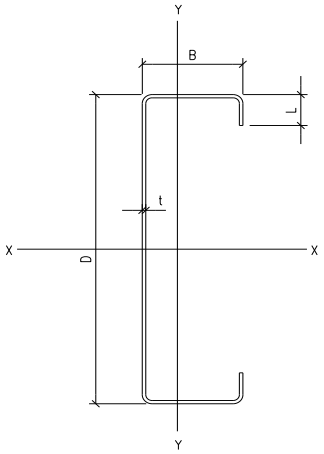


NOTES:

Section properties and allowable are computed in accordance with AISI North American Specification, 2007 edition

I_X and I_Y are for deflection determination

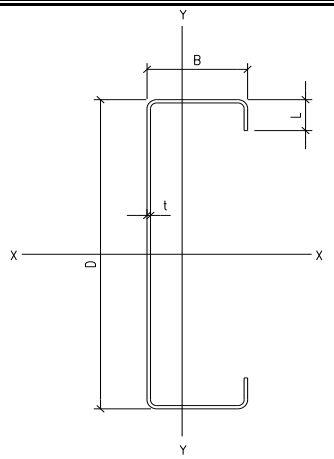
S_e and S_Y are for bending

Material is either ASTM A653-06 Gr. 55 or A1011-04 HSLAS Gr. 55 Cl-1

Fy = 55 ksi

Fu = 70 ksi

	DIMENSIONAL PROPERTIES						ALLOWABLES		AXIS X-X			AXIS Y-Y		
Section Name	D x B (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in^2)	Lip (in)	Ma (k-ft)	Va (kips)	I_X (in^4)	S_{xe} (in^3)	R_X (in)	I_Y (in^4)	S_{ye} (in^3)	R_Y (in)
4.0x2.0C16	4.0 x 2.0	16	0.059	1.793	0.527	0.773	1.808	3.842	1.331	0.659	1.588	0.314	0.239	0.772
4.0x2.0C14	4.0 x 2.0	14	0.070	2.127	0.626	0.800	2.147	5.031	1.564	0.782	1.581	0.371	0.290	0.770
4.0x2.0C13	4.0 x 2.0	13	0.085	2.583	0.760	0.836	2.574	6.057	1.876	0.938	1.571	0.449	0.358	0.768
4.0x2.0C12	4.0 x 2.0	12	0.105	3.191	0.938	0.885	3.125	7.396	2.278	1.139	1.558	0.550	0.445	0.766
4.0x2.5C16	4.0 x 2.5	16	0.059	1.994	0.586	0.773	1.847	3.842	1.560	0.673	1.631	0.533	0.329	0.953
4.0x2.5C14	4.0 x 2.5	14	0.070	2.365	0.696	0.800	2.278	5.031	1.835	0.830	1.624	0.630	0.399	0.952
4.0x2.5C13	4.0 x 2.5	13	0.085	2.872	0.845	0.836	2.962	6.057	2.201	1.079	1.614	0.763	0.495	0.950
4.0x2.5C12	4.0 x 2.5	12	0.105	3.548	1.043	0.885	3.672	7.396	2.676	1.338	1.601	0.938	0.617	0.948
5.0x2.5C16	5.0 x 2.5	16	0.059	2.194	0.645	0.773	2.480	3.842	2.604	0.904	2.009	0.578	0.332	0.946
5.0x2.5C14	5.0 x 2.5	14	0.070	2.603	0.766	0.800	3.050	5.409	3.069	1.111	2.002	0.684	0.403	0.945
5.0x2.5C13	5.0 x 2.5	13	0.085	3.161	0.930	0.836	3.964	7.810	3.693	1.445	1.993	0.829	0.502	0.944
5.0x2.5C12	5.0 x 2.5	12	0.105	3.905	1.148	0.885	4.946	9.561	4.505	1.802	1.981	1.020	0.635	0.942
6.0x2.5C16	6.0 x 2.5	16	0.059	2.395	0.704	0.773	3.170	3.319	3.971	1.155	2.375	0.616	0.334	0.935
6.0x2.5C14	6.0 x 2.5	14	0.070	2.841	0.836	0.800	3.889	5.409	4.687	1.417	2.368	0.729	0.406	0.934
6.0x2.5C13	6.0 x 2.5	13	0.085	3.450	1.015	0.836	5.048	7.975	5.649	1.839	2.360	0.884	0.506	0.933
6.0x2.5C12	6.0 x 2.5	12	0.105	4.262	1.253	0.885	6.321	11.727	6.909	2.303	2.348	1.088	0.642	0.932



NOTES:

Section properties and allowable are computed in accordance with AISI North American Specification, 2007 edition

I_X and I_Y are for deflection determination

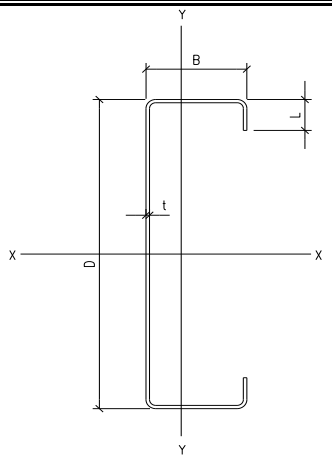
S_e and S_Y are for bending

Material is either ASTM A653-06 Gr. 55 or A1011-04 HSLAS Gr. 55 Cl-1

Fy = 55 ksi

Fu = 70 ksi

	DIMENSIONAL PROPERTIES						ALLOWABLES		AXIS X-X			AXIS Y-Y		
Section Name	D x B (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in^2)	Lip (in)	Ma (k-ft)	Va (kips)	I_X (in^4)	S_{xe} (in^3)	R_X (in)	I_Y (in^4)	S_{ye} (in^3)	R_Y (in)
6.0x3.0C16	6.0 x 3.0	16	0.059	2.595	0.763	0.773	3.313	3.319	4.492	1.207	2.426	0.953	0.435	1.117
6.0x3.0C14	6.0 x 3.0	14	0.070	3.079	0.906	0.800	4.056	5.409	5.302	1.478	2.420	1.130	0.530	1.117
6.0x3.0C13	6.0 x 3.0	13	0.085	3.739	1.100	0.836	5.136	7.975	6.393	1.871	2.411	1.370	0.663	1.116
6.0x3.0C12	6.0 x 3.0	12	0.105	4.619	1.358	0.885	6.846	11.727	7.821	2.494	2.400	1.690	0.842	1.115
6.0x3.5C16	6.0 x 3.5	16	0.059	2.796	0.822	0.773	3.418	3.319	5.012	1.246	2.469	1.382	0.545	1.296
6.0x3.5C14	6.0 x 3.5	14	0.070	3.317	0.976	0.800	4.211	5.409	5.917	1.534	2.463	1.639	0.667	1.296
6.0x3.5C13	6.0 x 3.5	13	0.085	4.028	1.185	0.836	5.346	7.975	7.136	1.948	2.454	1.989	0.834	1.296
6.0x3.5C12	6.0 x 3.5	12	0.105	4.976	1.463	0.885	7.005	11.727	8.733	2.552	2.443	2.455	1.062	1.295
6.0x4.0C16	6.0 x 4.0	16	0.059	2.997	0.881	0.773	3.476	3.319	5.533	1.266	2.506	1.911	0.668	1.473
6.0x4.0C14	6.0 x 4.0	14	0.070	3.555	1.046	0.800	4.303	5.409	6.533	1.568	2.500	2.268	0.815	1.473
6.0x4.0C13	6.0 x 4.0	13	0.085	4.317	1.270	0.836	5.516	7.975	7.880	2.010	2.491	2.753	1.021	1.473
6.0x4.0C12	6.0 x 4.0	12	0.105	5.333	1.568	0.885	7.215	11.727	9.646	2.629	2.480	3.399	1.301	1.472
7.0x2.5C16	7.0 x 2.5	16	0.059	2.595	0.763	0.773	3.916	2.809	5.690	1.427	2.730	0.647	0.335	0.921
7.0x2.5C14	7.0 x 2.5	14	0.070	3.079	0.906	0.800	4.794	4.707	6.722	1.747	2.724	0.767	0.408	0.921
7.0x2.5C13	7.0 x 2.5	13	0.085	3.739	1.010	0.836	6.211	7.975	8.113	2.263	2.716	0.930	0.509	0.920
7.0x2.5C12	7.0 x 2.5	12	0.105	4.619	1.358	0.885	7.794	12.170	9.939	2.840	2.705	1.146	0.647	0.919



NOTES:

Section properties and allowable are computed in accordance with AISI North American Specification, 2007 edition

I_X and I_Y are for deflection determination

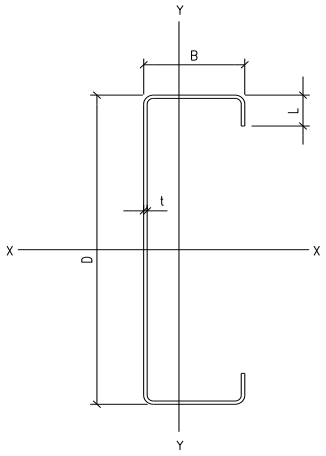
S_e and S_Y are for bending

Material is either ASTM A653-06 Gr. 55 or A1011-04 HSLAS Gr. 55 Cl-1

Fy = 55 ksi

Fu = 70 ksi

	DIMENSIONAL PROPERTIES						ALLOWABLES		AXIS X-X			AXIS Y-Y		
Section Name	D x B (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in^2)	Lip (in)	Ma (k-ft)	Va (kips)	I_X (in^4)	S_{xe} (in^3)	R_X (in)	I_Y (in^4)	S_{ye} (in^3)	R_Y (in)
7.0x3.0C16	7.0 x 3.0	16	0.059	2.796	0.822	0.773	4.088	2.809	6.401	1.489	2.790	1.004	0.437	1.105
7.0x3.0C14	7.0 x 3.0	14	0.070	3.317	0.976	0.800	4.995	4.707	7.562	1.820	2.784	1.190	0.533	1.105
7.0x3.0C13	7.0 x 3.0	13	0.085	4.028	1.185	0.836	6.310	7.975	9.129	2.299	2.776	1.445	0.667	1.104
7.0x3.0C12	7.0 x 3.0	12	0.105	4.976	1.463	0.885	8.389	12.170	11.187	3.057	2.765	1.782	0.849	1.104
7.0x4.0C16	7.0 x 4.0	16	0.059	3.197	0.940	0.773	4.157	2.809	7.822	1.515	2.884	2.017	0.671	1.465
7.0x4.0C14	7.0 x 4.0	14	0.070	3.793	1.116	0.800	5.300	4.707	9.243	1.931	2.878	2.394	0.819	1.465
7.0x4.0C13	7.0 x 4.0	13	0.085	4.606	1.355	0.836	6.768	7.975	11.161	2.466	2.870	2.907	1.027	1.465
7.0x4.0C12	7.0 x 4.0	12	0.105	5.690	1.673	0.885	9.005	11.603	13.683	3.281	2.860	3.591	1.319	1.465
8.0x2.5C16	8.0 x 2.5	16	0.059	2.796	0.822	0.773	4.649	2.435	7.791	1.694	3.078	0.675	0.336	0.906
8.0x2.5C14	8.0 x 2.5	14	0.070	3.317	0.976	0.800	5.766	4.078	9.210	2.101	3.072	0.800	0.409	0.906
8.0x2.5C13	8.0 x 2.5	13	0.085	4.028	1.185	0.836	7.452	7.330	11.126	2.715	3.065	0.970	0.512	0.905
8.0x2.5C12	8.0 x 2.5	12	0.105	4.976	1.463	0.885	9.365	12.170	13.649	3.412	3.054	1.196	0.650	0.904
8.0x3.0C16	8.0 x 3.0	16	0.059	2.997	0.881	0.773	4.732	2.435	8.721	1.724	3.146	1.048	0.438	1.090
8.0x3.0C14	8.0 x 3.0	14	0.070	3.555	1.046	0.800	6.000	4.078	10.310	2.186	3.140	1.243	0.534	1.090
8.0x3.0C13	8.0 x 3.0	13	0.085	4.317	1.270	0.836	7.564	7.330	12.457	2.756	3.132	1.509	0.669	1.090
8.0x3.0C12	8.0 x 3.0	12	0.105	5.333	1.568	0.885	10.030	12.170	15.285	3.655	3.122	1.862	0.854	1.090



NOTES:

Section properties and allowable are computed in accordance with AISI North American Specification, 2007 edition

I_X and I_Y are for deflection determination

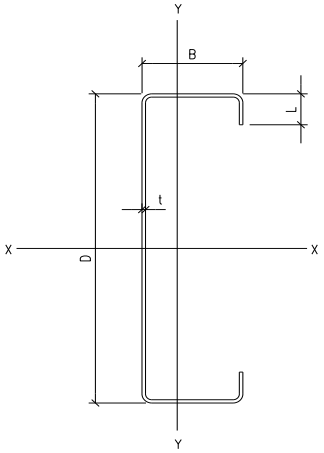
S_e and S_Y are for bending

Material is either ASTM A653-06 Gr. 55 or A1011-04 HSLAS Gr. 55 Cl-1

Fy = 55 ksi

Fu = 70 ksi

	DIMENSIONAL PROPERTIES						ALLOWABLES		AXIS X-X			AXIS Y-Y		
Section Name	D x B (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in^2)	Lip (in)	Ma (k-ft)	Va (kips)	I_X (in^4)	S_{xe} (in^3)	R_X (in)	I_Y (in^4)	S_{ye} (in^3)	R_Y (in)
8.0x3.5C16	8.0 x 3.5	16	0.059	3.197	0.940	0.773	4.772	2.435	9.651	1.739	3.204	1.523	0.550	1.273
8.0x3.5C14	8.0 x 3.5	14	0.070	3.793	1.116	0.800	6.218	4.078	11.411	2.266	3.198	1.808	0.672	1.273
8.0x3.5C13	8.0 x 3.5	13	0.085	4.606	1.355	0.836	7.860	7.330	13.789	2.864	3.190	2.196	0.843	1.273
8.0x3.5C12	8.0 x 3.5	12	0.105	5.690	1.673	0.885	10.243	12.170	16.921	3.732	3.180	2.712	1.077	1.273
8.0x4.0C16	8.0 x 4.0	16	0.059	3.398	0.999	0.773	4.755	2.435	10.582	1.733	3.254	2.110	0.672	1.453
8.0x4.0C14	8.0 x 4.0	14	0.070	4.031	1.186	0.800	6.349	4.078	12.511	2.314	3.248	2.505	0.822	1.454
8.0x4.0C13	8.0 x 4.0	13	0.085	4.895	1.440	0.836	8.103	7.330	15.120	2.952	3.241	3.043	1.031	1.454
8.0x4.0C12	8.0 x 4.0	12	0.105	6.047	1.778	0.885	10.545	12.170	18.558	3.842	3.230	3.760	1.319	1.454
9.0x2.5C16	9.0 x 2.5	16	0.059	2.997	0.881	0.773	5.193	2.148	10.303	1.892	3.419	0.698	0.336	0.890
9.0x2.5C14	9.0 x 2.5	14	0.070	3.555	1.046	0.800	6.802	3.597	12.185	2.479	3.414	0.828	0.410	0.890
9.0x2.5C13	9.0 x 2.5	13	0.085	4.317	1.270	0.836	8.773	6.463	14.732	3.197	3.406	1.005	0.513	0.890
9.0x2.5C12	9.0 x 2.5	12	0.105	5.333	1.568	0.885	11.033	12.170	18.090	4.020	3.396	1.239	0.653	0.889
9.0x3.0C16	9.0 x 3.0	16	0.059	3.197	0.940	0.773	5.300	2.148	11.482	1.931	3.494	1.086	0.438	1.075
9.0x3.0C14	9.0 x 3.0	14	0.070	3.793	1.116	0.800	7.031	3.597	13.581	2.562	3.489	1.289	0.536	1.075
9.0x3.0C13	9.0 x 3.0	13	0.085	4.606	1.355	0.836	8.899	6.463	16.421	3.242	3.482	1.565	0.672	1.075
9.0x3.0C12	9.0 x 3.0	12	0.105	5.690	1.673	0.885	11.769	12.170	20.167	4.288	3.472	1.933	0.857	1.075



NOTES:

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S_e and S_Y are for bending

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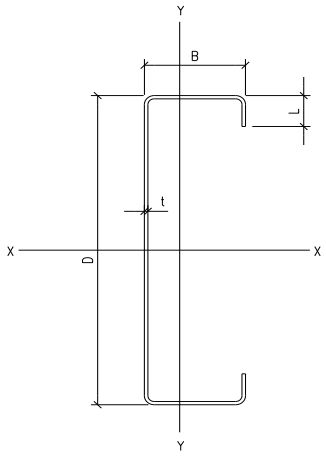
Fy = 55 ksi

Fu = 70 ksi

	DIMENSIONAL PROPERTIES						ALLOWABLES		AXIS X-X			AXIS Y-Y		
Section Name	D x B (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in^2)	Lip (in)	Ma (k-ft)	Va (kips)	I_X (in^4)	S_{xe} (in^3)	R_X (in)	I_Y (in^4)	S_{ye} (in^3)	R_Y (in)
10.0x2.0C16	10.0 x 2.0	16	0.059	2.997	0.881	0.773	5.459	1.922	11.798	1.989	3.659	0.419	0.245	0.690
10.0x2.0C14	10.0 x 2.0	14	0.070	3.555	1.046	0.800	6.789	3.218	13.958	2.474	3.654	0.497	0.298	0.689
10.0x2.0C13	10.0 x 2.0	13	0.085	4.317	1.270	0.836	8.581	5.780	16.884	3.127	3.647	0.602	0.372	0.689
10.0x2.0C12	10.0 x 2.0	12	0.105	5.333	1.568	0.885	11.029	10.941	20.745	4.019	3.637	0.741	0.471	0.687
10.0x2.5C16	10.0 x 2.5	16	0.059	3.197	0.940	0.773	5.740	1.922	13.256	2.091	3.755	0.719	0.337	0.875
10.0x2.5C14	10.0 x 2.5	14	0.070	3.793	1.116	0.800	7.650	3.218	15.684	2.788	3.750	0.853	0.411	0.874
10.0x2.5C13	10.0 x 2.5	13	0.085	4.606	1.355	0.836	10.172	5.780	18.973	3.706	3.742	1.035	0.514	0.874
10.0x2.5C12	10.0 x 2.5	12	0.105	5.690	1.673	0.885	12.798	10.941	23.316	4.663	3.733	1.277	0.655	0.874
10.0x3.0C16	10.0 x 3.0	16	0.059	3.398	0.999	0.773	5.871	1.922	14.713	2.139	3.837	1.120	0.439	1.059
10.0x3.0C14	10.0 x 3.0	14	0.070	4.031	1.186	0.800	7.756	3.218	17.410	2.826	3.832	1.330	0.537	1.059
10.0x3.0C13	10.0 x 3.0	13	0.085	4.895	1.440	0.836	10.313	5.780	21.062	3.758	3.825	1.615	0.673	1.059
10.0x3.0C12	10.0 x 3.0	12	0.105	6.047	1.778	0.885	13.606	10.941	25.886	4.957	3.815	1.995	0.860	1.059
10.0x3.5C16	10.0 x 3.5	16	0.059	3.598	1.058	0.773	5.946	1.922	16.171	2.166	3.909	1.633	0.552	1.242
10.0x3.5C14	10.0 x 3.5	14	0.070	4.269	1.256	0.800	7.873	3.218	19.135	2.869	3.904	1.939	0.675	1.243
10.0x3.5C13	10.0 x 3.5	13	0.085	5.184	1.525	0.836	10.699	5.780	23.151	3.898	3.897	2.356	0.848	1.243
10.0x3.5C12	10.0 x 3.5	12	0.105	6.404	1.883	0.885	13.880	10.941	28.456	5.057	3.887	2.912	1.085	1.243



NOTES:

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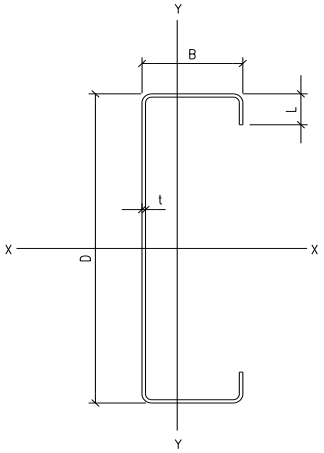
	DIMENSIONAL PROPERTIES						ALLOWABLES		AXIS X-X			AXIS Y-Y		
Section Name	D x B (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in^2)	Lip (in)	Ma (k-ft)	Va (kips)	I_X (in^4)	S_{xe} (in^3)	R_X (in)	I_Y (in^4)	S_{ye} (in^3)	R_Y (in)
10.0x4.0C16	10.0 x 4.0	16	0.059	3.799	1.117	0.773	5.944	1.922	17.629	2.166	3.972	2.267	0.675	1.425
10.0x4.0C14	10.0 x 4.0	14	0.070	4.507	1.326	0.800	7.900	3.218	20.861	2.879	3.967	2.692	0.825	1.425
10.0x4.0C13	10.0 x 4.0	13	0.085	5.473	1.610	0.836	11.020	5.780	25.240	4.015	3.960	3.272	1.037	1.426
10.0x4.0C12	10.0 x 4.0	12	0.105	6.761	1.988	0.885	14.279	10.941	31.026	5.203	3.950	4.045	1.329	1.426
11.0x2.5C16	11.0 x 2.5	16	0.059	3.398	0.999	0.773	5.978	1.739	16.679	2.178	4.085	0.737	0.337	0.859
11.0x2.5C14	11.0 x 2.5	14	0.070	4.031	1.186	0.800	7.679	2.911	19.741	2.798	4.080	0.875	0.412	0.859
11.0x2.5C13	11.0 x 2.5	13	0.085	4.895	1.440	0.836	10.523	5.227	23.891	3.834	4.074	1.062	0.516	0.859
11.0x2.5C12	11.0 x 2.5	12	0.105	6.047	1.778	0.885	13.936	9.891	29.378	5.078	4.064	1.310	0.657	0.858
11.0x3.0C16	11.0 x 3.0	16	0.059	3.598	1.058	0.773	6.444	1.739	18.444	2.348	4.175	1.151	0.440	1.043
11.0x3.0C14	11.0 x 3.0	14	0.070	4.269	1.256	0.800	8.484	2.911	21.831	3.091	4.170	1.366	0.537	1.043
11.0x3.0C13	11.0 x 3.0	13	0.085	5.184	1.525	0.836	11.807	5.227	26.422	4.302	4.163	1.659	0.675	1.043
11.0x3.0C12	11.0 x 3.0	12	0.105	6.404	1.883	0.885	15.539	9.891	32.494	5.662	4.154	2.050	0.862	1.043
11.0x3.5C16	11.0 x 3.5	16	0.059	3.799	1.117	0.773	6.534	1.739	20.210	2.381	4.253	1.680	0.553	1.226
11.0x3.5C14	11.0 x 3.5	14	0.070	4.507	1.326	0.800	8.630	2.911	23.922	3.145	4.248	1.994	0.676	1.227
11.0x3.5C13	11.0 x 3.5	13	0.085	5.473	1.610	0.836	12.031	5.227	28.954	4.384	4.241	2.423	0.849	1.227
11.0x3.5C12	11.0 x 3.5	12	0.105	6.761	1.988	0.885	15.846	9.891	35.610	5.774	4.232	2.996	1.088	1.227



NOTES:

Section properties and allowable are computed in accordance with AISI North American Specification, 2007 edition

I_X and I_Y are for deflection determination

S_e and S_Y are for bending

Material is either ASTM A653-06 Gr. 55 or A1011-04 HSLAS Gr. 55 Cl-1

Fy = 55 ksi

Fu = 70 ksi

	DIMENSIONAL PROPERTIES						ALLOWABLES		AXIS X-X			AXIS Y-Y		
Section Name	D x B (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in^2)	Lip (in)	Ma (k-ft)	Va (kips)	I_X (in^4)	S_{xe} (in^3)	R_X (in)	I_Y (in^4)	S_{ye} (in^3)	R_Y (in)
12.0x2.5C16	12.0 x 2.5	16	0.059	3.598	1.058	0.773	6.562	1.588	20.601	2.391	4.412	0.753	0.338	0.844
12.0x2.5C14	12.0 x 2.5	14	0.070	4.269	1.256	0.800	8.442	2.658	24.390	3.076	4.407	0.894	0.412	0.844
12.0x2.5C13	12.0 x 2.5	13	0.085	5.184	1.525	0.836	11.603	4.771	29.528	4.228	4.401	1.085	0.516	0.844
12.0x2.5C12	12.0 x 2.5	12	0.105	6.404	1.883	0.885	15.441	9.024	36.329	5.626	4.392	1.340	0.658	0.843
12.0x3.0C16	12.0 x 3.0	16	0.059	3.799	1.117	0.773	7.019	1.588	22.704	2.558	4.508	1.178	0.440	1.027
12.0x3.0C14	12.0 x 3.0	14	0.070	4.507	1.326	0.800	9.216	2.658	26.880	3.358	4.503	1.398	0.538	1.027
12.0x3.0C13	12.0 x 3.0	13	0.085	5.473	1.610	0.836	12.833	4.771	32.545	4.676	4.497	1.698	0.676	1.027
12.0x3.0C12	12.0 x 3.0	12	0.105	6.761	1.988	0.885	17.570	9.024	40.043	6.402	4.488	2.099	0.864	1.027
12.0x3.5C16	12.0 x 3.5	16	0.059	4.000	1.176	0.773	7.124	1.588	24.807	2.596	4.592	1.721	0.553	1.210
12.0x3.5C14	12.0 x 3.5	14	0.070	4.745	1.396	0.800	9.389	2.658	29.371	3.421	4.588	2.044	0.677	1.210
12.0x3.5C13	12.0 x 3.5	13	0.085	5.762	1.695	0.836	13.037	4.771	35.562	4.750	4.581	2.484	0.851	1.211
12.0x3.5C12	12.0 x 3.5	12	0.105	7.118	2.093	0.885	17.910	9.024	43.758	6.526	4.572	3.071	1.090	1.211
12.0x4.0C16	12.0 x 4.0	16	0.059	4.200	1.235	0.773	7.137	1.588	26.911	2.601	4.667	2.394	0.676	1.392
12.0x4.0C14	12.0 x 4.0	14	0.070	4.983	1.466	0.800	9.449	2.658	31.862	3.443	4.663	2.843	0.827	1.393
12.0x4.0C13	12.0 x 4.0	13	0.085	6.051	1.780	0.836	13.179	4.771	38.579	4.802	4.656	3.458	1.041	1.394
12.0x4.0C12	12.0 x 4.0	12	0.105	7.475	2.198	0.885	18.412	9.024	47.472	6.709	4.647	4.275	1.336	1.395