

# Structural studs & track 12"

Member	Thickness in	Area in <sup>2</sup>	Weight lb/ft	Gross properties					33 ksi effective properties				50 ksi effective properties				Torsional properties				
				Ix in <sup>4</sup>	Sx in <sup>3</sup>	Rx in	Iy in <sup>4</sup>	Ry in	Ix in <sup>4</sup>	Sx in <sup>3</sup>	Ma in-k	Va lb	Ix in <sup>4</sup>	Sx in <sup>3</sup>	Ma in-k	Va lb	Jx1000 in <sup>4</sup>	Cw in <sup>6</sup>	Xo in	Ro in	Beta
1200S137-33 <sup>5</sup>	0.0346	0.526	1.79	8.893	1.482	4.112	0.079	0.387	-	-	-	-	-	-	-	-	0.210	2.384	-0.558	4.168	0.982
1200S137-43 <sup>5</sup>	0.0451	0.684	2.33	11.517	1.920	4.104	0.100	0.383	-	-	-	-	-	-	-	-	0.464	3.026	-0.550	4.159	0.983
1200S137-54 <sup>5</sup>	0.0566	0.853	2.90	14.283	2.380	4.091	0.121	0.376	13.296	1.873	37.01	1377	12.836	1.694	50.71	1377	0.911	3.683	-0.542	4.144	0.983
1200S137-68	0.0713	1.067	3.63	17.698	2.950	4.072	0.144	0.367	17.142	2.518	49.76	2771	16.572	2.348	70.3	2771	1.809	4.458	-0.532	4.123	0.983
1200S137-97	0.1017	1.499	5.10	24.379	4.063	4.032	0.182	0.348	24.379	3.899	77.04	8147	24.161	3.666	109.75	8147	5.170	5.847	-0.512	4.079	0.984
1200S162-54 <sup>5</sup>	0.0566	0.896	3.05	15.730	2.622	4.190	0.212	0.486	14.743	2.109	41.68	1377	14.298	1.914	57.31	1377	0.957	6.293	-0.744	4.283	0.970
1200S162-68	0.0713	1.121	3.81	19.518	3.253	4.173	0.255	0.477	18.955	2.817	55.66	2771	18.390	2.645	79.19	2771	1.899	7.666	-0.734	4.264	0.970
1200S162-97	0.1017	1.576	5.36	26.966	4.494	4.137	0.331	0.459	26.966	4.327	85.51	8147	26.735	4.091	122.49	8147	5.433	10.187	-0.713	4.223	0.971
1200S200-54 <sup>5</sup>	0.0566	0.953	3.24	17.662	2.944	4.306	0.393	0.643	16.678	2.425	47.93	1377	16.333	2.074	62.09	1377	1.017	11.462	-1.047	4.478	0.945
1200S200-68	0.0713	1.192	4.06	21.947	3.658	4.291	0.479	0.634	21.376	3.215	63.54	2771	20.864	2.963	88.71	2771	2.020	14.038	-1.036	4.459	0.946
1200S200-97	0.1017	1.677	5.71	30.417	5.069	4.258	0.635	0.615	30.417	4.899	96.81	8147	30.175	4.660	139.51	8147	5.783	18.876	-1.014	4.420	0.947
1200S250-54 <sup>5</sup>	0.0566	1.009	3.43	19.681	3.280	4.416	0.683	0.823	18.831	2.484	49.09	1377	18.380	2.172	65.02	1377	1.078	19.354	-1.395	4.704	0.912
1200S250-68	0.0713	1.263	4.30	24.484	4.081	4.402	0.836	0.813	23.963	3.496	69.08	2771	23.572	3.012	90.17	2771	2.141	23.796	-1.384	4.686	0.913
1200S250-97	0.1017	1.779	6.05	34.016	5.669	4.373	1.121	0.794	34.016	5.496	108.6	8147	33.835	5.037	150.82	8147	6.134	32.260	-1.361	4.648	0.914
1200S300-97	0.1017	1.957	6.66	39.669	6.612	4.502	2.171	1.053	39.669	6.612	146.35	8147	39.669	6.424	212.25	8147	6.747	63.858	-1.953	5.019	0.848
1200S300-118	0.1242	2.369	8.06	47.613	7.936	4.483	2.561	1.039	47.613	7.936	179.62	13189	47.613	7.936	267.39	14986	12.183	75.552	-1.937	4.993	0.849
1200S350-97	0.1017	2.059	7.01	43.269	7.211	4.584	3.159	1.239	43.268	7.071	154.22	8147	43.269	6.599	197.57	8147	7.098	91.505	-2.353	5.299	0.803
1200S350-118	0.1242	2.494	8.49	51.993	8.665	4.566	3.741	1.225	51.993	8.665	192.74	13189	51.993	8.260	274.07	14986	12.821	108.579	-2.336	5.273	0.804
1200T100-54 <sup>5</sup>	0.0566	0.792	2.69	12.292	2.015	3.940	0.031	0.198	11.281	1.438	28.41	1354	10.792	1.248	37.38	1354	0.845	0.966	-0.228	3.952	0.997
1200T100-68	0.0713	0.997	3.39	15.504	2.531	3.943	0.038	0.196	14.876	2.074	40.97	2713	14.295	1.859	55.64	2713	1.690	1.200	-0.225	3.955	0.997
1200T100-97	0.1017	1.422	4.84	22.169	3.588	3.949	0.052	0.191	22.169	3.384	66.87	7902	21.856	3.139	93.99	7902	4.901	1.662	-0.220	3.960	0.997
1200T125-54 <sup>5</sup>	0.0566	0.820	2.79	13.335	2.186	4.033	0.060	0.271	12.296	1.491	29.47	1354	11.460	1.286	38.51	1354	0.876	1.820	-0.337	4.056	0.993
1200T125-68	0.0713	1.033	3.51	16.826	2.747	4.036	0.074	0.268	16.246	2.206	43.60	2713	15.686	1.934	57.90	2713	1.750	2.271	-0.334	4.059	0.993
1200T125-97	0.1017	1.472	5.01	24.078	3.897	4.044	0.102	0.263	24.078	3.690	72.92	7902	23.751	3.442	103.06	7902	5.076	3.173	-0.328	4.066	0.994
1200T125-118	0.1242	1.797	6.12	29.472	4.740	4.049	0.121	0.259	29.472	4.740	93.67	13189	29.472	4.490	134.44	14434	9.243	3.815	-0.323	4.070	0.994
1200T150-54 <sup>5</sup>	0.0566	0.848	2.89	14.378	2.357	4.117	0.103	0.348	12.962	1.530	30.23	1354	12.020	1.313	39.31	1354	0.906	3.032	-0.459	4.157	0.988
1200T150-68	0.0713	1.068	3.64	18.148	2.963	4.121	0.127	0.345	17.568	2.281	45.08	2713	16.566	1.987	59.48	2713	1.810	3.793	-0.456	4.161	0.988
1200T150-97	0.1017	1.523	5.18	25.987	4.206	4.130	0.176	0.340	25.987	3.996	78.97	7902	25.719	3.616	108.27	7902	5.252	5.332	-0.449	4.169	0.988
1200T200-118	0.1242	1.984	6.75	36.530	5.875	4.291	0.492	0.498	36.530	5.794	114.50	13189	36.530	5.278	158.02	14434	10.201	14.478	-0.719	4.379	0.973
1200T200-54 <sup>5</sup>	0.0566	0.905	3.08	16.464	2.699	4.265	0.236	0.510	14.078	1.582	31.26	1354	12.962	1.350	40.41	1354	0.966	6.706	-0.736	4.358	0.971
1200T200-68	0.0713	1.140	3.88	20.791	3.395	4.271	0.294	0.508	19.277	2.383	47.09	2713	18.026	2.058	61.62	2713	1.931	8.419	-0.732	4.363	0.972
1200T200-97	0.1017	1.625	5.53	29.805	4.824	4.283	0.410	0.502	29.805	4.298	84.93	7902	28.959	3.819	114.35	7902	5.602	11.921	-0.725	4.373	0.973
1200T250-54 <sup>5</sup>	0.0566	0.962	3.27	18.550	3.041	4.392	0.445	0.681	15.021	1.617	31.95	1354	13.756	1.374	41.14	1354	1.027	12.321	-1.047	4.566	0.947
1200T250-68	0.0713	1.211	4.12	23.435	3.826	4.399	0.556	0.678	20.720	2.451	48.44	2713	19.255	2.106	63.04	2713	2.052	15.499	-1.043	4.572	0.948
1200T250-97	0.1017	1.727	5.88	33.623	5.442	4.413	0.780	0.672	32.479	4.489	88.70	7902	31.310	3.954	118.37	7902	5.953	22.041	-1.035	4.582	0.949
1200T300-54 <sup>5</sup>	0.0566	1.018	3.46	20.636	3.383	4.502	0.745	0.855	15.856	1.641	32.44	1354	14.451	1.391	41.65	1354	1.087	20.178	-1.384	4.787	0.916
1200T300-68	0.0713	1.282	4.36	26.079	4.258	4.510	0.932	0.852	21.991	2.501	49.41	2713	20.338	2.140	64.06	2713	2.173	25.418	-1.380	4.792	0.917
1200T300-97	0.1017	1.828	6.22	37.441	6.060	4.525	1.310	0.847	34.841	4.629	91.46	7902	33.377	4.051	121.30	7902	6.304	36.249	-1.371	4.804	0.919

For section properties table notes see page 5

A = Cross sectional area

Ix = Moment of inertia (x-axis)

Sx = Section modulus (x-axis)

Rx = Radius of gyration (x-axis)

Iy = Moment of inertia (y-axis)

Ry = Radius of gyration (y-axis)

Ma = Allowable bending moment

Va = Allowable shear force

J = St. Vennant torsion constant

Cw = Torsional warping constant

Xo = Distance from center of gravity to shear center along x-axis

Ro = Polar radius of gyration about the centroidal principal axis

B = Beta coefficient