

Structural studs & track 6"

Member	Design Thickness (in)	Gross Properties							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
		Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	S _x (in ³)	R _x (in)	I _y (in ⁴)	R _y (in)	I _x (in ⁴)	S _x (in ³)	Ma (in-k)	Va (lb)	I _x (in ⁴)	S _x (in ³)	Ma (in-k)	Va (lb)	Jx1000 (in ⁴)	Cw (in ⁶)	Xo (in)	Ro (in)	Beta
600S137-33	0.0346	0.318	1.08	1.582	0.527	2.229	0.069	0.464	1.548	0.455	8.98	638	1.527	0.386	11.55	638	0.127	0.500	-0.807	2.416	0.889
600S137-43	0.0451	0.413	1.41	2.042	0.681	2.223	0.087	0.459	2.041	0.645	12.74	1416	2.012	0.579	17.33	1416	0.280	0.633	-0.796	2.406	0.890
600S137-54	0.0566	0.514	1.75	2.518	0.839	2.213	0.105	0.452	2.518	0.832	16.44	2739	2.518	0.777	23.26	2823	0.549	0.769	-0.784	2.391	0.893
600S137-68	0.0713	0.640	2.18	3.094	1.031	2.200	0.125	0.443	3.094	1.031	24.05	4347	3.094	1.030	30.84	5350	1.084	0.930	-0.768	2.371	0.895
600S137-97	0.1017	0.889	3.03	4.188	1.396	2.170	0.159	0.422	4.188	1.396	34.48	6911	4.188	1.396	50.80	10472	3.066	1.216	-0.734	2.330	0.901
600S162-33	0.0346	0.344	1.17	1.793	0.598	2.282	0.116	0.581	1.793	0.577	11.41	638	1.793	0.481	14.41	638	0.137	0.861	-1.072	2.587	0.828
600S162-43	0.0451	0.447	1.52	2.316	0.772	2.276	0.148	0.576	2.316	0.767	16.68	1416	2.316	0.705	21.12	1416	0.303	1.095	-1.062	2.577	0.830
600S162-54	0.0566	0.556	1.89	2.860	0.953	2.267	0.180	0.570	2.860	0.953	21.17	2739	2.860	0.916	30.33	2823	0.594	1.337	-1.049	2.562	0.832
600S162-68	0.0713	0.693	2.36	3.525	1.175	2.255	0.218	0.560	3.525	1.175	26.79	4347	3.525	1.164	39.47	5350	1.174	1.626	-1.032	2.543	0.835
600S162-97	0.1017	0.966	3.29	4.797	1.599	2.229	0.283	0.541	4.797	1.599	38.37	6911	4.797	1.599	56.73	10472	3.329	2.153	-0.997	2.501	0.841
600S200-33	0.0346	0.379	1.29	2.075	0.692	2.340	0.209	0.743	2.058	0.621	12.28	638	2.015	0.524	15.68	638	0.151	1.593	-1.457	2.855	0.740
600S200-43	0.0451	0.492	1.67	2.683	0.894	2.335	0.268	0.739	2.683	0.873	17.24	1416	2.683	0.807	24.17	1416	0.334	2.033	-1.446	2.844	0.742
600S200-54	0.0566	0.613	2.09	3.319	1.106	2.327	0.328	0.732	3.319	1.106	24.07	2739	3.319	1.015	30.40	2823	0.655	2.493	-1.432	2.829	0.744
600S200-68	0.0713	0.764	2.60	4.101	1.367	2.316	0.400	0.723	4.101	1.367	30.42	4347	4.101	1.317	43.71	5350	1.295	3.047	-1.415	2.809	0.746
600S200-97	0.1017	1.067	3.63	5.612	1.871	2.293	0.530	0.705	5.612	1.871	43.49	6911	5.612	1.871	64.53	10472	3.679	4.080	-1.378	2.767	0.752
600S250-43	0.0451	0.537	1.83	3.082	1.027	2.396	0.458	0.923	3.082	0.918	18.14	1416	2.976	0.818	24.50	1416	0.364	3.411	-1.874	3.179	0.652
600S250-54	0.0566	0.670	2.28	3.819	1.273	2.388	0.562	0.917	3.819	1.159	22.90	2739	3.766	1.069	32.00	2823	0.715	4.194	-1.860	3.163	0.654
600S250-68	0.0713	0.836	2.84	4.727	1.576	2.378	0.688	0.908	4.727	1.508	32.82	4347	4.723	1.386	41.49	5350	1.416	5.145	-1.842	3.142	0.656
600S250-97	0.1017	1.169	3.98	6.496	2.165	2.357	0.923	0.889	6.496	2.161	48.81	6911	6.496	2.063	69.38	10472	4.030	6.947	-1.803	3.098	0.661
600S300-54	0.0566	0.726	2.47	4.319	1.440	2.439	0.875	1.098	4.269	1.211	23.93	2739	4.014	1.106	33.13	2823	0.775	6.452	-2.299	3.527	0.575
600S300-68	0.0713	0.907	3.09	5.354	1.785	2.430	1.075	1.089	5.344	1.581	31.23	4347	5.221	1.446	43.30	5350	1.537	7.937	-2.280	3.505	0.577
600S300-97	0.1017	1.271	4.32	7.381	2.460	2.410	1.454	1.070	7.381	2.352	52.07	6911	7.280	2.247	67.28	10472	4.381	10.776	-2.241	3.461	0.581
600S350-54	0.0566	0.825	2.81	5.022	1.674	2.467	1.491	1.344	4.911	1.452	28.70	2739	4.721	1.335	39.97	2823	0.881	12.942	-3.037	4.137	0.461
600S350-68	0.0713	1.032	3.51	6.237	2.079	2.459	1.841	1.336	6.237	1.949	38.50	4347	6.166	1.771	53.01	5350	1.748	15.968	-3.018	4.115	0.462
600S350-97	0.1017	1.449	4.93	8.631	2.877	2.441	2.518	1.318	8.631	2.822	61.55	6911	8.631	2.593	77.64	10472	4.994	21.811	-2.979	4.071	0.464
600T125-33	0.0346	0.294	1.00	1.428	0.465	2.204	0.034	0.339	1.258	0.297	5.87	622	1.169	0.256	7.66	622	0.117	0.238	-0.516	2.289	0.949
600T125-43	0.0451	0.383	1.30	1.861	0.604	2.205	0.044	0.337	1.768	0.461	9.11	1377	1.670	0.402	12.05	1377	0.260	0.307	-0.513	2.288	0.950
600T125-54	0.0566	0.480	1.63	2.344	0.756	2.209	0.054	0.335	2.299	0.666	13.15	2728	2.241	0.592	17.73	2728	0.513	0.384	-0.508	2.291	0.951
600T125-68	0.0713	0.605	2.06	2.969	0.950	2.215	0.067	0.332	2.969	0.916	18.09	4347	2.934	0.858	25.69	5350	1.025	0.483	-0.503	2.296	0.952
600T125-97	0.1017	0.862	2.93	4.281	1.347	2.228	0.092	0.326	4.281	1.347	30.43	7359	4.281	1.347	40.33	10885	2.973	0.685	-0.491	2.305	0.955
600T150-33	0.0346	0.311	1.06	1.590	0.517	2.260	0.057	0.426	1.334	0.303	5.99	622	1.234	0.260	7.79	622	0.124	0.390	-0.684	2.399	0.919
600T150-43	0.0451	0.405	1.38	2.072	0.673	2.261	0.073	0.424	1.890	0.474	9.36	1377	1.775	0.411	12.31	1377	0.275	0.504	-0.680	2.398	0.920
600T150-54	0.0566	0.509	1.73	2.611	0.843	2.266	0.091	0.422	2.473	0.689	13.62	2728	2.400	0.609	18.24	2728	0.543	0.632	-0.675	2.401	0.921
600T150-68	0.0713	0.641	2.18	3.309	1.059	2.273	0.113	0.419	3.262	0.963	19.03	4347	3.162	0.891	26.68	5350	1.086	0.797	-0.669	2.406	0.923
600T150-97	0.1017	0.913	3.11	4.778	1.504	2.288	0.156	0.413	4.778	1.504	29.71	7359	4.778	1.444	43.23	10885	3.148	1.138	-0.656	2.415	0.926
600T200-33	0.0346	0.346	1.18	1.913	0.622	2.352	0.126	0.604	1.542	0.333	6.59	622	1.504	0.275	8.23	622	0.138	0.847	-1.048	2.645	0.843
600T200-43	0.0451	0.451	1.53	2.494	0.809	2.353	0.163	0.602	2.076	0.565	11.16	1377	2.025	0.460	13.76	1377	0.305	1.098	-1.044	2.643	0.844
600T200-54	0.0566	0.565	1.92	3.145	1.015	2.359	0.203	0.600	2.759	0.759	15.00	2728	2.641	0.717	21.48	2728	0.604	1.381	-1.038	2.646	0.846
600T200-68	0.0713	0.712	2.42	3.990	1.277	2.367	0.254	0.597	3.696	1.034	20.42	4347	3.540	0.973	29.12	5350	1.206	1.746	-1.031	2.650	0.849
600T200-97	0.1017	1.015	3.45	5.773	1.816	2.385	0.354	0.591	5.758	1.667	32.95	7359	5.558	1.568	46.94	10885	3.499	2.510	-1.016	2.659	0.854
600T250-43	0.0451	0.496	1.69	2.916	0.946	2.425	0.303	0.781	2.269	0.563	11.13	1377	2.210	0.457	13.67	1377	0.336	2.004	-1.436	2.925	0.759
600T250-54	0.0566	0.622	2.12	3.678	1.187	2.432	0.377	0.779	3.014	0.793	15.68	2728	2.881	0.732	21.92	2728	0.664	2.523	-1.430	2.927	0.761
600T250-68	0.0713	0.783	2.67	4.670	1.495	2.442	0.472	0.776	4.065	1.085	21.45	4347	3.871	1.017	30.46	5350	1.327	3.198	-1.422	2.930	0.764
600T250-97	0.1017	1.116	3.80	6.767	2.129	2.462	0.662	0.770	6.441	1.775	35.08	7359	6.157	1.656	49.58	10885	3.849	4.616	-1.406	2.938	0.771
600T300-54	0.0566	0.679	2.31	4.212	1.359	2.492	0.622	0.957	3.239	0.821	16.22	2728	3.108	0.722	21.61	2728	0.725	4.129	-1.842	3.243	0.677
600T300-68	0.0713	0.854	2.91	5.350	1.712	2.502	0.778	0.954	4.389	1.126	22.25	4347	4.164	1.053	31.53	5350	1.448	5.239	-1.834	3.246	0.681
600T300-97	0.1017	1.218	4.15	7.762	2.442	2.524	1.096	0.948	7.034	1.857	36.69	7359	6.681	1.724	51.62	10885	4.200	7.582	-1.816	3.251	0.688

For section properties table notes see page 4

A = Cross-sectional area

I_x = Moment of inertia (x-axis)

S_x = Section modulus (x-axis)

R_x = Radius of gyration (x-axis)

I_y = Moment of inertia (y-axis)

R_y = Radius of gyration (y-axis)

Ma = Allowable bending moment

Va = Allowable shear force

J = St. Venant 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

β = Beta coefficient