

## Member Designation

**362 SG 250 - 43**

(Stud Depth) (SigmaStud\*) (Flange Width) (Thickness)

All Manufactured From 50ksi Material

Material Properties: ASTM A1003/A1003M or ASTM A653/A653M, Grade 50(340), 50ksi (340MPa) minimum yield strength, 65ksi (450 MPa) minimum tensile strength, G-60 (Z180) hot-dipped galvanized coating; or equivalent.

### SIGMASTUD® SECTION PROPERTIES: 3.5" - 4" STUD DEPTHS

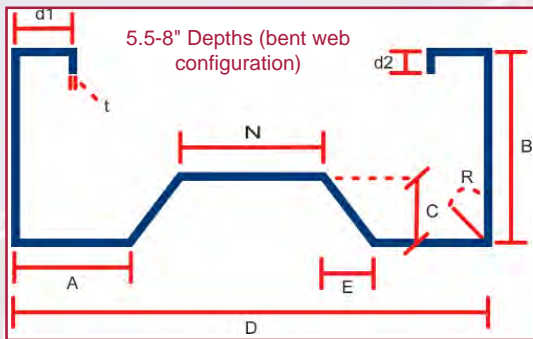
SigmaStud® Section	Overall Depth	Flange Width	Web Flat	Web Return	Web Return	Web Inside	Return Lip 1	Return Lip 2	Inside Bend Radius	Design Thick.	Unit Weight (lb/ft)
	D	B	A	C	E	N	d1	d2	R	t	
	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	
350SG250-33	3.5	2.5	3.5	N/A	N/A	N/A	0.589	0.5	0.105	0.0346	1.196
350SG250-43	3.5	2.5	3.5	N/A	N/A	N/A	0.610	0.5	0.105	0.0451	1.553
350SG250-54	3.5	2.5	3.5	N/A	N/A	N/A	0.633	0.5	0.105	0.0566	1.942
350SG250-68	3.5	2.5	3.5	N/A	N/A	N/A	0.662	0.5	0.105	0.0713	2.435
350SG250-97	3.5	2.5	3.5	N/A	N/A	N/A	0.723	0.5	0.105	0.1017	3.438
350SG350-68	3.5	3.5	3.5	N/A	N/A	N/A	0.663	0.5	0.105	0.0713	2.920
350SG350-97	3.5	3.5	3.5	N/A	N/A	N/A	0.723	0.5	0.105	0.1017	4.130
350SG350-118	3.5	3.5	3.5	N/A	N/A	N/A	0.768	0.5	0.105	0.1240	5.005
362SG250-33	3.625	2.5	3.625	N/A	N/A	N/A	0.589	0.5	0.105	0.0346	1.210
362SG250-43	3.625	2.5	3.625	N/A	N/A	N/A	0.610	0.5	0.105	0.0451	1.572
362SG250-54	3.625	2.5	3.625	N/A	N/A	N/A	0.633	0.5	0.105	0.0566	1.966
362SG250-68	3.625	2.5	3.625	N/A	N/A	N/A	0.662	0.5	0.105	0.0713	2.465
362SG250-97	3.625	2.5	3.625	N/A	N/A	N/A	0.723	0.5	0.105	0.1017	3.481
362SG350-68	3.625	3.5	3.625	N/A	N/A	N/A	0.663	0.5	0.105	0.0713	2.950
362SG350-97	3.625	3.5	3.625	N/A	N/A	N/A	0.723	0.5	0.105	0.1017	4.173
362SG350-118	3.625	3.5	3.625	N/A	N/A	N/A	0.768	0.5	0.105	0.1240	5.058
400SG250-33	4	2.5	4	N/A	N/A	N/A	0.589	0.5	0.105	0.0346	1.255
400SG250-43	4	2.5	4	N/A	N/A	N/A	0.610	0.5	0.105	0.0451	1.630
400SG250-54	4	2.5	4	N/A	N/A	N/A	0.633	0.5	0.105	0.0566	2.038
400SG250-68	4	2.5	4	N/A	N/A	N/A	0.662	0.5	0.105	0.0713	2.556
400SG250-97	4	2.5	4	N/A	N/A	N/A	0.723	0.5	0.105	0.1017	3.611
400SG350-68	4	3.5	4	N/A	N/A	N/A	0.663	0.5	0.105	0.0713	3.041
400SG350-97	4	3.5	4	N/A	N/A	N/A	0.723	0.5	0.105	0.1017	4.303
400SG350-118	4	3.5	4	N/A	N/A	N/A	0.768	0.5	0.105	0.1240	5.216

### SIGMASTUD® SECTION PROPERTIES: 5.5" - 8" STUD DEPTHS

SigmaStud® Section	Overall Depth	Flange Width	Web Flat	Web Return	Web Return	Web Inside	Return Lip 1	Return Lip 2	Inside Bend Radius	Design Thick.	Unit Weight (lb/ft)
	D	B	A	C	E	N	d1	d2	R	t	
	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	
550SG162-33	5.5	1.625	1	1	0.625	2.25	0.5	0.0	0.105	0.0346	1.232
550SG162-43	5.5	1.625	1	1	0.625	2.25	0.5	0.0	0.105	0.0451	1.598
550SG200-33	5.5	2	1	1	0.625	2.25	0.589	0.5	0.105	0.0346	1.438
550SG200-43	5.5	2	1	1	0.625	2.25	0.610	0.5	0.105	0.0451	1.869
550SG250-33	5.5	2.5	1	1	0.625	2.25	0.589	0.5	0.105	0.0346	1.556
550SG250-43	5.5	2.5	1	1	0.625	2.25	0.610	0.5	0.105	0.0451	2.023
550SG250-54	5.5	2.5	1	1	0.625	2.25	0.633	0.5	0.105	0.0566	2.531
550SG250-68	5.5	2.5	1	1	0.625	2.25	0.662	0.5	0.105	0.0713	3.176
550SG250-97	5.5	2.5	1	1	0.625	2.25	0.723	0.5	0.105	0.1017	4.493

- Section properties and capacities are calculated in accordance with AISI-NASPEC 2001 with 2004 Supplement.
- Tabulated gross properties are based on the full, unreduced cross section of the stud away from punchouts.
- Effective section properties incorporate the strength increase from cold work of forming as applicable per AISI-NASPEC, Sec. A7.2.
- Net effective section properties are calculated at a cross section through the punchout.
- For deflection calculations, use the effective moment of inertia (I<sub>x</sub>). This I<sub>x</sub> is calculated at a stress 0.6 F<sub>y</sub> (service load level).

Patent Pending



## Member Designation

**600 SG 250 - 43**

(Stud Depth) (SigmaStud®) (Flange Width) (Thickness)

All Manufactured From 50ksi Material

Material Properties: ASTM A1003/A1003M or ASTM A653/A653M, Grade 50(340), 50ksi (340MPa) minimum yield strength, 65ksi (450 MPa) minimum tensile strength, G-60 (Z180) hot-dipped galvanized coating; or equivalent.

### SIGMASTUD® SECTION PROPERTIES: 5.5" - 8" STUD DEPTHS

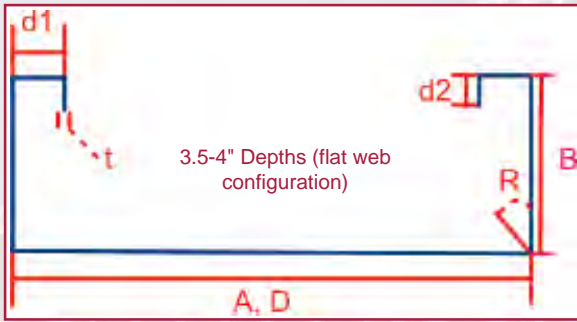
SigmaStud® Section	Overall Depth	Flange Width	Web Flat	Web Return	Web Return	Web Inside	Return Lip 1	Return Lip 2	Inside Bend Radius	Design Thick.	Unit Weight (lb/ft)
	D	B	A	C	E	N	d1	d2	R	t	
	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	
550SG300-43	5.5	3	1	1	0.625	2.25	0.610	0.5	0.105	0.0451	2.176
550SG300-54	5.5	3	1	1	0.625	2.25	0.633	0.5	0.105	0.0566	2.723
550SG300-68	5.5	3	1	1	0.625	2.25	0.662	0.5	0.105	0.0713	3.418
550SG300-97	5.5	3	1	1	0.625	2.25	0.723	0.5	0.105	0.1017	4.839
550SG300-118	5.5	3	1	1	0.625	2.25	0.768	0.5	0.105	0.1240	5.867
600SG162-33	6	1.625	1.25	1	0.625	2.25	0.5	0.0	0.105	0.0346	1.291
600SG162-43	6	1.625	1.25	1	0.625	2.25	0.5	0.0	0.105	0.0451	1.674
600SG200-33	6	2	1.25	1	0.625	2.25	0.589	0.5	0.105	0.0346	1.497
600SG200-43	6	2	1.25	1	0.625	2.25	0.610	0.5	0.105	0.0451	1.946
600SG250-33	6	2.5	1.25	1	0.625	2.25	0.589	0.5	0.105	0.0346	1.615
600SG250-43	6	2.5	1.25	1	0.625	2.25	0.610	0.5	0.105	0.0451	2.100
600SG250-54	6	2.5	1.25	1	0.625	2.25	0.633	0.5	0.105	0.0566	2.627
600SG250-68	6	2.5	1.25	1	0.625	2.25	0.662	0.5	0.105	0.0713	3.297
600SG250-97	6	2.5	1.25	1	0.625	2.25	0.723	0.5	0.105	0.1017	4.666
600SG300-43	6	3	1.25	1	0.625	2.25	0.610	0.5	0.105	0.0451	2.253
600SG300-54	6	3	1.25	1	0.625	2.25	0.633	0.5	0.105	0.0566	2.820
600SG300-68	6	3	1.25	1	0.625	2.25	0.662	0.5	0.105	0.0713	3.540
600SG300-97	6	3	1.25	1	0.625	2.25	0.723	0.5	0.105	0.1017	5.012
600SG300-118	6	3	1.25	1	0.625	2.25	0.768	0.5	0.105	0.1240	6.078
800SG162-33	8	1.625	2.25	1	0.625	2.25	0.5	0.0	0.105	0.0346	1.526
800SG162-43	8	1.625	2.25	1	0.625	2.25	0.5	0.0	0.105	0.0451	1.981
800SG200-33	8	2	2.25	1	0.625	2.25	0.589	0.5	0.105	0.0346	1.733
800SG200-43	8	2	2.25	1	0.625	2.25	0.610	0.5	0.105	0.0451	2.253
800SG250-33	8	2.5	2.25	1	0.625	2.25	0.589	0.5	0.105	0.0346	1.851
800SG250-43	8	2.5	2.25	1	0.625	2.25	0.610	0.5	0.105	0.0451	2.406
800SG250-54	8	2.5	2.25	1	0.625	2.25	0.633	0.5	0.105	0.0566	3.012
800SG250-68	8	2.5	2.25	1	0.625	2.25	0.662	0.5	0.105	0.0713	3.782
800SG250-97	8	2.5	2.25	1	0.625	2.25	0.723	0.5	0.105	0.1017	5.358
800SG300-43	8	3	2.25	1	0.625	2.25	0.610	0.5	0.105	0.0451	2.560
800SG300-54	8	3	2.25	1	0.625	2.25	0.633	0.5	0.105	0.0566	3.205
800SG300-68	8	3	2.25	1	0.625	2.25	0.662	0.5	0.105	0.0713	4.025
800SG300-97	8	3	2.25	1	0.625	2.25	0.723	0.5	0.105	0.1017	5.704
800SG300-118	8	3	2.25	1	0.625	2.25	0.768	0.5	0.105	0.1240	6.922

- Section properties and capacities are calculated in accordance with AISI-NASPEC 2001 with 2004 Supplement.
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- Net effective section properties are calculated at a cross section through the punchout.
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Patent Pending

Each SigmaStud® contains punchouts which are 1.5" wide and 4" tall, spaced every 24" o.c. vertically. The first punchout begins 12" from the end of the stud. Any larger holes cut into SigmaStud® require a review by the engineer, as load capacity is based on the existence of standard punchout sizes. With the realization that additional holes do manage to appear in studs, TSN provides the SigmaStud® Web RFT to provide reinforcement of a hole or holes added to the stud web during construction.





Member Designation

**362 SG 250 - 43**  
 (Stud Depth) (SigmaStud®) (Flange Width) (Thickness)

All Manufactured From 50ksi Material

Material Properties: ASTM A1003/A1003M or ASTM A653/A653M, Grade 50(340), 50ksi (340MPa) minimum yield strength, 65ksi (450 MPa) minimum tensile strength, G-60 (Z180) hot-dipped galvanized coating; or equivalent.

### SIGMASTUD® SECTION PROPERTIES: 3.5" - 4" STUD DEPTHS

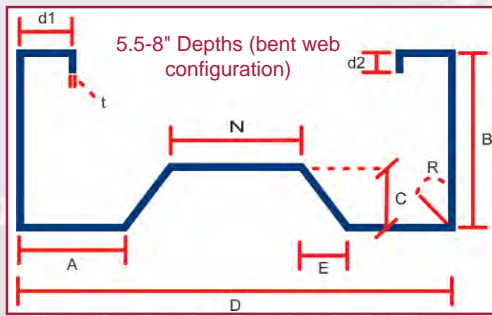
SigmaStud® Section (All 50 ksi)	Gross Properties											Effective Properties - 50 ksi								
	Area	I <sub>x</sub>	S <sub>x</sub>	R <sub>x</sub>	I <sub>y</sub>	R <sub>y</sub>	Jx1000	C <sub>w</sub>	R <sub>o</sub>	X <sub>o</sub>	m	β	A <sub>e(net)</sub>	I <sub>x</sub>	S <sub>x</sub>	S <sub>x(net)</sub>	M <sub>a</sub>	M <sub>a(net)</sub>	V <sub>a</sub>	V <sub>a(net)</sub>
	(in. <sup>2</sup> )	(in. <sup>4</sup> )	(in. <sup>3</sup> )	(in.)	(in. <sup>4</sup> )	(in.)	(in. <sup>4</sup> )	(in. <sup>9</sup> )	(in.)	(in.)	(in.)		(in. <sup>2</sup> )	(in. <sup>4</sup> )	(in. <sup>3</sup> )	(in. <sup>3</sup> )	(kips-in)	(kips-in)	(lb)	(lb)
350SG250-33	0.351	0.734	0.419	1.445	0.329	0.967	0.140	1.206	3.025	-2.476	1.497	0.330	0.210	0.670	0.332	0.307	9.94	9.19	1145	527
350SG250-43	0.456	0.945	0.540	1.439	0.424	0.964	0.309	1.565	3.017	-2.471	1.494	0.329	0.313	0.914	0.470	0.450	14.06	13.46	2141	747
350SG250-54	0.571	1.171	0.669	1.432	0.526	0.960	0.609	1.953	3.008	-2.465	1.491	0.329	0.404	1.171	0.595	0.578	17.81	17.31	3371	925
350SG250-68	0.715	1.450	0.829	1.424	0.653	0.955	1.212	2.443	2.996	-2.457	1.487	0.328	0.541	1.450	0.774	0.759	23.18	22.72	4208	900
350SG250-97	1.010	1.999	1.142	1.406	0.904	0.946	3.483	3.431	2.972	-2.441	1.478	0.325	0.858	1.999	1.142	1.126	38.18	37.64	5886	850
350SG350-68	0.858	1.870	1.068	1.476	1.471	1.309	1.454	5.401	3.980	-3.456	2.011	0.246	0.549	1.735	0.822	0.796	24.60	23.83	4208	900
350SG350-97	1.214	2.586	1.478	1.460	2.050	1.300	4.184	7.627	3.958	-3.441	2.004	0.244	0.879	2.551	1.284	1.256	38.45	37.60	5886	850
350SG350-118	1.471	3.082	1.761	1.448	2.457	1.293	7.538	9.227	3.941	-3.430	1.998	0.243	1.180	3.082	1.675	1.649	50.15	49.38	7073	814
362SG250-33	0.356	0.795	0.438	1.495	0.333	0.968	0.142	1.277	3.031	-2.453	1.487	0.345	0.211	0.727	0.348	0.320	10.42	9.59	1102	544
362SG250-43	0.462	1.024	0.565	1.489	0.430	0.964	0.313	1.656	3.023	-2.447	1.484	0.344	0.314	0.991	0.492	0.470	14.73	14.06	2141	802
362SG250-54	0.578	1.269	0.700	1.482	0.533	0.961	0.617	2.066	3.014	-2.442	1.481	0.344	0.405	1.269	0.623	0.604	18.65	18.09	3372	994
362SG250-68	0.724	1.573	0.868	1.474	0.662	0.956	1.227	2.583	3.002	-2.434	1.477	0.342	0.544	1.573	0.810	0.795	24.26	23.80	4375	1007
362SG250-97	1.023	2.169	1.197	1.456	0.916	0.946	3.527	3.625	2.977	-2.418	1.468	0.340	0.870	2.169	1.197	1.181	40.01	39.49	6124	954
362SG350-68	0.867	2.023	1.116	1.528	1.491	1.311	1.469	5.715	3.977	-3.430	2.001	0.256	0.552	1.877	0.860	0.834	25.74	24.96	4375	1007
362SG350-97	1.226	2.801	1.545	1.511	2.078	1.302	4.228	8.065	3.955	-3.415	1.994	0.254	0.892	2.762	1.342	1.314	40.19	39.35	6124	954
362SG350-118	1.486	3.340	1.843	1.499	2.491	1.295	7.617	9.753	3.938	-3.404	1.988	0.253	1.196	3.340	1.752	1.726	52.44	51.69	7363	917
400SG250-33	0.369	0.995	0.497	1.643	0.346	0.969	0.147	1.506	3.055	-2.386	1.458	0.390	0.212	0.912	0.398	0.361	11.91	10.80	991	589
400SG250-43	0.479	1.283	0.641	1.637	0.446	0.965	0.325	1.951	3.046	-2.381	1.455	0.389	0.316	1.242	0.561	0.530	16.80	15.87	2141	967
400SG250-54	0.599	1.591	0.796	1.630	0.554	0.962	0.640	2.432	3.037	-2.375	1.452	0.388	0.409	1.591	0.709	0.683	21.23	20.45	3372	1201
400SG250-68	0.751	1.975	0.987	1.622	0.688	0.957	1.273	3.038	3.025	-2.368	1.448	0.387	0.551	1.975	0.921	0.904	27.58	27.06	4876	1360
400SG250-97	1.061	2.730	1.365	1.604	0.953	0.948	3.658	4.255	3.000	-2.352	1.440	0.386	0.908	2.730	1.364	1.350	45.60	45.12	6839	1299
400SG350-68	0.894	2.525	1.263	1.681	1.547	1.316	1.514	6.736	3.976	-3.354	1.970	0.288	0.559	2.342	0.976	0.945	29.22	28.29	4876	1360
400SG350-97	1.265	3.503	1.751	1.664	2.158	1.306	4.360	9.488	3.953	-3.339	1.963	0.286	0.929	3.452	1.521	1.493	45.54	44.71	6839	1299
400SG350-118	1.533	4.184	2.092	1.652	2.587	1.299	7.855	11.458	3.936	-3.328	1.958	0.285	1.242	4.184	1.986	1.962	59.45	58.73	8235	1256

### SIGMASTUD® SECTION PROPERTIES: 5.5" - 8" STUD DEPTHS

SigmaStud® Section (All 50 ksi)	Gross Properties											Effective Properties - 50 ksi								
	Area	I <sub>x</sub>	S <sub>x</sub>	R <sub>x</sub>	I <sub>y</sub>	R <sub>y</sub>	Jx1000	C <sub>w</sub>	R <sub>o</sub>	X <sub>o</sub>	m	β	A <sub>e(net)</sub>	I <sub>x</sub>	S <sub>x</sub>	S <sub>x(net)</sub>	M <sub>a</sub>	M <sub>a(net)</sub>	V <sub>a</sub>	V <sub>a(net)</sub>
	(in. <sup>2</sup> )	(in. <sup>4</sup> )	(in. <sup>3</sup> )	(in.)	(in. <sup>4</sup> )	(in.)	(in. <sup>4</sup> )	(in. <sup>9</sup> )	(in.)	(in.)	(in.)		(in. <sup>2</sup> )	(in. <sup>4</sup> )	(in. <sup>3</sup> )	(in. <sup>3</sup> )	(kips-in)	(kips-in)	(lb)	(lb)
550SG162-33	0.362	1.522	0.554	2.051	0.096	0.514	0.144	0.864	2.124	-0.203	0.484	0.991	0.261	1.505	0.498	0.492	14.92	14.72	997	587
550SG162-43	0.469	1.963	0.714	2.045	0.122	0.510	0.318	1.097	2.116	-0.191	0.493	0.992	0.364	1.963	0.663	0.655	19.84	19.61	2141	952
550SG200-33	0.423	1.882	0.684	2.110	0.175	0.643	0.169	1.783	2.319	-0.716	0.191	0.905	0.319	1.830	0.618	0.611	18.49	18.29	997	587
550SG200-43	0.549	2.432	0.884	2.104	0.225	0.640	0.372	2.294	2.310	-0.708	0.196	0.906	0.456	2.432	0.851	0.844	25.47	25.28	2141	952
550SG250-33	0.457	2.140	0.778	2.163	0.302	0.813	0.182	2.936	2.584	-1.157	0.060	0.800	0.324	1.985	0.645	0.635	19.32	19.03	997	587
550SG250-43	0.594	2.767	1.006	2.158	0.389	0.809	0.403	3.788	2.575	-1.149	0.056	0.801	0.468	2.689	0.898	0.889	26.90	26.61	2141	952
550SG250-54	0.744	3.442	1.252	2.151	0.483	0.806	0.794	4.701	2.565	-1.141	0.052	0.802	0.596	3.441	1.131	1.119	33.85	33.50	3372	1176
550SG250-68	0.933	4.286	1.559	2.143	0.599	0.801	1.581	5.835	2.552	-1.131	0.047	0.804	0.766	4.286	1.460	1.447	43.71	43.33	4793	1298
550SG250-97	1.320	5.970	2.171	2.126	0.826	0.791	4.552	8.069	2.525	-1.108	0.036	0.807	1.168	5.970	2.166	2.155	72.40	72.04	6657	1207

- Section properties and capacities are calculated in accordance with AISI-NASPEC 2001 with 2004 Supplement.
- Tabulated gross properties are based on the full, unreduced cross section of the stud away from punchouts.
- Effective section properties incorporate the strength increase from cold work of forming as applicable per AISI-NASPEC, Sec. A7.2.
- Net effective section properties are calculated at a cross section through the punchout.
- For deflection calculations, use the effective moment of inertia (I<sub>x</sub>). This I<sub>x</sub> is calculated at a stress 0.6 F<sub>y</sub> (service load level).

Patent Pending



## Member Designation

**600 SG 250 - 43**

(Stud Depth) (SigmaStud®) (Flange Width) (Thickness)

All Manufactured From 50ksi Material

Material Properties: ASTM A1003/A1003M or ASTM A653/A653M, Grade 50(340), 50ksi (340MPa) minimum yield strength, 65ksi (450 MPa) minimum tensile strength, G-60 (Z180) hot-dipped galvanized coating; or equivalent.

## SIGMASTUD® SECTION PROPERTIES: 5.5" - 8" STUD DEPTHS

SigmaStud® Section (All 50 ksi)	Gross Properties												Effective Properties - 50 ksi							
	Area	I <sub>x</sub>	S <sub>x</sub>	R <sub>x</sub>	I <sub>y</sub>	R <sub>y</sub>	Jx1000	C <sub>w</sub>	R <sub>o</sub>	X <sub>o</sub>	m	β	A <sub>e</sub> (net)	I <sub>x</sub>	S <sub>x</sub>	S <sub>x</sub> (net)	M <sub>a</sub>	M <sub>a</sub> (net)	V <sub>a</sub>	V <sub>a</sub> (net)
	(in. <sup>2</sup> )	(in. <sup>4</sup> )	(in. <sup>3</sup> )	(in.)	(in. <sup>4</sup> )	(in.)	(in. <sup>4</sup> )	(in. <sup>6</sup> )	(in.)	(in.)	(in.)		(in. <sup>2</sup> )	(in. <sup>4</sup> )	(in. <sup>3</sup> )	(in. <sup>3</sup> )	(kips-in)	(kips-in)	(lb)	(lb)
550SG300-43	0.639	3.103	1.128	2.203	0.622	0.987	0.434	5.742	2.894	-1.597	0.308	0.695	0.461	2.895	0.908	0.894	27.20	26.76	2141	952
550SG300-54	0.800	3.861	1.404	2.197	0.773	0.983	0.855	7.139	2.884	-1.589	0.305	0.696	0.596	3.664	1.158	1.141	34.68	34.17	3372	1176
550SG300-68	1.004	4.812	1.750	2.189	0.960	0.978	1.702	8.883	2.870	-1.579	0.300	0.697	0.770	4.719	1.504	1.485	45.02	44.45	4793	1298
550SG300-97	1.422	6.711	2.440	2.172	1.332	0.968	4.902	12.348	2.843	-1.557	0.291	0.700	1.195	6.711	2.324	2.308	69.58	69.09	6657	1207
550SG300-118	1.724	8.048	2.927	2.161	1.590	0.960	8.837	14.766	2.822	-1.541	0.284	0.702	1.500	8.048	2.829	2.812	94.46	93.87	7956	1142
600SG162-33	0.379	1.854	0.618	2.211	0.104	0.523	0.151	1.090	2.284	-0.234	0.418	0.990	0.279	1.833	0.558	0.551	16.70	16.51	878	634
600SG162-43	0.492	2.392	0.797	2.205	0.133	0.519	0.334	1.386	2.276	-0.222	0.427	0.990	0.386	2.392	0.741	0.734	22.19	21.97	1959	1073
600SG200-33	0.440	2.291	0.764	2.282	0.187	0.653	0.176	2.203	2.487	-0.744	0.129	0.910	0.337	2.229	0.691	0.685	20.70	20.50	878	634
600SG200-43	0.572	2.962	0.987	2.276	0.241	0.650	0.388	2.837	2.479	-0.737	0.133	0.912	0.479	2.962	0.951	0.945	28.46	28.28	1959	1073
600SG250-33	0.475	2.599	0.866	2.340	0.320	0.822	0.189	3.590	2.747	-1.180	0.121	0.815	0.342	2.414	0.722	0.712	21.62	21.32	878	634
600SG250-43	0.617	3.362	1.121	2.334	0.413	0.818	0.418	4.633	2.737	-1.173	0.117	0.816	0.490	3.269	1.003	0.994	30.04	29.76	1959	1073
600SG250-54	0.772	4.183	1.394	2.328	0.513	0.815	0.824	5.752	2.728	-1.165	0.114	0.818	0.625	4.181	1.262	1.250	37.78	37.43	3372	1451
600SG250-68	0.969	5.213	1.738	2.320	0.636	0.810	1.642	7.145	2.715	-1.155	0.109	0.819	0.802	5.213	1.628	1.616	48.73	48.37	5350	1796
600SG250-97	1.371	7.270	2.423	2.303	0.879	0.800	4.727	9.893	2.688	-1.133	0.099	0.822	1.219	7.270	2.417	2.407	80.79	80.46	7610	1726
600SG300-43	0.662	3.761	1.254	2.384	0.655	0.995	0.449	6.972	3.047	-1.161	0.368	0.719	0.483	3.514	1.015	1.000	30.38	29.94	1959	1073
600SG300-54	0.829	4.683	1.561	2.377	0.814	0.991	0.885	8.670	3.036	-1.608	0.365	0.720	0.624	4.446	1.293	1.276	38.70	38.19	3372	1451
600SG300-68	1.040	5.840	1.947	2.369	1.012	0.986	1.763	10.793	3.023	-1.598	0.361	0.721	0.806	5.725	1.676	1.657	50.19	49.62	5350	1796
600SG300-97	1.473	8.155	2.718	2.353	1.404	0.976	5.078	15.015	2.996	-1.577	0.352	0.723	1.246	8.155	2.588	2.572	77.49	77.01	7610	1726
600SG300-118	1.786	9.789	3.263	2.341	1.678	0.969	9.154	17.967	2.976	-1.562	0.346	0.725	1.562	9.789	3.154	3.137	105.28	104.71	9118	1649
800SG162-33	0.448	3.631	0.908	2.845	0.130	0.538	0.179	2.193	2.912	-0.302	0.242	0.989	0.298	3.509	0.754	0.744	22.58	22.27	595	595
800SG162-43	0.582	4.691	1.173	2.839	0.166	0.534	0.395	2.796	2.903	-0.292	0.250	0.990	0.439	4.691	1.056	1.047	31.60	31.34	1324	1269
800SG200-33	0.509	4.453	1.113	2.957	0.230	0.672	0.203	4.278	3.134	-0.791	0.029	0.936	0.356	4.257	0.942	0.932	28.22	27.91	595	595
800SG200-43	0.662	5.765	1.441	2.951	0.296	0.669	0.449	5.516	3.126	-0.784	0.027	0.937	0.531	5.765	1.351	1.344	40.46	40.24	1324	1269
800SG250-33	0.544	5.002	1.250	3.033	0.382	0.838	0.217	6.837	3.368	-1.202	0.270	0.873	0.361	4.581	0.983	0.969	29.42	29.01	595	595
800SG250-43	0.707	6.478	1.620	3.027	0.493	0.835	0.479	8.833	3.360	-1.196	0.268	0.873	0.543	6.312	1.422	1.411	42.58	42.24	1324	1269
800SG250-54	0.885	8.074	2.019	3.020	0.612	0.832	0.945	10.975	3.350	-1.189	0.265	0.874	0.721	8.068	1.840	1.829	55.09	54.76	2632	1994
800SG250-68	1.111	10.081	2.520	3.012	0.761	0.827	1.883	13.649	3.339	-1.179	0.262	0.875	0.945	10.081	2.366	2.355	70.85	70.51	5301	3157
800SG250-97	1.575	14.116	3.529	2.994	1.055	0.818	5.428	18.950	3.314	-1.160	0.255	0.877	1.422	14.116	3.516	3.508	117.53	117.27	10885	4451
800SG300-43	0.752	7.192	1.798	3.092	0.767	1.010	0.510	13.119	3.633	-1.617	0.511	0.802	0.536	6.751	1.437	1.419	43.01	42.50	1324	1269
800SG300-54	0.942	8.967	2.242	3.086	0.954	1.006	1.006	16.324	3.623	-1.610	0.509	0.802	0.720	8.531	1.884	1.867	56.41	55.89	2632	1994
800SG300-68	1.183	11.202	2.800	3.078	1.187	1.002	2.004	20.337	3.611	-1.601	0.506	0.803	0.948	10.976	2.435	2.416	72.91	72.34	5301	3157
800SG300-97	1.676	15.702	3.926	3.061	1.651	0.993	5.779	28.342	3.586	-1.582	0.500	0.805	1.449	15.702	3.740	3.726	111.99	111.55	10885	4451
800SG300-118	2.034	18.902	4.725	3.048	1.976	0.986	10.426	33.962	3.567	-1.568	0.495	0.807	1.810	18.902	4.567	4.552	152.47	151.96	13768	4546

- Section properties and capacities are calculated in accordance with AISI-NASPEC 2001 with 2004 Supplement.
- Tabulated gross properties are based on the full, unreduced cross section of the stud away from punchouts.
- Effective section properties incorporate the strength increase from cold work of forming as applicable per AISI-NASPEC, Sec. A7.2.
- Net effective section properties are calculated at a cross section through the punchout.
- For deflection calculations, use the effective moment of inertia (I<sub>x</sub>). This I<sub>x</sub> is calculated at a stress 0.6 F<sub>y</sub> (service load level).

Patent Pending

## Combined Axial And Lateral Load Table Notes

- Allowable loads are based on weak axis and torsional bracing at 48" o.c. maximum for axial load calculation and continuous support of each flange for flexural calculation.
- Sections are punched with a standard punch-out 1.5" wide located along the centerline of the web 24" o.c.
- Allowable loads are based on checks for punched section under axial load, flexural, and shear conditions.
- Weak axis and torsional bracing should have sufficient stiffness and strength to resist the axial load.
- Lateral loads (except 5psf) are multiplied by 0.7 for deflection determination. Lateral and axial loads have not been modified for strength checks.
- Strength increase due to cold forming is incorporated in calculating allowable loads as per AISI Specification Sec. A7.2.
- Contact The Steel Network if web crippling capacity values of SigmaStud® are required to check lateral end reactions.
- Loads in tables are in kips/stud.

## Table Background And Example

### 1. Basis For Tables:

The combined axial and lateral load tables in this catalog cover the following basic load combinations for the Allowable Stress Design (ASD) Method (IBC2006 and ASCE 7-05):

$D + L$	(Strength determination)
$D + 0.75L + 0.75W_{MWFRS}^*$	(Strength determination)
$0.70W_{C\&C}^{**}$	(Deflection determination)

\* MWFRS: Main Wind Force Resisting System

\*\* C&C: Component and Cladding

### 2. Design Example:

Given:

Service (Un-factored) Loads:

Axial Dead Load	= 1.6 kips
Axial Live Load	= 3.2 kips
Wind Pressure (MWFRS)	= 28 psf
Wind Pressure (C&C)	= 40 psf

Wall Width= 6.0".  
 Stud Height= 12.0 ft.  
 Stud Spacing= 16" o.c.  
 Specified Deflection Limit= L/360  
 Bridging (Lateral Bracing) at maximum vertical spacing of 48" o.c.

Calculations:

- Use the D + L load combination to get the first estimate of the stud.  
 Combination total axial load = 1.6 + 3.2  
 = 4.8 kips  
 From the "No Lateral Load" table with a 12.0' wall height, choose 600SG200-33 (50ksi) with an axial resistance of 6.97 kips > 4.8 kips OK
- Check the  $D + 0.75L + 0.75W_{MWFRS}$  load combination for strength.  
 Combination total axial load = 1.6 + 0.75(3.2)  
 = 4.0 kips  
 $0.75W_{MWFRS} = 0.75 \times 28\text{psf} = 21\text{psf}$  (approximately 20psf)  
 Go to the "Lateral Load = 20 psf" table with a 12.0' wall height and 16" stud spacing. The axial resistance for 600SG200-33 (50ksi) is 4.37 kips > 4.0 kips OK
- Check the  $0.70W_{C\&C}$  load combination for deflection. The specified limit is L/360.  
 Go to the "Lateral Load = 40 psf" table with a 12.0' wall height and 16" stud spacing. The deflection parameter for 600SG200-33 (50ksi) is 6, which means that deflection exceeds L/600 < L/360 OK

Conclusion:

Use 600SG200-33 (50ksi) (with design thickness = 0.0346" and  $F_y = 50$  ksi) spaced at 16" o.c. with 2 lines of bridging arranged so that the maximum spacing does not exceed 48" (4 ft.).

### 3. Extra Design Considerations:

- Check lateral end reaction of the stud for web crippling if applicable.
- If the specified axial dead load acting on the stud is significantly larger than the specified axial live load, the following extra basic load combination needs to be checked as well:
  - ♦  $D + W_{C\&C}$  (Strength determination)



No Lateral Load (For Load Combination 1.0 [D+L])																				
Wall Height (ft.)	Spacing (in.) o.c.	350SG250-(mils)					350SG350-(mils)			362SG250-(mils)					362SG350-(mils)					
		33	43	54	68	97	68	97	118	33	43	54	68	97	68	97	118			
8	12, 16, 24	3.48	5.12	6.80	8.58	12.25	9.45	15.05	18.57	3.59	5.29	7.08	9.03	12.89	9.86	15.65	19.50			
9	12, 16, 24	3.28	4.82	6.32	7.94	11.30	8.99	14.12	17.17	3.40	5.01	6.62	8.41	11.96	9.36	14.88	18.14			
10	12, 16, 24	3.07	4.50	5.78	7.26	10.31	8.56	12.95	15.71	3.20	4.70	6.13	7.74	10.99	8.92	13.76	16.70			
12	12, 16, 24	2.62	3.72	4.69	5.87	8.28	7.37	10.53	12.73	2.76	3.97	5.07	6.34	8.95	7.83	11.36	13.73			
14	12, 16, 24	2.22	3.04	3.78	4.72	6.62	6.06	8.49	10.23	2.35	3.26	4.09	5.11	7.17	6.54	9.17	11.06			
16	12, 16, 24	1.89	2.48	3.09	3.85	5.37	4.96	6.93	8.33	2.00	2.69	3.34	4.17	5.82	5.36	7.50	9.01			
Wall Height (ft.)	Spacing (in.) o.c.	400SG250-(mils)					400SG350-(mils)			550SG162-(mils)		550SG200-(mils)		550SG250-(mils)						
		33	43	54	68	97	68	97	118	33	43	33	43	33	43	54	68	97		
8	12, 16, 24	3.87	5.74	7.83	10.18	14.72	10.87	17.46	22.17	4.60	5.91	6.57	8.92	7.53	10.60	13.41	17.49	24.89		
9	12, 16, 24	3.71	5.50	7.42	9.65	13.87	10.45	16.68	20.91	4.60	5.91	6.57	8.92	7.52	10.59	13.41	17.49	24.89		
10	12, 16, 24	3.54	5.23	6.99	9.07	12.95	9.99	15.88	19.56	4.60	5.91	6.57	8.92	7.33	10.28	13.05	17.10	24.33		
12	12, 16, 24	3.15	4.63	6.03	7.78	10.99	9.11	13.80	16.69	4.60	5.91	6.57	8.92	6.87	9.52	12.13	15.76	22.22		
14	12, 16, 24	2.72	3.91	5.04	6.39	8.98	7.95	11.41	13.76	4.60	5.91	6.07	8.19	6.25	8.64	11.16	14.10	19.83		
16	12, 16, 24	2.34	3.25	4.18	5.23	7.31	6.68	9.35	11.25	4.56	5.89	5.37	7.15	5.57	7.70	9.89	12.36	17.34		
Wall Height (ft.)	Spacing (in.) o.c.	550SG300-(mils)					600SG162-(mils)		600SG200-(mils)		600SG250-(mils)					600SG300-(mils)				
		43	54	68	97	118	33	43	33	43	33	43	54	68	97	43	54	68	97	118
8	12, 16, 24	10.91	13.79	17.77	27.39	34.19	4.96	6.38	6.97	9.46	7.94	11.14	14.08	18.34	26.14	11.63	14.70	18.94	29.08	36.43
9	12, 16, 24	10.67	13.47	17.35	26.75	33.18	4.96	6.38	6.97	9.46	7.94	11.14	14.08	18.34	26.14	11.42	14.43	18.57	28.52	35.56
10	12, 16, 24	10.38	13.10	16.86	26.01	31.99	4.96	6.38	6.97	9.46	7.89	11.07	14.03	18.31	26.14	11.17	14.10	18.14	27.86	34.52
12	12, 16, 24	9.71	12.22	15.72	24.17	29.25	4.96	6.38	6.97	9.46	7.47	10.39	13.21	17.27	24.38	10.55	13.30	17.08	26.31	32.03
14	12, 16, 24	8.88	11.21	14.61	21.67	26.18	4.96	6.38	6.76	9.17	6.94	9.58	12.22	15.73	22.16	9.82	12.36	15.95	24.14	29.18
16	12, 16, 24	7.97	10.12	13.21	19.06	22.99	4.96	6.38	6.09	8.17	6.30	8.68	11.25	14.07	19.78	8.95	11.33	14.79	21.65	26.14
Wall Height (ft.)	Spacing (in.) o.c.	800SG162-(mils)		800SG200-(mils)		800SG250-(mils)					800SG300-(mils)									
		33	43	33	43	33	43	54	68	97	43	54	68	97	118					
8	12, 16, 24	5.76	7.88	7.73	11.04	8.62	12.66	16.64	21.60	30.85	13.44	17.68	22.87	34.65	43.29					
9	12, 16, 24	5.76	7.88	7.73	11.04	8.62	12.66	16.64	21.60	30.85	13.44	17.68	22.87	34.65	43.29					
10	12, 16, 24	5.76	7.88	7.73	11.04	8.62	12.66	16.64	21.60	30.85	13.38	17.60	22.79	34.62	43.29					
12	12, 16, 24	5.76	7.88	7.73	11.04	8.62	12.66	16.64	21.60	30.85	13.04	17.13	22.10	33.54	41.77					
14	12, 16, 24	5.76	7.88	7.73	11.04	8.48	12.43	16.37	21.27	30.40	12.58	16.50	21.18	32.16	39.70					
16	12, 16, 24	5.76	7.88	7.73	11.04	8.12	11.82	15.53	20.20	28.52	12.03	15.70	20.09	30.59	37.29					



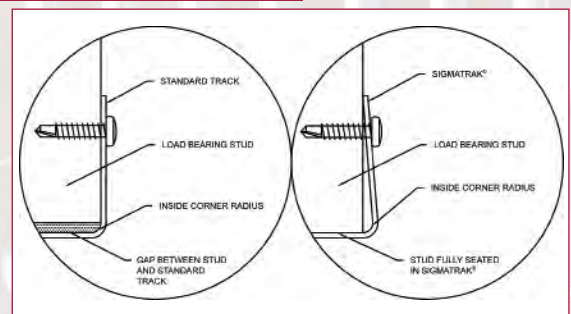
### Important Notes:

- Allowable loads are based on weak axis and torsional bracing at 48" o.c. maximum for axial load calculation and continuous support of each flange for flexural calculation.
- Sections are punched with a standard punch-out 1.5" wide located along the centerline of the web 24" o.c.
- Allowable loads are based on checks for punched section under axial load, flexural, and shear conditions.
- Weak axis and torsional bracing should have sufficient stiffness and strength to resist the axial load.
- Lateral loads are multiplied by 1.0 for deflection determination. Lateral and axial loads have not been modified for strength checks.
- Strength increase due to cold forming is incorporated in calculating allowable loads as per AISI Specification Sec. A7.2.
- Contact The Steel Network if web crippling capacity values of SigmaStud® are required to check lateral end reactions.
- Loads in tables are in kips/stud.



Load bearing walls are designed to fully seat within the top and bottom tracks. Standard (T) Section tracks (left) can contain an inside corner radius that prevents "full" bearing within the track. SigmaTrak™ (right) allows full bearing of the stud within the track.

Refer to page 17 for more information on SigmaTrak™.



## Lateral Load 5 Psf (Multiplied By 1.00 For Both Strength And Deflection Determinations)

Wall Height (ft.)	Spacing (in.) o.c.	350SG250-(mils)					350SG350-(mils)			362SG250-(mils)					362SG350-(mils)		
		33	43	54	68	97	68	97	118	33	43	54	68	97	68	97	118
8	12	3.23	4.86	6.52	8.31	12.01	9.19	14.76	18.29	3.35	5.04	6.81	8.77	12.65	9.60	15.37	19.23
	16	3.15	4.78	6.43	8.22	11.94	9.10	14.67	18.21	3.27	4.96	6.72	8.68	12.58	9.52	15.28	19.14
	24	3.00	4.61	6.25	8.05	11.78	8.93	14.48	18.02	3.12	4.80	6.55	8.51	12.42	9.34	15.10	18.96
9	12	2.98	4.49	5.96	7.60	11.00	8.64	13.75	16.82	3.10	4.69	6.28	8.06	11.66	9.02	14.51	17.79
	16	2.88	4.38	5.85	7.49	10.90	8.53	13.63	16.71	3.01	4.58	6.17	7.96	11.57	8.91	14.39	17.68
	24	2.69	4.18	5.64	7.27	10.71	8.31	13.40	16.48	2.82	4.38	5.95	7.74	11.37	8.70	14.15	17.45
10	12	2.70	4.09	5.36	6.85	9.94	8.12	12.49	15.28	2.83	4.30	5.71	7.32	10.61	8.49	13.31	16.27
	16	2.59	3.96	5.23	6.72	9.82	7.98	12.35	15.15	2.72	4.18	5.58	7.19	10.50	8.35	13.16	16.14
	24	2.37	3.72	4.98	6.46	9.59	7.71	12.06	14.87	2.50	3.94	5.32	6.94	10.26	8.09	12.87	15.86
12	12	2.13	3.20	4.15	5.34	7.80	6.75	9.93	12.16	2.27	3.44	4.51	5.80	8.46	7.21	10.74	13.15
	16	1.99	3.04	4.00	5.18	7.65	6.56	9.75	11.98	2.13	3.28	4.35	5.63	8.31	7.02	10.55	12.97
	24	1.74 <sup>7</sup>	2.77	3.70	4.89	7.37	6.21	9.39	11.65	1.87 <sup>7</sup>	2.99	4.04	5.32	8.02	6.66	10.19	12.62
14	12	1.64	2.43	3.17	4.12	6.07	5.32	7.79	9.57	1.76	2.64	3.46	4.48	6.60	5.77	8.45	10.37
	16	1.49 <sup>6</sup>	2.27	3.01	3.95	5.91	5.10	7.58	9.37	1.61 <sup>7</sup>	2.47	3.28	4.31	6.43	5.55	8.23	10.16
	24	1.22 <sup>6</sup>	1.99 <sup>6</sup>	2.71 <sup>7</sup>	3.64	5.61	4.72	7.20	8.99	1.33 <sup>6</sup>	2.17 <sup>6</sup>	2.97	3.98	6.12	5.15	7.84	9.77
16	12	1.24 <sup>6</sup>	1.84 <sup>7</sup>	2.43	3.19	4.77	4.15	6.16	7.59	1.35 <sup>6</sup>	2.02	2.66	3.49	5.20	4.52	6.69	8.25
	16	1.09 <sup>6</sup>	1.68 <sup>6</sup>	2.27 <sup>7</sup>	3.02	4.60	3.93	5.94	7.38	1.19 <sup>6</sup>	1.85 <sup>6</sup>	2.49	3.31	5.02	4.29	6.47	8.03
	24	0.83 <sup>3</sup>	1.41 <sup>3</sup>	1.97 <sup>6</sup>	2.71 <sup>6</sup>	4.30	3.55	5.55	6.99	0.92 <sup>3</sup>	1.56 <sup>6</sup>	2.18 <sup>6</sup>	2.98 <sup>7</sup>	4.70	3.89	6.05	7.62

## Lateral Load 5 Psf (Multiplied By 1.00 For Both Strength And Deflection Determinations)

Wall Height (ft.)	Spacing (in.) o.c.	400SG250-(mils)					400SG350-(mils)			550SG162-(mils)		550SG200-(mils)		550SG250-(mils)				
		33	43	54	68	97	68	97	118	33	43	33	43	33	43	54	68	97
8	12	3.65	5.51	7.57	9.93	14.50	10.63	17.20	21.91	4.42	5.73	6.36	8.71	7.30	10.35	13.16	17.24	24.67
	16	3.58	5.44	7.49	9.85	14.42	10.54	17.11	21.82	4.36	5.68	6.28	8.64	7.22	10.27	13.08	17.15	24.60
	24	3.44	5.29	7.33	9.68	14.27	10.39	16.94	21.65	4.24	5.56	6.15	8.50	7.07	10.11	12.92	16.99	24.46
9	12	3.43	5.20	7.10	9.32	13.58	10.14	16.34	20.57	4.36	5.68	6.28	8.64	7.20	10.26	13.07	17.14	24.59
	16	3.34	5.11	6.99	9.21	13.48	10.03	16.23	20.46	4.28	5.60	6.19	8.54	7.09	10.15	12.96	17.03	24.50
	24	3.17	4.92	6.79	9.00	13.29	9.83	16.00	20.24	4.13	5.45	6.00	8.35	6.89	9.93	12.74	16.81	24.30
10	12	3.19	4.86	6.58	8.65	12.58	9.59	15.44	19.13	4.29	5.61	6.19	8.54	6.92	9.85	12.61	16.65	23.93
	16	3.08	4.74	6.45	8.52	12.47	9.46	15.30	19.00	4.19	5.51	6.07	8.41	6.79	9.71	12.47	16.50	23.80
	24	2.88	4.51	6.20	8.27	12.23	9.21	15.01	18.72	3.99	5.31	5.82	8.17	6.53	9.44	12.19	16.21	23.54
12	12	2.67	4.09	5.46	7.20	10.47	8.50	13.15	16.08	4.09	5.41	5.92	8.25	6.24	8.86	11.45	15.04	21.59
	16	2.52	3.93	5.29	7.02	10.30	8.31	12.95	15.89	3.93	5.25	5.72	8.04	6.05	8.66	11.23	14.82	21.39
	24	2.26	3.64	4.97	6.68	9.99	7.94	12.56	15.52	3.63	4.95	5.35	7.65	5.68	8.27	10.82	14.38	21.00
14	12	2.13	3.26	4.34	5.69	8.35	7.13	10.61	13.01	3.79	5.10	5.14	7.21	5.39	7.71	10.15	13.07	18.92
	16	1.97	3.08	4.15	5.49	8.16	6.90	10.37	12.78	3.56	4.87	4.88	6.93	5.14	7.44	9.85	12.77	18.64
	24	1.67 <sup>6</sup>	2.75 <sup>7</sup>	3.79	5.12	7.81	6.46	9.92	12.34	3.16	4.44	4.42	6.43	4.69	6.94	9.30	12.20	18.11
16	12	1.66 <sup>7</sup>	2.53	3.41	4.46	6.62	5.74	8.45	10.40	3.36	4.64	4.22	5.93	4.50	6.50	8.57	11.03	16.14
	16	1.49 <sup>6</sup>	2.35 <sup>7</sup>	3.21	4.25	6.42	5.48	8.20	10.15	3.09	4.34	3.93	5.62	4.21	6.19	8.23	10.67	15.79
	24	1.19 <sup>3</sup>	2.02 <sup>6</sup>	2.85 <sup>7</sup>	3.88	6.05	5.02	7.73	9.69	2.61 <sup>6</sup>	3.82	3.44 <sup>7</sup>	5.08	3.71	5.63	7.60	10.01	15.15

1 = Deflection Exceeds L/120  
 2 = Deflection Exceeds L/240  
 3 = Deflection Exceeds L/360  
 6 = Deflection Exceeds L/600  
 7 = Deflection Exceeds L/720  
 If not noted, deflection is less than L/720

### Important Notes:

- Allowable loads are based on weak axis and torsional bracing at 48" o.c. maximum for axial load calculation and continuous support of each flange for flexural calculation.
- Sections are punched with a standard punch-out 1.5" wide located along the centerline of the web 24" o.c.
- Allowable loads are based on checks for punched section under axial load, flexural, and shear conditions.
- Weak axis and torsional bracing should have sufficient stiffness and strength to resist the axial load.
- Lateral loads are multiplied by 1.0 for deflection determination. Lateral and axial loads have not been modified for strength checks.
- Strength increase due to cold forming is incorporated in calculating allowable loads as per AISI Specification Sec. A7.2.
- Contact The Steel Network if web crippling capacity values of SigmaStud® are required to check lateral end reactions.
- Loads in tables are in kips/stud.
- 5 PSF is classified as live transverse loads, not wind loads, per 2006 IBC, Section 1607.13

SigmaStud®  
 Patent Pending



Lateral Load 5 Psf (Multiplied By 1.00 For Both Strength And Deflection Determinations)																									
Wall Height (ft.)	Spacing (in.) o.c.	600SG250-(mils)					600SG300-(mils)					800SG162-(mils)		800SG200-(mils)		800SG250-(mils)					800SG300-(mils)				
		33	43	54	68	97	43	54	68	97	118	33	43	33	43	33	43	54	68	97	43	54	68	97	118
8	12	7.73	10.92	13.86	18.11	25.94	11.41	14.47	18.71	28.85	36.21	5.62	7.75	7.58	10.89	7.99	12.01	15.98	20.93	30.27	13.27	17.51	22.70	34.47	43.13
	16	7.65	10.84	13.78	18.03	25.88	11.33	14.40	18.64	28.78	36.15	5.58	7.70	7.53	10.84	7.78	11.80	15.76	20.71	30.08	13.22	17.45	22.64	34.42	43.08
	24	7.51	10.70	13.64	17.88	25.75	11.18	14.25	18.49	28.63	36.01	5.49	7.61	7.43	10.74	7.37	11.38	15.33	20.27	29.70	13.10	17.34	22.53	34.30	42.98
9	12	7.65	10.84	13.78	18.03	25.87	11.13	14.13	18.28	28.22	35.28	5.58	7.71	7.53	10.84	7.81	11.82	15.78	20.72	30.09	13.22	17.45	22.64	34.42	43.08
	16	7.56	10.74	13.68	17.93	25.78	11.03	14.04	18.18	28.12	35.18	5.52	7.65	7.47	10.78	7.54	11.54	15.49	20.43	29.84	13.15	17.38	22.57	34.34	43.01
	24	7.37	10.55	13.49	17.73	25.61	10.84	13.84	17.99	27.92	35.00	5.41	7.53	7.34	10.65	7.01	11.00	14.93	19.86	29.34	13.00	17.23	22.42	34.20	42.88
10	12	7.52	10.68	13.63	17.90	25.78	10.79	13.72	17.76	27.47	34.16	5.54	7.66	7.48	10.79	7.59	11.59	15.53	20.47	29.87	13.10	17.32	22.50	34.33	43.02
	16	7.39	10.56	13.50	17.77	25.66	10.67	13.60	17.64	27.34	34.04	5.46	7.59	7.40	10.71	7.25	11.24	15.17	20.11	29.55	13.00	17.22	22.40	34.23	42.93
	24	7.16	10.30	13.25	17.50	25.43	10.43	13.36	17.39	27.09	33.80	5.31	7.44	7.24	10.55	6.60	10.55	14.47	19.38	28.91	12.82	17.03	22.21	34.04	42.76
12	12	6.90	9.79	12.59	16.62	23.82	9.98	12.72	16.49	25.69	31.47	5.42	7.54	7.35	10.65	7.05	11.00	14.92	19.82	29.30	12.61	16.70	21.66	33.10	41.36
	16	6.71	9.60	12.39	16.41	23.63	9.79	12.54	16.31	25.49	31.29	5.30	7.43	7.22	10.52	6.56	10.48	14.37	19.26	28.79	12.47	16.55	21.51	32.95	41.22
	24	6.37	9.23	12.00	16.00	23.27	9.43	12.17	15.93	25.09	30.92	5.08	7.20	6.98	10.27	5.62	9.47	13.31	18.15	27.80	12.19	16.27	21.22	32.65	40.95
14	12	6.13	8.71	11.31	14.78	21.33	8.99	11.53	15.09	23.22	28.36	5.25	7.37	7.16	10.45	6.28	10.06	13.86	18.65	28.06	11.96	15.87	20.54	31.51	39.10
	16	5.89	8.45	11.03	14.49	21.07	8.74	11.27	14.82	22.93	28.09	5.09	7.21	6.98	10.26	5.63	9.35	13.10	17.85	27.33	11.76	15.67	20.34	31.29	38.90
	24	5.43	7.96	10.51	13.94	20.56	8.26	10.77	14.30	22.37	27.57	4.77	6.89	6.63	9.89	4.42	8.02	11.67	16.33	25.91	11.37	15.26	19.93	30.87	38.51
16	12	5.25	7.53	9.98	12.80	18.65	7.86	10.20	13.57	20.39	24.99	5.03	7.14	6.90	10.16	5.29	8.72	12.20	16.67	25.36	11.19	14.83	19.22	29.66	36.45
	16	4.96	7.22	9.63	12.44	18.31	7.54	9.87	13.22	20.01	24.64	4.81	6.91	6.65	9.88	4.51	7.86	11.27	15.66	24.41	10.92	14.55	18.94	29.37	36.18
	24	4.44	6.64	8.99	11.77	17.67	6.97	9.25	12.55	19.30	23.97	4.39	6.47	6.17	9.36	3.11 <sup>7</sup>	6.30	9.56	13.80	22.63	10.41	14.02	18.39	28.78	35.64

Lateral Load 20 Psf (Multiplied By 1.00 For Both Strength And Deflection Determinations)																								
Wall Height (ft.)	Spacing (in.) o.c.	350SG250-(mils)					350SG350-(mils)			362SG250-(mils)					362SG350-(mils)			400SG250-(mils)			400SG350-(mils)		550SG200-(mils)	
		33	43	54	68	97	68	97	118	33	43	54	68	97	68	97	118	33	54	97	68	118	33	43
8	12	2.57	4.15	5.75	7.55	11.33	8.43	13.94	17.50	2.49	3.82	5.21	6.96	10.33	8.85	14.56	18.44	3.04	6.85	13.84	9.92	21.15	5.73	8.09
	16	2.30	3.85	5.43	7.23	11.04	8.10	13.58	17.16	2.22	3.54	4.92	6.68	10.04	8.53	14.22	18.10	2.78	6.55	13.55	9.61	20.82	5.47	7.82
	24	1.79	3.30	4.82	6.62	10.47	7.48	12.90	16.49	1.73	3.03	4.39	6.16	9.48	7.91	13.54	17.43	2.29	5.96	13.00	9.02	20.17	4.95	7.29
9	12	2.18	3.62	5.03	6.67	10.15	7.68	12.71	15.83	2.11	3.31	4.59	6.19	9.27	8.08	13.47	16.80	2.68	6.20	12.74	9.23	19.60	5.46	7.81
	16	1.86	3.27	4.66	6.29	9.80	7.29	12.27	15.41	1.80	2.99	4.26	5.87	8.92	7.68	13.03	16.38	2.37	5.83	12.39	8.85	19.18	5.12	7.46
	24	1.29 <sup>6</sup>	2.64 <sup>7</sup>	3.97	5.59	9.13	6.54	11.44	14.60	1.25 <sup>6</sup>	2.41 <sup>7</sup>	3.64	5.25	8.25	6.94	12.20	15.57	1.79 <sup>7</sup>	5.13	11.71	8.11	18.38	4.46	6.78
10	12	1.79	3.08	4.29	5.77	8.94	6.95	11.26	14.10	1.73	2.81	3.96	5.40	8.17	7.34	12.06	15.08	2.30	5.50	11.57	8.48	17.94	5.14	7.47
	16	1.45 <sup>6</sup>	2.70	3.89	5.36	8.54	6.48	10.76	13.62	1.40 <sup>6</sup>	2.46	3.59	5.04	7.77	6.87	11.55	14.59	1.95	5.08	11.14	8.02	17.44	4.72	7.02
	24	0.84 <sup>6</sup>	2.02 <sup>6</sup>	3.15 <sup>7</sup>	4.59	7.79	5.62	9.82	12.70	0.81 <sup>6</sup>	1.83 <sup>6</sup>	2.93 <sup>7</sup>	4.37	7.03	6.00	10.60	13.65	1.31 <sup>6</sup>	4.29	10.35	7.16	16.48	3.92	6.19
12	12	1.10 <sup>6</sup>	2.06 <sup>6</sup>	2.96	4.11	6.62	5.28	8.45	10.72	1.05 <sup>6</sup>	1.88 <sup>6</sup>	2.76 <sup>7</sup>	3.90	6.04	5.71	9.20	11.65	1.57 <sup>6</sup>	4.12	9.14	6.96	14.48	4.36	6.59
	16	0.74 <sup>3</sup>	1.66 <sup>6</sup>	2.53 <sup>6</sup>	3.67 <sup>7</sup>	6.18	4.73	7.88	10.15	0.71 <sup>3</sup>	1.51 <sup>6</sup>	2.37 <sup>6</sup>	3.51 <sup>7</sup>	5.60	5.15	8.61	11.07	1.17 <sup>6</sup>	3.63	8.63	6.37	13.85	3.78	5.96
	24	0.11 <sup>2</sup>	0.97 <sup>3</sup>	1.78 <sup>6</sup>	2.88 <sup>6</sup>	5.38 <sup>7</sup>	3.77 <sup>6</sup>	6.86	9.13	0.11 <sup>2</sup>	0.87 <sup>3</sup>	1.69 <sup>3</sup>	2.80 <sup>6</sup>	4.81 <sup>7</sup>	4.15 <sup>7</sup>	7.55	10.00	0.47 <sup>3</sup>	2.76 <sup>6</sup>	7.69	5.30	12.68	2.75 <sup>6</sup>	4.83
14	12	0.57 <sup>3</sup>	1.29 <sup>6</sup>	1.97 <sup>6</sup>	2.86 <sup>6</sup>	4.83	3.75 <sup>7</sup>	6.21	8.00	0.54 <sup>3</sup>	1.18 <sup>6</sup>	1.84 <sup>6</sup>	2.74 <sup>6</sup>	4.37	4.14	6.79	8.74	0.94 <sup>6</sup>	2.91 <sup>7</sup>	6.89	5.33	11.18	3.27	5.17
	16	0.22 <sup>2</sup>	0.91 <sup>3</sup>	1.55 <sup>3</sup>	2.42 <sup>6</sup>	4.38 <sup>7</sup>	3.21 <sup>6</sup>	5.63	7.43	0.21 <sup>2</sup>	0.82 <sup>3</sup>	1.47 <sup>3</sup>	2.35 <sup>6</sup>	3.93 <sup>6</sup>	3.57 <sup>6</sup>	6.20	8.14	0.54 <sup>3</sup>	2.41 <sup>6</sup>	6.35	4.69 <sup>7</sup>	10.49	2.63 <sup>6</sup>	4.46
	24		0.25 <sup>2</sup>	0.84 <sup>2</sup>	1.67 <sup>3</sup>	3.60 <sup>6</sup>	2.27 <sup>3</sup>	4.63 <sup>6</sup>	6.41 <sup>7</sup>		0.21 <sup>2</sup>	0.81 <sup>2</sup>	1.67 <sup>3</sup>	3.16 <sup>6</sup>	2.58 <sup>6</sup>	5.14 <sup>6</sup>	7.07 <sup>7</sup>		1.55 <sup>3</sup>	5.40 <sup>6</sup>	3.56 <sup>6</sup>	9.27	1.52 <sup>6</sup>	3.23 <sup>6</sup>
16	12	0.20 <sup>2</sup>	0.75 <sup>3</sup>	1.27 <sup>3</sup>	1.96 <sup>6</sup>	3.53 <sup>6</sup>	2.61 <sup>6</sup>	4.56 <sup>7</sup>	6.00	0.19 <sup>2</sup>	0.68 <sup>3</sup>	1.20 <sup>3</sup>	1.90 <sup>6</sup>	3.16 <sup>6</sup>	2.91 <sup>6</sup>	5.02	6.58	0.47 <sup>3</sup>	1.98 <sup>6</sup>	5.13	3.88 <sup>7</sup>	8.51	2.26 <sup>6</sup>	3.78 <sup>7</sup>
	16		0.39 <sup>2</sup>	0.88 <sup>3</sup>	1.55 <sup>3</sup>	3.10 <sup>6</sup>	2.10 <sup>3</sup>	4.01 <sup>6</sup>	5.44 <sup>7</sup>		0.35 <sup>2</sup>	0.84 <sup>2</sup>	1.53 <sup>3</sup>	2.74 <sup>6</sup>	2.36 <sup>6</sup>	4.44 <sup>6</sup>	5.99 <sup>7</sup>		1.51 <sup>3</sup>	4.61 <sup>6</sup>	3.25 <sup>6</sup>	7.83	1.62 <sup>6</sup>	3.08 <sup>6</sup>
	24			0.22 <sup>2</sup>	0.85 <sup>2</sup>	2.37 <sup>3</sup>	1.21 <sup>2</sup>	3.05 <sup>3</sup>	4.46 <sup>6</sup>			0.24 <sup>2</sup>	0.90 <sup>2</sup>	2.02 <sup>3</sup>	1.43 <sup>3</sup>	3.43 <sup>6</sup>	4.96 <sup>6</sup>		0.69 <sup>2</sup>	3.71 <sup>6</sup>	2.17 <sup>3</sup>	6.64 <sup>6</sup>	0.54 <sup>3</sup>	1.88 <sup>3</sup>

1 = Deflection Exceeds L/120  
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- Allowable loads are based on checks for punched section under axial load, flexural, and shear conditions.
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- Contact The Steel Network if web crippling capacity values of SigmaStud® are required to check lateral end reactions.
- Loads in tables are in kips/stud.
- 5 PSF is classified as live transverse loads, not wind loads, per 2006 IBC, Section 1607.13

SigmaStud®  
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## Lateral Load 20 Psf (Multiplied By 1.00 For Strength & By 0.70 For Deflection Determinations)

Wall Height (ft.)	Spacing (in.) o.c.	550SG162-(mils)		550SG200-(mils)		550SG250-(mils)					550SG300-(mils)					600SG162-(mils)		600SG200-(mils)		600SG250-(mils)	
		33	43	33	43	33	43	54	68	97	43	54	68	97	118	33	43	33	43	33	43
8	12	3.90	5.23	5.73	8.09	6.61	9.64	12.44	16.50	24.03	9.95	12.83	16.81	26.41	33.28	4.29	5.73	6.19	8.69	7.09	10.27
	16	3.67	5.01	5.47	7.82	6.31	9.33	12.12	16.17	23.75	9.64	12.52	16.50	26.08	32.98	4.08	5.52	5.95	8.44	6.82	9.98
	24	3.24	4.57	4.95	7.29	5.74	8.73	11.51	15.54	23.19	9.03	11.91	15.88	25.45	32.38	3.66	5.11	5.46	7.94	6.28	9.43
9	12	3.68	5.01	5.46	7.81	6.30	9.31	12.10	16.14	23.72	9.43	12.23	16.10	25.45	31.97	4.09	5.53	5.95	8.43	6.82	9.98
	16	3.39	4.73	5.12	7.46	5.92	8.91	11.69	15.71	23.33	9.03	11.83	15.70	25.03	31.58	3.82	5.26	5.63	8.11	6.47	9.61
	24	2.84	4.18	4.46	6.78	5.19	8.13	10.89	14.87	22.58	8.27	11.06	14.91	24.20	30.80	3.28	4.73	5.01	7.47	5.78	8.89
10	12	3.43	4.76	5.14	7.47	5.80	8.67	11.39	15.36	22.79	8.82	11.53	15.27	24.34	30.45	3.85	5.29	5.66	8.13	6.46	9.58
	16	3.08	4.40	4.72	7.02	5.34	8.18	10.88	14.82	22.30	8.34	11.04	14.77	23.81	29.95	3.51	4.95	5.26	7.72	6.03	9.11
	24	2.42	3.73	3.92	6.19	4.49	7.25	9.90	13.78	21.35	7.43	10.10	13.80	22.78	28.98	2.87	4.30	4.49	6.92	5.19	8.22
12	12	2.83	4.13	4.36	6.59	4.70	7.20	9.68	13.16	19.89	7.44	9.92	13.35	21.60	26.89	3.28	4.70	4.94	7.34	5.41	8.20
	16	2.35	3.63	3.78	5.96	4.11	6.56	8.99	12.42	19.19	6.80	9.25	12.65	20.83	26.17	2.81	4.22	4.37	6.74	4.82	7.57
	24	1.51 <sup>1</sup>	2.74 <sup>2</sup>	2.75 <sup>2</sup>	4.83	3.05 <sup>7</sup>	5.40	7.73	11.06	17.89	5.62	8.01	11.34	19.37	24.79	1.96 <sup>6</sup>	3.32	3.35	5.64	3.75	6.40
14	12	2.16 <sup>7</sup>	3.38	3.27	5.17	3.54	5.67	7.89	10.70	16.67	5.95	8.16	11.33	18.18	22.92	2.62	3.97	3.98	6.17	4.26	6.68
	16	1.60 <sup>6</sup>	2.77 <sup>2</sup>	2.63 <sup>3</sup>	4.46	2.88 <sup>7</sup>	4.94	7.08	9.84	15.82	5.20	7.36	10.46	17.22	22.00	2.04 <sup>6</sup>	3.36	3.30 <sup>7</sup>	5.43	3.58	5.93
	24	0.64 <sup>3</sup>	1.72 <sup>2</sup>	1.52 <sup>2</sup>	3.23 <sup>3</sup>	1.75 <sup>2</sup>	3.67 <sup>6</sup>	5.66 <sup>7</sup>	8.31	14.27	3.89 <sup>6</sup>	5.94	8.90	15.49	20.32	1.04 <sup>6</sup>	2.28 <sup>6</sup>	2.13 <sup>6</sup>	4.13 <sup>7</sup>	2.38 <sup>6</sup>	4.60 <sup>7</sup>
16	12	1.49 <sup>6</sup>	2.59 <sup>6</sup>	2.26 <sup>5</sup>	3.78 <sup>7</sup>	2.51 <sup>5</sup>	4.27	6.09	8.40	13.52	4.54	6.45	9.17	14.80	18.93	1.93 <sup>6</sup>	3.18 <sup>7</sup>	2.89 <sup>7</sup>	4.70	3.16 <sup>7</sup>	5.21
	16	0.90 <sup>3</sup>	1.93 <sup>6</sup>	1.62 <sup>5</sup>	3.08 <sup>6</sup>	1.84 <sup>5</sup>	3.52 <sup>6</sup>	5.25 <sup>7</sup>	7.50	12.59	3.76 <sup>6</sup>	5.59	8.23	13.76	17.90	1.30 <sup>6</sup>	2.48 <sup>6</sup>	2.20 <sup>6</sup>	3.93 <sup>7</sup>	2.45 <sup>6</sup>	4.42 <sup>7</sup>
	24		0.80 <sup>3</sup>	0.54 <sup>3</sup>	1.88 <sup>3</sup>	0.71 <sup>3</sup>	2.24 <sup>6</sup>	3.82 <sup>6</sup>	5.95 <sup>6</sup>	10.98	2.41 <sup>6</sup>	4.11 <sup>6</sup>	6.58 <sup>7</sup>	11.93	16.08	0.22 <sup>3</sup>	1.29 <sup>3</sup>	1.01 <sup>3</sup>	2.61 <sup>6</sup>	1.22 <sup>3</sup>	3.04 <sup>6</sup>

## Lateral Load 20 Psf (Multiplied By 1.00 For Strength & By 0.70 For Deflection Determinations)

Wall Height (ft.)	Spacing (in.) o.c.	600SG250-(mils)			600SG300-(mils)					800SG162-(mils)		800SG200-(mils)		800SG250-(mils)					800SG300-(mils)				
		54	68	97	43	54	68	97	118	33	43	33	43	33	43	54	68	97	43	54	68	97	118
8	12	13.20	17.44	25.36	10.74	13.81	18.05	28.18	35.58	5.22	7.35	7.14	10.45	7.99	12.01	15.98	20.93	30.27	12.77	17.00	22.18	33.96	42.66
	16	12.91	17.14	25.10	10.45	13.52	17.75	27.88	35.31	5.04	7.17	6.95	10.26	7.78	11.80	15.76	20.71	30.08	12.54	16.77	21.96	33.74	42.45
	24	12.34	16.56	24.59	9.88	12.94	17.17	27.29	34.75	4.69	6.83	6.57	9.87	7.37	11.38	15.33	20.27	29.70	12.10	16.32	21.50	33.29	42.04
9	12	12.91	17.13	25.09	10.27	13.27	17.41	27.33	34.45	5.06	7.19	6.97	10.27	7.81	11.82	15.78	20.72	30.09	12.56	16.79	21.97	33.75	42.46
	16	12.53	16.74	24.74	9.90	12.90	17.04	26.94	34.09	4.83	6.97	6.72	10.02	7.54	11.54	15.49	20.43	29.84	12.27	16.50	21.68	33.45	42.19
	24	11.79	15.97	24.06	9.17	12.17	16.29	26.18	33.37	4.38	6.52	6.23	9.52	7.01	11.00	14.93	19.86	29.34	11.70	15.91	21.09	32.86	41.64
10	12	12.50	16.72	24.74	9.72	12.64	16.67	26.33	33.10	4.88	7.01	6.77	10.06	7.59	11.59	15.53	20.47	29.87	12.26	16.47	21.65	33.47	42.22
	16	12.01	16.22	24.29	9.26	12.18	16.20	25.84	32.64	4.59	6.73	6.45	9.75	7.25	11.24	15.17	20.11	29.55	11.90	16.10	21.27	33.09	41.87
	24	11.09	15.24	23.41	8.38	11.28	15.28	24.88	31.74	4.04	6.17	5.84	9.12	6.60	10.55	14.47	19.38	28.91	11.19	15.37	20.53	32.33	41.17
12	12	10.92	14.84	22.23	8.42	11.14	14.87	23.94	29.86	4.44	6.56	6.27	9.53	7.05	11.00	14.92	19.82	29.30	11.37	15.43	20.37	31.79	40.14
	16	10.24	14.12	21.56	7.79	10.49	14.20	23.21	29.18	4.02	6.14	5.81	9.06	6.56	10.48	14.37	19.26	28.79	10.84	14.89	19.82	31.22	39.61
	24	9.00	12.77	20.30	6.62	9.27	12.92	21.82	27.87	3.24	5.34	4.94	8.14	5.62	9.47	13.31	18.15	27.80	9.82	13.83	18.73	30.10	38.56
14	12	9.12	12.45	19.16	6.97	9.43	12.88	20.81	26.12	3.89	5.98	5.64	8.84	6.28	10.06	13.86	18.65	28.06	10.26	14.11	18.74	29.63	37.36
	16	8.30	11.57	18.31	6.21	8.62	12.01	19.86	25.21	3.34	5.41	5.02	8.18	5.63	9.35	13.10	17.85	27.33	9.56	13.37	17.99	28.83	36.61
	24	6.84	9.99	16.75	4.84 <sup>7</sup>	7.17	10.45	18.12	23.54	2.33 <sup>7</sup>	4.35	3.89	6.95	4.42	8.02	11.67	16.33	25.91	8.23	11.97	16.54	27.29	35.15
16	12	7.38	10.08	15.99	5.51	7.69	10.83	17.43	22.17	3.26	5.28	4.89	7.96	5.29	8.72	12.20	16.67	25.36	8.99	12.53	16.85	27.12	34.09
	16	6.49	9.12	15.02	4.68	6.79	9.84	16.35	21.11	2.60	4.57	4.13	7.13	4.51	7.86	11.27	15.66	24.41	8.12	11.61	15.89	26.07	33.11
	24	4.93 <sup>6</sup>	7.44 <sup>7</sup>	13.30	3.24 <sup>6</sup>	5.22 <sup>7</sup>	8.10	14.41	19.20	1.40 <sup>6</sup>	3.28 <sup>7</sup>	2.77 <sup>6</sup>	5.62	3.11 <sup>7</sup>	6.30	9.56	13.80	22.63	6.54	9.93	14.11	24.11	31.25

- 1 = Deflection Exceeds L/120
  - 2 = Deflection Exceeds L/240
  - 3 = Deflection Exceeds L/360
  - 6 = Deflection Exceeds L/600
  - 7 = Deflection Exceeds L/720
- If not noted, deflection is less than L/720

### Important Notes:

- Allowable loads are based on weak axis and torsional bracing at 48" o.c. maximum for axial load calculation and continuous support of each flange for flexural calculation.
- Sections are punched with a standard punch-out 1.5" wide located along the centerline of the web 24" o.c.
- Allowable loads are based on checks for punched section under axial load, flexural, and shear conditions.
- Weak axis and torsional bracing should have sufficient stiffness and strength to resist the axial load.
- Lateral loads are multiplied by 0.7 for deflection determination. Lateral and axial loads have not been modified for strength checks.
- Strength increase due to cold forming is incorporated in calculating allowable loads as per AISI Specification Sec. A7.2.
- Contact The Steel Network if web crippling capacity values of SigmaStud® are required to check lateral end reactions.
- Loads in tables are in kips/stud.

SigmaStud®  
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## Lateral Load 30 Psf (Multiplied By 1.00 For Strength & By 0.70 For Deflection Determinations)

Wall Height (ft.)	Spacing (in.) o.c.	350SG250-(mils)					350SG350-(mils)			362SG250-(mils)					362SG350-(mils)			400SG250-(mils)					400SG350-(mils)		
		33	43	54	68	97	68	97	118	33	43	54	68	97	68	97	118	33	43	54	68	97	68	97	118
8	12	2.17	3.71	5.27	7.07	10.89	7.94	13.41	16.99	2.30	3.91	5.58	7.53	11.54	8.37	14.05	17.93	2.65	4.44	6.40	8.73	13.41	9.46	15.94	20.65
	16	1.79	3.30	4.82	6.62	10.47	7.48	12.90	16.49	1.92	3.50	5.13	7.07	11.12	7.91	13.54	17.43	2.29	4.05	5.96	8.28	13.00	9.02	15.46	20.17
	24	1.09 <sup>6</sup>	2.53 <sup>7</sup>	3.99	5.77	9.66	6.59	11.92	15.53	1.22 <sup>8</sup>	2.74	4.29	6.21	10.31	7.02	12.57	16.47	1.60 <sup>7</sup>	3.30	5.13	7.42	12.20	8.16	14.51	19.22
9	12	1.72 <sup>7</sup>	3.11	4.48	6.11	9.63	7.09	12.06	15.20	1.85	3.31	4.79	6.56	10.28	7.49	12.82	16.17	2.22	3.88	5.64	7.83	12.22	8.66	14.73	18.98
	16	1.29 <sup>6</sup>	2.64 <sup>7</sup>	3.97	5.59	9.13	6.54	11.44	14.60	1.42 <sup>6</sup>	2.84	4.27	6.03	9.78	6.94	12.20	15.57	1.79 <sup>7</sup>	3.41	5.13	7.29	11.71	8.11	14.12	18.38
	24	0.53 <sup>3</sup>	1.80 <sup>6</sup>	3.04 <sup>7</sup>	4.63	8.19	5.50	10.28	13.47	0.65 <sup>6</sup>	1.99 <sup>6</sup>	3.33 <sup>7</sup>	5.05	8.84	5.90	11.03	14.42	1.01 <sup>6</sup>	2.55 <sup>7</sup>	4.16	6.28	10.74	7.08	12.97	17.22
10	12	1.29 <sup>6</sup>	2.52 <sup>7</sup>	3.69	5.16	8.34	6.26	10.52	13.38	1.42 <sup>6</sup>	2.73	4.01	5.60	9.00	6.65	11.31	14.35	1.78 <sup>7</sup>	3.31	4.87	6.88	10.94	7.80	13.45	17.19
	16	0.84 <sup>6</sup>	2.02 <sup>6</sup>	3.15 <sup>7</sup>	4.59	7.79	5.62	9.82	12.70	0.96 <sup>6</sup>	2.22 <sup>6</sup>	3.45 <sup>7</sup>	5.01	8.43	6.00	10.60	13.65	1.31 <sup>6</sup>	2.78 <sup>7</sup>	4.29	6.26	10.35	7.16	12.73	16.48
	24	0.05 <sup>3</sup>	1.13 <sup>3</sup>	2.18 <sup>6</sup>	3.57 <sup>6</sup>	6.77	4.46	8.55	11.44	0.15 <sup>3</sup>	1.31 <sup>6</sup>	2.45 <sup>6</sup>	3.96 <sup>6</sup>	7.39	4.83 <sup>7</sup>	9.29	12.36	0.46 <sup>3</sup>	1.83 <sup>6</sup>	3.23 <sup>6</sup>	5.14	9.25	5.97	11.38	15.14
12	12	0.57 <sup>3</sup>	1.48 <sup>6</sup>	2.33 <sup>6</sup>	3.46 <sup>7</sup>	5.97	4.48	7.61	9.89	0.67 <sup>3</sup>	1.66 <sup>6</sup>	2.60 <sup>6</sup>	3.83 <sup>7</sup>	6.55	4.89	8.33	10.79	0.98 <sup>6</sup>	2.20 <sup>6</sup>	3.40 <sup>7</sup>	5.02	8.38	6.09	10.54	13.54
	16	0.11 <sup>2</sup>	0.97 <sup>3</sup>	1.78 <sup>6</sup>	2.88 <sup>6</sup>	5.38 <sup>7</sup>	3.77	6.86	9.13	0.19 <sup>2</sup>	1.13 <sup>3</sup>	2.02 <sup>6</sup>	3.22 <sup>6</sup>	5.93 <sup>7</sup>	4.15 <sup>7</sup>	7.55	10.00	0.47 <sup>3</sup>	1.62 <sup>6</sup>	2.76 <sup>6</sup>	4.32 <sup>7</sup>	7.69	5.30	9.67	12.68
	24		0.09 <sup>2</sup>	0.83 <sup>3</sup>	1.86 <sup>6</sup>	4.33 <sup>6</sup>	2.52	5.53	7.78		0.21 <sup>2</sup>	1.02 <sup>3</sup>	2.15 <sup>6</sup>	4.83 <sup>6</sup>	2.86 <sup>6</sup>	6.15 <sup>6</sup>	8.59		0.60 <sup>3</sup>	1.63 <sup>6</sup>	3.11 <sup>6</sup>	6.46 <sup>6</sup>	3.90	8.11	11.11
14	12		0.73 <sup>3</sup>	1.36 <sup>3</sup>	2.22 <sup>6</sup>	4.18 <sup>6</sup>	2.96	5.37	7.16	0.13 <sup>2</sup>	0.86 <sup>3</sup>	1.55 <sup>6</sup>	2.49 <sup>6</sup>	4.62 <sup>6</sup>	3.31 <sup>6</sup>	5.92	7.85	0.35 <sup>3</sup>	1.28 <sup>3</sup>	2.18 <sup>6</sup>	3.41 <sup>6</sup>	6.10	4.39	7.74	10.17
	16		0.25 <sup>3</sup>	0.84 <sup>2</sup>	1.67 <sup>3</sup>	3.60 <sup>6</sup>	2.27	4.63	6.41		0.36 <sup>2</sup>	1.00 <sup>3</sup>	1.91 <sup>3</sup>	4.02 <sup>6</sup>	2.58 <sup>6</sup>	5.14 <sup>6</sup>	7.07 <sup>7</sup>		0.70 <sup>3</sup>	1.55 <sup>3</sup>	2.73 <sup>6</sup>	5.40 <sup>6</sup>	3.56	6.85	9.27
	24				0.71 <sup>2</sup>	2.60 <sup>3</sup>	1.07	3.35	5.09				0.90 <sup>2</sup>	2.96 <sup>3</sup>	1.32 <sup>3</sup>	3.79 <sup>6</sup>	5.69 <sup>6</sup>			0.46 <sup>2</sup>	1.56 <sup>3</sup>	4.18 <sup>6</sup>	2.13	5.29	7.68
16	12		0.23 <sup>2</sup>	0.71 <sup>2</sup>	1.36 <sup>3</sup>	2.91 <sup>6</sup>	1.86	3.76	5.18		0.32 <sup>2</sup>	0.84 <sup>2</sup>	1.56 <sup>3</sup>	3.24 <sup>6</sup>	2.11 <sup>3</sup>	4.17 <sup>6</sup>	5.72 <sup>7</sup>		0.60 <sup>2</sup>	1.29 <sup>3</sup>	2.23 <sup>6</sup>	4.37 <sup>6</sup>	2.96	5.57	7.51
	16			0.22 <sup>2</sup>	0.85 <sup>2</sup>	2.37 <sup>3</sup>	1.21	3.05	4.46			0.33 <sup>2</sup>	1.01 <sup>2</sup>	2.67 <sup>3</sup>	1.43 <sup>3</sup>	3.43 <sup>6</sup>	4.96 <sup>6</sup>			0.69 <sup>2</sup>	1.59 <sup>3</sup>	3.71 <sup>6</sup>	2.17	4.71	6.64
	24					1.44 <sup>2</sup>	0.10	1.85	3.23					1.69 <sup>2</sup>	0.26 <sup>2</sup>	2.16 <sup>3</sup>	3.66 <sup>3</sup>			0.50 <sup>2</sup>	2.56 <sup>3</sup>	0.81	3.24	5.12	

## Lateral Load 30 Psf (Multiplied By 1.00 For Strength & By 0.70 For Deflection Determinations)

Wall Height (ft.)	Spacing (in.) o.c.	550SG162-(mils)		550SG200-(mils)		550SG250-(mils)					550SG300-(mils)					600SG162-(mils)		600SG200-(mils)		600SG250-(mils)				
		33	43	33	43	33	43	54	68	97	43	54	68	97	118	33	43	33	43	33	43	54	68	97
8	12	3.56	4.90	5.33	7.68	6.17	9.18	11.97	16.01	23.61	9.49	12.37	16.34	25.92	32.83	3.97	5.42	5.82	8.31	6.68	9.84	12.77	16.99	24.97
	16	3.24	4.57	4.95	7.29	5.74	8.73	11.51	15.54	23.19	9.03	11.91	15.88	25.45	32.38	3.66	5.11	5.46	7.94	6.28	9.43	12.34	16.56	24.59
	24	2.61	3.95	4.20	6.52	4.91	7.86	10.61	14.60	22.36	8.15	11.01	14.97	24.50	31.49	3.05	4.50	4.75	7.22	5.50	8.61	11.51	15.70	23.84
9	12	3.25	4.59	4.95	7.28	5.73	8.71	11.48	15.50	23.14	8.84	11.64	15.50	24.82	31.38	3.68	5.12	5.47	7.95	6.30	9.43	12.34	16.54	24.57
	16	2.84	4.18	4.46	6.78	5.19	8.13	10.89	14.87	22.58	8.27	11.06	14.91	24.20	30.80	3.28	4.73	5.01	7.47	5.78	8.89	11.79	15.97	24.06
	24	2.07	3.40	3.54	5.81	4.17	7.03	9.74	13.67	21.49	7.18	9.94	13.76	23.00	29.67	2.53	3.97	4.12	6.56	4.81	7.85	10.72	14.86	23.07
10	12	2.91	4.23	4.51	6.81	5.12	7.94	10.63	14.56	22.06	8.11	10.80	14.52	23.55	29.71	3.35	4.79	5.06	7.51	5.81	8.88	11.78	15.97	24.06
	16	2.42	3.73	3.92	6.19	4.49	7.25	9.90	13.78	21.35	7.43	10.10	13.80	22.78	28.98	2.87	4.30	4.49	6.92	5.19	8.22	11.09	15.24	23.41
	24	1.51 <sup>6</sup>	2.80	2.83 <sup>7</sup>	5.03	3.31	5.97	8.55	12.33	19.99	6.14	8.77	12.42	21.29	27.58	1.97 <sup>7</sup>	3.39	3.44	5.81	4.03	6.97	9.77	13.85	22.13
12	12	2.13 <sup>7</sup>	3.40	3.51	5.66	3.83	6.25	8.66	12.07	18.86	6.49	8.93	12.31	20.45	25.82	2.59	3.98	4.11	6.45	4.54	7.26	9.92	13.77	21.24
	16	1.51 <sup>6</sup>	2.74 <sup>7</sup>	2.75 <sup>6</sup>	4.83	3.05 <sup>7</sup>	5.40	7.73	11.06	17.89	5.62	8.01	11.34	19.37	24.79	1.96 <sup>6</sup>	3.32	3.35	5.64	3.75	6.40	9.00	12.77	20.30
	24	0.41 <sup>3</sup>	1.56 <sup>6</sup>	1.42 <sup>6</sup>	3.36 <sup>6</sup>	1.67 <sup>6</sup>	3.87 <sup>6</sup>	6.07	9.24	16.10	4.06 <sup>7</sup>	6.35	9.57	17.38	22.89	0.83 <sup>6</sup>	2.13 <sup>6</sup>	2.00 <sup>6</sup>	4.17 <sup>7</sup>	2.34 <sup>6</sup>	4.84 <sup>7</sup>	7.31	10.94	18.54
14	12	1.34 <sup>6</sup>	2.49 <sup>6</sup>	2.33 <sup>6</sup>	4.13 <sup>7</sup>	2.58 <sup>6</sup>	4.60	6.71	9.44	15.41	4.85	6.98	10.05	16.77	21.56	1.78 <sup>6</sup>	3.08 <sup>7</sup>	2.99 <sup>7</sup>	5.09	3.26 <sup>7</sup>	5.58	7.92	11.15	17.90
	16	0.64 <sup>3</sup>	1.72 <sup>6</sup>	1.52 <sup>6</sup>	3.23 <sup>6</sup>	1.75 <sup>6</sup>	3.67 <sup>6</sup>	5.66 <sup>7</sup>	8.31	14.27	3.89 <sup>6</sup>	5.94	8.90	15.49	20.32	1.04 <sup>6</sup>	2.28 <sup>6</sup>	2.13 <sup>6</sup>	4.13 <sup>7</sup>	2.38 <sup>6</sup>	4.60 <sup>7</sup>	6.84	9.99	16.75
	24		0.40 <sup>3</sup>	0.14 <sup>3</sup>	1.69 <sup>3</sup>	0.31 <sup>3</sup>	2.06 <sup>6</sup>	3.85 <sup>6</sup>	6.35 <sup>6</sup>	12.26	2.20 <sup>6</sup>	4.11 <sup>6</sup>	6.88 <sup>7</sup>	13.24	18.09		0.90 <sup>3</sup>	0.64 <sup>3</sup>	2.47 <sup>6</sup>	0.85 <sup>3</sup>	2.89 <sup>6</sup>	4.96 <sup>6</sup>	7.92 <sup>7</sup>	14.66
16	12	0.62 <sup>3</sup>	1.63 <sup>3</sup>	1.33 <sup>3</sup>	2.76 <sup>6</sup>	1.54 <sup>6</sup>	3.18 <sup>6</sup>	4.87 <sup>7</sup>	7.09	12.16	3.40 <sup>6</sup>	5.20 <sup>7</sup>	7.79	13.27	17.42	1.01 <sup>3</sup>	2.16 <sup>6</sup>	1.88 <sup>6</sup>	3.58 <sup>6</sup>	2.12 <sup>6</sup>	4.05 <sup>6</sup>	6.07	8.67	14.57
	16		0.80 <sup>3</sup>	0.54 <sup>3</sup>	1.88 <sup>3</sup>	0.71 <sup>3</sup>	2.24 <sup>6</sup>	3.82 <sup>6</sup>	5.95 <sup>6</sup>	10.98	2.41 <sup>6</sup>	4.11 <sup>6</sup>	6.58 <sup>7</sup>	11.93	16.08	0.22 <sup>3</sup>	1.29 <sup>3</sup>	1.01 <sup>3</sup>	2.61 <sup>6</sup>	1.22 <sup>3</sup>	3.04 <sup>6</sup>	4.93 <sup>6</sup>	7.44 <sup>7</sup>	13.30
	24				0.39 <sup>2</sup>		0.65 <sup>3</sup>	2.03 <sup>3</sup>	4.01 <sup>6</sup>	8.93 <sup>6</sup>	0.72 <sup>3</sup>	2.25 <sup>3</sup>	4.50 <sup>6</sup>	9.62 <sup>7</sup>	13.75				0.97 <sup>3</sup>		1.31 <sup>3</sup>	2.98 <sup>6</sup>	5.33 <sup>6</sup>	11.09 <sup>7</sup>

- 1 = Deflection Exceeds L/120
- 2 = Deflection Exceeds L/240
- 3 = Deflection Exceeds L/360
- 6 = Deflection Exceeds L/600
- 7 = Deflection Exceeds L/720
- If not noted, deflection is less than L/720

### Important Notes:

- Allowable loads are based on weak axis and torsional bracing at 48" o.c. maximum for axial load calculation and continuous support of each flange for flexural calculation.
- Sections are punched with a standard punch-out 1.5" wide located along the centerline of the web 24" o.c.
- Allowable loads are based on checks for punched section under axial load, flexural, and shear conditions.
- Weak axis and torsional bracing should have sufficient stiffness and strength to resist the axial load.
- Lateral loads are multiplied by 0.7 for deflection determination. Lateral and axial loads have not been modified for strength checks.
- Strength increase due to cold forming is incorporated in calculating allowable loads as per AISI Specification Sec. A7.2.
- Contact The Steel Network if web crippling capacity values of SigmaStud® are required to check lateral end reactions.
- Loads in tables are in kips/stud.

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Lateral Load 30 Psf (Multiplied By 1.00 For Strength & By 0.70 For Deflection Determinations)																						Lateral Load 40 Psf		
Wall Height (ft.)	Spacing (in.) o.c.	600SG300-(mils)					800SG162-(mils)		800SG200-(mils)		800SG250-(mils)					800SG300-(mils)					350SG250-(mils)			
		43	54	68	97	118	33	43	33	43	33	43	54	68	97	43	54	68	97	118	33	43	54	
8	12	10.31	13.38	17.61	27.73	35.17	4.95	7.09	6.85	10.16	7.68	11.69	15.65	20.60	29.98	12.43	16.66	21.84	33.62	42.35	1.79	3.30	4.82	
	16	9.88	12.94	17.17	27.29	34.75	4.69	6.83	6.57	9.87	7.37	11.38	15.33	20.27	29.70	12.10	16.32	21.50	33.29	42.04	1.32 <sup>6</sup>	2.78	4.26	
	24	9.04	12.10	16.32	26.41	33.93	4.17	6.31	6.00	9.30	6.76	10.75	14.68	19.61	29.13	11.44	15.65	20.83	32.62	41.41	0.46 <sup>6</sup>	1.83 <sup>6</sup>	3.22 <sup>7</sup>	
9	12	9.71	12.72	16.85	26.75	33.91	4.72	6.86	6.60	9.90	7.41	11.40	15.35	20.29	29.71	12.13	16.35	21.53	33.31	42.05	1.29 <sup>6</sup>	2.64 <sup>7</sup>	3.97	
	16	9.17	12.17	16.29	26.18	33.37	4.38	6.52	6.23	9.52	7.01	11.00	14.93	19.86	29.34	11.70	15.91	21.09	32.86	41.64	0.78 <sup>6</sup>	2.06 <sup>6</sup>	3.34 <sup>7</sup>	
	24	8.13	11.10	15.21	25.05	32.31	3.72	5.87	5.51	8.79	6.24	10.19	14.10	19.01	28.60	10.86	15.05	20.22	31.99	40.83		1.04 <sup>3</sup>	2.21 <sup>6</sup>	
10	12	9.03	11.95	15.96	25.60	32.41	4.45	6.59	6.30	9.59	7.09	11.06	15.00	19.92	29.39	11.72	15.92	21.08	32.90	41.69	0.84 <sup>6</sup>	2.02 <sup>6</sup>	3.15 <sup>7</sup>	
	16	8.38	11.28	15.28	24.88	31.74	4.04	6.17	5.84	9.12	6.60	10.55	14.47	19.38	28.91	11.19	15.37	20.53	32.33	41.17	0.30 <sup>3</sup>	1.41 <sup>6</sup>	2.49 <sup>6</sup>	
	24	7.13	10.00	13.96	23.48	30.41	3.23	5.36	4.96	8.21	5.65	9.55	13.42	18.31	27.97	10.14	14.30	19.43	31.22	40.13		0.35 <sup>3</sup>	1.32 <sup>3</sup>	
12	12	7.49	10.17	13.87	22.86	28.85	3.82	5.94	5.59	8.83	6.32	10.22	14.10	18.98	28.54	10.58	14.62	19.55	30.93	39.34	0.11 <sup>2</sup>	0.97 <sup>3</sup>	1.78 <sup>6</sup>	
	16	6.62	9.27	12.92	21.82	27.87	3.24	5.34	4.94	8.14	5.62	9.47	13.31	18.15	27.80	9.82	13.83	18.73	30.10	38.56		0.37 <sup>2</sup>	1.13 <sup>3</sup>	
	24	5.04	7.60	11.17	19.87	26.02	2.13	4.20	3.71	6.84	4.29	8.04	11.79	16.57	26.36	8.36	12.31	17.17	28.47	37.02				
14	12	5.85	8.24	11.61	19.41	24.78	3.08	5.14	4.73	7.86	5.31	9.01	12.73	17.46	26.97	9.21	13.01	17.62	28.44	36.24		0.25 <sup>2</sup>	0.84 <sup>2</sup>	
	16	4.84 <sup>7</sup>	7.17	10.45	18.12	23.54	2.33 <sup>7</sup>	4.35	3.89	6.95	4.42	8.02	11.67	16.33	25.91	8.23	11.97	16.54	27.29	35.15			0.23 <sup>2</sup>	
	24	3.07 <sup>6</sup>	5.26 <sup>7</sup>	8.38	15.79	21.26	0.97 <sup>6</sup>	2.91 <sup>7</sup>	2.35 <sup>6</sup>	5.28	2.77 <sup>7</sup>	6.20	9.70	14.21	23.90	6.40	10.03	14.50	25.11	33.07				
16	12	4.30 <sup>7</sup>	6.37	9.38	15.84	20.61	2.28 <sup>7</sup>	4.23	3.77	6.73	4.15	7.45	10.82	15.17	23.96	7.71	11.18	15.43	25.57	32.63			0.22 <sup>2</sup>	
	16	3.24 <sup>6</sup>	5.22 <sup>7</sup>	8.10	14.41	19.20	1.40 <sup>6</sup>	3.28 <sup>7</sup>	2.77 <sup>6</sup>	5.62	3.11 <sup>7</sup>	6.30	9.56	13.80	22.63	6.54	9.93	14.11	24.11	31.25				
	24	1.42 <sup>3</sup>	3.22 <sup>6</sup>	5.88 <sup>6</sup>	11.93	16.72		1.60 <sup>6</sup>	1.00 <sup>6</sup>	3.65 <sup>6</sup>	1.27 <sup>6</sup>	4.24 <sup>6</sup>	7.30	11.33	20.20	4.44 <sup>7</sup>	7.66	11.69	21.42	28.65				

Lateral Load 40 Psf (Multiplied By 1.00 For Strength & By 0.70 For Deflection Determinations)																						
Wall Height (ft.)	Spacing (in.) o.c.	350SG250-(mils)		350SG350-(mils)			362SG250-(mils)					362SG350-(mils)			400SG250-(mils)					400SG350-(mils)		
		68	97	68	97	118	33	43	54	68	97	68	97	118	33	43	54	68	97	68	97	118
8	12	6.62	10.47	7.48	12.90	16.49	1.92	3.50	5.13	7.07	11.12	7.91	13.54	17.43	2.29	4.05	5.96	8.28	13.00	9.02	15.46	20.17
	16	6.04	9.93	6.88	12.24	15.85	1.45 <sup>6</sup>	2.98	4.56	6.49	10.57	7.31	12.89	16.79	1.82	3.54	5.40	7.70	12.46	8.44	14.82	19.53
	24	4.98	8.90	5.76	10.99	14.61	0.59 <sup>6</sup>	2.03 <sup>6</sup>	3.51 <sup>7</sup>	5.41	9.54	6.19	11.64	15.56	0.96 <sup>6</sup>	2.60 <sup>7</sup>	4.34	6.61	11.43	7.33	13.61	18.31
9	12	5.59	9.13	6.54	11.44	14.60	1.42 <sup>6</sup>	2.84	4.27	6.03	9.78	6.94	12.20	15.57	1.79 <sup>7</sup>	3.41	5.13	7.29	11.71	8.11	14.12	18.38
	16	4.94	8.50	5.83	10.66	13.84	0.90 <sup>6</sup>	2.26 <sup>6</sup>	3.63	5.37	9.14	6.23	11.41	14.79	1.26 <sup>6</sup>	2.83 <sup>7</sup>	4.47	6.60	11.06	7.41	13.35	17.60
	24	3.76 <sup>6</sup>	7.33	4.54	9.21	12.41		1.22 <sup>6</sup>	2.48 <sup>6</sup>	4.16 <sup>7</sup>	7.96	4.93	9.94	13.34	0.30 <sup>3</sup>	1.76 <sup>6</sup>	3.28 <sup>7</sup>	5.34	9.83	6.10	11.88	16.12
10	12	4.59	7.79	5.62	9.82	12.70	0.96 <sup>6</sup>	2.22 <sup>6</sup>	3.45 <sup>7</sup>	5.01	8.43	6.00	10.60	13.65	1.31 <sup>6</sup>	2.78 <sup>7</sup>	4.29	6.26	10.35	7.16	12.73	16.48
	16	3.90 <sup>7</sup>	7.10	4.83	8.96	11.84	0.40 <sup>3</sup>	1.59 <sup>6</sup>	2.77 <sup>6</sup>	4.30 <sup>7</sup>	7.72	5.21	9.72	12.78	0.73 <sup>6</sup>	2.13 <sup>6</sup>	3.57 <sup>7</sup>	5.50	9.61	6.35	11.82	15.57
	24	2.67 <sup>6</sup>	5.86 <sup>6</sup>	3.41 <sup>6</sup>	7.40 <sup>7</sup>	10.28		0.50 <sup>3</sup>	1.56 <sup>3</sup>	3.03 <sup>6</sup>	6.45 <sup>7</sup>	3.78 <sup>6</sup>	8.11	11.18		0.98 <sup>3</sup>	2.28 <sup>6</sup>	4.13 <sup>6</sup>	8.24	4.87 <sup>7</sup>	10.14	13.88
12	12	2.88 <sup>6</sup>	5.38 <sup>7</sup>	3.77 <sup>6</sup>	6.86	9.13	0.19 <sup>2</sup>	1.13 <sup>3</sup>	2.02 <sup>6</sup>	3.22 <sup>6</sup>	5.93 <sup>7</sup>	4.15 <sup>7</sup>	7.55	10.00	0.47 <sup>3</sup>	1.62 <sup>6</sup>	2.76 <sup>6</sup>	4.32 <sup>7</sup>	7.69	5.30	9.67	12.68
	16	2.18 <sup>3</sup>	4.66 <sup>6</sup>	2.92 <sup>6</sup>	5.95 <sup>7</sup>	8.21		0.50 <sup>3</sup>	1.34 <sup>3</sup>	2.49 <sup>6</sup>	5.18 <sup>6</sup>	3.27 <sup>6</sup>	6.59 <sup>7</sup>	9.04		0.92 <sup>3</sup>	1.99 <sup>6</sup>	3.50 <sup>6</sup>	6.85 <sup>7</sup>	4.35 <sup>6</sup>	8.61	11.61
	24	0.98 <sup>2</sup>	3.41 <sup>3</sup>	1.44 <sup>3</sup>	4.36 <sup>6</sup>	6.59 <sup>6</sup>			0.15 <sup>2</sup>	1.23 <sup>3</sup>	3.87 <sup>3</sup>	1.74 <sup>3</sup>	4.92 <sup>6</sup>	7.34 <sup>6</sup>			0.65 <sup>3</sup>	2.05 <sup>3</sup>	5.36 <sup>6</sup>	2.67 <sup>6</sup>	6.72 <sup>6</sup>	9.70 <sup>7</sup>
14	12	1.67 <sup>3</sup>	3.60 <sup>6</sup>	2.27 <sup>3</sup>	4.63 <sup>6</sup>	6.41 <sup>7</sup>		0.36 <sup>2</sup>	1.00 <sup>3</sup>	1.91 <sup>3</sup>	4.02 <sup>6</sup>	2.58 <sup>6</sup>	5.14 <sup>6</sup>	7.07 <sup>7</sup>		0.70 <sup>3</sup>	1.55 <sup>3</sup>	2.73 <sup>6</sup>	5.40 <sup>6</sup>	3.56 <sup>6</sup>	6.85 <sup>7</sup>	9.27
	16	1.01 <sup>2</sup>	2.92 <sup>3</sup>	1.45 <sup>3</sup>	3.75 <sup>6</sup>	5.51 <sup>6</sup>			0.36 <sup>2</sup>	1.22 <sup>3</sup>	3.29 <sup>3</sup>	1.72 <sup>3</sup>	4.22 <sup>6</sup>	6.12 <sup>6</sup>			0.80 <sup>3</sup>	1.93 <sup>3</sup>	4.57 <sup>6</sup>	2.58 <sup>3</sup>	5.79 <sup>6</sup>	8.18 <sup>7</sup>
	24		1.74 <sup>2</sup>	0.05 <sup>2</sup>	2.23 <sup>3</sup>	3.95 <sup>3</sup>						2.05 <sup>2</sup>	0.24 <sup>2</sup>	2.62 <sup>3</sup>	4.48 <sup>3</sup>				0.55 <sup>2</sup>	3.13 <sup>3</sup>	0.90 <sup>2</sup>	3.94 <sup>3</sup>
16	12	0.85 <sup>2</sup>	2.37 <sup>3</sup>	1.21 <sup>2</sup>	3.05 <sup>3</sup>	4.46 <sup>6</sup>			0.33 <sup>2</sup>	1.01 <sup>2</sup>	2.67 <sup>3</sup>	1.43 <sup>3</sup>	3.43 <sup>6</sup>	4.96 <sup>6</sup>			0.69 <sup>2</sup>	1.59 <sup>3</sup>	3.71 <sup>6</sup>	2.17 <sup>3</sup>	4.71 <sup>6</sup>	6.64 <sup>6</sup>
	16	0.24 <sup>2</sup>	1.73 <sup>2</sup>	0.45 <sup>2</sup>	2.23 <sup>3</sup>	3.62 <sup>3</sup>				0.37 <sup>2</sup>	2.00 <sup>2</sup>	0.63 <sup>2</sup>	2.56 <sup>3</sup>	4.07 <sup>3</sup>				0.84 <sup>2</sup>	2.92 <sup>3</sup>	1.23 <sup>3</sup>	3.70 <sup>3</sup>	5.60 <sup>6</sup>
	24		0.64 <sup>2</sup>		0.82 <sup>2</sup>	2.16 <sup>2</sup>						0.85 <sup>2</sup>		1.08 <sup>2</sup>	2.53 <sup>2</sup>					1.58 <sup>2</sup>		1.97 <sup>2</sup>

1 = Deflection Exceeds L/120  
 2 = Deflection Exceeds L/240  
 3 = Deflection Exceeds L/360  
 6 = Deflection Exceeds L/600  
 7 = Deflection Exceeds L/720  
 If not noted, deflection is less than L/720

**Important Notes:**

- Allowable loads are based on weak axis and torsional bracing at 48" o.c. maximum for axial load calculation and continuous support of each flange for flexural calculation.
- Sections are punched with a standard punch-out 1.5" wide located along the centerline of the web 24" o.c.
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- Weak axis and torsional bracing should have sufficient stiffness and strength to resist the axial load.
- Lateral loads are multiplied by 0.7 for deflection determination. Lateral and axial loads have not been modified for strength checks.
- Strength increase due to cold forming is incorporated in calculating allowable loads as per AISI Specification Sec. A7.2.
- Contact The Steel Network if web crippling capacity values of SigmaStud® are required to check lateral end reactions.
- Loads in tables are in kips/stud.

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Lateral Load 40 Psf (Multiplied By 1.00 For Strength & By 0.70 For Deflection Determinations)																								
Wall Height (ft.)	Spacing (in.) o.c.	550SG162-(mils)		550SG200-(mils)		550SG250-(mils)					550SG300-(mils)					600SG162-(mils)		600SG200-(mils)		600SG250-(mils)		600SG250-(mils)		
		33	43	33	43	33	43	54	68	97	43	54	68	97	118	33	43	33	43	33	43	54	68	97
8	12	3.24	4.57	4.95	7.29	5.74	8.73	11.51	15.54	23.19	9.03	11.91	15.88	25.45	32.38	3.66	5.11	5.46	7.94	6.28	9.43	16.56	24.59	29.99
	16	2.81	4.15	4.44	6.78	5.18	8.14	10.90	14.91	22.64	8.44	11.31	15.27	24.82	31.79	3.25	4.70	4.98	7.46	5.76	8.88	15.98	24.09	29.49
	24	2.00	3.35	3.48	5.79	4.12	7.02	9.74	13.70	21.55	7.29	10.14	14.08	23.58	30.62	2.46	3.92	4.06	6.52	4.75	7.82	14.86	23.09	28.50
9	12	2.84	4.18	4.46	6.78	5.19	8.13	10.89	14.87	22.58	8.27	11.06	14.91	24.20	30.80	3.28	4.73	5.01	7.47	5.78	8.89	15.97	24.06	29.46
	16	2.32	3.65	3.84	6.13	4.50	7.39	10.11	14.06	21.85	7.54	10.31	14.14	23.40	30.04	2.78	4.22	4.41	6.86	5.13	8.19	15.22	23.40	28.80
	24	1.35 <sup>5</sup>	2.66	2.68 <sup>7</sup>	4.91	3.21	6.00	8.65	12.52	20.43	6.15	8.88	12.67	21.83	28.56	1.82 <sup>7</sup>	3.25	3.28	5.68	3.88	6.87	13.78	22.09	27.49
10	12	2.42	3.73	3.92	6.19	4.49	7.25	9.90	13.78	21.35	7.43	10.10	13.80	22.78	28.98	2.87	4.30	4.49	6.92	5.19	8.22	15.24	23.41	28.80
	16	1.80 <sup>7</sup>	3.10	3.18	5.40	3.69	6.39	8.99	12.80	20.44	6.56	9.21	12.87	21.78	28.04	2.26	3.69	3.78	6.17	4.40	7.37	14.31	22.55	27.94
	24	0.69 <sup>6</sup>	1.94 <sup>6</sup>	1.85 <sup>6</sup>	3.97 <sup>7</sup>	2.23 <sup>6</sup>	4.80	7.29	10.97	18.70	4.95	7.53	11.13	19.88	26.23	1.14 <sup>6</sup>	2.53 <sup>7</sup>	2.46 <sup>7</sup>	4.77	2.95 <sup>7</sup>	5.80	12.53	20.90	26.27
12	12	1.51 <sup>6</sup>	2.74 <sup>7</sup>	2.75 <sup>6</sup>	4.83	3.05 <sup>7</sup>	5.40	7.73	11.06	17.89	5.62	8.01	11.34	19.37	24.79	1.96 <sup>6</sup>	3.32	3.35	5.64	3.75	6.40	12.77	20.30	25.38
	16	0.75 <sup>6</sup>	1.94 <sup>6</sup>	1.84 <sup>6</sup>	3.83 <sup>6</sup>	2.11 <sup>6</sup>	4.35 <sup>7</sup>	6.60	9.82	16.68	4.56 <sup>7</sup>	6.88	10.14	18.02	23.51	1.19 <sup>6</sup>	2.51 <sup>6</sup>	2.43 <sup>6</sup>	4.64	2.79 <sup>6</sup>	5.34	11.53	19.11	24.16
	24		0.52 <sup>3</sup>	0.25 <sup>3</sup>	2.07 <sup>6</sup>	0.46 <sup>3</sup>	2.52 <sup>6</sup>	4.58 <sup>6</sup>	7.62 <sup>7</sup>	14.48	2.66 <sup>6</sup>	4.85 <sup>6</sup>	7.96	15.57	21.13		1.06 <sup>6</sup>	0.81 <sup>6</sup>	2.86 <sup>6</sup>	1.08 <sup>6</sup>	3.44 <sup>6</sup>	9.28	16.92	21.88
14	12	0.64 <sup>3</sup>	1.72 <sup>6</sup>	1.52 <sup>6</sup>	3.23 <sup>6</sup>	1.75 <sup>6</sup>	3.67 <sup>6</sup>	5.66 <sup>7</sup>	8.31	14.27	3.89 <sup>6</sup>	5.94	8.90	15.49	20.32	1.04 <sup>6</sup>	2.28 <sup>6</sup>	2.13 <sup>6</sup>	4.13 <sup>7</sup>	2.38 <sup>6</sup>	4.60 <sup>7</sup>	9.99	16.75	21.23
	16		0.82 <sup>3</sup>	0.57 <sup>3</sup>	2.17 <sup>6</sup>	0.76 <sup>6</sup>	2.56 <sup>6</sup>	4.42 <sup>6</sup>	6.97 <sup>7</sup>	12.90	2.73 <sup>6</sup>	4.68 <sup>6</sup>	7.52	13.95	18.80	0.17 <sup>3</sup>	1.33 <sup>6</sup>	1.11 <sup>3</sup>	3.00 <sup>6</sup>	1.33 <sup>6</sup>	3.43 <sup>6</sup>	8.58	15.33	19.74
	24				0.36 <sup>3</sup>		0.67 <sup>3</sup>	2.29 <sup>3</sup>	4.66 <sup>6</sup>	10.49 <sup>7</sup>	0.74 <sup>3</sup>	2.51 <sup>6</sup>	5.12 <sup>6</sup>	11.24 <sup>7</sup>	16.10				1.04 <sup>3</sup>		1.41 <sup>3</sup>	6.11 <sup>6</sup>	12.81	17.07
16	12		0.80 <sup>3</sup>	0.54 <sup>3</sup>	1.88 <sup>3</sup>	0.71 <sup>3</sup>	2.24 <sup>6</sup>	3.82 <sup>6</sup>	5.95 <sup>6</sup>	10.98	2.41 <sup>6</sup>	4.11 <sup>6</sup>	6.58 <sup>7</sup>	11.93	16.08	0.22 <sup>3</sup>	1.29 <sup>3</sup>	1.01 <sup>3</sup>	2.61 <sup>6</sup>	1.22 <sup>3</sup>	3.04 <sup>6</sup>	7.44 <sup>7</sup>	13.30	17.13
	16				0.85 <sup>3</sup>		1.15 <sup>3</sup>	2.59 <sup>3</sup>	4.62 <sup>6</sup>	9.57 <sup>7</sup>	1.25 <sup>3</sup>	2.84 <sup>6</sup>	5.16 <sup>6</sup>	10.35 <sup>7</sup>	14.48		0.27 <sup>3</sup>		1.49 <sup>3</sup>	0.16 <sup>3</sup>	1.85 <sup>3</sup>	6.00 <sup>6</sup>	11.79	15.52
	24						0.51 <sup>2</sup>	2.35 <sup>3</sup>	7.16 <sup>6</sup>		0.66 <sup>3</sup>	2.73 <sup>3</sup>	7.62 <sup>6</sup>	11.72 <sup>6</sup>							3.51 <sup>3</sup>	9.18 <sup>6</sup>	12.72 <sup>6</sup>	

Lateral Load 40 Psf (Multiplied By 1.00 For Strength & By 0.70 For Deflection Determinations)																				
Wall Height (ft.)	Spacing (in.) o.c.	600SG300-(mils)					800SG162-(mils)		800SG200-(mils)		800SG250-(mils)					800SG300-(mils)				
		43	54	68	97	118	33	43	33	43	33	43	54	68	97	43	54	68	97	118
8	12	9.88	12.94	17.17	27.29	34.75	4.69	6.83	6.57	9.87	7.37	11.38	15.33	20.27	29.70	12.10	16.32	21.50	33.29	42.04
	16	9.32	12.38	16.60	26.70	34.20	4.34	6.48	6.19	9.49	6.97	10.96	14.90	19.83	29.32	11.66	15.88	21.06	32.84	41.62
	24	8.22	11.27	15.48	25.55	33.12	3.65	5.80	5.44	8.73	6.17	10.13	14.05	18.96	28.56	10.79	14.99	20.16	31.95	40.79
9	12	9.17	12.17	16.29	26.18	33.37	4.38	6.52	6.23	9.52	7.01	11.00	14.93	19.86	29.34	11.70	15.91	21.09	32.86	41.64
	16	8.47	11.45	15.57	25.42	32.66	3.94	6.08	5.75	9.03	6.49	10.46	14.38	19.29	28.84	11.14	15.34	20.51	32.28	41.10
	24	7.13	10.08	14.16	23.95	31.27	3.08	5.22	4.81	8.07	5.48	9.40	13.28	18.17	27.86	10.02	14.21	19.36	31.12	40.02
10	12	8.38	11.28	15.28	24.88	31.74	4.04	6.17	5.84	9.12	6.60	10.55	14.47	19.38	28.91	11.19	15.37	20.53	32.33	41.17
	16	7.54	10.42	14.39	23.94	30.85	3.50	5.63	5.25	8.51	5.96	9.88	13.77	18.66	28.28	10.48	14.65	19.80	31.59	40.47
	24	5.96	8.78	12.70	22.13	29.13	2.46	4.57	4.11	7.33	4.73	8.58	12.41	17.26	27.04	9.12	13.25	18.36	30.12	39.10
12	12	6.62	9.27	12.92	21.82	27.87	3.24	5.34	4.94	8.14	5.62	9.47	13.31	18.15	27.80	9.82	13.83	18.73	30.10	38.56
	16	5.55	8.14	11.74	20.50	26.62	2.49	4.57	4.11	7.27	4.73	8.50	12.29	17.09	26.84	8.84	12.81	17.68	29.00	37.53
	24	3.61 <sup>6</sup>	6.08	9.55	18.07	24.28	1.11 <sup>6</sup>	3.13	2.56 <sup>7</sup>	5.62	3.05	6.69	10.35	15.05	24.97	6.98	10.86	15.66	26.89	35.52
14	12	4.84 <sup>7</sup>	7.17	10.45	18.12	23.54	2.33 <sup>7</sup>	4.35	3.89	6.95	4.42	8.02	11.67	16.33	25.91	8.23	11.97	16.54	27.29	35.15
	16	3.63 <sup>6</sup>	5.86 <sup>7</sup>	9.04	16.53	21.99	1.41 <sup>6</sup>	3.37	2.84 <sup>7</sup>	5.82	3.30 <sup>7</sup>	6.78	10.33	14.90	24.56	6.99	10.66	15.17	25.82	33.75
	24	1.52 <sup>3</sup>	3.58 <sup>6</sup>	6.55 <sup>6</sup>	13.71	19.21		1.59 <sup>6</sup>	0.96 <sup>6</sup>	3.76 <sup>6</sup>	1.28 <sup>6</sup>	4.54 <sup>7</sup>	7.89	12.26	22.02	4.72 <sup>7</sup>	8.23	12.61	23.04	31.08
16	12	3.24 <sup>6</sup>	5.22 <sup>7</sup>	8.10	14.41	19.20	1.40 <sup>6</sup>	3.28 <sup>7</sup>	2.77 <sup>6</sup>	5.62	3.11 <sup>7</sup>	6.30	9.56	13.80	22.63	6.54	9.93	14.11	24.11	31.25
	16	1.99 <sup>6</sup>	3.85 <sup>6</sup>	6.58 <sup>6</sup>	12.72	17.51	0.35 <sup>6</sup>	2.13 <sup>6</sup>	1.56 <sup>6</sup>	4.28 <sup>6</sup>	1.86 <sup>6</sup>	4.90 <sup>7</sup>	8.02	12.12	20.99	5.11 <sup>7</sup>	8.38	12.47	22.29	29.49
	24		1.50 <sup>3</sup>	3.96 <sup>6</sup>	9.77 <sup>6</sup>	14.54 <sup>7</sup>		0.11 <sup>3</sup>		1.92 <sup>6</sup>		2.42 <sup>6</sup>	5.29 <sup>6</sup>	9.11 <sup>7</sup>	17.99	2.56 <sup>6</sup>	5.63 <sup>6</sup>	9.51	18.97	26.26

1 = Deflection Exceeds L/120  
 2 = Deflection Exceeds L/240  
 3 = Deflection Exceeds L/360  
 6 = Deflection Exceeds L/600  
 7 = Deflection Exceeds L/720  
 If not noted, deflection is less than L/720

### Important Notes:

- Allowable loads are based on weak axis and torsional bracing at 48" o.c. maximum for axial load calculation and continuous support of each flange for flexural calculation.
- Sections are punched with a standard punch-out 1.5" wide located along the centerline of the web 24" o.c.
- Allowable loads are based on checks for punched section under axial load, flexural, and shear conditions.
- Weak axis and torsional bracing should have sufficient stiffness and strength to resist the axial load.
- Lateral loads are multiplied by 0.7 for deflection determination. Lateral and axial loads have not been modified for strength checks.
- Strength increase due to cold forming is incorporated in calculating allowable loads as per AISI Specification Sec. A7.2.
- Contact The Steel Network if web crippling capacity values of SigmaStud® are required to check lateral end reactions.
- Loads in tables are in kips/stud.



SigmaStud®  
 Patent Pending