

Product Category: 05 41 00 - Structural Framing
Product Name: 800S200-33

Project Information

Name:
Address:

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 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.
- 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. 3.625 S137 16-50 (50 ksi))

Contractor Information

Name:
Contact:
Phone:
Fax:

Architect Information

Name:
Contact:
Phone:
Fax:

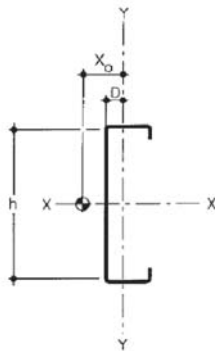
Distributor/Rep Information

Name:
Contact:
Phone:
Web/Email:

Properties

800S200-33 Properties

Finish:	G60
Web Depth	8 in
Flange Width	2 in
Design Thickness	0.0346 in
Thickness	33 mils or 20G
Yield stress, Fy	33 ksi
Weight	1.525 lb/ft



800S200-33 Section Properties

Gross Section Properties

Cross sectional area (A)	0.448 in ²
Moment of inertia (Ix)	4.097 in ⁴
Section Modulus (Sx)	1.024 in ³
Radius of gyration (Rx)	3.024 in
Gross moment of inertia (Iy)	0.227 in ⁴
Gross Radius of gyration (Ry)	0.712 in

Effective Section Properties

Moment of inertia for deflection (Ixe)	4.083 in ⁴
Section modulus (Sxe)	0.815 in ³
Allowable bending moment (Ma)	16.11 In-k
Allowable bending moment from distortional buckling (Mad)	14.66 In-k
Allowable strong axis shear away from punch-out (Vag)	474 lb
Allowable strong axis shear at punch out (Vanet)	474 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.179 in ⁴
Warping constant (Cw)	2.971 in ⁶
Distance from shear center to neutral axis (Xo)	-1.288 in
Distance from shear center to mid-plane (M)	0.817 in
Radii of gyration (Ro)	3.363 in
Torsional flexural constant (Beta)	0.853
Unbraced Length (Lu)	50.6 in

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Limiting Heights Properties

Limiting Wall Heights – Curtain Wall 1-Span

Spacing (inches)	5psf			15psf			20psf			25psf		
	L/120	L/240	L/360	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600
12	44'-2"	37'-8"	32'-11"	25'-6"	25'-6"	21'-8"	22'-1"	22'-1"	19'-8"	19'-9"	19'-9"	18'-3"
16	38'-3"	34'-2"	29'-10"	22'-1"	22'-1"	19'-8"	19'-1"	19'-1"	17'-10"	17'-1"	17'-1"	16'-7"
24	31'-3"	29'-10"	26'-1"	18'-0"	18'-0"	17'-2"	15'-7"	15'-7"	15'-7"	13'-11"	13'-11"	13'-11"

Spacing (inches)	30psf			35psf			40psf			50psf		
	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600
12	18'-0"	18'-0"	17'-2"	16'-8"	16'-8"	16'-4"	15'-7"	15'-7"	15'-7"	13'-11"	13'-11"	13'-11"
16	15'-7"	15'-7"	15'-7"	14'-5"	14'-5"	14'-5"	13'-6"	13'-6"	13'-6"	12'-1"	12'-1"	12'-1"
24	12'-9"	12'-9"	12'-9"	11'-9"	11'-9"	11'-9"	11'-0"	11'-0"	11'-0"	9'-10"	9'-10"	9'-10"

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 bjpowell@studsunlimited.com. Studs Unlimited is located in Oklahoma City, Oklahoma. **(1 point)**