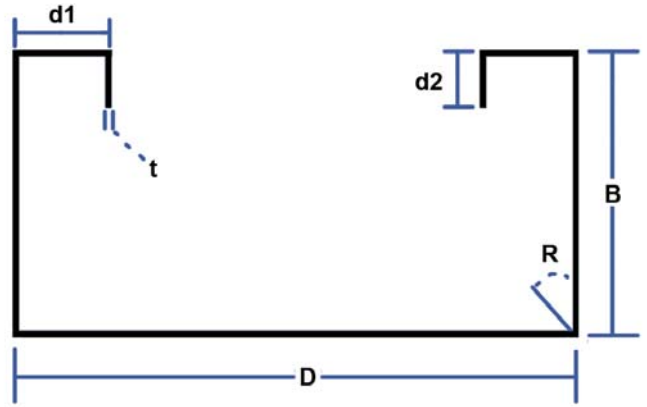


## 600C/STW250-68



### 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.

StiffWall® Column Product Profile

Section	Overall Depth	Flange Width	Return Lip 1	Return Lip 2	Inside Bend Radius	Design Thickness	Unit Weight (lbs/ft)
	D	B	d1	d2	R	t	
	(in)	(in)	(in)	(in)	(in)	(in)	
350C/STW200-33	3.139	2	0.5892	0.5	0.105	0.0346	1.035
350C/STW200-43	3.139	2	0.6102	0.5	0.105	0.0451	1.344
350C/STW200-54	3.139	2	0.6332	0.5	0.105	0.0566	1.680
350C/STW200-68	3.139	2	0.6626	0.5	0.105	0.0713	2.104
350C/STW200-97	3.139	2	0.7234	0.5	0.105	0.1017	2.967
350C/STW200-118	3.139	2	0.7684	0.5	0.105	0.1242	3.587
362C/STW200-33	3.264	2	0.5892	0.5	0.105	0.0346	1.050
362C/STW200-43	3.264	2	0.6102	0.5	0.105	0.0451	1.364
362C/STW200-54	3.264	2	0.6332	0.5	0.105	0.0566	1.704
362C/STW200-68	3.264	2	0.6626	0.5	0.105	0.0713	2.135
362C/STW200-97	3.264	2	0.7234	0.5	0.105	0.1017	3.010
362C/STW200-118	3.264	2	0.7684	0.5	0.105	0.1242	3.639
400C/STW200-33	3.639	2	0.5892	0.5	0.105	0.0346	1.094
400C/STW200-43	3.639	2	0.6102	0.5	0.105	0.0451	1.421
400C/STW200-54	3.639	2	0.6332	0.5	0.105	0.0566	1.776
400C/STW200-68	3.639	2	0.6626	0.5	0.105	0.0713	2.226
400C/STW200-97	3.639	2	0.7234	0.5	0.105	0.1017	3.140
400C/STW200-118	3.639	2	0.7684	0.5	0.105	0.1242	3.798
550C/STW250-43	5.139	2.5	0.6102	0.5	0.105	0.0451	1.805
550C/STW250-54	5.139	2.5	0.6332	0.5	0.105	0.0566	2.258
550C/STW250-68	5.139	2.5	0.6626	0.5	0.105	0.0713	2.832
550C/STW250-97	5.139	2.5	0.7234	0.5	0.105	0.1017	4.005
550C/STW250-118	5.139	2.5	0.7684	0.5	0.105	0.1242	4.853
600C/STW250-43	5.639	2.5	0.6102	0.5	0.105	0.0451	1.882
600C/STW250-54	5.639	2.5	0.6332	0.5	0.105	0.0566	2.354
600C/STW250-68	5.639	2.5	0.6626	0.5	0.105	0.0713	2.954
600C/STW250-97	5.639	2.5	0.7234	0.5	0.105	0.1017	4.178
600C/STW250-118	5.639	2.5	0.7684	0.5	0.105	0.1242	5.064
800C/STW250-43	7.639	2.5	0.6102	0.5	0.105	0.0451	2.189
800C/STW250-54	7.639	2.5	0.6332	0.5	0.105	0.0566	2.739
800C/STW250-68	7.639	2.5	0.6626	0.5	0.105	0.0713	3.439
800C/STW250-97	7.639	2.5	0.7234	0.5	0.105	0.1017	4.871
800C/STW250-118	7.639	2.5	0.7684	0.5	0.105	0.1242	5.908

Standard (S) section studs will not fit in the StiffWall® Boot and should not be considered as a substitute for the StiffWall Column.

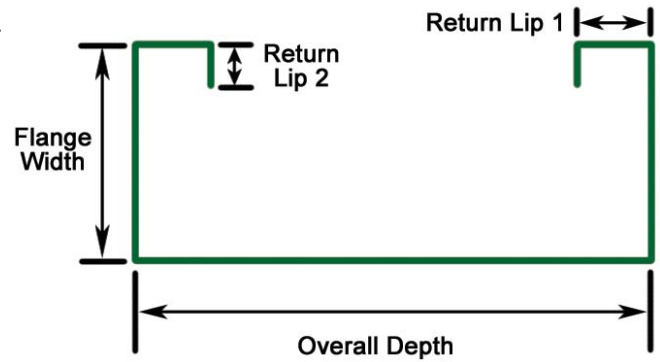
## Important Notes

1. Section properties and capacities are calculated in accordance with AISI-S100-07 with 2010 Supplement.
2. Tabulated gross properties are based on the full-unreduced cross section of the studs, away from punchouts.
3. Effective section properties incorporate the strength increase from the cold-work of forming as applicable per AISI S100-07 Sec. A7.2.
4. Net effective section properties are calculated at a cross section through the punchout.
5. For deflection calculations, use the effective moment of inertia.
6. 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 S100-07 Procedure I for serviceability determination has been used.
7. The StiffWall® Column must be used with the StiffWall Boot. Standard (S) sections will not fit inside the StiffWall boot or Strap Track.

StiffWall® Column Section Properties														
Section	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	I <sub>x</sub>	S <sub>x (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>6</sup> )	(in)	(in)	(in)		(in <sup>4</sup> )	(in <sup>3</sup> )
350C/STW200-33	0.304	0.489	0.312	1.268	0.185	0.781	0.121	0.607	2.524	-2.038	1.209	0.348	0.476	0.248
350C/STW200-43	0.395	0.629	0.401	1.262	0.239	0.777	0.268	0.787	2.515	-2.032	1.206	0.347	0.629	0.355
350C/STW200-54	0.494	0.777	0.495	1.255	0.295	0.774	0.527	0.982	2.506	-2.026	1.203	0.346	0.777	0.462
350C/STW200-68	0.618	0.960	0.612	1.246	0.366	0.769	1.048	1.226	2.493	-2.018	1.199	0.345	0.960	0.599
350C/STW200-97	0.872	1.315	0.838	1.228	0.502	0.759	3.006	1.718	2.467	-2.001	1.190	0.342	1.315	0.819
350C/STW200-118	1.054	1.555	0.991	1.215	0.595	0.752	5.402	2.065	2.448	-1.988	1.183	0.341	1.555	0.969
362C/STW200-33	0.309	0.535	0.328	1.317	0.188	0.781	0.123	0.644	2.531	-2.016	1.198	0.366	0.522	0.260
362C/STW200-43	0.401	0.689	0.422	1.311	0.242	0.778	0.272	0.834	2.523	-2.010	1.195	0.365	0.689	0.373
362C/STW200-54	0.501	0.852	0.522	1.304	0.300	0.774	0.535	1.040	2.513	-2.004	1.192	0.364	0.852	0.486
362C/STW200-68	0.627	1.053	0.645	1.295	0.371	0.769	1.063	1.299	2.501	-1.996	1.188	0.363	1.053	0.633
362C/STW200-97	0.885	1.443	0.884	1.277	0.510	0.760	3.050	1.817	2.475	-1.979	1.179	0.361	1.443	0.867
362C/STW200-118	1.069	1.709	1.047	1.264	0.605	0.752	5.481	2.183	2.455	-1.966	1.172	0.359	1.709	1.026
400C/STW200-33	0.322	0.689	0.379	1.464	0.197	0.782	0.128	0.764	2.562	-1.952	1.167	0.420	0.673	0.297
400C/STW200-43	0.418	0.887	0.488	1.458	0.253	0.779	0.283	0.989	2.553	-1.946	1.164	0.419	0.887	0.426
400C/STW200-54	0.522	1.099	0.604	1.451	0.314	0.775	0.557	1.232	2.544	-1.940	1.161	0.418	1.099	0.556
400C/STW200-68	0.654	1.360	0.748	1.442	0.388	0.770	1.108	1.536	2.531	-1.932	1.157	0.417	1.360	0.732
400C/STW200-97	0.923	1.871	1.028	1.424	0.534	0.761	3.181	2.143	2.505	-1.915	1.149	0.415	1.871	1.013
400C/STW200-118	1.116	2.220	1.220	1.411	0.633	0.753	5.719	2.569	2.485	-1.903	1.142	0.414	2.220	1.201
550C/STW250-43	0.530	2.281	0.888	2.074	0.491	0.962	0.360	3.069	3.175	-2.203	1.321	0.518	2.258	0.748
550C/STW250-54	0.663	2.835	1.103	2.067	0.609	0.958	0.708	3.821	3.165	-2.197	1.318	0.518	2.835	0.952
550C/STW250-68	0.832	3.527	1.373	2.059	0.757	0.954	1.410	4.763	3.153	-2.189	1.314	0.518	3.527	1.240
550C/STW250-97	1.177	4.902	1.908	2.041	1.050	0.944	4.058	6.644	3.127	-2.173	1.306	0.517	4.902	1.873
550C/STW250-118	1.426	5.864	2.282	2.028	1.253	0.937	7.308	7.966	3.108	-2.161	1.299	0.517	5.864	2.282
600C/STW250-43	0.553	2.825	1.002	2.261	0.508	0.958	0.375	3.671	3.253	-2.134	1.288	0.570	2.802	0.849
600C/STW250-54	0.692	3.514	1.246	2.254	0.630	0.955	0.739	4.568	3.244	-2.128	1.285	0.569	3.514	1.079
600C/STW250-68	0.868	4.376	1.552	2.245	0.783	0.950	1.471	5.692	3.231	-2.121	1.281	0.569	4.376	1.404
600C/STW250-97	1.228	6.093	2.161	2.228	1.086	0.941	4.233	7.932	3.205	-2.104	1.273	0.569	6.093	2.121
600C/STW250-118	1.488	7.298	2.588	2.215	1.297	0.934	7.626	9.503	3.186	-2.092	1.266	0.569	7.298	2.588
800C/STW250-43	0.643	5.723	1.498	2.983	0.563	0.936	0.436	6.814	3.661	-1.904	1.176	0.729	5.709	1.169
800C/STW250-54	0.805	7.131	1.867	2.976	0.700	0.932	0.860	8.472	3.651	-1.898	1.173	0.730	7.131	1.627
800C/STW250-68	1.011	8.900	2.330	2.968	0.870	0.928	1.712	10.544	3.639	-1.890	1.169	0.730	8.900	2.121
800C/STW250-97	1.431	12.452	3.260	2.950	1.207	0.918	4.934	14.662	3.613	-1.873	1.160	0.731	12.452	3.199
800C/STW250-118	1.736	14.968	3.919	2.936	1.442	0.911	8.897	17.540	3.594	-1.861	1.153	0.732	14.968	3.919

## Important Notes

1. Allowable loads are based on specified weak axis and torsional bracing for axial load calculation.
2. Sections are punched with a standard punch-out 1.5" wide located along the centerline of the web 24" o.c.
3. Allowable loads are based on a punched section for axial load calculation.
4. The allowable axial strength for distortional buckling is based on an assumed  $k_{\phi} = 0$ .
5. Weak axis and torsional bracing should have sufficient strength and stiffness to resist the axial load.
6. Strength increase due to cold work of forming is incorporated in calculating allowable loads as per AISI S100-07 Sec. A7.2.
7. The StiffWall® Column must be used with the StiffWall Boot. Standard (S) sections will not fit inside the StiffWall Boot or Strap Track.
8. StiffWall Columns are delivered to the job site with Boots pre-attached at the top and bottom for fast installation.



Single Section Table

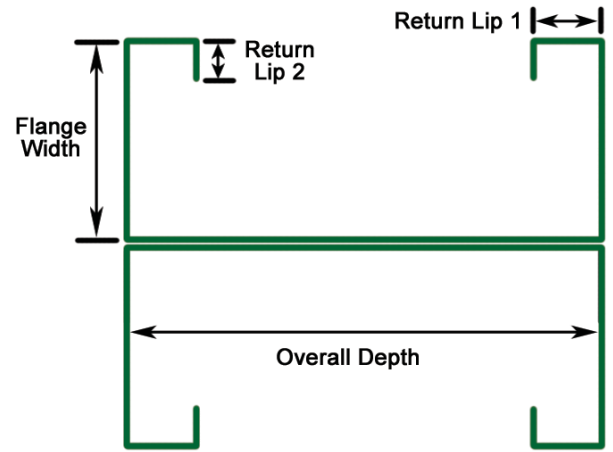
Section	Maximum Unbraced Length = 48"						Maximum Unbraced Length = 60"					
	SW Column Height (ft)						SW Column Height (ft)					
	8	9	10	12	14	16	8	9	10	12	14	16
350C/STW200-33	2.86	2.64	2.41	1.95	1.57	1.27	2.29	2.12	1.96	1.64	1.37	1.15
350C/STW200-43	3.93	3.56	3.18	2.53	2.03	1.64	3.04	2.80	2.57	2.14	1.78	1.49
350C/STW200-54	4.94	4.47	3.98	3.15	2.52	2.04	3.87	3.55	3.25	2.70	2.23	1.86
350C/STW200-68	6.24	5.63	5.00	3.95	3.15	2.54	4.97	4.55	4.14	3.41	2.81	2.33
350C/STW200-97	8.99	8.08	7.14	5.57	4.40	3.54	7.46	6.75	6.09	4.94	4.02	3.29
350C/STW200-118	11.07	9.91	8.72	6.74	5.30	4.24	9.48	8.51	7.62	6.09	4.91	3.99
362C/STW200-33	2.99	2.78	2.56	2.09	1.71	1.39	2.42	2.26	2.09	1.77	1.49	1.25
362C/STW200-43	4.17	3.83	3.45	2.75	2.21	1.80	3.27	3.02	2.78	2.33	1.94	1.62
362C/STW200-54	5.27	4.81	4.32	3.44	2.76	2.24	4.15	3.83	3.51	2.93	2.43	2.03
362C/STW200-68	6.66	6.06	5.44	4.30	3.44	2.79	5.33	4.90	4.47	3.71	3.06	2.54
362C/STW200-97	9.59	8.69	7.76	6.08	4.82	3.88	8.00	7.28	6.59	5.37	4.38	3.60
362C/STW200-118	11.79	10.66	9.49	7.37	5.80	4.66	10.13	9.17	8.24	6.63	5.35	4.37
400C/STW200-33	3.33	3.15	2.95	2.53	2.09	1.73	2.76	2.62	2.47	2.13	1.82	1.55
400C/STW200-43	4.74	4.44	4.12	3.42	2.81	2.32	3.84	3.61	3.36	2.89	2.46	2.07
400C/STW200-54	6.15	5.75	5.33	4.38	3.53	2.88	5.02	4.70	4.35	3.68	3.08	2.59
400C/STW200-68	7.88	7.33	6.73	5.49	4.42	3.59	6.43	6.01	5.54	4.66	3.89	3.25
400C/STW200-97	11.31	10.48	9.60	7.77	6.20	5.02	9.53	8.88	8.16	6.76	5.57	4.62
400C/STW200-118	13.88	12.83	11.73	9.43	7.49	6.03	11.99	11.14	10.23	8.36	6.83	5.62
550C/STW250-43	6.47	6.34	6.20	5.84	5.39	4.85	5.86	5.76	5.64	5.30	4.89	4.43
550C/STW250-54	8.49	8.32	8.14	7.83	7.30	6.45	7.86	7.76	7.61	7.18	6.53	5.81
550C/STW250-68	12.15	11.94	11.55	10.62	9.57	8.45	10.78	10.51	10.20	9.46	8.59	7.64
550C/STW250-97	18.75	18.21	17.59	16.15	14.50	12.75	16.61	16.18	15.68	14.50	13.12	11.59
550C/STW250-118	23.71	23.00	22.19	20.19	17.89	15.50	21.09	20.47	19.76	18.09	16.17	14.10
600C/STW250-43	6.69	6.59	6.46	6.17	5.80	5.35	6.11	6.03	5.93	5.69	5.34	4.94
600C/STW250-54	8.80	8.66	8.49	8.14	7.81	7.25	8.10	8.02	7.94	7.68	7.25	6.60
600C/STW250-68	12.57	12.38	12.18	11.48	10.55	9.52	11.42	11.20	10.95	10.32	9.57	8.70
600C/STW250-97	19.77	19.32	18.81	17.57	16.12	14.52	17.67	17.32	16.91	15.93	14.72	13.36
600C/STW250-118	25.13	24.55	23.88	22.27	20.38	18.30	22.59	22.14	21.60	20.30	18.71	16.90
800C/STW250-43	7.17	7.13	7.08	6.94	6.74	6.49	6.67	6.64	6.60	6.49	6.35	6.15
800C/STW250-54	9.50	9.44	9.37	9.17	8.90	8.55	8.81	8.76	8.71	8.56	8.36	8.18
800C/STW250-68	13.55	13.47	13.37	13.10	12.74	12.31	12.64	12.59	12.52	12.34	12.03	11.53
800C/STW250-97	22.06	21.88	21.65	21.03	20.20	19.17	20.09	19.95	19.78	19.34	18.73	17.93
800C/STW250-118	28.31	28.08	27.78	26.98	25.90	24.57	25.89	25.71	25.49	24.91	24.11	23.07

# Load Bearing Wall Systems

# Double-Post Axial Load Tables

## Important Notes

1. Allowable loads are based on specified weak axis and torsional bracing for axial load calculation.
2. Sections are punched with a standard punch-out 1.5" wide located along the centerline of the web 24" o.c.
3. Allowable loads are based on a punched section for axial load calculation.
4. The allowable axial strength for distortional buckling is based on an assumed  $k_y = 0$ .
5. Weak axis and torsional bracing should have sufficient strength and stiffness to resist the axial load.
6. Strength increase due to cold work of forming is incorporated in calculating allowable loads as per AISI S100-07 Sec. A7.2.
7. Allowable loads for double sections are based on maximum attachment interval of 24" o.c. via weld, bolts, or screws.
8. The StiffWall® Column must be used with the StiffWall Boot. Standard (S) sections will not fit inside the StiffWall Boot or Strap Track.
9. StiffWall Columns are delivered to the job site with Boots pre-attached at the top and bottom for fast installation.



**Double Section Table (Fastener Spacing = 24 in)**

Section (Back-to-Back)	Maximum Unbraced Length = 48"						Maximum Unbraced Length = 60"					
	SW Column Height (ft)						SW Column Height (ft)					
	8	9	10	12	14	16	8	9	10	12	14	16
(2) 350C/STW200-33	8.06	7.40	6.71	5.34	4.06	3.12	8.06	7.40	6.71	5.34	4.06	3.12
(2) 350C/STW200-43	11.62	10.62	9.45	7.13	5.24	4.01	11.62	10.62	9.45	7.13	5.24	4.01
(2) 350C/STW200-54	14.91	13.33	11.77	8.80	6.47	4.95	14.91	13.33	11.77	8.80	6.47	4.95
(2) 350C/STW200-68	18.54	16.56	14.59	10.86	7.98	6.11	18.54	16.56	14.59	10.86	7.98	6.11
(2) 350C/STW200-97	25.75	22.92	20.11	14.84	10.90	8.35	25.75	22.92	20.11	14.84	10.90	8.35
(2) 350C/STW200-118	30.78	27.32	23.91	17.52	12.87	9.86	30.78	27.32	23.91	17.52	12.87	9.86
(2) 362C/STW200-33	8.29	7.65	7.00	5.68	4.40	3.42	8.29	7.65	7.00	5.68	4.40	3.42
(2) 362C/STW200-43	11.99	11.03	9.95	7.75	5.75	4.41	11.99	11.03	9.95	7.75	5.75	4.41
(2) 362C/STW200-54	15.60	14.11	12.57	9.62	7.11	5.44	15.60	14.11	12.57	9.62	7.11	5.44
(2) 362C/STW200-68	19.48	17.54	15.60	11.89	8.78	6.72	19.48	17.54	15.60	11.89	8.78	6.72
(2) 362C/STW200-97	27.10	24.33	21.56	16.31	12.01	9.19	27.10	24.33	21.56	16.31	12.01	9.19
(2) 362C/STW200-118	32.42	29.04	25.68	19.31	14.19	10.86	32.42	29.04	25.68	19.31	14.19	10.86
(2) 400C/STW200-33	8.83	8.29	7.72	6.53	5.35	4.23	8.48	8.29	7.72	6.53	5.35	4.23
(2) 400C/STW200-43	12.86	12.04	11.18	9.21	7.27	5.66	12.43	12.04	11.18	9.21	7.27	5.66
(2) 400C/STW200-54	17.04	15.77	14.45	11.81	9.25	7.08	16.55	15.77	14.45	11.81	9.25	7.08
(2) 400C/STW200-68	21.98	20.30	18.48	14.84	11.44	8.76	21.67	20.30	18.48	14.84	11.44	8.76
(2) 400C/STW200-97	30.86	28.30	25.68	20.51	15.70	12.02	30.86	28.30	25.68	20.51	15.70	12.02
(2) 400C/STW200-118	37.03	33.90	30.71	24.43	18.60	14.24	37.03	33.90	30.71	24.43	18.60	14.24
(2) 550C/STW250-43	12.94	14.58	14.16	13.22	12.19	11.06	13.93	13.93	13.93	13.22	12.19	11.06
(2) 550C/STW250-54	16.99	19.21	18.63	17.33	16.08	14.92	18.37	18.37	18.37	17.33	16.08	14.92
(2) 550C/STW250-68	24.31	27.22	26.38	24.66	22.40	19.62	26.12	26.12	26.12	24.66	22.40	19.62
(2) 550C/STW250-97	37.50	43.71	41.89	37.94	33.76	29.48	41.86	41.86	41.86	37.94	33.76	29.48
(2) 550C/STW250-118	47.42	54.95	52.61	47.56	42.06	36.17	53.18	53.18	52.61	47.56	42.06	36.17
(2) 600C/STW250-43	13.38	13.17	14.55	13.74	12.84	11.86	14.02	14.02	14.02	13.74	12.84	11.86
(2) 600C/STW250-54	17.61	17.32	19.20	18.08	16.83	15.84	18.50	18.50	18.50	18.08	16.83	15.84
(2) 600C/STW250-68	25.13	24.77	27.25	25.68	24.12	21.63	26.35	26.35	26.35	25.68	24.12	21.63
(2) 600C/STW250-97	39.53	38.65	43.92	40.46	36.72	32.84	42.44	42.44	42.44	40.46	36.72	32.84
(2) 600C/STW250-118	50.25	49.10	55.51	51.08	46.29	41.31	54.13	54.13	54.13	51.08	46.29	41.31
(2) 800C/STW250-43	14.35	14.26	14.16	13.87	14.41	13.78	14.20	14.20	14.20	14.20	14.20	13.78
(2) 800C/STW250-54	18.99	18.88	18.73	18.34	19.06	18.19	18.80	18.80	18.80	18.80	18.80	18.19
(2) 800C/STW250-68	27.10	26.94	26.73	26.19	27.16	25.97	26.85	26.85	26.85	26.85	26.85	25.97
(2) 800C/STW250-97	44.12	43.75	43.29	42.06	44.07	41.41	43.64	43.64	43.64	43.64	43.64	41.41
(2) 800C/STW250-118	56.63	56.15	55.56	53.96	56.36	52.97	56.12	56.12	56.12	56.12	56.12	52.97