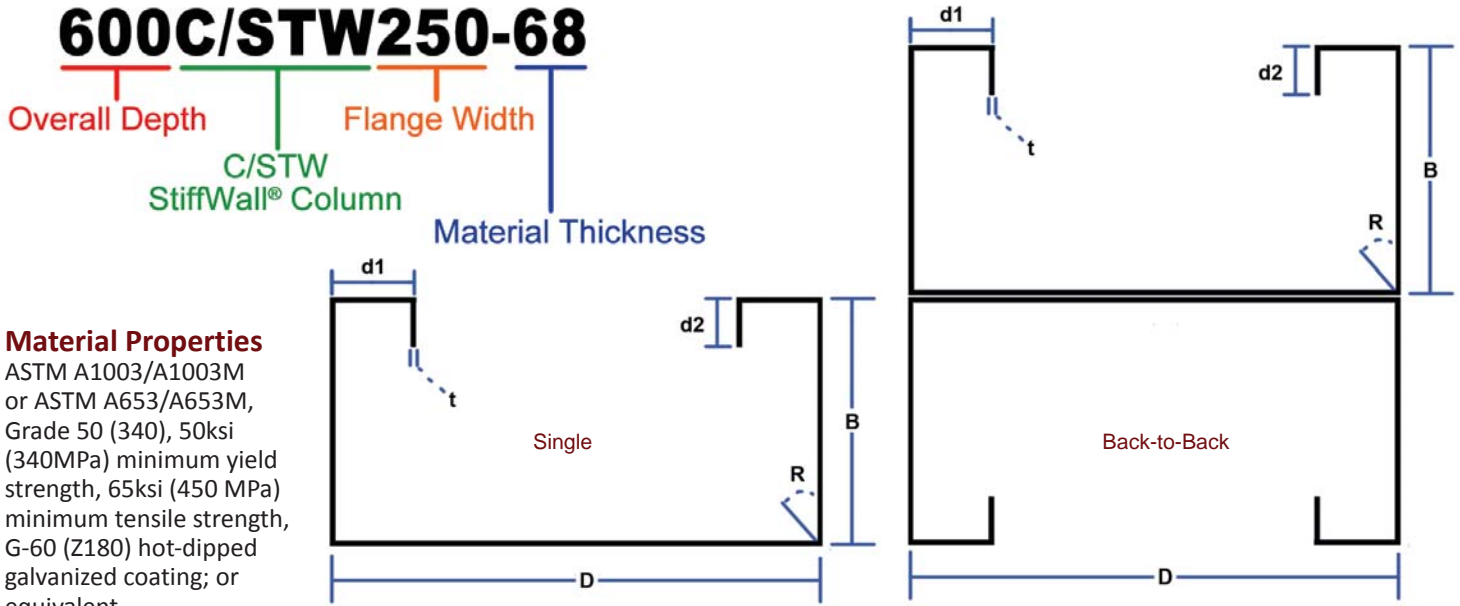


# Shear Wall Systems Single & Back-to-Back StiffWall® Column Product Profile

## 600C/STW250-68



### Material Properties

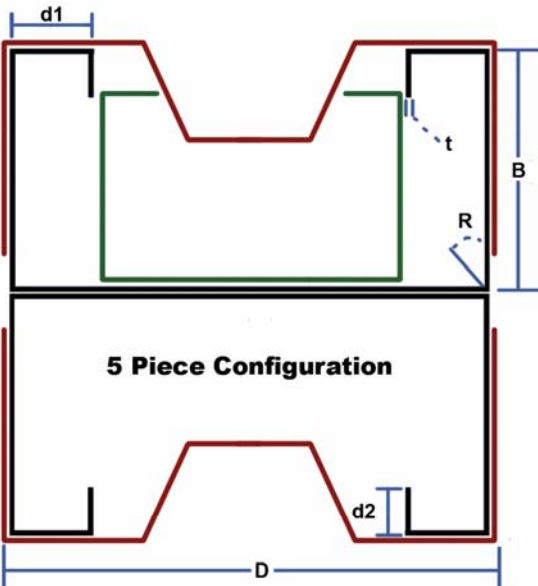
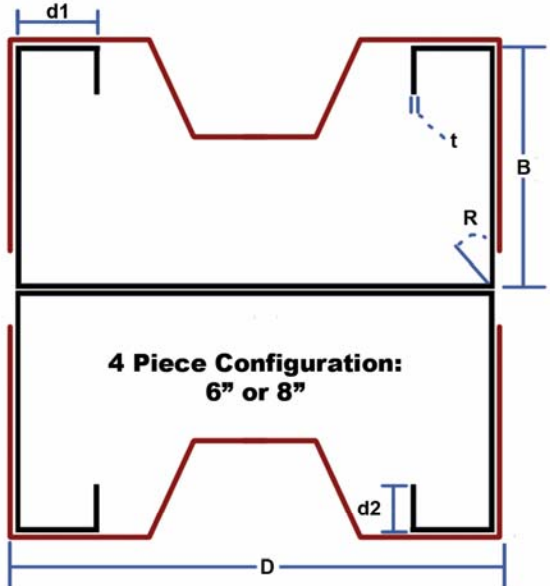
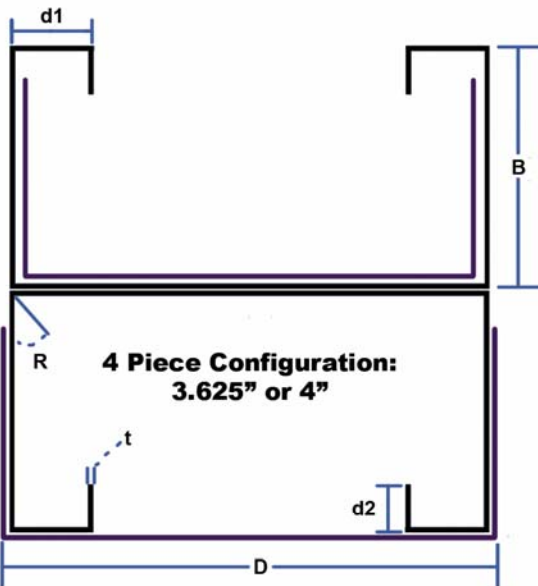
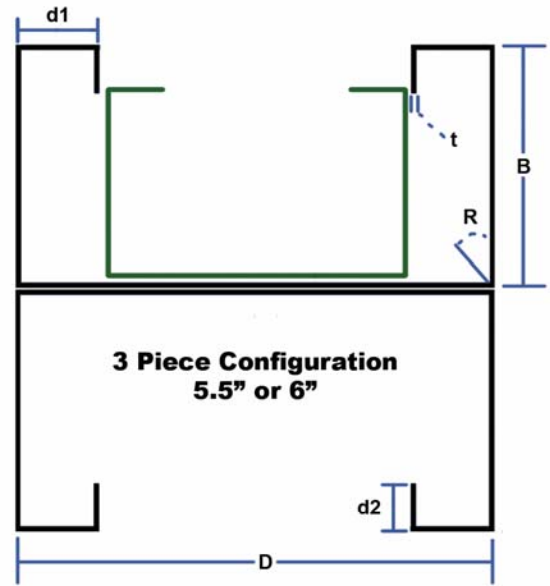
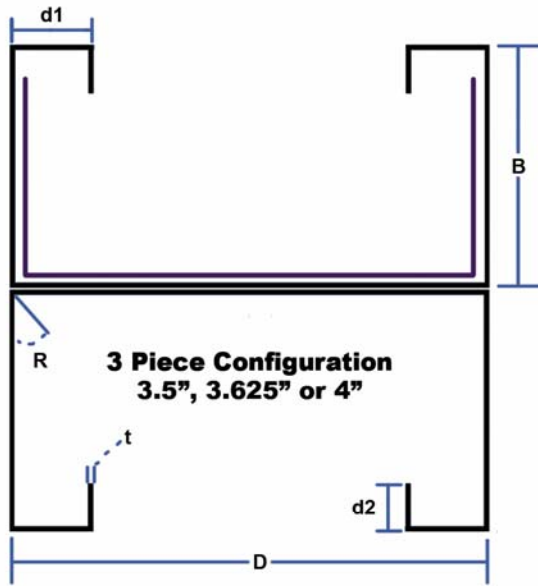
ASTM A1003/A1003M or ASTM A653/A653M, Grade 50 (340), 50ksi (340MPa) minimum yield strength, 65ksi (450 MPa) minimum tensile strength, G-60 (Z180) hot-dipped galvanized coating; or equivalent.

Single & Back-to-Back StiffWall® Column Product Profile							
Section (All 50 ksi)	Overall Depth	Flange Width	Return Lip 1	Return Lip 2	Inside Bend Radius	Design Thickness	Unit Weight
	D (in)	B (in)	d1 (in)	d2 (in)	R (in)	t (in)	(lbs/ft)
350C/STW200-33	3.139	2.000	0.5892	0.5	0.105	0.0346	1.035
350C/STW200-43	3.139	2.000	0.6102	0.5	0.105	0.0451	1.344
350C/STW200-54	3.139	2.000	0.6332	0.5	0.105	0.0566	1.680
350C/STW200-68	3.139	2.000	0.6626	0.5	0.105	0.0713	2.104
350C/STW200-97	3.139	2.000	0.7234	0.5	0.105	0.1017	2.967
350C/STW200-118	3.139	2.000	0.7684	0.5	0.105	0.1242	3.587
362C/STW200-33	3.264	2.000	0.5892	0.5	0.105	0.0346	1.050
362C/STW200-43	3.264	2.000	0.6102	0.5	0.105	0.0451	1.364
362C/STW200-54	3.264	2.000	0.6332	0.5	0.105	0.0566	1.704
362C/STW200-68	3.264	2.000	0.6626	0.5	0.105	0.0713	2.135
362C/STW200-97	3.264	2.000	0.7234	0.5	0.105	0.1017	3.010
362C/STW200-118	3.264	2.000	0.7684	0.5	0.105	0.1242	3.639
400C/STW200-33	3.639	2.000	0.5892	0.5	0.105	0.0346	1.094
400C/STW200-43	3.639	2.000	0.6102	0.5	0.105	0.0451	1.421
400C/STW200-54	3.639	2.000	0.6332	0.5	0.105	0.0566	1.776
400C/STW200-68	3.639	2.000	0.6626	0.5	0.105	0.0713	2.226
400C/STW200-97	3.639	2.000	0.7234	0.5	0.105	0.1017	3.140
400C/STW200-118	3.639	2.000	0.7684	0.5	0.105	0.1242	3.798
550C/STW250-43	5.139	2.500	0.6102	0.5	0.105	0.0451	1.805
550C/STW250-54	5.139	2.500	0.6332	0.5	0.105	0.0566	2.258
550C/STW250-68	5.139	2.500	0.6626	0.5	0.105	0.0713	2.832
550C/STW250-97	5.139	2.500	0.7234	0.5	0.105	0.1017	4.005
550C/STW250-118	5.139	2.500	0.7684	0.5	0.105	0.1242	4.853
600C/STW250-43	5.639	2.500	0.6102	0.5	0.105	0.0451	1.882
600C/STW250-54	5.639	2.500	0.6332	0.5	0.105	0.0566	2.354
600C/STW250-68	5.639	2.500	0.6626	0.5	0.105	0.0713	2.954
600C/STW250-97	5.639	2.500	0.7234	0.5	0.105	0.1017	4.178
600C/STW250-118	5.639	2.500	0.7684	0.5	0.105	0.1242	5.064
800C/STW250-43	7.639	2.500	0.6102	0.5	0.105	0.0451	2.189
800C/STW250-54	7.639	2.500	0.6332	0.5	0.105	0.0566	2.739
800C/STW250-68	7.639	2.500	0.6626	0.5	0.105	0.0713	3.439
800C/STW250-97	7.639	2.500	0.7234	0.5	0.105	0.1017	4.871
800C/STW250-118	7.639	2.500	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.

## 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 (C/STW)

- Back-to-Back (C/STW)**
- Standard Stud (S)**
- Sigma Piece (SGP)**
- Track (T)**

Built-Up StiffWall® Column Product Profile							
Depth (in)	Section (All 50 ksi)	Components	Overall Depth	Flange Width	Return Lip 1	Design Thickness	Unit Weight
			D	B	d1	t	(lbs/ft)
			(in)	(in)	(in)	(in)	
350	(3P) 350C/STW200-97	(2) 350C/STW200-97	3.139	2.000	0.7234	0.1017	7.793
		275T150-97	2.750	1.500	N/A	0.1017	
	(3P) 350C/STW200-118	(2) 350C/STW200-118	3.139	2.000	0.7684	0.1242	9.032
		275T150-97	2.750	1.500	N/A	0.1017	
362	(3P) 362C/STW200-97	(2) 362C/STW200-97	3.264	2.000	0.7234	0.1017	7.880
		275T150-97	2.750	1.500	N/A	0.1017	
	(3P) 362C/STW200-118	(2) 362C/STW200-118	3.264	2.000	0.7684	0.1242	9.138
		275T150-97	2.750	1.500	N/A	0.1017	
	(4P) 362C/STW200-97	(2) 362*C/STW200-97	3.029	2.000	0.7234	0.1017	9.841
		275T150-97	2.750	1.500	N/A	0.1017	
		326T162-97	3.264	1.625	N/A	0.1017	
	(4P) 362C/STW200-118	(2) 362*C/STW200-118	3.029	2.000	0.7684	0.1242	11.156
		275T150-97	2.750	1.500	N/A	0.1017	
		326T162-97	3.264	1.625	N/A	0.1017	
400	(3P) 400C/STW200-97	(2) 400C/STW200-97	3.639	2.000	0.7234	0.1017	8.139
		275T150-97	2.750	1.500	N/A	0.1017	
	(3P) 400C/STW200-118	(2) 400C/STW200-118	3.639	2.000	0.7684	0.1242	9.454
		275T150-97	2.750	1.500	N/A	0.1017	
	(4P) 400C/STW200-97	(2) 400*C/STW200-97	3.404	2.000	0.7234	0.1017	10.230
		275T150-97	2.750	1.500	N/A	0.1017	
		364T162-97	3.639	1.625	N/A	0.1017	
	(4P) 400C/STW200-118	(2) 400*C/STW200-118	3.404	2.000	0.7684	0.1242	11.509
		275T150-97	2.750	1.500	N/A	0.1017	
364T162-97		3.639	1.625	N/A	0.1017		
550	(3P) 550C/STW250-97	(2) 550C/STW250-97	5.139	2.500	0.7234	0.1017	10.604
		400S162-97	4.000	1.625	0.5000	0.1017	
	(3P) 550C/STW250-118	(2) 550C/STW250-118	5.139	2.500	0.7684	0.1242	12.299
		400S162-97	4.000	1.625	0.5000	0.1017	

\* Overall Depth (D) varies from Single and Back-to-Back sections

# Built-Up StiffWall® Column Product Profile

Built-Up StiffWall® Column Product Profile							
Depth (in)	Section (All 50 ksi)	Components	Overall Depth	Flange Width	Return Lip 1	Design Thickness	Unit Weight
			D	B	d1	t	(lbs/ft)
			(in)	(in)	(in)	(in)	
600	(3P) 600C/STW250-97	(2) 600C/STW250-97	5.639	2.500	0.7234	0.1017	10.950
		400S162-97	4.000	1.625	0.5000	0.1017	
	(3P) 600C/STW250-118	(2) 600C/STW250-118	5.639	2.500	0.7684	0.1242	12.721
		400S162-97	4.000	1.625	0.5000	0.1017	
	(4P) 600C/STW250-97	(2) 600*C/STW250-97	5.404	2.500	0.7234	0.1017	15.704
		(2) 564SGP225-97	5.639	2.250	N/A	0.1017	
	(4P) 600C/STW250-118	(2) 600*C/STW250-118	5.404	2.500	0.7684	0.1242	17.439
		(2) 564SGP225-97	5.639	2.250	N/A	0.1017	
	(5P) 600C/STW250-97	(2) 600*C/STW250-97	5.404	2.500	0.7234	0.1017	18.297
		(2) 564SGP225-97	5.639	2.250	N/A	0.1017	
		400S162-97	4.000	1.625	0.5000	0.1017	
	(5P) 600C/STW250-118	(2) 600*C/STW250-118	5.404	2.500	0.7684	0.1242	20.032
(2) 564SGP225-97		5.639	2.250	N/A	0.1017		
400S162-97		4.000	1.625	0.5000	0.1017		
800	(3P) 800C/STW250-97	(2) 800C/STW250-97	7.639	2.500	0.7234	0.1017	13.373
		600S200-97	6.000	2.000	0.6250	0.1017	
	(3P) 800C/STW250-118	(2) 800C/STW250-118	7.639	2.500	0.7684	0.1242	15.447
		600S200-97	6.000	2.000	0.6250	0.1017	
	(4P) 800C/STW250-97	(2) 800*C/STW250-97	7.404	2.500	0.7234	0.1017	18.473
		(2) 764SGP225-97	7.639	2.250	N/A	0.1017	
	(4P) 800C/STW250-118	(2) 800*C/STW250-118	7.404	2.500	0.7684	0.1242	20.511
		(2) 764SGP225-97	7.639	2.250	N/A	0.1017	
	(5P) 800C/STW250-97	(2) 800*C/STW250-97	7.404	2.500	0.7234	0.1017	21.758
		(2) 764SGP225-97	7.639	2.250	N/A	0.1017	
		600S162-97	6.000	1.625	0.5000	0.1017	
	(5P) 800C/STW250-118	(2) 800*C/STW250-118	7.404	2.500	0.7684	0.1242	23.797
(2) 764SGP225-97		7.639	2.250	N/A	0.1017		
600S162-97		6.000	1.625	0.5000	0.1017		

\* Overall Depth (D) varies from Single and Back-to-Back sections

## Important Notes

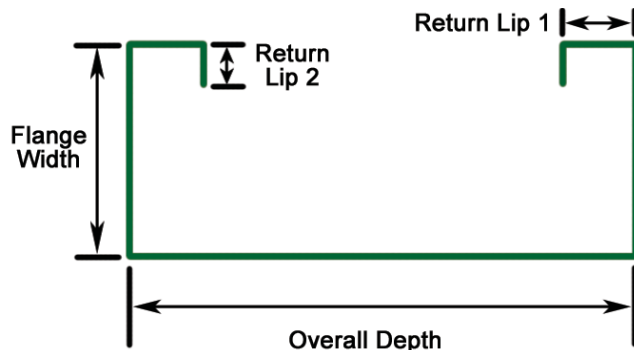
1. Section properties and capacities are calculated in accordance with AISI S100.
2. Tabulated gross properties are based on the full-unreduced cross section of the studs, away from punchouts.
3. Effective section properties incorporate the strength increase from the cold-work of forming as applicable per AISI S100 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.
7. The StiffWall Column must be used with the StiffWall Boot. Standard (S) sections will not fit inside the StiffWall Boot or Strap Track.



Single StiffWall® Column Section Properties														
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	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  $k_y = 0$ .
5. Weak axis and torsional bracing should have sufficient stiffness and strength to resist the axial load.
6. Strength increase due to cold work of forming is incorporated in calculating allowable loads as per AISI S100, 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.

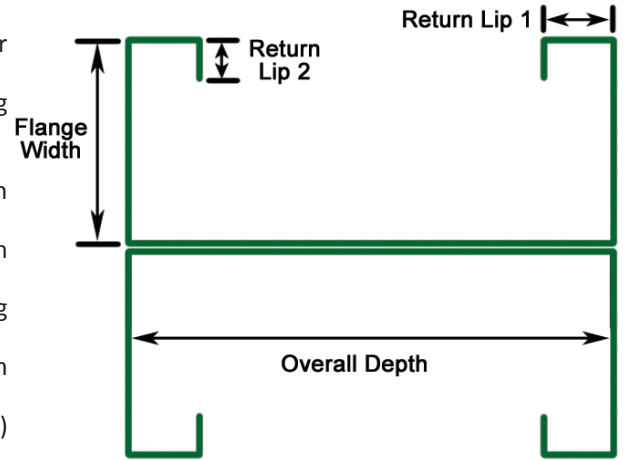


Single Section: Axial Compression Load (kips)												
Section (All 50 ksi)	Maximum Unbraced Length = 48"				Maximum Unbraced Length = 60"				Max Unbraced Length = Full Height			
	SW Column Height (ft)				SW Column Height (ft)				SW Column Height (ft)			
	9	10	12	14	9	10	12	14	9	10	12	14
350C/STW200-33	2.64	2.41	1.95	1.57	2.12	1.96	1.64	1.37	0.91	0.75	0.54	0.42
350C/STW200-43	3.56	3.18	2.53	2.03	2.80	2.57	2.14	1.78	1.25	1.04	0.76	0.60
350C/STW200-54	4.47	3.98	3.15	2.52	3.55	3.25	2.70	2.23	1.66	1.40	1.05	0.84
350C/STW200-68	5.63	5.00	3.95	3.15	4.55	4.14	3.41	2.81	2.29	1.95	1.51	1.23
350C/STW200-97	8.08	7.14	5.57	4.40	6.75	6.09	4.94	4.02	3.96	3.45	2.76	2.08
350C/STW200-118	9.91	8.72	6.74	5.30	8.51	7.62	6.09	4.91	5.53	4.83	3.35	2.46
362C/STW200-33	2.78	2.56	2.09	1.71	2.26	2.09	1.77	1.49	0.97	0.80	0.57	0.44
362C/STW200-43	3.83	3.45	2.75	2.21	3.02	2.78	2.33	1.94	1.32	1.10	0.81	0.63
362C/STW200-54	4.81	4.32	3.44	2.76	3.83	3.51	2.93	2.43	1.76	1.48	1.11	0.89
362C/STW200-68	6.06	5.44	4.30	3.44	4.90	4.47	3.71	3.06	2.42	2.06	1.59	1.30
362C/STW200-97	8.69	7.76	6.08	4.82	7.28	6.59	5.37	4.38	4.18	3.64	2.89	2.12
362C/STW200-118	10.66	9.49	7.37	5.80	9.17	8.24	6.63	5.35	5.84	4.93	3.42	2.51
400C/STW200-33	3.15	2.95	2.53	2.09	2.62	2.47	2.13	1.82	1.14	0.94	0.68	0.52
400C/STW200-43	4.44	4.12	3.42	2.81	3.61	3.36	2.89	2.46	1.56	1.29	0.94	0.73
400C/STW200-54	5.75	5.33	4.38	3.53	4.70	4.35	3.68	3.08	2.06	1.73	1.29	1.03
400C/STW200-68	7.33	6.73	5.49	4.42	6.01	5.54	4.66	3.89	2.82	2.39	1.84	1.50
400C/STW200-97	10.48	9.60	7.77	6.20	8.88	8.16	6.76	5.57	4.83	4.21	3.05	2.24
400C/STW200-118	12.83	11.73	9.43	7.49	11.14	10.23	8.36	6.83	6.42	5.20	3.61	2.65
550C/STW250-43	6.34	6.20	5.84	5.39	5.76	5.64	5.30	4.89	2.84	2.37	1.74	1.35
550C/STW250-54	8.32	8.14	7.83	7.30	7.76	7.61	7.18	6.53	3.80	3.19	2.37	1.85
550C/STW250-68	11.94	11.55	10.62	9.57	10.51	10.20	9.46	8.59	5.19	4.38	3.25	2.54
550C/STW250-97	18.21	17.59	16.15	14.50	16.18	15.68	14.50	13.12	8.40	7.11	5.43	4.41
550C/STW250-118	23.00	22.19	20.19	17.89	20.47	19.76	18.09	16.17	11.16	9.59	7.45	5.48
600C/STW250-43	6.59	6.46	6.17	5.80	6.03	5.93	5.69	5.34	3.11	2.60	1.91	1.48
600C/STW250-54	8.66	8.49	8.14	7.81	8.02	7.94	7.68	7.25	4.17	3.50	2.61	2.05
600C/STW250-68	12.38	12.18	11.48	10.55	11.20	10.95	10.32	9.57	5.70	4.81	3.63	2.87
600C/STW250-97	19.32	18.81	17.57	16.12	17.32	16.91	15.93	14.72	9.48	8.02	6.09	4.78
600C/STW250-118	24.55	23.88	22.27	20.38	22.14	21.60	20.30	18.71	12.54	10.73	7.76	5.70
800C/STW250-43	7.13	7.08	6.94	6.74	6.64	6.60	6.49	6.35	3.93	3.27	2.40	1.86
800C/STW250-54	9.44	9.37	9.17	8.90	8.76	8.71	8.56	8.36	5.25	4.40	3.27	2.56
800C/STW250-68	13.47	13.37	13.10	12.74	12.59	12.52	12.34	12.03	7.13	6.02	4.51	3.46
800C/STW250-97	21.88	21.65	21.03	20.20	19.95	19.78	19.34	18.73	11.40	9.51	6.95	5.32
800C/STW250-118	28.08	27.78	26.98	25.90	25.71	25.49	24.91	24.11	14.46	12.06	8.77	6.47

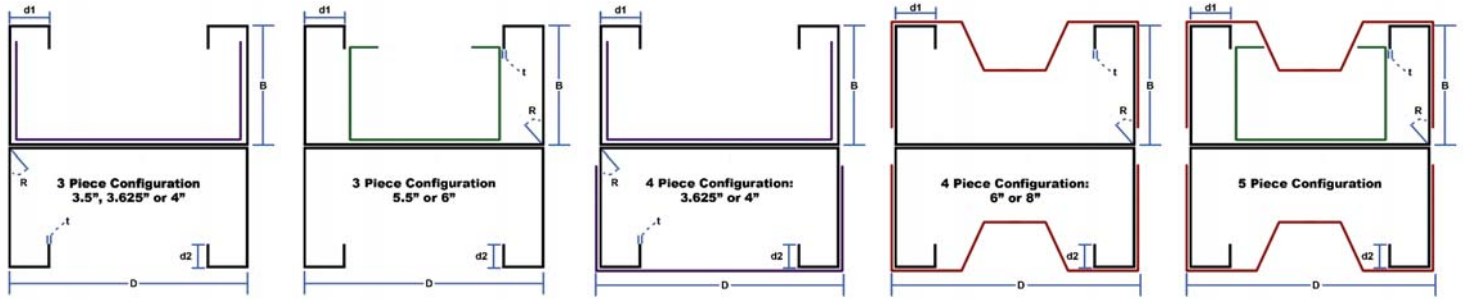


## Important Notes

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 stiffness and strength to resist the axial load.
6. Strength increase due to cold work of forming is incorporated in calculating allowable loads as per AISI S100, Sec. A7.2.
7. Allowable loads for Back-to-Back 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.



Back-to-Back (Fastener Spacing = 24 in): Axial Compression Load (kips)												
Section (Back-to-Back)	Maximum Unbraced Length = 48"				Maximum Unbraced Length = 60"				Max Unbraced Length = Full Height			
	SW Column Height (ft)				SW Column Height (ft)				SW Column Height (ft)			
	9	10	12	14	9	10	12	14	9	10	12	14
(2) 350C/STW200-33	7.40	6.71	5.34	4.06	7.40	6.71	5.34	4.06	4.51	3.76	2.73	2.10
(2) 350C/STW200-43	10.62	9.45	7.13	5.24	10.62	9.45	7.13	5.24	6.28	5.25	3.90	3.09
(2) 350C/STW200-54	13.33	11.77	8.80	6.47	13.33	11.77	8.80	6.47	8.48	7.18	5.50	4.48
(2) 350C/STW200-68	16.56	14.59	10.86	7.98	16.56	14.59	10.86	7.98	11.83	10.27	8.15	6.50
(2) 350C/STW200-97	22.92	20.11	14.84	10.90	22.92	20.11	14.84	10.90	19.70	16.97	12.21	9.11
(2) 350C/STW200-118	27.32	23.91	17.52	12.87	27.32	23.91	17.52	12.87	23.71	20.42	14.69	10.97
(2) 362C/STW200-33	7.65	7.00	5.68	4.40	7.65	7.00	5.68	4.40	4.56	3.80	2.78	2.14
(2) 362C/STW200-43	11.03	9.95	7.75	5.75	11.03	9.95	7.75	5.75	6.40	5.34	3.96	3.13
(2) 362C/STW200-54	14.11	12.57	9.62	7.11	14.11	12.57	9.62	7.11	8.62	7.29	5.56	4.52
(2) 362C/STW200-68	17.54	15.60	11.89	8.78	17.54	15.60	11.89	8.78	11.98	10.38	8.20	6.52
(2) 362C/STW200-97	24.33	21.56	16.31	12.01	24.33	21.56	16.31	12.01	19.86	17.07	12.25	9.15
(2) 362C/STW200-118	29.04	25.68	19.31	14.19	29.04	25.68	19.31	14.19	23.91	20.55	14.75	11.01
(2) 400C/STW200-33	8.29	7.72	6.53	5.35	8.29	7.72	6.53	5.35	4.66	3.89	2.87	2.24
(2) 400C/STW200-43	12.04	11.18	9.21	7.27	12.04	11.18	9.21	7.27	6.60	5.56	4.13	3.24
(2) 400C/STW200-54	15.77	14.45	11.81	9.25	15.77	14.45	11.81	9.25	9.00	7.58	5.73	4.62
(2) 400C/STW200-68	20.30	18.48	14.84	11.44	20.30	18.48	14.84	11.44	12.40	10.67	8.34	6.59
(2) 400C/STW200-97	28.30	25.68	20.51	15.70	28.30	25.68	20.51	15.70	20.33	17.36	12.39	9.24
(2) 400C/STW200-118	33.90	30.71	24.43	18.60	33.90	30.71	24.43	18.60	24.48	20.90	14.92	11.13
(2) 550C/STW250-43	14.58	14.16	13.22	12.19	13.93	13.93	13.22	12.19	9.37	8.02	5.90	4.59
(2) 550C/STW250-54	19.21	18.63	17.33	16.08	18.37	18.37	17.33	16.08	12.67	10.82	8.08	6.37
(2) 550C/STW250-68	27.22	26.38	24.66	22.40	26.12	26.12	24.66	22.40	17.18	14.93	11.35	9.12
(2) 550C/STW250-97	43.71	41.89	37.94	33.76	41.86	41.86	37.94	33.76	28.16	25.24	20.00	16.44
(2) 550C/STW250-118	54.95	52.61	47.56	42.06	53.18	52.61	47.56	42.06	37.07	33.67	27.79	20.75
(2) 600C/STW250-43	14.76	14.55	13.74	12.84	14.02	14.02	13.74	12.84	9.50	8.17	6.00	4.67
(2) 600C/STW250-54	19.48	19.20	18.08	16.83	18.50	18.50	18.08	16.83	12.85	11.00	8.19	6.45
(2) 600C/STW250-68	27.64	27.25	25.68	24.12	26.35	26.35	25.68	24.12	17.41	15.12	11.47	9.19
(2) 600C/STW250-97	44.77	43.92	40.46	36.72	42.44	42.44	40.46	36.72	28.50	25.48	20.31	16.70
(2) 600C/STW250-118	56.56	55.51	51.08	46.29	54.13	54.13	51.08	46.29	38.02	34.65	28.08	20.91
(2) 800C/STW250-43	14.77	14.77	14.77	14.41	14.20	14.20	14.20	14.20	9.77	8.45	6.19	4.79
(2) 800C/STW250-54	19.55	19.55	19.55	19.06	18.80	18.80	18.80	18.80	13.21	11.31	8.38	6.56
(2) 800C/STW250-68	27.86	27.86	27.86	27.16	26.85	26.85	26.85	26.85	17.80	15.42	11.59	9.21
(2) 800C/STW250-97	45.50	45.50	45.50	44.07	43.64	43.64	43.64	43.64	28.93	25.60	19.98	16.29
(2) 800C/STW250-118	58.13	58.13	58.13	56.36	56.12	56.12	56.12	56.12	38.52	34.63	26.92	20.83



## 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 stiffness and strength to resist the axial load.
6. Strength increase due to cold work of forming is incorporated in calculating allowable loads as per AISI Specification Sec. A7.2.
7. The StiffWall® Column must be used with the StiffWall Boot. Standard (S) 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.
9. Allowable loads for built-up sections are based on maximum attachment interval of 24" o.c. via weld, bolts, or screws.

Built-Up Section (Fastener Spacing = 24 in): Axial Compression Load (kips)													
Section (Built-up Column) (all 50 ksi)	Thickness (mils)	Max Unbraced Length = 48"				Max Unbraced Length = 60"				Max Unbraced Length = Full Height			
		SW Column Height (ft)				SW Column Height (ft)				SW Column Height (ft)			
		9	10	12	14	9	10	12	14	9	10	12	14
(3P) 350C/STW200-97	97 (C/STW), 97 (TP)	28.30	24.66	17.90	13.15	28.30	24.66	17.90	13.15	22.28	18.63	13.23	9.85
(3P) 350C/STW200-118	118 (C/STW), 97 (TP)	32.69	28.44	20.59	15.13	32.69	28.44	20.59	15.13	26.43	22.21	15.79	11.76
(3P) 362C/STW200-97	97 (C/STW), 97 (TP)	29.77	26.16	19.36	14.23	29.77	26.16	19.36	14.23	22.41	18.70	13.27	9.88
(3P) 362C/STW200-118	118 (C/STW), 97 (TP)	34.47	30.26	22.34	16.42	34.47	30.26	22.34	16.42	26.59	22.30	15.84	11.81
(4P) 362C/STW200-97	97 (C/STW), 97 (TP), 97 (T)	34.97	30.42	22.01	16.17	34.97	30.42	22.01	16.17	27.11	25.03	21.43	16.03
(4P) 362C/STW200-118	118 (C/STW), 97 (TP), 97 (T)	39.10	33.94	24.46	17.97	39.10	33.94	24.46	17.97	35.30	32.80	24.08	17.97
(3P) 400C/STW200-97	97 (C/STW), 97 (TP)	34.00	30.54	23.82	17.82	34.00	30.54	23.82	17.82	22.77	18.90	13.41	9.98
(3P) 400C/STW200-118	118 (C/STW), 97 (TP)	39.59	35.55	27.72	20.72	39.59	35.55	27.72	20.72	27.05	22.55	16.01	11.92
(4P) 400C/STW200-97	97 (C/STW), 97 (TP), 97 (T)	40.72	36.38	27.89	20.64	40.72	36.38	27.89	20.64	27.62	25.23	21.90	16.69
(4P) 400C/STW200-118	118 (C/STW), 97 (TP), 97 (T)	45.78	40.84	31.23	23.08	45.78	40.84	31.23	23.08	35.94	33.68	25.03	18.72
(3P) 550C/STW250-97	97 (C/STW), 97 (S)	56.31	53.63	47.88	41.88	54.17	53.63	47.88	41.88	35.83	32.11	25.39	18.87
(3P) 550C/STW250-118	118 (C/STW), 97 (S)	67.50	64.29	57.42	49.94	65.56	64.29	57.42	49.94	44.99	40.86	30.31	22.54
(3P) 600C/STW250-97	97 (C/STW), 97 (S)	58.51	56.13	50.98	45.51	54.89	54.89	50.98	45.51	36.24	32.39	25.43	19.00
(3P) 600C/STW250-118	118 (C/STW), 97 (S)	70.50	67.67	61.53	54.98	66.65	66.65	61.53	54.98	46.07	41.75	30.53	22.69
(4P) 600C/STW250-97	97 (C/STW), 97 (SGP)	82.23	79.29	72.57	65.37	74.96	79.29	72.57	65.37	69.98	65.46	56.08	46.68
(4P) 600C/STW250-118	118 (C/STW), 97 (SGP)	93.76	90.50	82.76	74.44	85.31	90.50	82.76	74.44	79.04	73.72	62.62	51.13
(5P) 600C/STW250-97	97 (C/STW), 97 (S), 97 (SGP)	95.30	91.40	82.98	74.03	95.30	91.40	82.98	74.03	78.91	73.13	61.30	49.73
(5P) 600C/STW250-118	118 (C/STW), 97 (S), 97 (SGP)	106.95	102.57	93.10	83.02	106.95	102.57	93.10	83.02	87.79	81.18	67.43	53.81
(3P) 800C/STW250-97	97 (C/STW), 97 (S)	63.53	63.53	63.53	60.04	60.10	60.10	60.10	60.04	39.27	34.69	26.52	20.36
(3P) 800C/STW250-118	118 (C/STW), 97 (S)	76.11	76.11	76.11	72.29	72.59	72.59	72.59	72.29	49.03	43.44	32.49	24.95
(4P) 800C/STW250-97	97 (C/STW), 97 (SGP)	92.13	92.13	92.13	87.36	83.63	83.63	83.63	87.36	79.69	74.74	64.44	54.09
(4P) 800C/STW250-118	118 (C/STW), 97 (SGP)	104.58	104.58	104.58	99.41	94.84	94.84	94.84	99.41	89.51	83.72	71.70	59.70
(5P) 800C/STW250-97	97 (C/STW), 97 (S), 97 (SGP)	107.85	107.85	107.49	100.93	97.96	97.96	107.49	100.93	89.91	83.62	70.70	57.98
(5P) 800C/STW250-118	118 (C/STW), 97 (S), 97 (SGP)	120.25	120.25	120.24	112.96	109.12	109.12	120.24	112.96	99.49	92.33	77.66	63.27