



Telling Industries
 2007 North American Specification ASD
 DATE: 3/17/2010

BUILDSTRONG

SECTION DESIGNATION: 600S300-97 [50] Single

Section Dimensions:

Web Height =	6.000 in
Top Flange =	3.000 in
Bottom Flange =	3.000 in
Stiffening Lip =	0.625 in
Inside Corner Radius =	0.1526 in
Punchout Width =	1.500 in
Punchout Length =	4.000 in
Design Thickness =	0.1017 in



Steel Properties:

Fy =	50.000 ksi
Fu =	65.000 ksi
Fya =	50.000 ksi

Gross Properties

A(gross) (in ²)	Weight (lb/ft)	A(net) (in ²)	Sxx (in ³)	Ixx (in ⁴)	Rx (in)	Iyy (in ⁴)	Ry (in)
1.2706	4.3237	1.1181	2.4603	7.3809	2.4101	1.4535	1.0695

Effective Properties

Ixx(defl) (in ⁴)	Sxx (in ³)	Ma-xx (Ft-Lb)	Ma-x(dist) (Ft-Lb)	Vag (lb)	Vanet (lb)	Syy (in ³)	Ma-y (Ft-Lb)
7.3032	2.2472	5606.7	5389.2	10472	3805	0.6568	1638.8

K-phi for Distortional Buckling = 0.00 lb*in/in

Torsional Properties

Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	m (in)	Ro (in)	Beta
4.3807	10.7758	-2.241	1.343	3.461	0.581

Warping Torsional Properties

a (in ³)	Sxx(lip) (in ³)	Wn(1) (in ²)	Wn(2) (in ²)	Wn(3) (in ²)	Wn(4) (in ²)	Wn(5) (in ²)	Wn(6) (in ²)
80.1	2.8118	7.0221	4.5870	-3.9605	3.9605	-4.5870	-7.0221

Web Crippling - Allowable Loads, Pa (lb)

End Bearing Length = 1.00 (in)
 Interior Bearing Length = 3.50 (in)

Cond. 1 (E1F)	Cond. 2 (I1F)	Cond. 3 (E2F)	Cond. 4 (I2F)
1752	4939	1781	5885

Punchout Reduction Factor Cond. 1, Rc(E1F) = 0.921 + 0.083x/h <= 1.0
 Punchout Reduction Factor Cond. 2, Rc(I1F) = 0.887 + 0.053x/h <= 1.0

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Product Specification

Project Information:

Information not entered.

Contractor Information:

Information not entered.

Product Specification

Structural Stud - 6" stud, 16 GA, 2-1/2" flange

Product Code: 600S250-54
Web Height (inches): 6"
Web Height (mm): 152.4
Flange Height (inches): 2-1/2"
Flange Height (mm): 63.5

Gauge: 16
Mils: 54
Design Thickness: 0.0566
Lip: 5/8"
Yield Strength: 33 KSI/50 KSI

Weight (lbs/ft): 2.28
Weight (kg/ft): 1.0351
Product Complies With: ASTM C955, ASTM C1007

Gross Section Properties

Area: 0.67 in.²
Moment of inertia about x-x axis (Ix): 3.819 in.⁴
Radius of gyration about x-x axis (Rx): 2.388 in.
Moment of inertia about y-y axis (Iy): 0.562 in.⁴
Radius of gyration about y-y axis (Ry): 0.917 in.

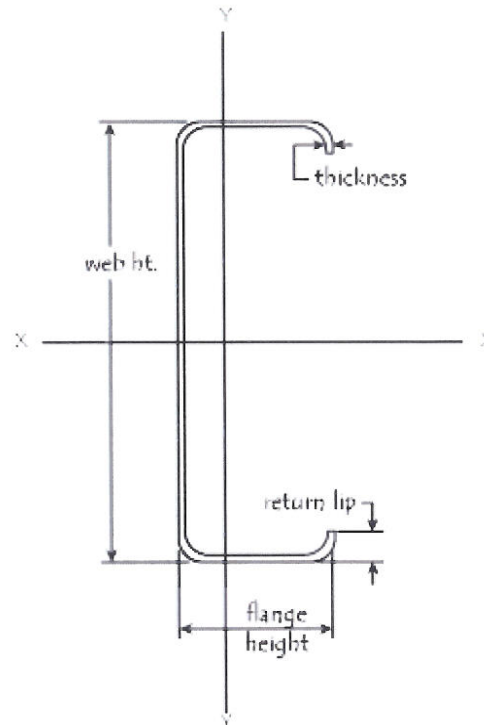
Effective Section Properties

Yield Strength: 33 KSI
Allowable Bending Moment (Ma): 22.91 in.-k.
Moment of Inertia about x-x axis (Ix): 3.819 in.⁴
Effective Section Modulus about x-x axis (Sx): 1.16 in.³

Yield Strength: 50 KSI
Allowable Bending Moment (Ma): 32.31 in.-k.
Moment of Inertia about x-x axis (Ix): 3.763 in.⁴
Effective Section Modulus about x-x axis (Sx): 1.079 in.³

Torsional Section Properties

Distance between shear center and centroid (Xo): -1.889 in.
St. Venant torsional constant (Jx1000): 0.715 in.⁴
Warping torsional constant (Cw): 4.146 in.⁶
Polar radius of gyration about principal axis (Ro): 3.18 in.
Beta Equals 1-(Xo/Ro)²: 0.647



Allowable Floor Joist Spans

Single Span

KSI

(S) Stud Member	(S) Stud Member	Spacing (in.)	Allowable Floor Joist Spans											
			10-20 psf		10-30 psf		10-40 psf		10-50 psf		15-125 psf		40-125 psf	
			Defl. Limit	Defl. Limit	Defl. Limit	Defl. Limit	Defl. Limit	Defl. Limit	Defl. Limit	Defl. Limit	Defl. Limit	Defl. Limit	Defl. Limit	
600S250-54	33 KSI	12	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
			20' 3"	18' 5"	17' 8"	16' 1"	16' 1"	14' 7"	14' 11"	13' 6"	10' 5" e	10' 0" e	9' 7" e	9' 7" e

600S250-54	33 KSI	16	18' 5"	16' 8"	16' 1"	14' 7"	14' 7"	13' 3"	13' 6"	12' 4"	9' 0" e	9' 0" e	8' 3" e	8' 3" e
600S250-54	33 KSI	24	15' 11"	14' 7"	13' 9"	12' 9"	12' 4" e	11' 7"	11' 3" e	10' 9" e	7' 4" e	7' 4" e	6' 9" e	6' 9" e
600S250-54	50 KSI	12	20' 2"	18' 4"	17' 7"	16' 0"	16' 0"	14' 6"	14' 10"	13' 6"	10' 11"	9' 11"	10' 11"	9' 11"
600S250-54	50 KSI	16	18' 4"	16' 7"	16' 0"	14' 6"	14' 6"	13' 2"	13' 6"	12' 3"	9' 11" e	9' 0"	9' 10" e	9' 0" e
600S250-54	50 KSI	24	16' 0"	14' 6"	13' 11"	12' 8"	12' 8"	11' 6"	11' 9"	10' 8"	8' 8" e	7' 10" e	8' 0" e	7' 10" e

Two Equal Spans

KSI

(S) Stud Member	(S) Stud Member	Spacing (in.)	Allowable Floor Joist Spans											
			10-20 psf		10-30 psf		10-40 psf		10-50 psf		15-125 psf		40-125 psf	
			Defl. Limit		Defl. Limit		Defl. Limit		Defl. Limit		Defl. Limit		Defl. Limit	
			L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
600S250-54	33 KSI	12	22' 6" i	20' 8" i	19' 6" i	18' 0" i	17' 5" i	16' 5" i	15' 11" i	15' 2" i	10' 5" i	10' 5" i	9' 7" i	9' 7" i
600S250-54	33 KSI	16	19' 6" i	18' 9" i	16' 11" i	16' 5" i	15' 1" i	14' 11" i	13' 9" i	13' 9" i	9' 0" a	9' 0" a	8' 3" a	8' 3" a
600S250-54	33 KSI	24	15' 11" i	15' 11" i	7' 4" a	7' 4" a	11' 3" i	11' 3" i	12' 4" i	12' 4" i	13' 9" i	13' 9" i	6' 9" a	6' 9" a
600S250-54	50 KSI	12	22' 7"	20' 7"	19' 9"	17' 11"	17' 11" i	16' 4"	16' 8" i	15' 2"	12' 3" i	11' 2" i	11' 5" i	11' 2" i
600S250-54	50 KSI	16	20' 7" i	18' 8"	17' 11" i	16' 4"	16' 4" i	14' 10" i	15' 2" i	13' 9" i	10' 8" i	10' 1" i	9' 10" i	9' 10" i
600S250-54	50 KSI	24	17' 11" i	16' 4" i	8' 9" a	8' 9" a	13' 3" i	12' 0" i	14' 3" i	12' 11" i	15' 8" i	14' 3" i	8' 0" a	8' 0" a

Table Notes

- Spans based on Total Load deflection = L/240, Live Load deflection = L/360 or L/480 as listed.
- For Two Equal Spans, listed span is the distance from end to interior support.
- Alternate span live loading considered for Two Equal Span condition.
- Where spans are noted "e", web stiffeners are required at end reactions; "i" stiffeners required at interior.
- Web crippling checks based on end and interior bearing length = 3.5 inches.
- Web crippling and shear capacity have not been reduced for punchouts. If web punchouts occur near supports members must be checked for reduced shear and web crippling in accordance with the 2001 NASPEC.
- Joists are assumed to be adequately braced to develop full allowable moment, Ma.
- At interior supports of two-span conditions, joists must be braced to resist rotation.

^e Web stiffeners required at end reactions

ⁱ Web stiffeners required at interior reactions

^a Web stiffeners required at all supports

Disclaimer

All information contained in this Web site is intended as a general guide for using Telling Industries' products. This information should not be used in design or assembly without independent assessment by a qualified design professional. Such an assessment is necessary to verify the suitability of a particular product for use in any load bearing application. Telling Industries assume no liability for failure resulting from the use or misapplications of any information contained herein. For the latest product information or to verify availability, contact a Telling Industry representative.



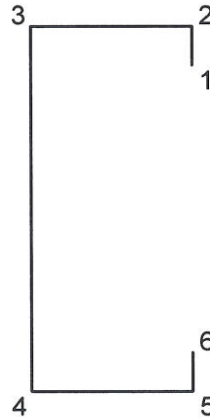
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 2007 North American Specification ASD
 DATE: 3/17/2010

BUILDSTRONG

SECTION DESIGNATION: 600S300-68 [50] Single

Section Dimensions:

Web Height =	6.000 in
Top Flange =	3.000 in
Bottom Flange =	3.000 in
Stiffening Lip =	0.625 in
Inside Corner Radius =	0.1070 in
Punchout Width =	1.500 in
Punchout Length =	4.000 in
Design Thickness =	0.0713 in



Steel Properties:

Fy =	50.000 ksi
Fu =	65.000 ksi
Fya =	50.000 ksi

Gross Properties

A(gross) (in ²)	Weight (lb/ft)	A(net) (in ²)	Sxx (in ⁴)	Ixx (in ⁴)	Rx (in)	Iyy (in ⁴)	Ry (in)
0.9069	3.0861	0.8000	1.7845	5.3536	2.4296	1.0752	1.0888

Effective Properties

Ixx(defl) (in ⁴)	Sxx (in ³)	Ma-xx (Ft-Lb)	Ma-x(dist) (Ft-Lb)	Vag (lb)	Vanet (lb)	Syy (in ³)	Ma-y (Ft-Lb)
5.2381	1.4461	3608.0	3377.3	5350	2879	0.4624	1153.7

K-phi for Distortional Buckling = 0.00 lb*in/in

Torsional Properties

Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	m (in)	Ro (in)	Beta
1.5369	7.9373	-2.280	1.363	3.505	0.577

Warping Torsional Properties

a (in ³)	Sxx(lip) (in ³)	Wn(1) (in ²)	Wn(2) (in ²)	Wn(3) (in ²)	Wn(4) (in ²)	Wn(5) (in ²)	Wn(6) (in ²)
116.1	1.7900	7.1711	4.6419	-4.0398	4.0398	-4.6419	-7.1711

Web Crippling - Allowable Loads, Pa (lb)

End Bearing Length = 1.00 (in)
 Interior Bearing Length = 3.50 (in)

Cond. 1 (E1F)
914

Cond. 2 (I1F)
2596

Cond. 3 (E2F)
816

Cond. 4 (I2F)
2881

Punchout Reduction Factor Cond. 1, Rc(E1F) = 0.924 + 0.083x/h <= 1.0

Punchout Reduction Factor Cond. 2, Rc(I1F) = 0.888 + 0.053x/h <= 1.0