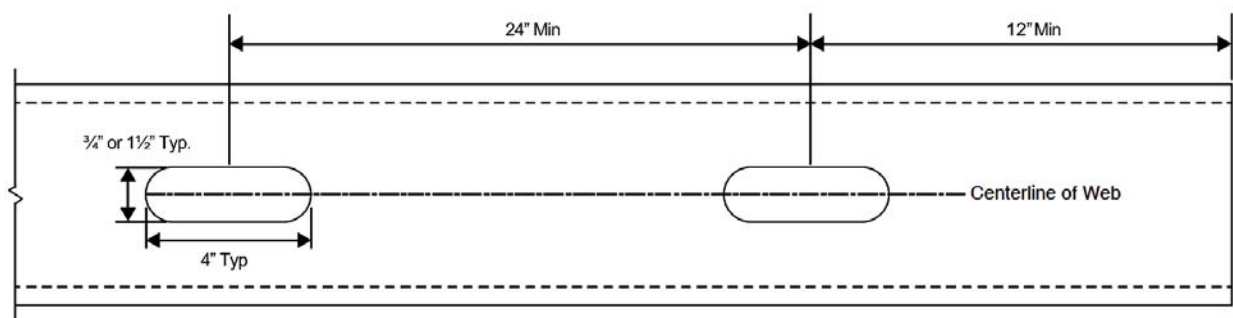


General Notes for All Tables

- The values in this catalog are based on the 2007 edition of North American Specification for the Design of Cold-Formed Steel Structural Members, AISI S100-07 as referenced by 2009 International Building Code (IBC) and AISI S100-07 with supplement S2-10 as referenced by 2012 IBC.
- Where AISI S100 is referenced, it is the North American Specification for the Design of Cold-Formed Steel Structural Members, S100-07 and AISI S100-07 with Supplement S2-10, as applicable with U.S. provisions.
- The structural properties included in this catalog have been computed based on allowable strength design (ASD) method.
- Distortional buckling calculations are based on $K_\phi = 0$.
- The effective moment of inertia for deflection is calculated at a stress that results in a section modulus such that the stress times the section modulus at that stress is equal to the allowable moment. AISI S100 Procedure I for serviceability determination has been used.
- Various sections may be manufactured with yield points of 33 or 50 kips per square inch (ksi). The yield point used for calculations is indicated in the tables.
- For sections available in both 33 and 50 ksi, the specifier must clearly indicate which yield point is required. For example: 362S162-54 (50 ksi).
- Conditions with loads that exceed the 10 psf limit for nonstructural members require an approved CP60 coating.
- S Sections with 350 flanges will be substituted with TSN's JamStud® section with 350 flanges and an extra stiffening lip. Refer to TSN's Curtainwall Catalog for JamStud dimensions and section properties.
- When provided, factory punchouts will be located along the center line of the webs of the stud members and will have a minimum center-to-center spacing of 24". Punchouts for members less than 2 1/2" deep are a maximum of 1 1/2" wide x 4 1/2" long. Members with depths 2 1/2" and smaller are maximum 3/4" wide x 4 1/2" long. Any configuration or combination of holes that fit within the punchout width and length limitations mentioned above shall be permitted; other punchout configurations and locations not in compliance with limitations listed above must be approved by a design professional. Values in this catalog are based on punchout configuration and location as illustrated below:



Thickness Table				
Designation Thickness (mils)	Minimum Thickness ¹ (in)	Design Thickness ¹ (in)	Design Inside Corner (Radii ² (in))	Reference Only Gauge No.
18	0.0179	0.0188	0.0844	25
27	0.0269	0.0283	0.0796	22
30	0.0296	0.0312	0.0782	20 - Drywall
33	0.0329	0.0346	0.0765	20 - Structural
43	0.0428	0.0451	0.0712	18
54	0.0538	0.0566	0.0849	16
68	0.0677	0.0713	0.1070	14
97	0.0966	0.1017	0.1526	12
118	0.1180	0.1242	0.1863	10

Design Stiffening Lip Length		
Section	Flange Width	Design Stiffening Lip Length (in)
S125	1 1/4"	0.188
S137	1 3/8"	0.375
S162	1 5/8"	0.500
S200	2"	0.625
S250	2 1/2"	0.625
S300	3"	0.625
S350	3 1/2"	1.000

¹ Minimum thickness represents 95% of the design thickness and is the minimum acceptable thickness delivered to the job site based on Section A2.4 of AISI S100-07.

² The tables in this catalog are calculated based on inside corner radii listed in this table. The inside corner radius is the maximum of 3/32 - t/2 or 1.5t, truncated after the fourth decimal place (t = design thickness.) Centerline bend radius is calculated by adding half of the design thickness to listed corner radius.

Material Specifications

Structural and nonstructural members are coated to meet the minimum code requirements. Higher corrosion protection coatings such as G90 are available upon request. Products manufactured by TSN are cold-formed from corrosion protected steel coils or sheets and meet the following specifications requirements:

Product Type	Material Specification	Min Yield	Min Tensile	Min Metallic Coating Designation
Nonstructural Products ASTM C645	ASTM A653, SS Grade 33	33 ksi	45 ksi	G40 ¹
	ASTM A1003, Grade 33 (NS33)	33 ksi	- ^A	G40 ¹ , A40 ¹ , AZ50 ² , GF30 ³ , T1-25 ⁴ , T2-100 ⁴ , 60G/60G ⁵
Structural Products ASTM C955	ASTM A653, SS Grade 33	33 ksi	45 ksi	G60 ¹ , A60 ¹
	ASTM A653, SS Grade 50 Class 1	50 ksi	65 ksi	G60 ¹ , A60 ¹
	ASTM A1003, Grade 33 Type H (ST33H)	33 ksi	45 ksi	G60 ¹ , A60 ¹ , AZ50 ² , GF30 ³
	ASTM A1003, Grade 50 Type H (ST50H)	50 ksi	65 ksi	G60 ¹ , A60 ¹ , AZ50 ² , GF30 ³

¹ A653 Standard for steel sheet, zinc coated (galvanized) or zinc-iron alloy-coated (galvannealed) by the hot-dip process

² A792 Standard for steel sheet, 55% aluminum-zinc alloy-coated by the hot-dip process

³ A875 Standard for steel sheet, zinc-5% aluminum alloy-coated by the hot-dip process

⁴ A463 Standard for steel sheet, aluminum coated by the hot-dip process

⁵ A879 Standard for steel sheet, zinc coated by the electrolytic process for application requiring designation of the coating mass on each surface

^A No tensile requirements for NS steels

Web Depth-to-Thickness Ratios for Stud and Joist Members ^{2 3 4}																			
Mil Thickness		18 mil		27 mil		30 mil		33 mil		43 mil		54 mil		68 mil		97 mil		118 mil	
Design Thickness		0.0188 in.		0.0283 in.		0.0312 in.		0.0346 in.		0.0451 in.		0.0566 in.		0.0713 in.		0.1017 in.		0.1242 in.	
Inside Bend Radius		0.0844 in.		0.0796 in.		0.0782 in.		0.0765 in.		0.0712 in.		0.0849 in.		0.1070 in.		0.1526 in.		0.1863 in.	
Style	Depth (in)	h (in)	h/t	h (in)	h/t	h (in)	h/t	h (in)	h/t	h (in)	h/t	h (in)	h/t	h (in)	h/t	h (in)	h/t	h (in)	h/t
162S	1.625	1.419	75	1.409	50	1.406	45	1.403	41	1.392	31	1.342	24	1.269	18	1.117	11	1.004	8
250S	2.5	2.294	122	2.284	81	2.281	73	2.278	66	2.267	50	2.217	39	2.144	30	1.992	20	1.879	15
350S	3.5	3.294	175	3.284	116	3.281	105	3.278	95	3.267	72	3.217	57	3.144	44	2.992	29	2.879	23
362S	3.625	3.419	182	3.409	120	3.406	109	3.403	98	3.392	75	3.342	59	3.269	46	3.117	31	3.004	24
400S	4	3.794	202 ¹	3.784	134	3.781	121	3.778	109	3.767	84	3.717	66	3.644	51	3.492	34	3.379	27
550S	5.5	5.294	-	5.284	187	5.281	169	5.278	153	5.267	117	5.217	92	5.144	72	4.992	49	4.879	39
600S	6	5.794	-	5.784	204 ¹	5.781	185	5.778	167	5.767	128	5.717	101	5.644	79	5.492	54	5.379	43
800S	8	7.794	-	7.784	-	7.781	249 ¹	7.778	225 ¹	7.767	172	7.717	136	7.644	107	7.492	74	7.379	59
1000S	10	9.794	-	9.784	-	9.781	-	9.778	-	9.767	217 ¹	9.717	172	9.644	135	9.492	96	9.379	76
1200S	12	11.794	-	11.784	-	11.781	-	11.778	-	11.767	-	11.717	207 ¹	11.644	164	11.492	113	11.379	92
1400S	14	13.794	-	13.784	-	13.781	-	13.778	-	13.767	-	13.717	242 ¹	13.644	192	13.492	133	13.379	108
1600S	16	15.794	-	15.784	-	15.781	-	15.778	-	15.767	-	15.717	-	15.644	220 ¹	15.492	152	15.379	124

¹ h/t exceeds 200

² h value used for h/t calculation is the flat width of the web. For S members, this is the out-to-out member size, minus twice the thickness, minus twice the inside bend radius.

³ h/t values exceeding 260 are marked with a dash (-)

⁴ h/t values in this table apply to S (studs & joists) members only, and do not apply to tracks and channels

Symbol Definitions for Section Properties:

Gross Properties

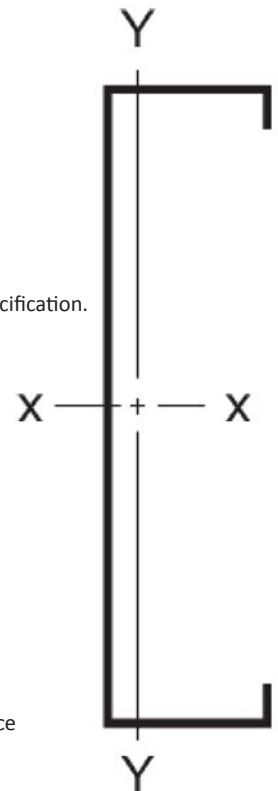
- I_x : Moment of inertia of the gross section about the X-X axis (strong axis).
- S_x : Section modulus about the X-X axis.
- R_x : Radius of gyration of the gross section about the X-X axis.
- I_y : Moment of inertia of the gross section about the Y-Y axis (weak axis).
- R_y : Radius of gyration of the gross section about the Y-Y axis.

Effective Properties

- I_{xe} : Moment of inertia for deflection calculations based on "Procedure 1 for Deflection Determination" of the 2007 AISI Specification.
- S_{xe} : Effective section modulus about the X-X axis when stress = F_y .
- M_{al} : Allowable moment based on local buckling.
- M_{ad} : Allowable moment based on distortional buckling, assuming $K_\phi = 0$.
- M_a : Allowable Bending Moment – Based on the effective section modulus and the allowable stress including the strength increase from cold-work of forming (AISI 7.2) where applicable.
- V_{ag} : Allowable strong axis shear away from punchout, calculated in accordance with AISI section C3.2.1.
- $V_{a(net)}$: Allowable strong axis shear at the punchout, calculated in accordance with AISI section C3.2.2.

Torsional and Other Properties

- J : St. Venant Torsional Constant.
- C_w : Torsional warping constant.
- m : Distance from shear center to mid-plane of web.
- X_o : Distance from the shear center to the centroid along the principal X-axis.
- R_o : Polar radius of gyration about the centroidal principal axis.
- β : $1 - (X_o/R_o)^2$
- L_u : The longest weak axis (L_y) and torsional (L_t) unbraced length at which lateral torsional buckling is restrained in accordance with AISI C3.1.2.1.
- K_ϕ : Distortional buckling moment (M_{ad}) is calculated without the beneficial effect of sheathing to rotational stiffness, $K_\phi = 0$.



Section Properties Table Notes

1. The centerline bend radius is based on inside corner radii shown in thickness table on page 2.
2. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
3. Tabulated gross properties are based on the full-unreduced cross section of the studs, away from punchouts.
4. For deflection calculations, use the effective moment of inertia.
5. Allowable moment is the lesser of M_{al} and M_{ad} . Stud distortional buckling is based on an assumed $K_{\phi} = 0$.
6. See page 2 for additional notes.

Section	Design Thickness (in)	F _y (ksi)	Gross Properties							Effective Properties						Torsional						L _u (in)
			Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	S _x (in ³)	R _x (in)	I _y (in ⁴)	R _y (in)	I _{xe} (in ⁴)	S _{xe} (in ³)	M _{al} (in-k)	M _{ad} (in-k)	V _{ag} (lb)	V _{a (net)} (lb)	Jx1000 (in ⁴)	C _w (in ⁹)	X _o (in)	m (in)	R _o (in)	β	
162S125-18	0.0188	33	0.080	0.27	0.038	0.046	0.686	0.016	0.447	0.034	0.031	0.61	0.65	302	100	0.009	0.009	-1.029	0.594	1.315	0.388	29.0
162S125-27	0.0283	33	0.120	0.41	0.056	0.068	0.682	0.023	0.443	0.055	0.053	1.05	1.14	494	106	0.032	0.013	-1.017	0.587	1.302	0.390	29.1
162S125-30	0.0312	33	0.131	0.45	0.061	0.075	0.681	0.026	0.441	0.060	0.060	1.19	1.29	543	106	0.043	0.014	-1.014	0.585	1.298	0.390	29.0
162S125-33	0.0346	33	0.145	0.49	0.067	0.083	0.679	0.028	0.440	0.066	0.069	1.37	1.48	601	105	0.058	0.016	-1.010	0.583	1.294	0.391	29.3
250S125-18	0.0188	33	0.097	0.33	0.099	0.079	1.014	0.019	0.439	0.089	0.059	1.17	1.03	258	196	0.011	0.023	-0.904	0.543	1.427	0.599	29.0
250S125-27	0.0283	33	0.144	0.49	0.147	0.118	1.009	0.027	0.434	0.144	0.097	1.92	1.83	685	344	0.039	0.034	-0.893	0.536	1.416	0.602	28.9
250S125-30	0.0312	33	0.159	0.54	0.161	0.129	1.008	0.030	0.433	0.159	0.110	2.17	2.09	832	378	0.052	0.037	-0.889	0.534	1.412	0.603	28.9
250S125-33	0.0346	33	0.176	0.60	0.178	0.142	1.006	0.033	0.431	0.175	0.125	2.48	2.41	975	399	0.070	0.040	-0.885	0.532	1.408	0.605	28.9
250S125-43	0.0451	33	0.227	0.77	0.228	0.182	1.001	0.041	0.426	0.225	0.177	3.49	3.43	1,265	394	0.154	0.050	-0.873	0.525	1.396	0.608	28.9
250S125-54	0.0566	33	0.280	0.95	0.277	0.222	0.994	0.049	0.419	0.277	0.218	4.98 ²	5.07	1,553	373	0.299	0.060	-0.859	0.518	1.379	0.612	26.8
250S125-54	0.0566	50	0.280	0.95	0.277	0.222	0.994	0.049	0.419	0.274	0.209	6.25	6.17	2,353	565	0.299	0.060	-0.859	0.518	1.379	0.612	23.3
250S125-68	0.0713	33	0.345	1.18	0.334	0.267	0.984	0.057	0.408	0.334	0.266	6.30 ²	6.32	1,891	342	0.585	0.072	-0.839	0.508	1.356	0.617	26.5
250S125-68	0.0713	50	0.345	1.18	0.334	0.267	0.984	0.057	0.408	0.334	0.262	7.84	8.01	2,866	519	0.585	0.072	-0.839	0.508	1.356	0.617	23.3
350S125-18	0.0188	33	0.115	0.39	0.215	0.123	1.366	0.021	0.423	0.203	0.072	1.42	1.47	180	159	0.014	0.050	-0.797	0.495	1.637	0.763	28.8
350S125-27	0.0283	33	0.173	0.59	0.320	0.183	1.361	0.030	0.418	0.315	0.130	2.57	2.65	614	359	0.046	0.072	-0.787	0.489	1.627	0.766	28.7
350S125-30	0.0312	33	0.190	0.65	0.351	0.201	1.359	0.033	0.417	0.346	0.150	2.96	3.04	824	436	0.062	0.079	-0.784	0.487	1.624	0.767	28.6
350S125-33	0.0346	33	0.210	0.72	0.387	0.221	1.358	0.036	0.415	0.382	0.175	3.45	3.53	1,024	487	0.084	0.087	-0.780	0.485	1.620	0.768	28.6
350S125-43	0.0451	33	0.272	0.93	0.498	0.284	1.352	0.046	0.410	0.495	0.258	5.10	5.11	1,739	631	0.184	0.109	-0.769	0.479	1.609	0.771	28.4
350S125-54	0.0566	33	0.337	1.15	0.608	0.348	1.344	0.055	0.402	0.608	0.328	6.49	6.87	2,253	633	0.360	0.131	-0.755	0.471	1.593	0.775	28.4
350S125-54	0.0566	50	0.337	1.15	0.608	0.348	1.344	0.055	0.402	0.604	0.308	9.22	9.25	3,372	947	0.360	0.131	-0.755	0.471	1.593	0.775	22.9
350S125-68	0.0713	33	0.417	1.42	0.739	0.422	1.332	0.064	0.391	0.737	0.409	9.67 ²	9.98	2,774	592	0.706	0.156	-0.737	0.462	1.571	0.780	25.7
350S125-68	0.0713	50	0.417	1.42	0.739	0.422	1.332	0.064	0.391	0.737	0.400	11.97	12.54	4,202	897	0.706	0.156	-0.737	0.462	1.571	0.780	22.8
362S125-18	0.0188	33	0.118	0.40	0.234	0.129	1.409	0.021	0.421	0.221	0.075	1.48	1.52	173	163	0.014	0.054	-0.786	0.490	1.667	0.778	28.8
362S125-27	0.0283	33	0.176	0.60	0.347	0.192	1.404	0.031	0.416	0.342	0.135	2.67	2.75	592	370	0.047	0.079	-0.776	0.484	1.657	0.781	28.6
362S125-30	0.0312	33	0.194	0.66	0.381	0.210	1.402	0.033	0.415	0.376	0.156	3.08	3.17	794	449	0.063	0.086	-0.773	0.482	1.654	0.782	28.6
362S125-33	0.0346	33	0.215	0.73	0.421	0.232	1.400	0.037	0.413	0.415	0.182	3.59	3.67	1,024	521	0.086	0.094	-0.769	0.480	1.650	0.783	28.5
362S125-43	0.0451	33	0.278	0.95	0.540	0.298	1.395	0.046	0.408	0.537	0.269	5.31	5.33	1,739	676	0.188	0.118	-0.758	0.473	1.639	0.786	28.4
362S125-54	0.0566	33	0.344	1.17	0.661	0.365	1.386	0.055	0.400	0.661	0.343	6.78	7.19	2,341	705	0.367	0.142	-0.744	0.466	1.623	0.790	28.3
362S125-54	0.0566	50	0.344	1.17	0.661	0.365	1.386	0.055	0.400	0.656	0.321	9.62	9.65	3,372	1,016	0.367	0.142	-0.744	0.466	1.623	0.790	22.8
362S125-68	0.0713	33	0.426	1.45	0.803	0.443	1.374	0.065	0.389	0.802	0.430	8.51	8.76	2,884	662	0.721	0.169	-0.726	0.457	1.602	0.795	28.2
362S125-68	0.0713	50	0.426	1.45	0.803	0.443	1.374	0.065	0.389	0.802	0.418	12.52	13.11	4,370	1,004	0.721	0.169	-0.726	0.457	1.602	0.795	22.7
400S125-18 ¹	0.0188	33	0.125	0.42	0.294	0.147	1.536	0.021	0.414	0.281	0.083	1.64	1.68	156	156	0.015	0.068	-0.754	0.475	1.760	0.816	28.7
400S125-27	0.0283	33	0.187	0.64	0.438	0.219	1.531	0.031	0.410	0.431	0.151	2.97	3.07	533	398	0.050	0.098	-0.744	0.469	1.751	0.819	28.5
400S125-30	0.0312	33	0.206	0.70	0.481	0.240	1.529	0.034	0.408	0.474	0.174	3.44	3.53	715	484	0.067	0.107	-0.741	0.467	1.748	0.820	28.5
400S125-33	0.0346	33	0.228	0.77	0.531	0.265	1.527	0.038	0.407	0.524	0.203	4.01	4.10	976	595	0.091	0.118	-0.738	0.465	1.744	0.821	28.4
400S125-43	0.0451	33	0.295	1.00	0.682	0.341	1.521	0.048	0.402	0.680	0.301	5.96	5.99	1,739	810	0.200	0.148	-0.727	0.459	1.733	0.824	28.2
400S125-54	0.0566	33	0.365	1.24	0.835	0.418	1.512	0.057	0.394	0.835	0.387	7.65	8.12	2,603	944	0.390	0.178	-0.713	0.451	1.718	0.828	28.1
400S125-54	0.0566	50	0.365	1.24	0.835	0.418	1.512	0.057	0.394	0.830	0.361	10.81	10.87	3,372	1,223	0.390	0.178	-0.713	0.451	1.718	0.828	22.7
400S125-68	0.0713	33	0.452	1.54	1.017	0.509	1.499	0.066	0.383	1.015	0.492	9.72	10.05	3,215	895	0.767	0.213	-0.695	0.442	1.696	0.832	28.0
400S125-68	0.0713	50	0.452	1.54	1.017	0.509	1.499	0.066	0.383	1.015	0.474	14.18	14.84	4,871	1,356	0.767	0.213	-0.695	0.442	1.696	0.832	22.5
550S125-18 ^{1,3}	0.0188	33	0.153	0.52	0.630	0.229	2.029	0.023	0.390							0.018	0.140	-0.651	0.423	2.166	0.910	22.9
550S125-27	0.0283	33	0.229	0.78	0.938	0.341	2.023	0.034	0.385	0.898	0.246	4.86	4.26	382	382	0.061	0.205	-0.641	0.417	2.157	0.912	27.9
550S125-30	0.0312	33	0.252	0.86	1.031	0.375	2.021	0.037	0.384	0.996	0.286	5.65	4.95	512	512	0.082	0.224	-0.639	0.415	2.154	0.912	27.9
550S125-33																						

Light Steel Framing Members

See Section Properties Table Notes on page 4.

Structural Stud Section Properties

Complies with 2009 & 2012 International Building Code (IBC)

Section	Design Thickness	F _y	Gross Properties							Effective Properties						Torsional						L _u
			Area	Weight	I _x	S _x	R _x	I _y	R _y	I _{xe}	S _{xe}	M _{al}	M _{ad}	V _{ag}	V _{a (net)}	Jx1000	C _w	X _o	m	R _o	β	
	(in)	(ksi)	(in²)	(lb/ft)	(in⁴)	(in³)	(in)	(in⁴)	(in)	(in⁴)	(in³)	(in-k)	(in-k)	(lb)	(lb)	(in⁴)	(in⁶)	(in)	(in)	(in)		
250S137-33	0.0346	33	0.197	0.67	0.203	0.163	1.015	0.052	0.515	0.203	0.158	3.11	3.10	975	399	0.079	0.076	-1.141	0.677	1.612	0.499	35.6
250S137-43	0.0451	33	0.255	0.87	0.261	0.208	1.010	0.067	0.511	0.261	0.205	4.53²	4.60	1,265	394	0.173	0.096	-1.129	0.670	1.599	0.501	33.6
250S137-54	0.0566	33	0.316	1.07	0.318	0.255	1.004	0.080	0.504	0.318	0.255	5.76²	5.75	1,553	373	0.337	0.115	-1.115	0.663	1.583	0.504	33.4
250S137-54	0.0566	50	0.316	1.07	0.318	0.255	1.004	0.080	0.504	0.318	0.244	8.22²	8.34	2,353	565	0.337	0.115	-1.115	0.663	1.583	0.504	27.1
250S137-68	0.0713	33	0.390	1.33	0.386	0.309	0.994	0.095	0.495	0.386	0.309	7.19²	7.19	1,891	342	0.661	0.138	-1.096	0.653	1.561	0.507	33.1
250S137-68	0.0713	50	0.390	1.33	0.386	0.309	0.994	0.095	0.495	0.386	0.308	10.65²	10.67	2,866	519	0.661	0.138	-1.096	0.653	1.561	0.507	26.8
250S162-33	0.0346	33	0.223	0.76	0.235	0.188	1.027	0.087	0.624	0.235	0.180	3.55	3.56	975	399	0.089	0.146	-1.470	0.859	1.898	0.401	44.1
250S162-43	0.0451	33	0.289	0.98	0.302	0.242	1.022	0.111	0.620	0.302	0.240	5.22²	5.25	1,265	394	0.196	0.184	-1.457	0.852	1.885	0.402	42.1
250S162-54	0.0566	33	0.358	1.22	0.370	0.296	1.016	0.135	0.613	0.370	0.296	6.57²	6.57	1,553	373	0.383	0.223	-1.443	0.845	1.868	0.403	41.8
250S162-54	0.0566	50	0.358	1.22	0.370	0.296	1.016	0.135	0.613	0.370	0.284	9.42²	9.46	2,353	565	0.383	0.223	-1.443	0.845	1.868	0.403	33.9
250S162-68	0.0713	33	0.443	1.51	0.450	0.360	1.007	0.162	0.605	0.450	0.360	8.21²	8.21	1,891	342	0.752	0.268	-1.424	0.835	1.846	0.405	41.7
250S162-68	0.0713	50	0.443	1.51	0.450	0.360	1.007	0.162	0.605	0.450	0.357	12.11²	12.21	2,866	519	0.752	0.268	-1.424	0.835	1.846	0.405	33.7
350S162-33	0.0346	33	0.258	0.88	0.508	0.290	1.404	0.098	0.617	0.508	0.257	5.08	5.22	1,024	487	0.103	0.277	-1.324	0.796	2.026	0.573	42.7
350S162-43	0.0451	33	0.334	1.14	0.654	0.374	1.400	0.125	0.612	0.654	0.357	7.05	7.31	1,739	631	0.227	0.350	-1.312	0.789	2.014	0.575	42.6
350S162-54	0.0566	33	0.415	1.41	0.804	0.460	1.392	0.152	0.606	0.804	0.447	8.83	9.08	2,253	633	0.443	0.426	-1.298	0.782	1.998	0.578	42.7
350S162-54	0.0566	50	0.415	1.41	0.804	0.460	1.392	0.152	0.606	0.804	0.426	12.74	13.05	3,372	947	0.443	0.426	-1.298	0.782	1.998	0.578	34.5
350S162-68	0.0713	33	0.515	1.75	0.985	0.563	1.383	0.184	0.597	0.985	0.551	12.56²	12.83	2,774	592	0.872	0.514	-1.280	0.772	1.977	0.581	39.7
350S162-68	0.0713	50	0.515	1.75	0.985	0.563	1.383	0.184	0.597	0.985	0.549	16.44	16.84	4,202	897	0.872	0.514	-1.280	0.772	1.977	0.581	34.5
350S300-54	0.0566	33	0.585	1.99	1.286	0.735	1.483	0.724	1.113	1.279	0.582	11.51	12.73	2,253	633	0.624	2.166	-2.682	1.531	3.261	0.323	74.7
350S300-54	0.0566	50	0.585	1.99	1.286	0.735	1.483	0.724	1.113	1.213	0.508	15.20	16.71	3,372	947	0.624	2.166	-2.682	1.531	3.261	0.323	60.4
350S300-68	0.0713	33	0.729	2.48	1.586	0.906	1.475	0.888	1.104	1.586	0.775	15.31	16.98	2,774	592	1.235	2.649	-2.663	1.521	3.238	0.324	75.1
350S300-68	0.0713	50	0.729	2.48	1.586	0.906	1.475	0.888	1.104	1.557	0.687	20.56	22.54	4,202	897	1.235	2.649	-2.663	1.521	3.238	0.324	60.5
362S137-33	0.0346	33	0.236	0.80	0.479	0.264	1.424	0.059	0.501	0.479	0.232	4.59	4.73	1,024	521	0.094	0.165	-1.003	0.615	1.813	0.694	34.7
362S137-43	0.0451	33	0.306	1.04	0.616	0.340	1.419	0.075	0.497	0.616	0.320	6.32	6.65	1,739	676	0.207	0.208	-0.991	0.608	1.801	0.697	34.6
362S137-54	0.0566	33	0.379	1.29	0.756	0.417	1.411	0.091	0.490	0.756	0.402	7.94	8.24	2,341	705	0.405	0.251	-0.978	0.601	1.785	0.700	34.6
362S137-54	0.0566	50	0.379	1.29	0.756	0.417	1.411	0.091	0.490	0.756	0.381	11.42	11.91	3,372	1016	0.405	0.251	-0.978	0.601	1.785	0.700	27.9
362S137-68	0.0713	33	0.470	1.60	0.922	0.509	1.401	0.109	0.480	0.922	0.498	9.84	10.05	2,884	662	0.797	0.302	-0.959	0.592	1.764	0.704	34.6
362S137-68	0.0713	50	0.470	1.60	0.922	0.509	1.401	0.109	0.480	0.922	0.493	14.77	15.24	4,370	1,004	0.797	0.302	-0.959	0.592	1.764	0.704	27.8
362S162-33	0.0346	33	0.262	0.89	0.551	0.304	1.450	0.099	0.616	0.551	0.268	5.29	5.43	1,024	521	0.105	0.297	-1.308	0.789	2.048	0.592	42.6
362S162-43	0.0451	33	0.340	1.16	0.710	0.392	1.445	0.127	0.611	0.710	0.372	7.34	7.62	1,739	676	0.230	0.376	-1.297	0.782	2.036	0.594	42.5
362S162-54	0.0566	33	0.422	1.44	0.873	0.481	1.438	0.154	0.604	0.873	0.466	9.22	9.51	2,341	705	0.451	0.457	-1.283	0.774	2.020	0.597	42.5
362S162-54	0.0566	50	0.422	1.44	0.873	0.481	1.438	0.154	0.604	0.873	0.444	13.28	13.59	3,372	1,016	0.451	0.457	-1.283	0.774	2.020	0.597	34.4
362S162-68	0.0713	33	0.524	1.78	1.069	0.590	1.429	0.186	0.596	1.069	0.579	11.43	11.65	2,884	662	0.887	0.552	-1.264	0.765	1.998	0.600	42.7
362S162-68	0.0713	50	0.524	1.78	1.069	0.590	1.429	0.186	0.596	1.069	0.574	17.18	17.65	4,370	1,004	0.887	0.552	-1.264	0.765	1.998	0.600	34.3
362S200-33	0.0346	33	0.297	1.01	0.648	0.358	1.478	0.177	0.772	0.647	0.294	5.81	6.19	1,024	521	0.118	0.577	-1.741	1.030	2.411	0.478	53.6
362S200-43	0.0451	33	0.385	1.31	0.836	0.461	1.474	0.227	0.767	0.836	0.427	8.43	8.70	1,739	676	0.261	0.734	-1.729	1.024	2.398	0.480	53.5
362S200-54	0.0566	33	0.479	1.63	1.030	0.568	1.467	0.277	0.761	1.030	0.553	10.93	11.23	2,341	705	0.511	0.896	-1.715	1.016	2.382	0.482	53.6
362S200-54	0.0566	50	0.479	1.63	1.030	0.568	1.467	0.277	0.761	1.030	0.490	14.66	15.47	3,372	1,016	0.511	0.896	-1.715	1.016	2.382	0.482	43.3
362S200-68	0.0713	33	0.595	2.02	1.265	0.698	1.458	0.337	0.753	1.265	0.687	15.29²	15.54	2,884	662	1.008	1.089	-1.696	1.006	2.360	0.484	50.6
362S200-68	0.0713	50	0.595	2.02	1.265	0.698	1.458	0.337	0.753	1.265	0.666	19.95	20.51	4,370	1,004	1.008	1.089	-1.696	1.006	2.360	0.484	43.3
362S300-54	0.0566	33	0.592	2.01	1.390	0.767	1.533	0.734	1.1													

Light Steel Framing Members

See Section Properties Table Notes on page 4.

Structural Stud Section Properties

Complies with 2009 & 2012 International Building Code (IBC)

Section	Design Thickness	F _y	Gross Properties							Effective Properties						Torsional						L _u
			Area	Weight	I _x	S _x	R _x	I _y	R _y	I _{xe}	S _{xe}	M _{al}	M _{ed}	V _{ag}	V _{a (net)}	Jx1000	C _w	X _o	m	R _o	β	
	(in)	(ksi)	(in ²)	(lb/ft)	(in ⁴)	(in ³)	(in)	(in ⁴)	(in)	(in ⁴)	(in ³)	(in-k)	(in-k)	(lb)	(lb)	(in ⁴)	(in ⁶)	(in)	(in)	(in)		
400S200-33	0.0346	33	0.310	1.05	0.812	0.406	1.619	0.183	0.769	0.812	0.328	6.49	6.90	976	595	0.124	0.697	-1.688	1.007	2.462	0.530	53.1
400S200-43	0.0451	33	0.402	1.37	1.047	0.524	1.615	0.235	0.764	1.047	0.478	9.45	9.74	1,739	810	0.272	0.886	-1.676	1.000	2.449	0.532	53.0
400S200-54	0.0566	33	0.500	1.70	1.292	0.646	1.608	0.287	0.758	1.292	0.623	12.30	12.77	2,603	944	0.534	1.083	-1.662	0.993	2.433	0.534	53.0
400S200-54	0.0566	50	0.500	1.70	1.292	0.646	1.608	0.287	0.758	1.292	0.549	16.43	17.31	3,372	1,223	0.534	1.083	-1.662	0.993	2.433	0.534	42.9
400S200-68	0.0713	33	0.622	2.12	1.589	0.795	1.599	0.349	0.750	1.589	0.780	15.40	15.70	3,215	895	1.054	1.318	-1.643	0.983	2.412	0.536	53.2
400S200-68	0.0713	50	0.622	2.12	1.589	0.795	1.599	0.349	0.750	1.589	0.751	22.48	23.04	4,871	1,356	1.054	1.318	-1.643	0.983	2.412	0.536	42.9
400S300-54	0.0566	33	0.613	2.09	1.732	0.866	1.681	0.760	1.114	1.723	0.680	13.44	14.70	2,603	944	0.655	2.802	-2.594	1.496	3.285	0.377	74.0
400S300-54	0.0566	50	0.613	2.09	1.732	0.866	1.681	0.760	1.114	1.637	0.592	17.72	19.25	3,372	1,223	0.655	2.802	-2.594	1.496	3.285	0.377	59.9
400S300-68	0.0713	33	0.764	2.60	2.139	1.070	1.673	0.933	1.105	2.139	0.914	18.06	19.68	3,215	895	1.295	3.432	-2.574	1.486	3.263	0.378	74.3
400S300-68	0.0713	50	0.764	2.60	2.139	1.070	1.673	0.933	1.105	2.099	0.805	24.09	26.05	4,871	1,356	1.295	3.432	-2.574	1.486	3.263	0.378	60.0
550S162-33	0.0346	33	0.327	1.11	1.458	0.530	2.112	0.113	0.589	1.458	0.512	10.11	8.63	699	699	0.130	0.713	-1.114	0.697	2.459	0.795	41.4
550S162-43	0.0451	33	0.424	1.44	1.883	0.685	2.107	0.145	0.584	1.883	0.681	14.79 ²	13.14	1,550	1,199	0.288	0.905	-1.103	0.691	2.448	0.797	39.2
550S162-54	0.0566	33	0.528	1.80	2.324	0.845	2.098	0.176	0.577	2.324	0.845	18.76 ²	17.87	2,739	1,666	0.564	1.105	-1.090	0.684	2.434	0.800	38.7
550S162-54	0.0566	50	0.528	1.80	2.324	0.845	2.098	0.176	0.577	2.324	0.811	26.86 ²	23.52	3,093	1,881	0.564	1.105	-1.090	0.684	2.434	0.800	31.6
550S162-68	0.0713	33	0.657	2.24	2.861	1.040	2.086	0.212	0.568	2.861	1.040	23.72 ²	23.72	4,347	2,057	1.114	1.342	-1.072	0.675	2.414	0.803	38.0
550S162-68	0.0713	50	0.657	2.24	2.861	1.040	2.086	0.212	0.568	2.861	1.031	34.94 ²	32.28	5,350	2,532	1.114	1.342	-1.072	0.675	2.414	0.803	31.1
550S300-54	0.0566	33	0.698	2.37	3.545	1.289	2.254	0.850	1.104	3.505	1.080	21.34	20.74	2,739	1,666	0.745	5.364	-2.365	1.401	3.449	0.530	73.0
550S300-54	0.0566	50	0.698	2.37	3.545	1.289	2.254	0.850	1.104	3.295	0.983	29.44	26.99	3,093	1,881	0.745	5.364	-2.365	1.401	3.449	0.530	59.2
550S300-68	0.0713	33	0.871	2.96	4.391	1.597	2.245	1.044	1.095	4.384	1.411	27.88	28.03	4,347	2,057	1.476	6.594	-2.346	1.391	3.427	0.531	73.1
550S300-68	0.0713	50	0.871	2.96	4.391	1.597	2.245	1.044	1.095	4.285	1.287	38.53	36.85	5,350	2,532	1.476	6.594	-2.346	1.391	3.427	0.531	59.1
600S137-33	0.0346	33	0.318	1.08	1.582	0.527	2.229	0.069	0.464	1.548	0.455	8.98	8.19	638	638	0.127	0.500	-0.807	0.519	2.416	0.889	33.5
600S137-43	0.0451	33	0.413	1.41	2.042	0.681	2.223	0.087	0.459	2.041	0.645	12.74	11.82	1,416	1,240	0.280	0.633	-0.796	0.513	2.406	0.890	33.3
600S137-54	0.0566	33	0.514	1.75	2.518	0.839	2.213	0.105	0.452	2.518	0.832	16.44	15.95	2,739	1,890	0.549	0.769	-0.784	0.506	2.391	0.893	33.0
600S137-54	0.0566	50	0.514	1.75	2.518	0.839	2.213	0.105	0.452	2.518	0.777	23.26	21.24	2,823	1,947	0.549	0.769	-0.784	0.506	2.391	0.893	26.8
600S137-68	0.0713	33	0.640	2.18	3.094	1.031	2.200	0.125	0.443	3.094	1.031	24.05 ²	24.05	4,347	2,339	1.084	0.930	-0.768	0.497	2.371	0.895	30.1
600S137-68	0.0713	50	0.640	2.18	3.094	1.031	2.200	0.125	0.443	3.094	1.030	30.84	28.89	5,350	2,879	1.084	0.930	-0.768	0.497	2.371	0.895	26.5
600S137-97	0.1017	33	0.889	3.03	4.188	1.396	2.170	0.159	0.422	4.188	1.396	34.48 ²	34.49	6,911	2,512	3.066	1.216	-0.734	0.480	2.330	0.901	28.8
600S137-97	0.1017	50	0.889	3.03	4.188	1.396	2.170	0.159	0.422	4.188	1.396	50.80 ²	50.80	10,472	3,805	3.066	1.216	-0.734	0.480	2.330	0.901	23.6
600S162-33	0.0346	33	0.344	1.17	1.793	0.598	2.282	0.116	0.581	1.793	0.577	11.41	9.47	638	638	0.137	0.861	-1.072	0.677	2.587	0.828	41.1
600S162-43	0.0451	33	0.447	1.52	2.316	0.772	2.276	0.148	0.576	2.316	0.767	16.68 ²	14.46	1,416	1,240	0.303	1.095	-1.062	0.670	2.577	0.830	39.0
600S162-54	0.0566	33	0.556	1.89	2.860	0.953	2.267	0.180	0.570	2.860	0.953	21.17 ²	19.75	2,739	1,890	0.594	1.337	-1.049	0.663	2.562	0.832	38.4
600S162-54	0.0566	50	0.556	1.89	2.860	0.953	2.267	0.180	0.570	2.860	0.916	30.33 ²	25.90	2,823	1,947	0.594	1.337	-1.049	0.663	2.562	0.832	31.4
600S162-68	0.0713	33	0.693	2.36	3.525	1.175	2.255	0.218	0.560	3.525	1.175	26.79 ²	26.78	4,347	2,339	1.174	1.626	-1.032	0.655	2.543	0.835	37.7
600S162-68	0.0713	50	0.693	2.36	3.525	1.175	2.255	0.218	0.560	3.525	1.164	39.47 ²	35.69	5,350	2,879	1.174	1.626	-1.032	0.655	2.543	0.835	30.8
600S162-97	0.1017	33	0.966	3.29	4.797	1.599	2.229	0.283	0.541	4.797	1.599	38.37 ²	38.37	6,911	2,512	3.329	2.153	-0.997	0.636	2.501	0.841	36.4
600S162-97	0.1017	50	0.966	3.29	4.797	1.599	2.229	0.283	0.541	4.797	1.599	56.73 ²	56.72	10,472	3,805	3.329	2.153	-0.997	0.636	2.501	0.841	29.8
600S162-118	0.1242	33	1.158	3.94	5.652	1.884	2.209	0.321	0.526	5.652	1.884	46.82 ²	46.82	8,267	2,391	5.956	2.487	-0.971	0.623	2.47	0.845	35.6
600S162-118	0.1242	50	1.158	3.94	5.652	1.884	2.209	0.321	0.526	5.652	1.884	68.94 ²	68.93	12,526	3,622	5.956	2.487	-0.971	0.623	2.47	0.845	29.1
600S200-33	0.0346	33	0.379	1.29	2.075	0.692	2.340	0.209	0.743	2.058	0.621	12.28	10.77	638	638	0.151	1.593	-1.457	0.901	2.855	0.740	51.6
600S200-43	0.0451	33	0.492	1.67	2.683	0.894	2.335	0.268	0.739	2.683	0.873	17.24	15.39	1,416	1,240	0.334	2.033	-1.446	0.894	2.844		

Light Steel Framing Members

See Section Properties Table Notes on page 4.

Structural Stud Section Properties

Complies with 2009 & 2012 International Building Code (IBC)

Section	Design Thickness	F _y	Gross Properties							Effective Properties						Torsional						L _u
	Area		Weight	I _x	S _x	R _x	I _y	R _y	I _{xe}	S _{xe}	M _{al}	M _{ad}	V _{ag}	V _{a (net)}	Jx1000	C _w	X _o	m	R _o	β		
	(in ²)		(lb/ft)	(in ⁴)	(in ³)	(in)	(in ⁴)	(in)	(in ⁴)	(in ³)	(in-k)	(in-k)	(lb)	(lb)	(in ⁴)	(in ⁶)	(in)	(in)	(in)			
600S300-54	0.0566	33	0.726	2.47	4.319	1.440	2.439	0.875	1.098	4.269	1.211	23.93	22.80	2,739	1,890	0.775	6.452	-2.299	1.372	3.527	0.575	72.8
600S300-54	0.0566	50	0.726	2.47	4.319	1.440	2.439	0.875	1.098	4.014	1.106	33.13	29.62	2,823	1,947	0.775	6.452	-2.299	1.372	3.527	0.575	59.1
600S300-68	0.0713	33	0.907	3.09	5.354	1.785	2.430	1.075	1.089	5.344	1.581	31.23	30.88	4,347	2,339	1.537	7.937	-2.280	1.363	3.505	0.577	72.8
600S300-68	0.0713	50	0.907	3.09	5.354	1.785	2.430	1.075	1.089	5.221	1.446	43.30	40.53	5,350	2,879	1.537	7.937	-2.280	1.363	3.505	0.577	59.0
600S300-97	0.1017	33	1.271	4.32	7.381	2.460	2.410	1.454	1.070	7.381	2.352	52.07 ²	52.40	6,911	2,512	4.381	10.776	-2.241	1.343	3.461	0.581	68.8
600S300-97	0.1017	50	1.271	4.32	7.381	2.460	2.410	1.454	1.070	7.280	2.247	67.28	64.67	10,472	3,805	4.381	10.776	-2.241	1.343	3.461	0.581	58.8
600S300-118	0.1242	33	1.531	5.21	8.785	2.928	2.395	1.704	1.055	8.785	2.84	64.29 ²	66.28	8,267	2,391	7.872	12.683	-2.212	1.328	3.427	0.583	68.1
600S300-118	0.1242	50	1.531	5.21	8.785	2.928	2.395	1.704	1.055	8.713	2.797	94.24 ²	90.37	12,526	3,622	7.872	12.683	-2.212	1.328	3.427	0.583	55.3
600S350-54 ³	0.0566	33	0.825	2.81	5.022	1.674	2.467	1.491	1.344	4.911	1.452	28.70	27.98	2,739	1,890	0.881	12.942	-3.037	1.787	4.137	0.461	91.8
600S350-54 ³	0.0566	50	0.825	2.81	5.022	1.674	2.467	1.491	1.344	4.721	1.335	39.97	36.56	2,823	1,947	0.881	12.942	-3.037	1.787	4.137	0.461	74.4
600S350-68 ³	0.0713	33	1.032	3.51	6.237	2.079	2.459	1.841	1.336	6.237	1.949	38.50	37.63	4,347	2,339	1.748	15.968	-3.018	1.777	4.115	0.462	91.8
600S350-68 ³	0.0713	50	1.032	3.51	6.237	2.079	2.459	1.841	1.336	6.166	1.771	53.01	49.69	5,350	2,879	1.748	15.968	-3.018	1.777	4.115	0.462	74.4
600S350-97 ³	0.1017	33	1.449	4.93	8.631	2.877	2.441	2.518	1.318	8.631	2.822	61.55 ²	62.49	6,911	2,512	4.994	21.811	-2.979	1.757	4.071	0.464	87.5
600S350-97 ³	0.1017	50	1.449	4.93	8.631	2.877	2.441	2.518	1.318	8.631	2.593	77.64	78.36	10,472	3,805	4.994	21.811	-2.979	1.757	4.071	0.464	74.4
600S350-118 ³	0.1242	33	1.748	5.95	10.304	3.435	2.428	2.978	1.305	10.304	3.435	76.39 ²	76.40	8,267	2,391	8.990	25.791	-2.951	1.742	4.038	0.466	86.9
600S350-118 ³	0.1242	50	1.748	5.95	10.304	3.435	2.428	2.978	1.305	10.304	3.268	108.43 ²	107.66	12,526	3,622	8.990	25.791	-2.951	1.742	4.038	0.466	70.6
800S137-33 ¹	0.0346	33	0.388	1.32	3.198	0.799	2.873	0.073	0.435	2.998	0.622	12.30	10.71	474	474	0.155	0.957	-0.696	0.460	2.987	0.946	32.5
800S137-43	0.0451	33	0.503	1.71	4.134	1.033	2.866	0.093	0.430	4.001	0.896	17.70	15.78	1,051	1,051	0.341	1.214	-0.687	0.454	2.978	0.947	32.2
800S137-54	0.0566	33	0.627	2.13	5.110	1.277	2.855	0.112	0.423	5.077	1.179	23.29	21.74	2,091	2,091	0.670	1.478	-0.676	0.448	2.964	0.948	32.0
800S137-54	0.0566	50	0.627	2.13	5.110	1.277	2.855	0.112	0.423	4.974	1.083	32.42	28.47	2,091	2,091	0.670	1.478	-0.676	0.448	2.964	0.948	25.9
800S137-68	0.0713	33	0.782	2.66	6.303	1.576	2.839	0.134	0.414	6.303	1.541	30.45	29.75	4,221	3,367	1.325	1.789	-0.661	0.440	2.944	0.950	31.6
800S137-68	0.0713	50	0.782	2.66	6.303	1.576	2.839	0.134	0.414	6.285	1.468	43.96	39.57	4,221	3,367	1.325	1.789	-0.661	0.440	2.944	0.950	25.6
800S137-97	0.1017	33	1.093	3.72	8.597	2.149	2.805	0.169	0.394	8.597	2.149	53.09 ²	53.09	8,843	4,824	3.767	2.349	-0.630	0.423	2.902	0.953	27.6
800S137-97	0.1017	50	1.093	3.72	8.597	2.149	2.805	0.169	0.394	8.597	2.149	64.35	63.91	10,885	5,938	3.767	2.349	-0.630	0.423	2.902	0.953	25.0
800S162-33 ¹	0.0346	33	0.413	1.41	3.582	0.896	2.943	0.125	0.550	3.384	0.710	14.03	12.61	474	474	0.165	1.630	-0.936	0.607	3.137	0.911	40.1
800S162-43	0.0451	33	0.537	1.83	4.633	1.158	2.937	0.160	0.546	4.500	1.019	20.14	18.33	1,051	1,051	0.364	2.076	-0.926	0.601	3.128	0.912	39.8
800S162-54	0.0566	33	0.670	2.28	5.736	1.434	2.927	0.194	0.539	5.702	1.334	26.36	24.98	2,091	2,091	0.715	2.539	-0.914	0.594	3.113	0.914	39.6
800S162-54	0.0566	50	0.670	2.28	5.736	1.434	2.927	0.194	0.539	5.600	1.229	36.79	32.81	2,091	2,091	0.715	2.539	-0.914	0.594	3.113	0.914	32.1
800S162-68	0.0713	33	0.836	2.84	7.089	1.772	2.913	0.235	0.530	7.089	1.737	34.32	33.84	4,221	3,367	1.416	3.093	-0.899	0.586	3.094	0.916	39.3
800S162-68	0.0713	50	0.836	2.84	7.089	1.772	2.913	0.235	0.530	7.070	1.663	49.80	45.11	4,221	3,367	1.416	3.093	-0.899	0.586	3.094	0.916	31.9
800S162-97	0.1017	33	1.169	3.98	9.713	2.428	2.883	0.305	0.510	9.713	2.428	58.27 ²	58.27	8,843	4,824	4.030	4.114	-0.866	0.568	3.053	0.919	35.1
800S162-97	0.1017	50	1.169	3.98	9.713	2.428	2.883	0.305	0.510	9.713	2.428	72.70	71.93	10,885	5,938	4.030	4.114	-0.866	0.568	3.053	0.919	31.4
800S162-118	0.1242	33	1.407	4.79	11.504	2.876	2.860	0.345	0.496	11.504	2.876	71.47 ²	71.47	11,341	4,971	7.234	4.766	-0.842	0.556	3.022	0.922	34.1
800S162-118	0.1242	50	1.407	4.79	11.504	2.876	2.860	0.345	0.496	11.504	2.876	105.23 ²	105.23	16,235	7,115	7.234	4.766	-0.842	0.556	3.022	0.922	28.0
800S200-33 ¹	0.0346	33	0.448	1.52	4.096	1.024	3.023	0.227	0.712	4.096	0.816	16.12	14.52	474	474	0.179	2.971	-1.288	0.817	3.363	0.853	50.6
800S200-43	0.0451	33	0.582	1.98	5.302	1.325	3.018	0.292	0.708	5.302	1.293	25.54	20.99	1,051	1,051	0.395	3.797	-1.277	0.811	3.353	0.855	50.3
800S200-54	0.0566	33	0.726	2.47	6.573	1.643	3.009	0.357	0.701	6.573	1.643	35.75 ²	30.37	2,091	2,091	0.775	4.663	-1.265	0.804	3.338	0.856	47.8
800S200-54	0.0566	50	0.726	2.47	6.573	1.643	3.009	0.357	0.701	6.573	1.499	44.87	37.37	2,091	2,091	0.775	4.663	-1.265	0.804	3.338	0.856	40.7
800S200-68	0.0713	33	0.907	3.09	8.140	2.035	2.996	0.435	0.692	8.140	2.035	45.29 ²	41.79	4,221	3,367	1.537	5.712	-1.248	0.796	3.319	0.859	47.0
800S200-68	0.0713	50	0.907	3.09	8.140	2.035	2.996	0.435	0.692</													

Light Steel Framing Members

See Section Properties Table Notes on page 4.

Structural Stud Section Properties

Complies with 2009 & 2012 International Building Code (IBC)

Section	Design Thickness	F _y	Gross Properties							Effective Properties						Torsional						L _u
			Area	Weight	I _x	S _x	R _x	I _y	R _y	I _{xe}	S _{xe}	M _{al}	M _{ad}	V _{ag}	V _{a (net)}	Jx1000	C _w	X _o	m	R _o	β	
	(in)	(ksi)	(in²)	(lb/ft)	(in⁴)	(in³)	(in)	(in⁴)	(in)	(in⁴)	(in³)	(in-k)	(in-k)	(lb)	(lb)	(in⁴)	(in⁶)	(in)	(in)	(in)		
800S300-54	0.0566	33	0.839	2.86	8.358	2.090	3.156	0.960	1.069	8.249	1.785	35.28	31.13	2,091	2,091	0.896	12.076	-2.073	1.271	3.924	0.721	72.2
800S300-54	0.0566	50	0.839	2.86	8.358	2.090	3.156	0.960	1.069	7.862	1.535	45.96	40.22	2,091	2,091	0.896	12.076	-2.073	1.271	3.924	0.721	58.6
800S300-68	0.0713	33	1.050	3.57	10.382	2.595	3.145	1.179	1.060	10.351	2.321	45.86	42.54	4,221	3,367	1.779	14.888	-2.055	1.262	3.903	0.723	72.0
800S300-68	0.0713	50	1.050	3.57	10.382	2.595	3.145	1.179	1.060	10.082	2.145	64.21	55.47	4,221	3,367	1.779	14.888	-2.055	1.262	3.903	0.723	58.4
800S300-97	0.1017	33	1.474	5.02	14.375	3.594	3.123	1.595	1.040	14.375	3.443	76.21²	73.25	8,843	4,824	5.082	20.304	-2.017	1.243	3.860	0.727	67.7
800S300-97	0.1017	50	1.474	5.02	14.375	3.594	3.123	1.595	1.040	14.170	3.304	98.92	89.89	10,885	5,938	5.082	20.304	-2.017	1.243	3.860	0.727	58.1
800S300-118	0.1242	33	1.779	6.05	17.167	4.292	3.106	1.871	1.025	17.167	4.168	94.33²	95.78	11,341	4,971	9.149	23.979	-1.989	1.229	3.828	0.730	66.8
800S300-118	0.1242	50	1.779	6.05	17.167	4.292	3.106	1.871	1.025	17.022	4.108	138.41²	126.69	16,235	7,115	9.149	23.979	-1.989	1.229	3.828	0.730	54.5
800S350-54³	0.0566	33	0.938	3.19	9.683	2.421	3.212	1.646	1.325	9.477	2.125	41.98	32.29	2,091	2,091	1.002	22.897	-2.766	1.668	4.441	0.612	90.0
800S350-54³	0.0566	50	0.938	3.19	9.683	2.421	3.212	1.646	1.325	9.191	1.869	55.96	49.74	2,091	2,091	1.002	22.897	-2.766	1.668	4.441	0.612	73.1
800S350-68³	0.0713	33	1.174	4.00	12.046	3.012	3.203	2.034	1.316	12.046	2.837	56.07	51.89	4,221	3,367	1.990	28.308	-2.748	1.658	4.421	0.614	89.9
800S350-68³	0.0713	50	1.174	4.00	12.046	3.012	3.203	2.034	1.316	11.909	2.596	77.73	68.05	4,221	3,367	1.990	28.308	-2.748	1.658	4.421	0.614	72.9
800S350-97³	0.1017	33	1.652	5.62	16.737	4.184	3.183	2.784	1.298	16.737	4.101	89.43²	87.25	8,843	4,824	5.696	38.834	-2.710	1.639	4.377	0.617	85.4
800S350-97³	0.1017	50	1.652	5.62	16.737	4.184	3.183	2.784	1.298	16.737	3.785	113.34	108.67	10,885	5,938	5.696	38.834	-2.710	1.639	4.377	0.617	72.7
800S350-118³	0.1242	33	1.997	6.79	20.041	5.010	3.168	3.295	1.285	20.041	5.010	111.44²	111.44	11,341	4,971	10.267	46.068	-2.682	1.624	4.345	0.619	84.6
800S350-118³	0.1242	50	1.997	6.79	20.041	5.010	3.168	3.295	1.285	20.041	4.762	158.02²	150.37	16,235	7,115	10.267	46.068	-2.682	1.624	4.345	0.619	68.9
1000S162-43¹	0.0451	33	0.627	2.13	8.025	1.605	3.577	0.168	0.518	7.523	1.302	25.74	22.49	3,345	3,345	1.658	5.121	-0.798	0.531	3.673	0.953	38.2
1000S162-54	0.0566	33	0.783	2.66	9.950	1.990	3.565	0.204	0.511	9.627	1.722	34.02	31.11	3,345	3,345	1.658	5.121	-0.798	0.531	3.673	0.953	31.0
1000S162-54	0.0566	50	0.783	2.66	9.950	1.990	3.565	0.204	0.511	9.391	1.572	47.07	40.37	8,843	6,434	4.731	6.827	-0.768	0.514	3.631	0.955	37.5
1000S162-68	0.0713	33	0.978	3.33	12.325	2.465	3.550	0.246	0.502	12.256	2.276	44.98	42.91	9,864	7,177	4.731	6.827	-0.768	0.514	3.631	0.955	30.4
1000S162-68	0.0713	50	0.978	3.33	12.325	2.465	3.550	0.246	0.502	11.978	2.154	64.51	56.35	13,189	7,747	8.511	7.924	-0.746	0.502	3.600	0.957	32.9
1000S162-97	0.1017	33	1.372	4.67	16.967	3.393	3.516	0.320	0.483	16.967	3.393	67.06	67.05	16,235	9,536	8.511	7.924	-0.746	0.502	3.600	0.957	30.0
1000S162-97	0.1017	50	1.372	4.67	16.967	3.393	3.516	0.320	0.483	16.967	3.269	97.89	92.56	836	836	0.456	6.236	-1.147	0.743	3.910	0.914	49.3
1000S162-118	0.1242	33	1.655	5.63	20.169	4.034	3.491	0.363	0.468	20.169	4.034	100.24²	100.25	1,661	1,661	0.896	7.665	-1.135	0.737	3.896	0.915	49.1
1000S162-118	0.1242	50	1.655	5.63	20.169	4.034	3.491	0.363	0.468	20.169	4.034	120.77	120.34	1,661	1,661	0.896	7.665	-1.135	0.737	3.896	0.915	39.8
1000S200-43¹	0.0451	33	0.672	2.29	9.085	1.817	3.676	0.309	0.677	8.602	1.470	29.05	26.14	3,345	3,345	1.779	9.401	-1.120	0.729	3.876	0.917	48.8
1000S200-54	0.0566	33	0.839	2.86	11.278	2.256	3.666	0.378	0.671	10.953	1.984	39.20	35.86	3,345	3,345	1.779	9.401	-1.120	0.729	3.876	0.917	39.6
1000S200-54	0.0566	50	0.839	2.86	11.278	2.256	3.666	0.378	0.671	10.769	1.705	51.05	46.62	8,843	6,434	5.082	12.679	-1.088	0.711	3.836	0.920	48.2
1000S200-68	0.0713	33	1.050	3.57	13.994	2.799	3.652	0.460	0.662	13.920	2.607	51.51	49.07	9,864	7,177	5.082	12.679	-1.088	0.711	3.836	0.920	39.0
1000S200-68	0.0713	50	1.050	3.57	13.994	2.799	3.652	0.460	0.662	13.665	2.420	72.46	64.50	13,189	7,747	9.149	14.848	-1.064	0.699	3.805	0.922	43.3
1000S200-97	0.1017	33	1.474	5.02	19.336	3.867	3.622	0.609	0.643	19.336	3.867	76.42	76.24	16,235	9,536	9.149	14.848	-1.064	0.699	3.805	0.922	38.7
1000S200-97	0.1017	50	1.474	5.02	19.336	3.867	3.622	0.609	0.643	19.336	3.741	112.00	104.73	836	836	0.486	10.481	-1.518	0.965	4.155	0.867	60.7
1000S200-118	0.1242	33	1.779	6.05	23.052	4.610	3.599	0.703	0.629	23.052	4.610	110.50²	110.50	1,661	1,661	0.957	12.922	-1.505	0.958	4.140	0.868	60.5
1000S200-118	0.1242	50	1.779	6.05	23.052	4.610	3.599	0.703	0.629	23.052	4.610	138.04	135.74	1,661	1,661	0.957	12.922	-1.505	0.958	4.140	0.868	49.1
1000S250-43¹	0.0451	33	0.717	2.44	10.203	2.041	3.771	0.531	0.860	10.203	1.617	31.95	27.67	3,345	3,345	1.899	15.909	-1.488	0.950	4.121	0.870	57.3
1000S250-54	0.0566	33	0.896	3.05	12.677	2.535	3.762	0.653	0.854	12.677	2.277	44.99	38.02	3,345	3,345	1.899	15.909	-1.488	0.950	4.121	0.870	48.8
1000S250-54	0.0566	50	0.896	3.05	12.677	2.535	3.762	0.653	0.854	12.660	1.879	56.26	49.16	8,843	6,434	5.433	21.632	-1.454	0.932	4.080	0.873	55.8
1000S250-68	0.0713	33	1.121	3.81	15.751	3.150	3.749	0.799	0.844	15.751	3.028	65.93²	55.62	9,864	7,177	5.433	21.632	-1.454	0.932	4.080	0.873	45.6
1000S250-68	0.0713	50	1.121	3.81	15.751	3.150	3.749	0.799	0.844	15.741	2.768	82.89	68.13	13,189	7,747	9.788	25.490	-1.428	0.918	4.049	0.876	54.7
1000S250-97	0.1017	33	1.576	5.36	21.827	4.365	3.722	1.072	0.825	21.827	4.357	98.41²	91.77	16,235	9,536	9.788	25.490	-1.428	0.918	4.04		

Light Steel Framing Members

See Section Properties Table Notes on page 4.

Structural Stud Section Properties

Complies with 2009 & 2012 International Building Code (IBC)

Section	Design Thickness	F _y	Gross Properties							Effective Properties						Torsional						L _u
			Area	Weight	I _x	S _x	R _x	I _y	R _y	I _{xe}	S _{xe}	M _{al}	M _{ad}	V _{ag}	V _{a (net)}	Jx1000	C _w	X _o	m	R _o	β	
			(in²)	(lb/ft)	(in⁴)	(in³)	(in)	(in⁴)	(in)	(in⁴)	(in³)	(in-k)	(in-k)	(lb)	(lb)	(in⁴)	(in⁴)	(in)	(in)	(in)		
1200S162-54¹	0.0566	33	0.896	3.05	15.730	2.622	4.190	0.212	0.486	14.743	2.109	41.68	36.38	1,377	1,377	0.957	6.340	-0.732	0.493	4.281	0.971	37.5
1200S162-54¹	0.0566	50	0.896	3.05	15.730	2.622	4.190	0.212	0.486	14.298	1.914	57.31	46.75	1,377	1,377	0.957	6.340	-0.732	0.493	4.281	0.971	30.5
1200S162-68	0.0713	33	1.121	3.81	19.518	3.253	4.173	0.255	0.477	18.955	2.817	55.66	50.95	2,771	2,771	1.899	7.739	-0.719	0.485	4.261	0.972	37.2
1200S162-68	0.0713	50	1.121	3.81	19.518	3.253	4.173	0.255	0.477	18.390	2.645	79.19	66.14	2,771	2,771	1.899	7.739	-0.719	0.485	4.261	0.972	30.2
1200S162-97	0.1017	33	1.576	5.36	26.966	4.494	4.137	0.331	0.459	26.966	4.327	85.51	83.86	8,147	7,411	5.433	10.331	-0.691	0.47	4.219	0.973	36.4
1200S162-97	0.1017	50	1.576	5.36	26.966	4.494	4.137	0.331	0.459	26.735	4.091	122.49	111.30	8,147	7,411	5.433	10.331	-0.691	0.47	4.219	0.973	29.5
1200S162-118	0.1242	33	1.904	6.48	32.145	5.357	4.109	0.376	0.444	32.145	5.357	105.87	105.87	13,189	9,714	9.788	12.002	-0.670	0.459	4.187	0.974	35.8
1200S162-118	0.1242	50	1.904	6.48	32.145	5.357	4.109	0.376	0.444	32.145	5.168	154.74	147.23	14,986	11,037	9.788	12.002	-0.670	0.459	4.187	0.974	29.0
1200S200-54¹	0.0566	33	0.953	3.24	17.662	2.944	4.306	0.393	0.643	16.678	2.425	47.93	42.47	1,377	1,377	1.017	11.550	-1.032	0.681	4.474	0.947	48.0
1200S200-54¹	0.0566	50	0.953	3.24	17.662	2.944	4.306	0.393	0.643	16.334	2.073	62.07	54.74	1,377	1,377	1.017	11.550	-1.032	0.681	4.474	0.947	39.0
1200S200-68	0.0713	33	1.192	4.06	21.947	3.658	4.291	0.479	0.634	21.376	3.215	63.54	58.83	2,771	2,771	2.020	14.176	-1.017	0.673	4.455	0.948	47.7
1200S200-68	0.0713	50	1.192	4.06	21.947	3.658	4.291	0.479	0.634	20.864	2.963	88.71	76.55	2,771	2,771	2.020	14.176	-1.017	0.673	4.455	0.948	38.7
1200S200-97	0.1017	33	1.677	5.71	30.417	5.069	4.258	0.635	0.615	30.417	4.899	96.81	95.43	8,147	7,411	5.783	19.150	-0.987	0.656	4.414	0.950	47.0
1200S200-97	0.1017	50	1.677	5.71	30.417	5.069	4.258	0.635	0.615	30.175	4.660	139.51	126.86	8,147	7,411	5.783	19.150	-0.987	0.656	4.414	0.950	38.1
1200S200-118	0.1242	33	2.028	6.90	36.347	6.058	4.234	0.732	0.601	36.347	6.058	119.71	119.71	13,189	9,714	10.427	22.451	-0.964	0.644	4.384	0.952	46.5
1200S200-118	0.1242	50	2.028	6.90	36.347	6.058	4.234	0.732	0.601	36.347	5.865	175.59	166.80	14,986	11,037	10.427	22.451	-0.964	0.644	4.384	0.952	37.7
1200S250-54¹	0.0566	33	1.009	3.43	19.681	3.280	4.416	0.683	0.823	18.832	2.482	49.05	45.43	1,377	1,377	1.078	19.505	-1.378	0.892	4.699	0.914	59.6
1200S250-54¹	0.0566	50	1.009	3.43	19.681	3.280	4.416	0.683	0.823	18.433	2.149	64.34	58.39	1,377	1,377	1.078	19.505	-1.378	0.892	4.699	0.914	48.3
1200S250-68	0.0713	33	1.263	4.30	24.484	4.081	4.402	0.836	0.813	23.963	3.496	69.08	62.95	2,771	2,771	2.141	24.034	-1.362	0.884	4.679	0.915	59.2
1200S250-68	0.0713	50	1.263	4.30	24.484	4.081	4.402	0.836	0.813	23.575	3.007	90.04	81.59	2,771	2,771	2.141	24.034	-1.362	0.884	4.679	0.915	48.1
1200S250-97	0.1017	33	1.779	6.05	34.016	5.669	4.373	1.121	0.794	34.016	5.496	108.60	102.52	8,147	7,411	6.134	32.734	-1.329	0.867	4.639	0.918	58.6
1200S250-97	0.1017	50	1.779	6.05	34.016	5.669	4.373	1.121	0.794	33.835	5.037	150.82	135.37	8,147	7,411	6.134	32.734	-1.329	0.867	4.639	0.918	47.5
1200S250-118	0.1242	33	2.152	7.32	40.726	6.788	4.350	1.307	0.779	40.726	6.788	134.13	133.19	13,189	9,714	11.065	38.619	-1.305	0.854	4.608	0.920	58.2
1200S250-118	0.1242	50	2.152	7.32	40.726	6.788	4.350	1.307	0.779	40.726	6.541	195.84	178.57	14,986	11,037	11.065	38.619	-1.305	0.854	4.608	0.920	47.1
1200S300-54¹	0.0566	33	1.066	3.63	21.699	3.617	4.512	1.074	1.004	21.648	2.736	54.06	47.36	1,377	1,377	1.138	30.051	-1.743	1.111	4.940	0.876	70.8
1200S300-54¹	0.0566	50	1.066	3.63	21.699	3.617	4.512	1.074	1.004	21.043	2.272	68.04	60.65	1,377	1,377	1.138	30.051	-1.743	1.111	4.940	0.876	57.4
1200S300-68	0.0713	33	1.335	4.54	27.020	4.503	4.499	1.320	0.994	26.918	4.064	80.30	65.72	2,771	2,771	2.262	37.126	-1.726	1.103	4.921	0.877	70.5
1200S300-68	0.0713	50	1.335	4.54	27.020	4.503	4.499	1.320	0.994	26.510	3.317	99.32	84.79	2,771	2,771	2.262	37.126	-1.726	1.103	4.921	0.877	57.2
1200S300-97	0.1017	33	1.881	6.40	37.616	6.269	4.472	1.786	0.974	37.616	6.035	133.59²	116.06	8,147	7,411	6.484	50.853	-1.691	1.085	4.880	0.880	66.0
1200S300-97	0.1017	50	1.881	6.40	37.616	6.269	4.472	1.786	0.974	37.085	5.831	174.57	141.05	8,147	7,411	6.484	50.853	-1.691	1.085	4.880	0.880	56.7
1200S300-118	0.1242	33	2.276	7.75	45.106	7.518	4.452	2.095	0.959	45.106	7.323	165.76²	154.65	13,189	9,714	11.704	60.251	-1.666	1.071	4.849	0.882	64.9
1200S300-118	0.1242	50	2.276	7.75	45.106	7.518	4.452	2.095	0.959	44.727	7.232	243.67²	201.68	14,986	11,037	11.704	60.251	-1.666	1.071	4.849	0.882	53.0
1200S350-54¹.3	0.0566	33	1.165	3.96	24.860	4.143	4.620	1.866	1.266	24.610	3.295	65.12	58.95	1,377	1,377	1.244	54.279	-2.363	1.478	5.341	0.804	88.0
1200S350-54¹.3	0.0566	50	1.165	3.96	24.860	4.143	4.620	1.866	1.266	24.087	2.787	83.46	75.92	1,377	1,377	1.244	54.279	-2.363	1.478	5.341	0.804	71.4
1200S350-68³	0.0713	33	1.460	4.97	30.996	5.166	4.608	2.306	1.257	30.996	4.908	96.98	80.83	2,771	2,771	2.473	67.251	-2.346	1.469	5.322	0.806	87.7
1200S350-68³	0.0713	50	1.460	4.97	30.996	5.166	4.608	2.306	1.257	30.916	4.061	121.59	104.89	2,771	2,771	2.473	67.251	-2.346	1.469	5.322	0.806	71.2
1200S350-97³	0.1017	33	2.059	7.01	43.269	7.211	4.584	3.159	1.239	43.269	7.071	154.22²	138.56	8,147	7,411	7.098	92.672	-2.310	1.450	5.281	0.809	83.0
1200S350-97³	0.1017	50	2.059	7.01	43.269	7.211	4.584	3.159	1.239	43.269	6.590	197.31	170.84	8,147	7,411	7.098	92.672	-2.310	1.450	5.281	0.809	70.8
1200S350-118³	0.1242	33	2.494	8.48	51.992	8.665	4.566	3.741	1.225	51.992	8.665	192.74²	181.90	13,189	9,714	12.821	110.302	-2.284	1.436	5.250	0.811	81.9
1200S350-118³	0.1242	50	2.494	8.48	51.992	8.665	4.566	3.741	1.225	51.992	8.260	274.07²	23									

Light Steel Framing Members

See Section Properties Table Notes on page 4.

Structural Stud Section Properties

Complies with 2009 & 2012 International Building Code (IBC)

Section	Design Thickness	F _y	Gross Properties							Effective Properties						Torsional							L _u
			Area	Weight	I _x	S _x	R _x	I _y	R _y	I _{xe}	S _{xe}	M _{al}	M _{ed}	V _{ag}	V _{a (net)}	Jx1000	C _w	X _o	m	R _o	β		
	(in)	(ksi)	(in²)	(lb/ft)	(in⁴)	(in³)	(in)	(in⁴)	(in)	(in⁴)	(in³)	(in-k)	(in-k)	(lb)	(lb)	(in⁴)	(in⁶)	(in)	(in)	(in)	β	(in)	
1400S250-54¹	0.0566	33	1.122	3.82	28.702	4.100	5.057	0.707	0.794	26.758	2.927	57.83	52.08	1,177	1,177	1.198	27.675	-1.272	0.835	5.275	0.942	58.6	
1400S250-54¹	0.0566	50	1.122	3.82	28.702	4.100	5.057	0.707	0.794	26.141	2.527	75.65	66.58	1,177	1,177	1.198	27.675	-1.272	0.835	5.275	0.942	47.6	
1400S250-68	0.0713	33	1.406	4.78	35.743	5.106	5.042	0.865	0.784	34.239	4.145	81.90	72.82	2,365	2,365	2.383	34.118	-1.257	0.827	5.255	0.943	58.3	
1400S250-68	0.0713	50	1.406	4.78	35.743	5.106	5.042	0.865	0.784	33.565	3.550	106.29	93.79	2,365	2,365	2.383	34.118	-1.257	0.827	5.255	0.943	47.3	
1400S250-97	0.1017	33	1.983	6.75	49.764	7.109	5.010	1.160	0.765	49.579	6.611	130.64	120.65	6,939	6,939	6.835	46.520	-1.225	0.811	5.214	0.945	57.6	
1400S250-97	0.1017	50	1.983	6.75	49.764	7.109	5.010	1.160	0.765	48.650	6.010	179.95	157.94	6,939	6,939	6.835	46.520	-1.225	0.811	5.214	0.945	46.7	
1400S250-118	0.1242	33	2.400	8.17	59.676	8.525	4.986	1.352	0.750	59.676	8.330	164.61	158.62	12,745	11,287	12.342	54.927	-1.203	0.798	5.184	0.946	57.1	
1400S250-118	0.1242	50	2.400	8.17	59.676	8.525	4.986	1.352	0.750	59.504	7.881	235.94	210.42	12,745	11,287	12.342	54.927	-1.203	0.798	5.184	0.946	46.2	
1400S300-54¹	0.0566	33	1.179	4.01	31.453	4.493	5.165	1.115	0.972	29.581	3.019	59.66	54.74	1,177	1,177	1.259	42.690	-1.617	1.046	5.499	0.914	69.9	
1400S300-54¹	0.0566	50	1.179	4.01	31.453	4.493	5.165	1.115	0.972	27.227	2.580	77.25	69.82	1,177	1,177	1.259	42.690	-1.617	1.046	5.499	0.914	56.8	
1400S300-68	0.0713	33	1.477	5.03	39.201	5.600	5.151	1.370	0.963	37.902	4.236	83.71	76.51	2,365	2,365	2.503	52.772	-1.601	1.038	5.480	0.915	69.6	
1400S300-68	0.0713	50	1.477	5.03	39.201	5.600	5.151	1.370	0.963	36.290	3.655	109.42	98.25	2,365	2,365	2.503	52.772	-1.601	1.038	5.480	0.915	56.5	
1400S300-97	0.1017	33	2.084	7.09	54.675	7.811	5.122	1.854	0.943	54.574	7.035	139.02	126.99	6,939	6,939	7.186	72.365	-1.568	1.02	5.439	0.917	68.9	
1400S300-97	0.1017	50	2.084	7.09	54.675	7.811	5.122	1.854	0.943	53.226	6.372	190.78	165.45	6,939	6,939	7.186	72.365	-1.568	1.02	5.439	0.917	55.9	
1400S300-118	0.1242	33	2.525	8.59	65.655	9.379	5.100	2.174	0.928	65.655	9.046	178.75	167.53	12,745	11,287	12.981	85.812	-1.544	1.008	5.408	0.919	68.5	
1400S300-118	0.1242	50	2.525	8.59	65.655	9.379	5.100	2.174	0.928	65.570	8.427	252.29	220.81	12,745	11,287	12.981	85.812	-1.544	1.008	5.408	0.919	55.5	
1400S350-54¹,³	0.0566	33	1.278	4.35	35.830	5.119	5.295	1.947	1.234	35.659	3.823	75.54	68.80	1,177	1,177	1.365	76.252	-2.207	1.400	5.868	0.859	87.1	
1400S350-54¹,³	0.0566	50	1.278	4.35	35.830	5.119	5.295	1.947	1.234	33.308	3.249	97.27	88.25	1,177	1,177	1.365	76.252	-2.207	1.400	5.868	0.859	70.7	
1400S350-68³	0.0713	33	1.602	5.45	44.707	6.387	5.283	2.406	1.226	44.707	5.700	112.64	94.81	2,365	2,365	2.715	94.534	-2.190	1.391	5.848	0.860	86.8	
1400S350-68³	0.0713	50	1.602	5.45	44.707	6.387	5.283	2.406	1.226	44.707	4.709	141.00	122.49	2,365	2,365	2.715	94.534	-2.190	1.391	5.848	0.860	70.4	
1400S350-97³	0.1017	33	2.262	7.70	62.507	8.930	5.257	3.296	1.207	62.507	8.762	191.08²	163.95	6,939	6,939	7.799	130.43	-2.156	1.373	5.808	0.862	82.0	
1400S350-97³	0.1017	50	2.262	7.70	62.507	8.930	5.257	3.296	1.207	62.507	8.189	245.18	201.25	6,939	6,939	7.799	130.43	-2.156	1.373	5.808	0.862	70.0	
1400S350-118³	0.1242	33	2.742	9.33	75.200	10.743	5.237	3.903	1.193	75.200	10.743	238.95²	216.66	12,745	11,287	14.099	155.387	-2.130	1.360	5.778	0.864	80.9	
1400S350-118³	0.1242	50	2.742	9.33	75.200	10.743	5.237	3.903	1.193	75.200	10.260	340.44²	282.84	12,745	11,287	14.099	155.387	-2.130	1.360	5.778	0.864	66.1	
1600S162-68¹	0.0713	33	1.406	4.78	40.913	5.114	5.394	0.268	0.436	37.533	3.896	76.99	64.10	2,062	2,062	2.383	14.816	-0.601	0.415	5.445	0.988	35.2	
1600S162-68¹	0.0713	50	1.406	4.78	40.913	5.114	5.394	0.268	0.436	35.986	3.624	108.49	81.87	2,062	2,062	2.383	14.816	-0.601	0.415	5.445	0.988	28.6	
1600S162-97	0.1017	33	1.983	6.75	56.824	7.103	5.354	0.347	0.418	55.563	6.173	121.97	110.13	6,043	6,043	6.835	19.807	-0.577	0.401	5.401	0.989	34.4	
1600S162-97	0.1017	50	1.983	6.75	56.824	7.103	5.354	0.347	0.418	53.725	5.738	171.79	142.80	6,043	6,043	6.835	19.807	-0.577	0.401	5.401	0.989	27.9	
1600S162-118	0.1242	33	2.400	8.17	68.014	8.502	5.323	0.393	0.405	68.014	7.920	156.50	147.57	11,088	11,088	12.342	23.035	-0.559	0.391	5.368	0.989	33.7	
1600S162-118	0.1242	50	2.400	8.17	68.014	8.502	5.323	0.393	0.405	66.535	7.399	221.51	193.72	11,088	11,088	12.342	23.035	-0.559	0.391	5.368	0.989	27.3	
1600S200-68¹	0.0713	33	1.477	5.03	45.291	5.661	5.537	0.506	0.585	41.916	4.431	87.56	75.11	2,062	2,062	2.503	27.155	-0.862	0.584	5.634	0.977	45.7	
1600S200-68¹	0.0713	50	1.477	5.03	45.291	5.661	5.537	0.506	0.585	40.523	4.045	121.11	96.27	2,062	2,062	2.503	27.155	-0.862	0.584	5.634	0.977	37.1	
1600S200-97	0.1017	33	2.084	7.09	63.050	7.881	5.500	0.670	0.567	61.757	6.938	137.10	126.78	6,043	6,043	7.186	36.744	-0.835	0.569	5.592	0.978	44.9	
1600S200-97	0.1017	50	2.084	7.09	63.050	7.881	5.500	0.670	0.567	59.933	6.500	194.61	164.99	6,043	6,043	7.186	36.744	-0.835	0.569	5.592	0.978	36.4	
1600S200-118	0.1242	33	2.525	8.59	75.663	9.450	5.472	0.773	0.553	75.601	8.859	175.05	168.39	11,088	11,088	12.981	43.132	-0.815	0.558	5.560	0.979	44.3	
1600S200-118	0.1242	50	2.525	8.59	75.663	9.450	5.472	0.773	0.553	74.084	8.331	249.44	221.86	11,088	11,088	12.981	43.132	-0.815	0.558	5.560	0.979	35.9	
1600S250-68¹	0.0713	33	1.549	5.27	49.814	6.227	5.672	0.889	0.758	46.607	4.792	94.70	81.69	2,062	2,062	2.624	46.230	-1.167	0.778	5.840	0.960	57.3	
1600S250-68¹	0.0713	50	1.549	5.27	49.814	6.227	5.672	0.889	0.758	45.550	4.092	122.51	104.63	2,062	2,062	2.624	46.230	-1.167	0.778	5.840	0.960	46.5	
1600S250-97	0.1017	33	2.186	7.44	69.476	8.685	5.638	1.192	0.738	68.160	7.728	152.72	137.47	6,043	6,043	7.536	63.082	-1.138	0.762	5.799	0.962	56.5	
1600S250-97	0.1017	50	2.186	7.44	69.476	8.685	5.638	1.192	0.738	66.577	td												