 in ⁶
Distance from shear center to neutral axis (Xo)	-0.608 in
Distance from shear center to mid-plane of web (m)	0.399 in
Radius of gyration (Ro)	2.294 in
Torsional flexural constant (β)	0.930
Unbraced Length (Lu)	27.6 in

Fully Braced Non-Composite Limiting Heights Table Notes

- 5 psf, 7.5 psf, and 10 psf loads have NOT been reduced for strength or deflection checks.
- Calculated properties are based on AISI S100-16/S2-20, North American Specification for Cold-Formed Steel Structural Members and meets the requirements of the IBC 2021 Building Code.
- Limiting heights are based on continuous support of each flange over the full length of the stud.
- Limiting heights are based on steel properties only (non-composite).
- Web crippling checks are based on end-one flange loading condition using 1-inch end bearing.

Non-Composite Limiting Heights – Fully Braced

Spacing (inches)	5psf L/120	5psf L/240	5psf L/360	7.5psf L/120	7.5psf L/240	7.5psf L/360	10psf L/120	10psf L/240	10psf L/360
12	27'-10"	26'-1"	22'-9"	22'-9"	22'-9"	19'-11"	19'-8"	19'-8"	18'-1"
16	24'-1"	23'-8"	20'-8"	19'-8"	19'-8"	18'-1"	17'-0"	17'-0"	16'-5"
24	19'-8"	19'-8"	18'-1"	16'-1"	16'-1"	15'-9"	13'-11"	13'-11"	13'-11"

Interior Composite Limiting Heights

Spacing (inches)	5psf L/120	5psf L/240	5psf L/360	7.5psf L/120	7.5psf L/240	7.5psf L/360	10psf L/120	10psf L/240	10psf L/360	15psf L/120	15psf L/240	15psf L/360
12	35' 4"	28' 1"	24' 6"	30' 10"	24' 6"	21' 5"	27' 10"	22' 3"	19' 5"	18' 4"	18' 4"	16' 11"
16	32' 1"	25' 6"	22' 3"	27' 10"	22' 3"	19' 5"	24' 1"	20' 3"	17' 8"	15' 10"	15' 10"	
24	27' 10"	22' 3"	19' 5"	22' 9"	19' 5"	16' 11"	19' 8"	17' 8"				

Additional Information

MRI Steel Framing, LLC is an SFIA member. MRI acts in accordance with the product and quality standards required by the SFIA program.

MRI meets or exceeds ASTM C645, C745, A653, and A1003.

Current LEED credits available upon request