Product Category: 05 41 00 - Structural Framing
Product Name: 250S162-43

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))

Project Information
Name:
Address:

Contractor Information
Name:
Contact:
Phone:
Fax:

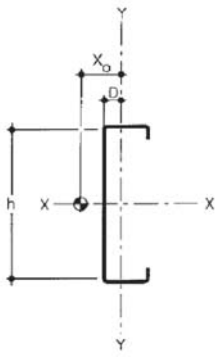
Architect Information
Name:
Contact:
Phone:
Fax:

Distributor/Rep Information
Name:
Contact:
Phone:
Web/Email:

Properties

250S162-43 Properties

Finish:	G60
Web Depth	2 1/2 in
Flange Width	1 5/8 in
Design Thickness	0.0451 in
Thickness	43mils or 18G
Yield stress, Fy	33 ksi
Weight	0.984 lb/ft



250S162-43 Section Properties

Gross Section Properties

Cross sectional area (A)	0.289 in^2
Moment of inertia (Ix)	0.302 in^4
Section Modulus (Sx)	0.242 in^3
Radius of gyration (Rx)	1.022 in
Gross moment of inertia (Iy)	0.111 in^4
Gross Radius of gyration (Ry)	0.620 in

Effective Section Properties

Moment of inertia for deflection (Ixe)	0.301 in^4
Section modulus (Sxe)	0.240 in^3
Allowable bending moment (Ma)	5.21 In-k
Allowable bending moment from distortional buckling (Mad)	4.78 In-k
Allowable strong axis shear away from punch-out (Vag)	1265 lb
Allowable strong axis shear at punch out (Vanet)	394 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.196 in^4
Warping constant (Cw)	0.184 in^6
Distance from shear center to neutral axis (Xo)	-1.457 in
Distance from shear center to mid-plane (M)	0.852 in
Radii of gyration (Ro)	1.885 in
Torsional flexural constant (Beta)	0.402
Unbraced Length (Lu)	42.1 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												
16												
24												

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												
16												
24												

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)**