

Structural studs & track 3-5/8"

Member	Thickness in	Area in ²	Weight lb/ft	Gross properties					33 ksi effective properties				50 ksi effective properties				Torsional properties				
				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
362S137-33	0.0346	0.236	0.80	0.479	0.264	1.424	0.059	0.501	0.479	0.232	4.59	1024	0.479	0.198	5.94	1083	0.094	0.162	-1.026	1.826	0.684
362S137-43	0.0451	0.306	1.04	0.616	0.340	1.419	0.075	0.497	0.616	0.320	6.32	1739	0.616	0.293	8.78	2141	0.207	0.204	-1.015	1.814	0.687
362S137-54	0.0566	0.379	1.29	0.756	0.417	1.411	0.091	0.490	0.756	0.402	7.94	2341	0.756	0.381	11.42	3372	0.405	0.246	-1.006	1.801	0.688
362S137-68	0.0713	0.470	1.60	0.922	0.509	1.401	0.109	0.480	0.922	0.498	9.84	2884	0.922	0.493	14.77	4370	0.797	0.294	-0.996	1.784	0.689
362S137-97	0.1017	0.648	2.20	1.229	0.678	1.377	0.137	0.460	1.229	0.662	13.09	3922	1.229	0.662	19.83	5943	2.233	0.375	-0.975	1.749	0.689
362S162-33	0.0346	0.262	0.89	0.551	0.304	1.450	0.099	0.616	0.551	0.268	5.29	1024	0.551	0.235	7.04	1083	0.105	0.293	-1.335	2.065	0.582
362S162-43	0.0451	0.340	1.16	0.710	0.392	1.445	0.127	0.611	0.710	0.372	7.34	1739	0.710	0.321	9.62	2141	0.230	0.371	-1.323	2.052	0.585
362S162-54	0.0566	0.422	1.44	0.873	0.481	1.438	0.154	0.604	0.873	0.466	9.22	2341	0.873	0.444	13.28	3372	0.451	0.449	-1.314	2.040	0.585
362S162-68	0.0713	0.524	1.78	1.069	0.590	1.429	0.186	0.596	1.069	0.579	11.43	2884	1.069	0.574	17.18	4370	0.887	0.540	-1.305	2.024	0.585
362S162-97	0.1017	0.724	2.46	1.435	0.792	1.408	0.241	0.577	1.435	0.776	15.33	3922	1.435	0.776	23.23	5943	2.496	0.699	-1.286	1.992	0.583
362S200-33	0.0346	0.297	1.01	0.648	0.358	1.478	0.177	0.772	0.648	0.291	5.76	1024	0.629	0.258	7.73	1083	0.118	0.571	-1.770	2.432	0.470
362S200-43	0.0451	0.385	1.31	0.836	0.461	1.474	0.227	0.767	0.836	0.427	8.43	1739	0.836	0.376	11.26	2141	0.261	0.726	-1.758	2.419	0.472
362S200-54	0.0566	0.479	1.63	1.030	0.568	1.467	0.277	0.761	1.030	0.553	10.93	2341	1.030	0.490	14.66	3372	0.511	0.884	-1.750	2.407	0.471
362S200-68	0.0713	0.595	2.02	1.265	0.698	1.458	0.337	0.753	1.265	0.687	13.58	2884	1.265	0.666	19.95	4370	1.008	1.070	-1.741	2.393	0.470
362S200-97	0.1017	0.826	2.81	1.711	0.944	1.44	0.446	0.735	1.711	0.928	18.34	3922	1.711	0.928	27.80	5943	2.847	1.404	-1.724	2.363	0.468
362S250-43	0.0451	0.430	1.46	0.980	0.541	1.510	0.385	0.946	0.980	0.451	8.91	1739	0.957	0.394	11.81	2141	0.292	1.219	-2.230	2.854	0.390
362S250-54	0.0566	0.535	1.82	1.210	0.668	1.504	0.473	0.940	1.210	0.583	11.52	2341	1.203	0.521	15.60	3372	0.571	1.489	-2.222	2.843	0.389
362S250-68	0.0713	0.666	2.27	1.490	0.822	1.496	0.578	0.931	1.490	0.782	15.46	2884	1.490	0.690	20.67	4370	1.129	1.812	-2.213	2.829	0.388
362S250-97	0.1017	0.927	3.16	2.027	1.118	1.478	0.772	0.912	2.027	1.103	21.79	3922	2.027	1.055	31.59	5943	3.197	2.402	-2.196	2.800	0.385
362S300-54	0.0566	0.634	2.16	1.433	0.791	1.503	0.863	1.166	1.433	0.687	13.58	2341	1.390	0.614	18.39	3372	0.677	3.805	-2.995	3.549	0.288
362S300-68	0.0713	0.791	2.69	1.770	0.976	1.496	1.062	1.158	1.770	0.948	18.73	2884	1.770	0.858	25.69	4370	1.341	4.657	-2.989	3.537	0.286
362S300-97	0.1017	1.105	3.76	2.420	1.335	1.480	1.440	1.141	2.420	1.319	26.07	3922	2.420	1.307	39.12	5943	3.811	6.255	-2.976	3.514	0.283
362T100-33	0.0346	0.194	0.66	0.378	0.200	1.394	0.016	0.288	0.352	0.166	3.28	1024	0.338	0.157	4.71	1039	0.078	0.041	-0.481	1.502	0.898
362T100-43	0.0451	0.253	0.86	0.492	0.260	1.394	0.021	0.286	0.481	0.232	4.58	1739	0.464	0.219	6.56	2141	0.172	0.053	-0.477	1.501	0.899
362T100-54	0.0566	0.318	1.08	0.622	0.326	1.400	0.026	0.284	0.622	0.311	6.15	2480	0.613	0.295	8.82	3372	0.339	0.066	-0.473	1.504	0.901
362T100-68	0.0713	0.400	1.36	0.792	0.409	1.407	0.032	0.281	0.792	0.409	9.09	3104	0.792	0.398	11.90	4703	0.678	0.084	-0.469	1.509	0.903
362T100-97	0.1017	0.570	1.94	1.152	0.579	1.422	0.043	0.274	1.152	0.579	13.45	4370	1.152	0.579	19.96	6622	1.965	0.120	-0.461	1.520	0.908
362T125-33	0.0346	0.212	0.72	0.438	0.232	1.438	0.030	0.377	0.384	0.174	3.44	1024	0.368	0.164	4.92	1039	0.085	0.075	-0.667	1.630	0.832
362T125-43	0.0451	0.276	0.94	0.571	0.302	1.439	0.039	0.375	0.531	0.245	4.84	1739	0.508	0.230	6.89	2141	0.187	0.097	-0.663	1.628	0.834
362T125-54	0.0566	0.346	1.18	0.723	0.378	1.445	0.048	0.373	0.705	0.332	6.57	2480	0.678	0.312	9.34	3372	0.369	0.122	-0.659	1.632	0.837
362T125-68	0.0713	0.436	1.48	0.921	0.475	1.454	0.060	0.370	0.921	0.453	8.95	3104	0.907	0.427	12.78	4703	0.738	0.155	-0.655	1.637	0.840
362T125-97	0.1017	0.621	2.11	1.343	0.675	1.471	0.082	0.363	1.343	0.675	15.24	4370	1.343	0.675	20.20	6622	2.140	0.223	-0.646	1.647	0.846
362T150-33	0.0346	0.229	0.78	0.499	0.264	1.475	0.050	0.467	0.414	0.180	3.56	1024	0.395	0.170	5.09	1039	0.091	0.123	-0.865	1.772	0.762
362T150-43	0.0451	0.298	1.02	0.650	0.343	1.476	0.064	0.465	0.574	0.255	5.04	1739	0.547	0.239	7.15	2141	0.202	0.160	-0.860	1.771	0.764
362T150-54	0.0566	0.374	1.27	0.823	0.431	1.483	0.080	0.462	0.769	0.349	6.89	2480	0.735	0.325	9.74	3372	0.400	0.201	-0.856	1.774	0.767
362T150-68	0.0713	0.471	1.60	1.050	0.542	1.492	0.099	0.459	1.034	0.480	9.49	3104	0.993	0.449	13.43	4703	0.799	0.256	-0.852	1.779	0.771
362T150-97	0.1017	0.672	2.29	1.534	0.771	1.512	0.138	0.453	1.534	0.771	15.23	4370	1.534	0.733	21.94	6622	2.315	0.37	-0.843	1.789	0.778
362T200-33	0.0346	0.264	0.90	0.619	0.328	1.532	0.110	0.645	0.464	0.190	3.76	1024	0.445	0.167	5.00	1039	0.105	0.269	-1.282	2.100	0.627
362T200-43	0.0451	0.343	1.17	0.808	0.427	1.534	0.142	0.643	0.649	0.270	5.34	1739	0.615	0.252	7.55	2141	0.233	0.349	-1.277	2.097	0.629
362T200-54	0.0566	0.431	1.47	1.024	0.536	1.541	0.177	0.640	0.879	0.372	7.35	2480	0.832	0.345	10.34	3372	0.460	0.441	-1.273	2.099	0.632
362T200-68	0.0713	0.543	1.85	1.307	0.675	1.552	0.221	0.638	1.199	0.519	10.26	3104	1.138	0.480	14.37	4703	0.919	0.562	-1.268	2.104	0.636
362T200-97	0.1017	0.773	2.63	1.917	0.963	1.575	0.308	0.631	1.915	0.867	17.14	4370	1.839	0.803	24.06	6622	2.666	0.820	-1.259	2.112	0.645
362T250-43	0.0451	0.389	1.32	0.966	0.510	1.577	0.260	0.818	0.713	0.281	5.56	1739	0.672	0.262	7.85	2141	0.263	0.640	-1.715	2.469	0.517
362T250-54	0.0566	0.487	1.66	1.224	0.641	1.585	0.324	0.816	0.971	0.389	7.69	2480	0.914	0.360	10.77	3372	0.521	0.810	-1.711	2.471	0.520
362T250-68	0.0713	0.614	2.09	1.565	0.808	1.597	0.406	0.813	1.337	0.546	10.79	3104	1.259	0.502	15.04	4703	1.040	1.035	-1.706	2.474	0.524
362T250-97	0.1017	0.875	2.98	2.300	1.155	1.621	0.570	0.807	2.180	0.928	18.34	4370	2.069	0.851	25.49	6622	3.016	1.517	-1.696	2.481	0.533
362T300-54	0.0566	0.544	1.85	1.425	0.746	1.618	0.531	0.988	1.051	0.402	7.94	2480	0.985	0.371	11.11	3372	0.581	1.336	-2.163	2.876	0.435
362T300-68	0.0713	0.685	2.33	1.823	0.941	1.631	0.665	0.985	1.456	0.566	11.19	3104	1.364	0.519	15.55	4703	1.161	1.708	-2.158	2.879	0.438
362T300-97	0.1017	0.977	3.32	2.682	1.348	1.657	0.937	0.979	2.409	0.972	19.21	4370	2.268	0.887	26.54	6622	3.367	2.512	-2.147	2.884	0.446

For section properties table notes see page 5

- 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. 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