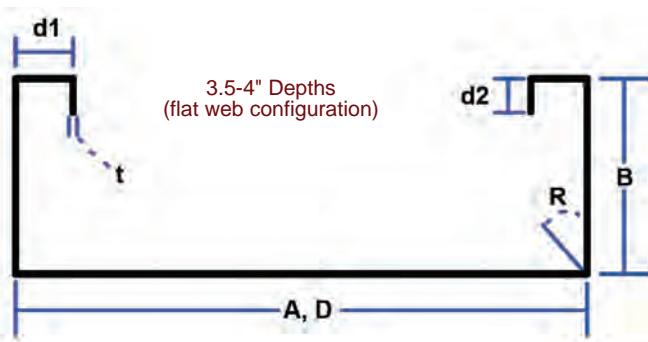


# Load Bearing Wall Members

# SigmaStud® Product Profile

## Important Notes

- Section properties and capacities are calculated in accordance with AISI S100-16 Specification.
- Tabulated gross properties are based on the full-unreduced cross section of the studs, away from punchouts.
- Effective section properties incorporate the strength increase from the cold-work of forming as applicable per AISI S100-16 Spec, Sec. A3.3.2 (3).
- Net effective section properties are calculated at a cross section through the punchout.
- Allowable moment is the lesser of  $M_{al}$  and  $M_{ad}$ . Stud distortional buckling is based on an assumed  $k_f = 0$ .
- For deflection calculations, use the effective moment of inertia.
- The effective moment of inertia for deflection is calculated at a stress which results in a section modulus such that the stress times the section modulus at that stress is equal to the allowable moment. AISI S100-16 Specification Procedure I for serviceability determination has been used.



**SigmaStud® Product Profile: 3.5" - 4" Stud Depths**

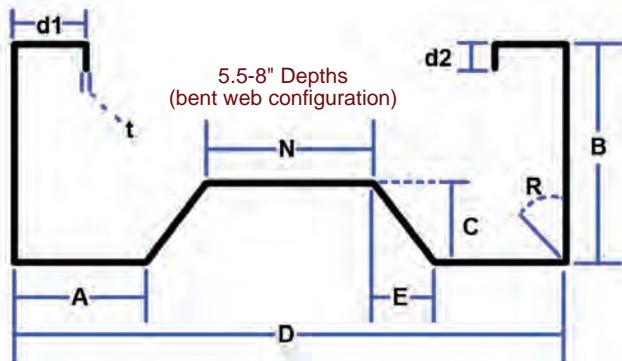
Section (All 50 ksi)	Overall Depth	Flange Width	Web Flat	Web Return	Web Return	Web Inside	Return Lip 1	Return Lip 2	Inside Bend Radius	Design Thickness	Unit Weight (lb/ft)
	D	B	A	C	E	N	d1	d2	R	t	
	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	
350SG200-33	3.5	2	3.5	N/A	N/A	N/A	0.5892	0.5	0.105	0.0346	1.078
350SG200-43	3.5	2	3.5	N/A	N/A	N/A	0.6102	0.5	0.105	0.0451	1.400
350SG200-54	3.5	2	3.5	N/A	N/A	N/A	0.6332	0.5	0.105	0.0566	1.749
350SG200-68	3.5	2	3.5	N/A	N/A	N/A	0.6626	0.5	0.105	0.0713	2.192
350SG200-97	3.5	2	3.5	N/A	N/A	N/A	0.7234	0.5	0.105	0.1017	3.092
350SG250-33	3.5	2.5	3.5	N/A	N/A	N/A	0.5892	0.5	0.105	0.0346	1.196
350SG250-43	3.5	2.5	3.5	N/A	N/A	N/A	0.6102	0.5	0.105	0.0451	1.553
350SG250-54	3.5	2.5	3.5	N/A	N/A	N/A	0.6332	0.5	0.105	0.0566	1.942
350SG250-68	3.5	2.5	3.5	N/A	N/A	N/A	0.6626	0.5	0.105	0.0713	2.435
350SG250-97	3.5	2.5	3.5	N/A	N/A	N/A	0.7234	0.5	0.105	0.1017	3.438
350SG350-68	3.5	3.5	3.5	N/A	N/A	N/A	0.6626	0.5	0.105	0.0713	2.920
362SG200-33	3.625	2	3.625	N/A	N/A	N/A	0.5892	0.5	0.105	0.0346	1.093
362SG200-43	3.625	2	3.625	N/A	N/A	N/A	0.6102	0.5	0.105	0.0451	1.419
362SG200-54	3.625	2	3.625	N/A	N/A	N/A	0.6332	0.5	0.105	0.0566	1.773
362SG200-68	3.625	2	3.625	N/A	N/A	N/A	0.6626	0.5	0.105	0.0713	2.222
362SG200-97	3.625	2	3.625	N/A	N/A	N/A	0.7234	0.5	0.105	0.1017	3.135
362SG250-33	3.625	2.5	3.625	N/A	N/A	N/A	0.5892	0.5	0.105	0.0346	1.210
362SG250-43	3.625	2.5	3.625	N/A	N/A	N/A	0.6102	0.5	0.105	0.0451	1.572
362SG250-54	3.625	2.5	3.625	N/A	N/A	N/A	0.6332	0.5	0.105	0.0566	1.966
362SG250-68	3.625	2.5	3.625	N/A	N/A	N/A	0.6626	0.5	0.105	0.0713	2.465
362SG250-97	3.625	2.5	3.625	N/A	N/A	N/A	0.7234	0.5	0.105	0.1017	3.481
362SG350-68	3.625	3.5	3.625	N/A	N/A	N/A	0.6626	0.5	0.105	0.0713	2.950
400SG200-33	4	2	4	N/A	N/A	N/A	0.5892	0.5	0.105	0.0346	1.137
400SG200-43	4	2	4	N/A	N/A	N/A	0.6102	0.5	0.105	0.0451	1.477
400SG200-54	4	2	4	N/A	N/A	N/A	0.6332	0.5	0.105	0.0566	1.846
400SG200-68	4	2	4	N/A	N/A	N/A	0.6626	0.5	0.105	0.0713	2.313
400SG200-97	4	2	4	N/A	N/A	N/A	0.7234	0.5	0.105	0.1017	3.265
400SG250-33	4	2.5	4	N/A	N/A	N/A	0.5892	0.5	0.105	0.0346	1.255
400SG250-43	4	2.5	4	N/A	N/A	N/A	0.6102	0.5	0.105	0.0451	1.630
400SG250-54	4	2.5	4	N/A	N/A	N/A	0.6332	0.5	0.105	0.0566	2.038
400SG250-68	4	2.5	4	N/A	N/A	N/A	0.6626	0.5	0.105	0.0713	2.556
400SG250-97	4	2.5	4	N/A	N/A	N/A	0.7234	0.5	0.105	0.1017	3.611
400SG350-68	4	3.5	4	N/A	N/A	N/A	0.6626	0.5	0.105	0.0713	3.041
400SG350-97	4	3.5	4	N/A	N/A	N/A	0.7234	0.5	0.105	0.1017	4.303
400SG350-118	4	3.5	4	N/A	N/A	N/A	0.7684	0.5	0.105	0.1242	5.216

# Load Bearing Wall Members

# SigmaStud® Product Profile

## Important Notes

- Section properties and capacities are calculated in accordance with AISI S100-16 Specification.
- Tabulated gross properties are based on the full-unreduced cross section of the studs, away from punchouts.
- Effective section properties incorporate the strength increase from the cold-work of forming as applicable per AISI S100-16 Spec, Sec. A3.3.2 (3).
- Net effective section properties are calculated at a cross section through the punchout.
- Allowable moment is the lesser of  $M_{al}$  and  $M_{ad}$ . Stud distortional buckling is based on an assumed  $k_\phi = 0$ .
- For deflection calculations, use the effective moment of inertia.
- The effective moment of inertia for deflection is calculated at a stress which results in a section modulus such that the stress times the section modulus at that stress is equal to the allowable moment. AISI S100-16 Specification Procedure I for serviceability determination has been used.



SigmaStud® Product Profile: 5.5" - 8" Stud Depths 5.5" - 8"											
Section (All 50 ksi)	Overall Depth	Flange Width	Web Flat	Web Return	Web Return	Web Inside	Return Lip 1	Return Lip 2	Inside Bend Radius	Design Thickness	Unit Weight
	D	B	A	C	E	N	d1	d2	R	t	
	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(lb/ft)
550SG162-33	5.5	1.625	1	1	0.625	2.25	0.5	0	0.105	0.0346	1.232
550SG162-43	5.5	1.625	1	1	0.625	2.25	0.5	0	0.105	0.0451	1.598
550SG200-33	5.5	2	1	1	0.625	2.25	0.5892	0.5	0.105	0.0346	1.438
550SG200-43	5.5	2	1	1	0.625	2.25	0.6102	0.5	0.105	0.0451	1.869
550SG200-54	5.5	2	1	1	0.625	2.25	0.6332	0.5	0.105	0.0566	2.338
550SG200-68	5.5	2	1	1	0.625	2.25	0.6626	0.5	0.105	0.0713	2.933
550SG200-97	5.5	2	1	1	0.625	2.25	0.7234	0.5	0.105	0.1017	4.147
550SG250-33	5.5	2.5	1	1	0.625	2.25	0.5892	0.5	0.105	0.0346	1.556
550SG250-43	5.5	2.5	1	1	0.625	2.25	0.6102	0.5	0.105	0.0451	2.023
550SG250-54	5.5	2.5	1	1	0.625	2.25	0.6332	0.5	0.105	0.0566	2.531
550SG250-68	5.5	2.5	1	1	0.625	2.25	0.6626	0.5	0.105	0.0713	3.176
550SG250-97	5.5	2.5	1	1	0.625	2.25	0.7234	0.5	0.105	0.1017	4.493
550SG300-43	5.5	3	1	1	0.625	2.25	0.6102	0.5	0.105	0.0451	2.176
550SG300-54	5.5	3	1	1	0.625	2.25	0.6332	0.5	0.105	0.0566	2.723
550SG300-68	5.5	3	1	1	0.625	2.25	0.6626	0.5	0.105	0.0713	3.418
550SG300-97	5.5	3	1	1	0.625	2.25	0.7234	0.5	0.105	0.1017	4.839
550SG300-118	5.5	3	1	1	0.625	2.25	0.7684	0.5	0.105	0.1242	5.867
600SG162-33	6	1.625	1.25	1	0.625	2.25	0.5	0	0.105	0.0346	1.291
600SG162-43	6	1.625	1.25	1	0.625	2.25	0.5	0	0.105	0.0451	1.674
600SG200-33	6	2	1.25	1	0.625	2.25	0.5892	0.5	0.105	0.0346	1.497
600SG200-43	6	2	1.25	1	0.625	2.25	0.6102	0.5	0.105	0.0451	1.946
600SG200-54	6	2	1.25	1	0.625	2.25	0.6332	0.5	0.105	0.0566	2.435
600SG200-68	6	2	1.25	1	0.625	2.25	0.6626	0.5	0.105	0.0713	3.054
600SG200-97	6	2	1.25	1	0.625	2.25	0.7234	0.5	0.105	0.1017	4.320
600SG250-33	6	2.5	1.25	1	0.625	2.25	0.5892	0.5	0.105	0.0346	1.615
600SG250-43	6	2.5	1.25	1	0.625	2.25	0.6102	0.5	0.105	0.0451	2.100
600SG250-54	6	2.5	1.25	1	0.625	2.25	0.6332	0.5	0.105	0.0566	2.627
600SG250-68	6	2.5	1.25	1	0.625	2.25	0.6626	0.5	0.105	0.0713	3.297
600SG250-97	6	2.5	1.25	1	0.625	2.25	0.7234	0.5	0.105	0.1017	4.666
600SG300-43	6	3	1.25	1	0.625	2.25	0.6102	0.5	0.105	0.0451	2.253
600SG300-54	6	3	1.25	1	0.625	2.25	0.6332	0.5	0.105	0.0566	2.820
600SG300-68	6	3	1.25	1	0.625	2.25	0.6626	0.5	0.105	0.0713	3.540
600SG300-97	6	3	1.25	1	0.625	2.25	0.7234	0.5	0.105	0.1017	5.012
600SG300-118	6	3	1.25	1	0.625	2.25	0.7684	0.5	0.105	0.1242	6.078
800SG162-33	8	1.625	2.25	1	0.625	2.25	0.5	0	0.105	0.0346	1.526
800SG162-43	8	1.625	2.25	1	0.625	2.25	0.5	0	0.105	0.0451	1.981
800SG200-33	8	2	2.25	1	0.625	2.25	0.5892	0.5	0.105	0.0346	1.733
800SG200-43	8	2	2.25	1	0.625	2.25	0.6102	0.5	0.105	0.0451	2.253
800SG200-54	8	2	2.25	1	0.625	2.25	0.6332	0.5	0.105	0.0566	2.820
800SG200-68	8	2	2.25	1	0.625	2.25	0.6626	0.5	0.105	0.0713	3.540
800SG200-97	8	2	2.25	1	0.625	2.25	0.7234	0.5	0.105	0.1017	5.012
800SG250-33	8	2.5	2.25	1	0.625	2.25	0.5892	0.5	0.105	0.0346	1.851
800SG250-43	8	2.5	2.25	1	0.625	2.25	0.6102	0.5	0.105	0.0451	2.406
800SG250-54	8	2.5	2.25	1	0.625	2.25	0.6332	0.5	0.105	0.0566	3.012
800SG250-68	8	2.5	2.25	1	0.625	2.25	0.6626	0.5	0.105	0.0713	3.782
800SG250-97	8	2.5	2.25	1	0.625	2.25	0.7234	0.5	0.105	0.1017	5.358
800SG300-43	8	3	2.25	1	0.625	2.25	0.6102	0.5	0.105	0.0451	2.560
800SG300-54	8	3	2.25	1	0.625	2.25	0.6332	0.5	0.105	0.0566	3.205
800SG300-68	8	3	2.25	1	0.625	2.25	0.6626	0.5	0.105	0.0713	4.025
800SG300-97	8	3	2.25	1	0.625	2.25	0.7234	0.5	0.105	0.1017	5.704
800SG300-118	8	3	2.25	1	0.625	2.25	0.7684	0.5	0.105	0.1242	6.922

## Important Notes

- Section properties and capacities are calculated in accordance with AISI S100-16 Spec, "North American Specification for the Design of Cold-Formed Steel Structural Members".
- Tabulated gross properties are based on the full-unreduced cross section of the studs, away from punchouts.
- Effective section properties incorporate the strength increase from the cold-work of forming as applicable per AISI S100-16 Spec, Sec. A3.3.2 (3).
- Allowable moment is the lesser of  $M_{al}$  and  $M_{ad}$ . Stud distortional buckling is based on an assumed  $k_\phi = 0$ .
- For deflection calculations, use the effective moment of inertia.
- The effective moment of inertia for deflection is calculated at a stress which results in a section modulus such that the stress times the section modulus at that stress is equal to the allowable moment. AISI S100-16 Procedure I for serviceability determination has been used.

Section (All 50 ksi)	SigmaStud® Section Properties																					
	Gross Properties						Torsional Properties						Effective Properties 50 ksi									
	Area (in <sup>2</sup> )	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	Jx10 <sup>3</sup> (in <sup>4</sup> )	C <sub>w</sub> (in)	X <sub>o</sub> (in)	m (in)	X <sub>o</sub> (in)	β	A <sub>e(net)</sub> (in <sup>2</sup> )	I <sub>xe</sub> (in <sup>4</sup> )	S <sub>xe</sub> (in <sup>3</sup> )	S <sub>xe(net)</sub> (in <sup>3</sup> )	M <sub>al</sub> (in-k)	M <sub>al(net)</sub> (in-k)	M <sub>ad</sub> (in-k)	M <sub>ad(net)</sub> (in-k)	V <sub>a</sub> (lbs)	V <sub>a(net)</sub> (lbs)
350SG200-33	0.317	0.630	0.360	1.410	0.194	0.782	0.126	0.718	-1.975	1.178	2.549	0.400	0.201	0.615	0.310	0.283	9.295	8.479	8.570	8.332	1144	527
350SG200-43	0.411	0.810	0.463	1.404	0.249	0.779	0.279	0.929	-1.969	1.176	2.541	0.399	0.293	0.810	0.430	0.406	12.878	12.161	12.176	11.825	2141	747
350SG200-54	0.514	1.003	0.573	1.397	0.309	0.775	0.549	1.158	-1.963	1.173	2.531	0.398	0.384	1.003	0.550	0.530	16.470	15.871	16.295	15.825	3371	925
350SG200-68	0.644	1.241	0.709	1.388	0.382	0.770	1.091	1.444	-1.955	1.169	2.519	0.397	0.529	1.241	0.709	0.696	23.531	20.831	23.373	20.636	4208	900
350SG200-97	0.909	1.705	0.974	1.370	0.525	0.760	3.132	2.017	-1.938	1.160	2.492	0.395	0.756	1.705	0.974	0.958	33.387	32.831	33.387	32.827	5886	850
350SG250-33	0.351	0.734	0.419	1.445	0.329	0.967	0.140	1.206	-2.476	1.448	3.025	0.330	0.210	0.693	0.331	0.300	9.904	8.995	9.106	8.870	1144	527
350SG250-43	0.456	0.945	0.540	1.439	0.424	0.964	0.309	1.565	-2.471	1.445	3.017	0.329	0.292	0.933	0.447	0.418	13.371	12.505	13.045	12.687	2141	747
350SG250-54	0.571	1.171	0.669	1.432	0.526	0.960	0.609	1.953	-2.465	1.442	3.008	0.329	0.383	1.171	0.571	0.545	17.099	16.324	17.616	17.120	3371	925
350SG250-68	0.715	1.450	0.829	1.424	0.653	0.955	1.212	2.443	-2.457	1.439	2.996	0.328	0.519	1.450	0.748	0.728	22.400	21.809	23.676	23.014	4208	900
350SG250-97	1.010	1.999	1.142	1.406	0.904	0.946	3.483	3.431	-2.441	1.430	2.972	0.325	0.835	1.999	1.125	1.107	37.597	37.006	38.177	37.438	5886	850
350SG350-68	0.858	1.870	1.068	1.476	1.471	1.309	1.454	5.401	-3.456	1.965	3.980	0.246	0.535	1.812	0.804	0.774	24.073	23.179	26.651	25.932	4208	900
362SG200-33	0.321	0.683	0.377	1.459	0.196	0.782	0.128	0.759	-1.954	1.168	2.561	0.418	0.202	0.668	0.326	0.295	9.754	8.842	8.919	8.673	1102	544
362SG200-43	0.417	0.879	0.485	1.452	0.253	0.779	0.283	0.983	-1.948	1.166	2.552	0.417	0.293	0.879	0.451	0.424	13.504	12.690	12.685	12.320	2141	802
362SG200-54	0.521	1.089	0.601	1.445	0.313	0.775	0.556	1.224	-1.942	1.163	2.542	0.416	0.385	1.089	0.577	0.553	17.261	16.571	16.994	16.504	3372	994
362SG200-68	0.653	1.348	0.744	1.437	0.388	0.770	1.107	1.526	-1.934	1.159	2.530	0.415	0.532	1.348	0.744	0.728	24.678	21.799	24.401	21.653	4375	1007
362SG200-97	0.921	1.854	1.023	1.419	0.533	0.761	3.176	2.130	-1.918	1.150	2.504	0.413	0.769	1.854	1.023	1.007	35.050	34.514	35.050	34.509	6124	954
362SG250-33	0.356	0.795	0.438	1.495	0.333	0.968	0.142	1.277	-2.453	1.437	3.031	0.345	0.210	0.751	0.347	0.313	10.387	9.375	9.461	9.217	1102	544
362SG250-43	0.462	1.024	0.565	1.489	0.430	0.964	0.313	1.656	-2.447	1.435	3.023	0.344	0.293	1.011	0.468	0.435	14.012	13.038	13.565	13.194	2141	802
362SG250-54	0.578	1.269	0.700	1.482	0.533	0.961	0.617	2.066	-2.442	1.432	3.014	0.344	0.385	1.269	0.598	0.569	17.908	17.031	18.335	17.821	3372	994
362SG250-68	0.724	1.573	0.868	1.474	0.662	0.956	1.227	2.583	-2.434	1.428	3.002	0.342	0.522	1.573	0.783	0.761	23.449	22.775	24.670	23.982	4375	1007
362SG250-97	1.023	2.169	1.197	1.456	0.916	0.946	3.527	3.625	-2.418	1.420	2.977	0.340	0.848	2.169	1.178	1.161	39.389	38.814	40.011	39.252	6124	954
362SG350-68	0.867	2.023	1.116	1.528	1.491	1.311	1.469	5.715	-3.430	1.954	3.977	0.256	0.538	1.961	0.841	0.808	25.186	24.190	27.689	26.946	4375	1007
400SG200-33	0.334	0.859	0.429	1.603	0.204	0.782	0.133	0.895	-1.894	1.139	2.602	0.470	0.202	0.842	0.373	0.332	11.168	9.928	9.971	9.701	991	589
400SG200-43	0.434	1.107	0.553	1.597	0.263	0.778	0.294	1.157	-1.889	1.136	2.593	0.469	0.295	1.107	0.515	0.477	15.429	14.276	14.220	13.817	2141	967
400SG200-54	0.542	1.371	0.686	1.590	0.325	0.775	0.579	1.440	-1.883	1.133	2.583	0.469	0.389	1.371	0.658	0.624	19.693	18.673	19.109	18.563	3372	1201
400SG200-68	0.680	1.700	0.850	1.581	0.403	0.770	1.152	1.794	-1.875	1.129	2.571	0.468	0.540	1.700	0.850	0.825	28.202	24.708	27.517	24.756	4876	1360
400SG200-97	0.959	2.344	1.172	1.563	0.555	0.760	3.308	2.498	-1.858	1.121	2.544	0.467	0.806	2.344	1.172	1.158	40.162	34.664	40.162	34.659	6839	1299
400SG250-33	0.369	0.995	0.497	1.643	0.346	0.969	0.147	1.506	-2.386	1.407	3.055	0.390	0.211	0.944	0.397	0.351	11.873	10.514	10.530	10.264	991	589
400SG250-43	0.479	1.283	0.641	1.637	0.446	0.965	0.325	1.951	-2.381	1.404	3.046	0.389	0.294	1.268	0.534	0.489	15.981	14.635	15.133	14.726	2141	967
400SG250-54	0.599	1.591	0.796	1.630	0.554	0.962	0.640	2.432	-2.375	1.401	3.037	0.388	0.388	1.591	0.681	0.640	20.397	19.150	20.506	19.938	3372	1201
400SG250-68	0.751	1.975	0.987	1.622	0.688	0.957	1.273	3.038	-2.368	1.398	3.025	0.387	0.530	1.975	0.891	0.858	26.669	25.675	27.679	26.913	4876	1360
400SG250-97	1.061	2.730	1.365	1.604	0.953	0.948	3.658	4.255	-2.352	1.390	3.000	0.386	0.908	2.730	1.343	1.351	44.884	40.448	45.635	40.443	6839	1299
400SG350-68	0.894	2.525	1.263	1.681	1.547	1.316	1.514	6.736	-3.354	1.922	3.976	0.288	0.545	2.447	0.955	0.909	28.602	27.223	30.818	30.002	4876	1360
400SG350-97	1.265	3.503	1.751	1.664	2.158	1.306	4.360	9.488	-3.339	1.915	3.953	0.286	0.917	3.483	1.502	1.473	44.961	44.092	49.104	47.809	6839	1299
400SG350-118	1.533	4.184	2.092	1.652	2.587	1.299	7.855	11.458	-3.328	1.909	3.936	0.285	1.235	4.184	1.980	1.955	59.268	58.533	62.640	61.275	8235	1256

