

## Stud Section Properties

### Table Notes

- 1 Inside bend radius values are shown in the General Notes.
- 2 Gross section properties are based on the full-unreduced cross section of the stud sections, away from the punchouts.
- 3 The factored moment resistance for design is based on the lesser of local and distortional buckling. Distortional buckling is based on an assumed rotational stiffness of  $K_{\phi} = 0$ .

Stud Designation	Lip (mm)	Base Design Thickness (mm)	F <sub>y</sub> (MPa)	GROSS							PERFORATED EFFECTIVE							TORSIONAL							
				Mass (Kg/m)	Area (E+03) (mm <sup>2</sup> )	I <sub>x</sub> (E+06) (mm <sup>4</sup> )	r <sub>x</sub> (mm)	I <sub>y</sub> (E+06) (mm <sup>4</sup> )	r <sub>y</sub> (mm)	V <sub>rg</sub> (kN)	I <sub>xd</sub> (E+06) (mm <sup>4</sup> )	S <sub>xo</sub> (E+03) (mm <sup>3</sup> )	M <sub>rx</sub> LB (kN-m)	M <sub>rx</sub> DB (kN-m)	V <sub>m</sub> (kN)	M <sub>ry</sub> LB web comp. (kN-m)	M <sub>ry</sub> LB lip comp. (kN-m)	M <sub>ry</sub> DB lip comp. (kN-m)	J (mm <sup>4</sup> )	C <sub>w</sub> (E+06) (mm <sup>6</sup> )	x <sub>o</sub> (mm)	m (mm)	r <sub>o</sub> (mm)	β	L <sub>u</sub> (mm)
162S125-18	4.78	0.478	230	0.406	0.0517	0.0157	17.4	0.00666	11.4	1.72	0.0137	0.503	0.103	0.0977	0.565	0.0591	0.0601	0.0501	3.93	2.47	26.1	15.1	33.4	0.388	737
162S125-33	4.78	0.879	230	0.737	0.0937	0.0279	17.2	0.0117	11.2	3.42	0.0275	1.13	0.232	0.216	0.596	0.105	0.105	0.112	24.1	4.21	25.7	14.8	32.9	0.391	742
250S125-18	4.78	0.478	230	0.490	0.0623	0.0413	25.8	0.00774	11.2	1.46	0.0366	0.973	0.199	0.156	1.11	0.0608	0.0675	0.0516	4.74	6.27	23.0	13.8	36.2	0.599	734
250S125-33	4.78	0.879	230	0.890	0.113	0.0740	25.6	0.0136	10.9	5.55	0.0728	2.05	0.421	0.357	2.27	0.116	0.118	0.116	29.2	10.8	22.5	13.5	35.8	0.605	732
250S125-43	4.78	1.146	230	1.15	0.146	0.0948	25.5	0.0172	10.8	7.21	0.0938	2.89	0.592	0.507	2.25	0.149	0.149	0.158	64.1	13.5	22.2	13.3	35.5	0.608	732
362S125-18	4.78	0.478	230	0.597	0.0760	0.0973	35.8	0.00870	10.7	0.983	0.0873	1.22	0.251	0.234	0.930	0.0610	0.0694	0.0537	5.77	14.5	20.0	12.4	42.3	0.778	732
362S125-33	4.78	0.879	230	1.09	0.138	0.175	35.6	0.0152	10.5	5.82	0.172	2.98	0.610	0.552	2.97	0.117	0.122	0.122	35.6	25.2	19.5	12.2	41.9	0.783	724
362S125-43	4.78	1.146	230	1.41	0.179	0.225	35.4	0.0193	10.4	9.89	0.223	4.40	0.901	0.797	3.84	0.152	0.154	0.165	78.4	31.6	19.3	12.0	41.6	0.786	721
362S125-54	4.78	1.438	345	1.74	0.222	0.275	35.2	0.0230	10.2	19.2	0.273	5.26	1.63	1.41	5.78	0.275	0.277	0.297	153	38.1	18.9	11.8	41.2	0.790	579
362S162-33	12.7	0.879	230	1.33	0.169	0.229	36.8	0.0413	15.6	5.82	0.229	4.39	0.898	0.880	2.97	0.269	0.286	0.298	43.5	79.7	33.2	20.0	52.0	0.592	1082
362S162-43	12.7	1.146	230	1.72	0.219	0.296	36.7	0.0528	15.5	9.89	0.296	6.10	1.25	1.23	3.84	0.354	0.365	0.391	95.9	101	32.9	19.9	51.7	0.594	1080
362S162-54	12.7	1.438	345	2.14	0.272	0.363	36.5	0.0642	15.3	19.2	0.363	7.26	2.25	2.18	5.78	0.653	0.671	0.720	188	123	32.6	19.7	51.3	0.597	874
362S162-68	12.7	1.811	345	2.65	0.338	0.445	36.3	0.0774	15.1	24.9	0.445	9.41	2.92	2.87	5.72	0.804	0.806	0.867	369	148	32.1	19.4	50.8	0.600	874
362S162-97	12.7	2.583	345	3.67	0.467	0.597	35.8	0.100	14.7	33.8	0.597	12.7	4.68*	4.68	4.98	1.04	1.04	1.12	1039	194	31.1	18.9	49.6	0.606	800
362S200-33	15.9	0.879	230	1.50	0.191	0.270	37.5	0.0736	19.6	5.82	0.265	4.82	0.986	1.01	2.97	0.405	0.416	0.428	49.3	155	44.2	26.2	61.2	0.478	1359
362S200-43	15.9	1.146	230	1.95	0.248	0.348	37.4	0.0944	19.5	9.89	0.348	6.99	1.43	1.42	3.84	0.535	0.556	0.597	109	197	43.9	26.0	60.9	0.480	1359
362S200-54	15.9	1.438	345	2.42	0.309	0.429	37.3	0.115	19.3	19.2	0.429	8.01	2.49	2.51	5.78	0.994	1.03	1.06	213	240	43.6	25.8	60.5	0.482	1100
362S200-68	15.9	1.811	345	3.01	0.384	0.527	37.0	0.140	19.1	24.9	0.527	10.9	3.39	3.33	5.72	1.24	1.25	1.34	420	292	43.1	25.6	59.9	0.484	1100
362S200-97	15.9	2.583	345	4.18	0.533	0.713	36.6	0.186	18.7	33.8	0.712	15.2	5.43*	5.45	4.98	1.63	1.63	1.77	1185	387	42.1	25.0	58.8	0.487	1026
362S250-33	15.9	0.879	230	1.68	0.214	0.316	38.5	0.125	24.2	5.82	0.298	5.16	1.06	1.08	2.97	0.557	0.576	0.529	55.0	259	56.2	32.6	72.2	0.395	1628
362S250-43	15.9	1.146	230	2.18	0.277	0.408	38.4	0.160	24.0	9.89	0.405	7.36	1.51	1.54	3.84	0.738	0.768	0.749	121	330	55.9	32.4	71.9	0.396	1628
362S250-54	15.9	1.438	345	2.71	0.345	0.504	38.2	0.197	23.9	19.2	0.483	8.42	2.61	2.69	5.78	1.38	1.43	1.32	238	404	55.5	32.2	71.5	0.397	1318
362S250-68	15.9	1.811	345	3.37	0.430	0.620	38.0	0.240	23.6	24.9	0.614	11.3	3.50	3.59	5.72	1.72	1.74	1.76	470	493	55.0	32.0	70.9	0.398	1321
362S250-97	15.9	2.583	345	4.70	0.598	0.844	37.6	0.322	23.2	33.8	0.844	17.1	5.98*	5.50	4.98	2.30	2.30	2.52	1331	658	54.0	31.5	69.7	0.401	1252
362S300-33	15.9	0.879	230	1.85	0.236	0.363	39.2	0.193	28.6	5.82	0.325	5.37	1.10	1.13	2.97	0.728	0.756	0.626	60.8	397	68.2	39.0	83.7	0.336	1885
362S300-43	15.9	1.146	230	2.41	0.307	0.468	39.1	0.248	28.4	9.89	0.441	7.52	1.54	1.62	3.84	0.966	1.01	0.894	134	507	67.9	38.9	83.4	0.336	1887
362S300-54	15.9	1.438	345	3.00	0.382	0.579	38.9	0.305	28.3	19.2	0.525	8.66	2.69	2.82	5.78	1.81	1.87	1.57	263	622	67.5	38.7	82.9	0.337	1529
362S300-68	15.9	1.811	345	3.74	0.476	0.714	38.7	0.375	28.1	24.9	0.675	11.7	3.64	3.81	5.72	2.27	2.29	2.12	520	761	67.1	38.4	82.4	0.337	1532
362S300-97	15.9	2.583	345	5.21	0.664	0.975	38.3	0.505	27.6	33.8	0.960	18.8	5.84	5.91	4.98	3.07	3.07	3.27	1477	1021	66.0	37.9	81.2	0.338	1544
400S125-18	4.78	0.478	230	0.632	0.081	0.123	39.0	0.00891	10.5	0.885	0.110	1.36	0.278	0.261	0.885	0.061	0.0710	0.0543	6.12	18.1	19.2	12.1	44.7	0.817	729
400S125-33	4.78	0.879	230	1.15	0.147	0.221	38.8	0.0157	10.3	5.54	0.217	3.32	0.681	0.619	3.38	0.118	0.125	0.123	37.8	31.6	18.7	11.8	44.3	0.821	721
400S125-43	4.78	1.146	230	1.49	0.190	0.284	38.7	0.0198	10.2	9.89	0.281	4.94	1.01	0.897	4.61	0.154	0.158	0.166	83.2	39.7	18.5	11.7	44.0	0.824	716
400S125-54	4.78	1.438	345	1.85	0.236	0.348	38.4	0.0236	10.0	19.2	0.344	5.91	1.83	1.59	6.96	0.278	0.284	0.301	162	47.9	18.1	11.5	43.6	0.828	577
400S162-33	12.7	0.879	230	1.39	0.177	0.288	40.3	0.0427	15.5	5.54	0.288	4.89	1.00	0.984	3.38	0.270	0.293	0.302	45.7	97.4	32.1	19.5	53.8	0.644	1074
400S162-43	12.7	1.146	230	1.81	0.230	0.371	40.2	0.0546	15.4	9.89	0.371	6.83	1.40	1.39	4.61	0.356	0.374	0.395	101	123	31.8	19.3	53.5	0.647	1069
400S162-54	12.7	1.438	345	2.24	0.286	0.457	40.0	0.0663	15.2	19.2	0.457	8.15	2.53	2.45	6.96	0.658	0.687	0.728	197	150	31.4	19.2	53.1	0.649	864
400S162-68	12.7	1.811	345	2.79	0.355	0.560	39.7	0.0800	15.0	27.7	0.560	10.6	3.30	3.24	7.72	0.815	0.825	0.877	388	182	31.0	18.9	52.6	0.653	864
400S162-97	12.7	2.583	345	3.86	0.492	0.755	39.2	0.104	14.5	37.9	0.755	14.6	5.38*	5.38	6.87	1.06	1.06	1.14	1094	239	30.0	18.4	51.5	0.660	790
400S200-33	15.9	0.879	230	1.57	0.200	0.338	41.1	0.0762	19.5	5.54	0.332	5.38	1.10	1.13	3.38	0.406	0.426	0.432	51.4	187	42.9	25.6	62.5	0.530	1349
400S200-43	15.9	1.146	230	2.03	0.259	0.436	41.0	0.0977	1																

Stud Designation	Lip (mm)	Base Design Thickness (mm)	F <sub>y</sub> (MPa)	GROSS							PERFORATED EFFECTIVE								TORSIONAL						L <sub>u</sub> (mm)
				Mass (Kg/m)	Area (E+03) (mm <sup>2</sup> )	I <sub>x</sub> (E+06) (mm <sup>4</sup> )	r <sub>x</sub> (mm)	I <sub>y</sub> (E+06) (mm <sup>4</sup> )	r <sub>y</sub> (mm)	V <sub>rg</sub> (kN)	I <sub>xd</sub> (E+06) (mm <sup>4</sup> )	S <sub>xe</sub> (E+03) (mm <sup>3</sup> )	M <sub>rxLB</sub> (kN-m)	M <sub>rxDB</sub> (kN-m)	V <sub>rn</sub> (kN)	M <sub>ryLB</sub> web comp. (kN-m)	M <sub>ryLB</sub> lip comp. (kN-m)	M <sub>ryDB</sub> lip comp. (kN-m)	J (mm <sup>4</sup> )	C <sub>w</sub> (E+06) (mm <sup>6</sup> )	x <sub>o</sub> (mm)	m (mm)	r <sub>o</sub> (mm)	β	
600S125-33	4.78	0.879	230	1.50	0.191	0.587	55.4	0.0173	9.53	3.63	0.560	6.05	1.24	0.972	3.63	0.120	0.133	0.128	49.3	80.6	15.4	10.1	58.3	0.930	699
600S125-43	4.78	1.146	230	1.95	0.248	0.756	55.2	0.0219	9.40	8.04	0.747	9.08	1.86	1.43	7.05	0.157	0.168	0.173	109	102	15.2	9.98	58.0	0.931	693
600S125-54	4.78	1.438	345	2.42	0.309	0.931	54.9	0.0261	9.19	16.0	0.922	11.0	3.42	2.59	11.1	0.285	0.304	0.312	213	123	14.9	9.80	57.6	0.933	556
600S162-33	12.7	0.879	230	1.74	0.222	0.746	58.0	0.0484	14.8	3.63	0.746	9.46	1.94	1.55	3.63	0.273	0.313	0.322	57.2	231	27.2	17.2	65.7	0.828	1044
600S162-43	12.7	1.146	230	2.26	0.288	0.964	57.8	0.0618	14.6	8.04	0.964	12.6	2.84*	2.20	7.05	0.362	0.400	0.411	126	294	27.0	17.0	65.5	0.830	988
600S162-54	12.7	1.438	345	2.82	0.359	1.19	57.6	0.0751	14.5	16.0	1.19	15.0	5.15*	3.91	11.1	0.670	0.737	0.757	247	359	26.6	16.8	65.1	0.833	795
600S162-68	12.7	1.811	345	3.51	0.447	1.47	57.3	0.0907	14.2	30.4	1.47	19.1	6.70*	5.28	16.4	0.836	0.889	0.914	489	437	26.2	16.6	64.6	0.835	782
600S162-97	12.7	2.583	345	4.89	0.623	2.00	56.6	0.118	13.8	59.6	2.00	26.2	9.64*	8.07	21.7	1.13	1.15	1.19	1385	578	25.3	16.2	63.5	0.841	754
600S200-33	15.9	0.879	230	1.92	0.244	0.864	59.4	0.087	18.9	3.63	0.850	10.2	2.08	1.77	3.63	0.410	0.459	0.449	62.9	428	37.0	22.9	72.5	0.740	1311
600S200-43	15.9	1.146	230	2.49	0.317	1.12	59.3	0.112	18.8	8.04	1.12	14.3	2.93	2.52	7.05	0.547	0.613	0.626	139	546	36.7	22.7	72.2	0.742	1306
600S200-54	15.9	1.438	345	3.10	0.395	1.38	59.1	0.137	18.6	16.0	1.38	16.6	5.16	4.46	11.1	1.02	1.14	1.12	272	669	36.4	22.5	71.9	0.744	1054
600S200-68	15.9	1.811	345	3.87	0.493	1.71	58.8	0.166	18.4	30.4	1.71	21.6	7.42*	6.02	16.4	1.28	1.38	1.42	539	818	35.9	22.3	71.3	0.746	998
600S200-97	15.9	2.583	345	5.40	0.689	2.34	58.2	0.221	17.9	59.6	2.34	30.7	11.0*	9.33	21.7	1.78	1.83	1.89	1531	1096	35.0	21.8	70.3	0.752	973
600S250-33	15.9	0.879	230	2.09	0.267	0.992	61.0	0.148	23.6	3.63	0.941	10.6	2.18	1.85	3.63	0.565	0.641	0.547	68.7	716	47.9	29.0	81.1	0.651	1588
600S250-43	15.9	1.146	230	2.72	0.347	1.28	60.9	0.191	23.4	8.04	1.27	15.0	3.08	2.67	7.05	0.754	0.854	0.776	152	916	47.6	28.9	80.7	0.652	1582
600S250-54	15.9	1.438	345	3.39	0.432	1.59	60.7	0.234	23.3	16.0	1.52	17.5	5.43	4.69	11.1	1.41	1.59	1.38	298	1126	47.2	28.7	80.3	0.654	1280
600S250-68	15.9	1.811	345	4.23	0.539	1.97	60.4	0.286	23.1	30.4	1.94	22.7	7.04	6.36	16.4	1.79	1.94	1.84	589	1382	46.8	28.4	79.8	0.657	1278
600S250-97	15.9	2.583	345	5.92	0.754	2.70	59.9	0.384	22.6	59.6	2.70	33.8	11.8*	10.0	21.7	2.51	2.59	2.69	1677	1865	45.8	27.9	78.7	0.661	1199
600S300-33	15.9	0.879	230	2.27	0.289	1.12	62.3	0.230	28.2	3.63	1.02	10.9	2.22	1.90	3.63	0.738	0.845	0.641	74.4	1097	59.1	35.2	90.3	0.572	1854
600S300-43	15.9	1.146	230	2.95	0.376	1.45	62.1	0.296	28.1	8.04	1.37	15.5	3.17	2.76	7.05	0.986	1.12	0.919	164	1406	58.8	35.1	90.0	0.574	1849
600S300-54	15.9	1.438	345	3.68	0.468	1.80	62.0	0.364	27.9	16.0	1.64	18.1	5.62	4.85	11.1	1.85	2.10	1.62	323	1733	58.4	34.8	89.6	0.575	1499
600S300-68	15.9	1.811	345	4.59	0.585	2.23	61.7	0.448	27.7	30.4	2.11	23.7	7.35	6.61	16.4	2.35	2.57	2.19	640	2131	57.9	34.6	89.1	0.577	1496
600S300-97	15.9	2.583	345	6.43	0.820	3.07	61.2	0.605	27.2	59.6	3.02	36.8	11.4	10.5	21.7	3.34	3.46	3.42	1823	2894	56.9	34.1	87.9	0.581	1494
800S162-43	12.7	1.146	230	2.72	0.347	1.93	74.6	0.067	13.9	5.97	1.87	16.7	3.42	2.99	5.97	0.364	0.414	0.420	152	557	23.5	15.3	79.5	0.912	1011
800S162-54	12.7	1.438	345	3.39	0.432	2.39	74.3	0.081	13.7	11.9	2.32	20.1	6.24	5.32	11.9	0.675	0.763	0.774	298	682	23.2	15.1	79.1	0.914	815
800S162-68	12.7	1.811	345	4.23	0.539	2.95	74.0	0.098	13.5	24.0	2.93	27.3	8.46	7.29	19.1	0.843	0.920	0.934	589	831	22.8	14.9	78.6	0.916	808
800S162-97	12.7	2.583	345	5.92	0.754	4.04	73.2	0.127	13.0	61.9	4.04	39.8	12.3	11.6	33.8	1.15	1.19	1.22	1677	1105	22.0	14.4	77.5	0.920	795
800S200-43	15.9	1.146	230	2.95	0.376	2.21	76.7	0.121	18.0	5.97	2.21	21.2	4.33	3.45	5.97	0.550	0.636	0.646	164	1020	32.4	20.6	85.2	0.855	1278
800S200-54	15.9	1.438	345	3.68	0.468	2.74	76.4	0.149	17.8	11.9	2.74	24.5	7.61	6.11	11.9	1.02	1.18	1.15	323	1252	32.1	20.4	84.8	0.856	1031
800S200-68	15.9	1.811	345	4.59	0.585	3.39	76.1	0.181	17.6	24.0	3.39	32.2	11.1*	8.34	19.1	1.29	1.44	1.46	640	1534	31.7	20.2	84.3	0.859	975
800S200-97	15.9	2.583	345	6.43	0.820	4.66	75.4	0.240	17.1	61.9	4.66	45.9	16.4*	13.2	33.8	1.80	1.90	1.93	1823	2063	30.8	19.7	83.3	0.863	945
800S250-43	15.9	1.146	230	3.18	0.405	2.50	78.7	0.208	22.7	5.97	2.49	21.5	4.40	3.63	5.97	0.758	0.890	0.801	177	1712	42.5	26.5	92.3	0.787	1562
800S250-54	15.9	1.438	345	3.96	0.505	3.11	78.5	0.256	22.5	11.9	2.98	25.0	7.75	6.41	11.9	1.42	1.66	1.42	348	2108	42.2	26.3	91.9	0.789	1262
800S250-68	15.9	1.811	345	4.95	0.631	3.86	78.2	0.313	22.3	24.0	3.80	33.7	10.5	8.78	19.1	1.80	2.03	1.90	690	2592	41.8	26.1	91.4	0.791	1257
800S250-97	15.9	2.583	345	6.95	0.885	5.32	77.5	0.420	21.8	61.9	5.32	50.0	17.4*	14.1	33.8	2.55	2.71	2.77	1969	3515	40.8	25.6	90.3	0.796	1176
800S300-43	15.9	1.146	230	3.40	0.434	2.80	80.4	0.324	27.3	5.97	2.66	21.5	4.40	3.73	5.97	0.991	1.18	0.941	190	2628	53.0	32.5	100	0.719	1836
800S300-54	15.9	1.438	345	4.25	0.541	3.48	80.2	0.399	27.2	11.9	3.19	25.1	7.80	6.59	11.9	1.86	2.20	1.66	373	3243	52.7	32.3	99.7	0.721	1486
800S300-68	15.9	1.811	345	5.31	0.677	4.32	79.9	0.491	26.9	24.0	4.10	35.1	10.9	9.07	19.1	2.37	2.70	2.26	740	3998	52.2	32.1	99.2	0.723	1481
800S300-97	15.9	2.583	345	7.46	0.951	5.98	79.3	0.664	26.4	61.9	5.88	54.1	16.8	14.7	33.8	3.39	3.64	3.54	2115	5452	51.2	31.6	98.1	0.727	1473

\* Cold work of forming applies

## Joist Section Properties

### Table Notes

- 1 Inside bend radius values are shown in the General Notes.
- 2 Gross section properties are based on the full-unreduced cross section of the joist sections, away from the punchouts.
- 3 The factored moment resistance for design is based on the lesser of local and distortional buckling. Distortional buckling is based on an assumed rotational stiffness of  $K_{\phi} = 0$ .

Stud Designation	Lip (mm)	Base Design Thickness (mm)	F <sub>y</sub> (MPa)	GROSS							PERFORATED EFFECTIVE							TORSIONAL						L <sub>u</sub> (mm)	
				Mass (kg/m)	Area (E+03) (mm <sup>2</sup> )	I <sub>x</sub> (E+06) (mm <sup>4</sup> )	r <sub>x</sub> (mm)	I <sub>y</sub> (E+06) (mm <sup>4</sup> )	r <sub>y</sub> (mm)	V <sub>rg</sub> (kN)	I <sub>xd</sub> (E+06) (mm <sup>4</sup> )	S <sub>xe</sub> (E+03) (mm <sup>3</sup> )	M <sub>rxLB</sub> (kN-m)	M <sub>rxDB</sub> (kN-m)	V <sub>rn</sub> (kN)	M <sub>ryLB</sub> web comp. (kN-m)	M <sub>ryLB</sub> lip comp. (kN-m)	M <sub>ryDB</sub> lip comp. (kN-m)	J (mm <sup>4</sup> )	C <sub>w</sub> (E+06) (mm <sup>6</sup> )	x <sub>o</sub> (mm)	m (mm)	r <sub>o</sub> (mm)		β
600S162-43	12.7	1.146	230	2.26	0.288	0.964	57.8	0.0618	14.6	8.04	0.964	12.6	2.84*	2.20	7.05	0.363	0.400	0.411	126	294	27.0	17.0	65.5	0.830	991
600S162-54	12.7	1.438	345	2.82	0.359	1.19	57.6	0.0751	14.5	16.0	1.19	15.0	5.15*	3.91	11.1	0.670	0.738	0.757	247	359	26.6	16.8	65.1	0.833	798
600S162-68	12.7	1.811	345	3.51	0.447	1.47	57.3	0.0907	14.2	30.4	1.47	19.1	6.70*	5.28	16.4	0.836	0.888	0.914	489	437	26.2	16.6	64.6	0.835	782
600S162-97	12.7	2.583	345	4.89	0.623	2.00	56.6	0.118	13.8	59.6	2.00	26.2	9.64*	8.07	21.7	1.13	1.15	1.19	1385	578	25.3	16.2	63.5	0.841	757
600S200-43	15.9	1.146	230	2.49	0.317	1.12	59.3	0.112	18.8	8.04	1.12	14.3	2.93	2.52	7.05	0.547	0.614	0.626	139	546	36.7	22.7	72.2	0.742	1306
600S200-54	15.9	1.438	345	3.10	0.395	1.38	59.1	0.137	18.6	16.0	1.38	16.6	5.16	4.46	11.1	1.02	1.14	1.12	272	669	36.4	22.5	71.9	0.744	1057
600S200-68	15.9	1.811	345	3.87	0.493	1.71	58.8	0.166	18.4	30.4	1.71	21.6	7.42*	6.02	16.4	1.28	1.38	1.42	539	818	35.9	22.3	71.3	0.746	998
600S200-97	15.9	2.583	345	5.40	0.689	2.34	58.2	0.221	17.9	59.6	2.34	30.7	11.0*	9.33	21.7	1.78	1.83	1.89	1531	1096	35.0	21.8	70.3	0.752	973
600S250-43	15.9	1.146	230	2.72	0.347	1.28	60.9	0.191	23.4	8.04	1.27	15.0	3.08	2.67	7.05	0.754	0.854	0.776	152	916	47.6	28.9	80.7	0.652	1582
600S250-54	15.9	1.438	345	3.39	0.432	1.59	60.7	0.234	23.3	16.0	1.52	17.5	5.43	4.69	11.1	1.41	1.59	1.38	298	1126	47.2	28.7	80.3	0.654	1280
600S250-68	15.9	1.811	345	4.23	0.539	1.97	60.4	0.286	23.1	30.4	1.94	22.7	7.04	6.36	16.4	1.79	1.94	1.84	589	1382	46.8	28.4	79.8	0.657	1278
600S250-97	15.9	2.583	345	5.92	0.754	2.70	59.9	0.384	22.6	59.6	2.70	33.8	11.8*	10.0	21.7	2.51	2.59	2.69	1677	1865	45.8	27.9	78.7	0.661	1199
600S300-43	15.9	1.146	230	2.95	0.376	1.45	62.1	0.296	28.1	8.04	1.37	15.5	3.17	2.76	7.05	0.986	1.12	0.919	164	1406	58.8	35.1	90.0	0.574	1849
600S300-54	15.9	1.438	345	3.68	0.468	1.80	62.0	0.364	27.9	16.0	1.64	18.1	5.62	4.85	11.1	1.85	2.10	1.62	323	1733	58.4	34.8	89.6	0.575	1499
600S300-68	15.9	1.811	345	4.59	0.585	2.23	61.7	0.448	27.7	30.4	2.11	23.7	7.35	6.61	16.4	2.35	2.57	2.19	640	2131	57.9	34.6	89.1	0.577	1496
600S300-97	15.9	2.583	345	6.43	0.820	3.07	61.2	0.605	27.2	59.6	3.02	36.8	11.4	10.5	21.7	3.34	3.46	3.42	1823	2894	56.9	34.1	87.9	0.581	1494
800S162-43	12.7	1.146	230	2.72	0.347	1.93	74.6	0.0666	13.9	5.97	1.87	16.7	3.42	2.99	5.97	0.365	0.414	0.420	152	557	23.5	15.3	79.5	0.912	1011
800S162-54	12.7	1.438	345	3.39	0.432	2.39	74.3	0.0809	13.7	11.9	2.32	20.1	6.24	5.32	11.9	0.675	0.763	0.774	298	682	23.2	15.1	79.1	0.914	815
800S162-68	12.7	1.811	345	4.23	0.539	2.95	74.0	0.0976	13.5	24.0	2.93	27.3	8.46	7.29	19.1	0.844	0.920	0.934	589	831	22.8	14.9	78.6	0.916	810
800S162-97	12.7	2.583	345	5.92	0.754	4.04	73.2	0.127	13.0	61.9	4.04	39.8	12.3	11.6	33.8	1.15	1.20	1.22	1677	1105	22.0	14.4	77.5	0.920	798
800S200-43	15.9	1.146	230	2.95	0.376	2.21	76.7	0.121	18.0	5.97	2.21	21.2	4.33	3.45	5.97	0.550	0.636	0.646	164	1020	32.4	20.6	85.2	0.855	1278
800S200-54	15.9	1.438	345	3.68	0.468	2.74	76.4	0.149	17.8	11.9	2.74	24.5	7.61	6.11	11.9	1.02	1.18	1.15	323	1252	32.1	20.4	84.8	0.856	1034
800S200-68	15.9	1.811	345	4.59	0.585	3.39	76.1	0.181	17.6	24.0	3.39	32.2	11.1*	8.34	19.1	1.29	1.44	1.46	640	1534	31.7	20.2	84.3	0.859	975
800S200-97	15.9	2.583	345	6.43	0.820	4.66	75.4	0.240	17.1	61.9	4.66	45.9	16.4*	13.2	33.8	1.80	1.90	1.93	1823	2063	30.8	19.7	83.3	0.863	945
800S250-43	15.9	1.146	230	3.18	0.405	2.50	78.7	0.208	22.7	5.97	2.49	21.5	4.40	3.63	5.97	0.758	0.890	0.801	177	1712	42.5	26.5	92.3	0.787	1562
800S250-54	15.9	1.438	345	3.96	0.505	3.11	78.5	0.256	22.5	11.9	2.98	25.0	7.75	6.41	11.9	1.42	1.66	1.42	348	2108	42.2	26.3	91.9	0.789	1265
800S250-68	15.9	1.811	345	4.95	0.631	3.86	78.2	0.313	22.3	24.0	3.80	33.7	10.5	8.78	19.1	1.80	2.03	1.90	690	2592	41.8	26.1	91.4	0.791	1260
800S250-97	15.9	2.583	345	6.95	0.885	5.32	77.5	0.420	21.8	61.9	5.32	50.0	17.4*	14.1	33.8	2.55	2.71	2.77	1969	3515	40.8	25.6	90.3	0.796	1179
800S300-43	15.9	1.146	230	3.40	0.434	2.80	80.4	0.324	27.3	5.97	2.66	21.5	4.40	3.73	5.97	0.991	1.18	0.941	190	2628	53.0	32.5	100	0.719	1836
800S300-54	15.9	1.438	345	4.25	0.541	3.48	80.2	0.399	27.2	11.9	3.19	25.1	7.80	6.59	11.9	1.86	2.20	1.66	373	3243	52.7	32.3	99.7	0.721	1486
800S300-68	15.9	1.811	345	5.31	0.677	4.32	79.9	0.491	26.9	24.0	4.10	35.1	10.9	9.07	19.1	2.37	2.70	2.26	740	3998	52.2	32.1	99.2	0.723	1481
800S300-97	15.9	2.583	345	7.46	0.951	5.98	79.3	0.664	26.4	61.9	5.88	54.1	16.8	14.7	33.8	3.39	3.64	3.54	2115	5452	51.2	31.6	98.1	0.727	1473

\* Cold work of forming applies

Stud Designation	Lip (mm)	Base Design Thickness (mm)	F <sub>y</sub> (MPa)	GROSS							PERFORATED EFFECTIVE									TORSIONAL						
				Mass (kg/m)	Area (E+03) (mm <sup>2</sup> )	I <sub>x</sub> (E+06) (mm <sup>4</sup> )	r <sub>x</sub> (mm)	I <sub>y</sub> (E+06) (mm <sup>4</sup> )	r <sub>y</sub> (mm)	V <sub>rg</sub> (kN)	I <sub>xd</sub> (E+06) (mm <sup>4</sup> )	S <sub>xe</sub> (E+03) (mm <sup>3</sup> )	M <sub>rxLB</sub> (kN-m)	M <sub>rxDB</sub> (kN-m)	V <sub>m</sub> (kN)	M <sub>ryLB</sub> web comp. (kN-m)	M <sub>ryLB</sub> lip comp. (kN-m)	M <sub>ryDB</sub> lip comp. (kN-m)	J (mm <sup>4</sup> )	C <sub>w</sub> (E+06) (mm <sup>6</sup> )	x <sub>o</sub> (mm)	m (mm)	r <sub>o</sub> (mm)	β	L <sub>u</sub> (mm)	
1000S162-54	12.7	1.438	345	3.96	0.505	4.14	90.6	0.0851	13.0	9.43	3.87	25.7	7.99	6.58	9.43	0.677	0.777	0.785	348	1127	20.6	13.7	93.8	0.952	795	
1000S162-68	12.7	1.811	345	4.95	0.631	5.13	90.2	0.103	12.8	19.0	4.96	35.3	11.0	9.14	19.0	0.847	0.939	0.948	690	1375	20.3	13.5	93.3	0.953	787	
1000S162-97	12.7	2.583	345	6.95	0.885	7.06	89.3	0.133	12.3	56.0	7.06	53.6	16.6	14.9	40.8	1.16	1.22	1.23	1969	1833	19.5	13.1	92.3	0.955	772	
1000S200-54	15.9	1.438	345	4.25	0.541	4.70	93.1	0.157	17.0	9.43	4.43	27.9	8.66	7.65	9.43	1.03	1.21	1.18	373	2058	28.8	18.7	99.0	0.915	1011	
1000S200-68	15.9	1.811	345	5.31	0.677	5.83	92.8	0.191	16.8	19.0	5.66	39.6	12.3	10.6	19.0	1.30	1.47	1.49	740	2524	28.4	18.5	98.5	0.917	1006	
1000S200-97	15.9	2.583	345	7.46	0.951	8.05	92.0	0.254	16.3	56.0	8.05	61.3	19.0	17.1	40.8	1.82	1.95	1.97	2115	3405	27.6	18.1	97.4	0.920	991	
1000S250-54	15.9	1.438	345	4.54	0.578	5.28	95.6	0.272	21.7	9.43	5.08	30.8	9.55	8.08	9.43	1.42	1.70	1.46	398	3470	38.2	24.3	105	0.868	1247	
1000S250-68	15.9	1.811	345	5.68	0.723	6.56	95.2	0.333	21.4	19.0	6.47	45.3	14.1	11.2	19.0	1.81	2.08	1.94	791	4272	37.8	24.1	105	0.870	1240	
1000S250-97	15.9	2.583	345	7.98	1.02	9.09	94.5	0.446	21.0	56.0	9.08	68.5	23.8*	18.2	40.8	2.57	2.79	2.82	2261	5809	36.9	23.7	104	0.873	1158	
1000S300-54	15.9	1.438	345	4.82	0.615	5.86	97.7	0.426	26.3	9.43	5.33	31.2	9.66	8.32	9.43	1.86	2.26	1.71	423	5341	48.1	30.1	112	0.816	1473	
1000S300-68	15.9	1.811	345	6.04	0.769	7.29	97.4	0.524	26.1	19.0	6.93	45.9	14.2	11.5	19.0	2.38	2.78	2.32	841	6593	47.6	29.9	111	0.818	1468	
1000S300-97	15.9	2.583	345	8.49	1.08	10.1	96.7	0.709	25.6	56.0	9.95	73.7	22.9	18.9	40.8	3.41	3.75	3.63	2407	9015	46.7	29.4	110	0.821	1458	
1200S162-68	12.7	1.811	345	5.68	0.723	8.13	106	0.106	12.1	15.7	7.60	43.3	13.4	10.8	15.7	0.850	0.951	0.958	791	2078	18.3	12.3	108	0.972	767	
1200S162-97	12.7	2.583	345	7.98	1.02	11.2	105	0.138	11.7	46.3	11.1	67.0	20.8	18.0	42.1	1.16	1.24	1.24	2261	2774	17.6	11.9	107	0.973	749	
1200S200-68	15.9	1.811	345	6.04	0.769	9.14	109	0.199	16.1	15.7	8.62	48.5	15.1	12.5	15.7	1.30	1.49	1.50	841	3807	25.8	17.1	113	0.948	983	
1200S200-97	15.9	2.583	345	8.49	1.08	12.7	108	0.264	15.6	46.3	12.5	76.3	23.7	20.8	42.1	1.82	1.98	2.00	2407	5142	25.1	16.7	112	0.950	968	
1200S250-68	15.9	1.811	345	6.40	0.815	10.2	112	0.348	20.7	15.7	9.53	49.2	15.3	13.4	15.7	1.81	2.12	1.98	891	6454	34.6	22.5	119	0.915	1222	
1200S250-97	15.9	2.583	345	9.01	1.15	14.2	111	0.467	20.2	46.3	14.0	82.5	25.6	22.1	42.1	2.58	2.84	2.87	2553	8790	33.8	22.0	118	0.918	1207	
1200S300-68	15.9	1.811	345	6.76	0.861	11.2	114	0.549	25.2	15.7	10.7	54.3	16.9	13.9	15.7	2.39	2.83	2.36	941	9970	43.8	28.0	125	0.877	1453	
1200S300-97	15.9	2.583	345	9.52	1.21	15.7	114	0.744	24.8	46.3	15.4	95.5	29.6	23.2	42.1	3.43	3.83	3.69	2699	13656	43.0	27.6	124	0.880	1440	
1400S162-68	12.7	1.811	345	6.40	0.815	12.1	122	0.109	11.6	13.4	10.9	51.4	15.9	12.1	13.4	0.851	0.959	0.965	891	2945	16.6	11.4	123	0.982	747	
1400S162-97	12.7	2.583	345	9.01	1.15	16.7	121	0.142	11.1	39.4	16.1	80.5	25.0	20.7	39.4	1.16	1.25	1.25	2553	3934	16.0	11.0	122	0.983	729	
1400S200-68	15.9	1.811	345	6.76	0.861	13.4	125	0.206	15.4	13.4	12.3	57.4	17.8	14.3	13.4	1.30	1.51	1.51	941	5393	23.7	15.9	128	0.966	963	
1400S200-97	15.9	2.583	345	9.52	1.21	18.7	124	0.273	15.0	39.4	18.0	91.4	28.4	24.1	39.4	1.83	2.00	2.01	2699	7292	23.0	15.5	127	0.967	947	
1400S250-68	15.9	1.811	345	7.12	0.907	14.9	128	0.360	19.9	13.4	13.5	58.1	18.0	15.5	13.4	1.81	2.15	1.99	992	9162	31.9	21.0	134	0.943	1201	
1400S250-97	15.9	2.583	345	10.0	1.28	20.7	127	0.483	19.4	39.4	20.1	98.5	30.5	25.9	39.4	2.58	2.88	2.90	2845	12492	31.1	20.6	132	0.945	1186	
1400S300-68	15.9	1.811	345	7.48	0.953	16.3	131	0.570	24.5	13.4	14.3	59.8	18.6	16.2	13.4	2.39	2.88	2.40	1042	14171	40.7	26.4	139	0.915	1435	
1400S300-97	15.9	2.583	345	10.6	1.34	22.8	130	0.772	24.0	39.4	21.7	104	32.4	27.1	39.4	3.44	3.89	3.74	2991	19433	39.8	25.9	138	0.917	1420	

\* Cold work of forming applies

## Track Section Properties

### Table Notes

- 1 Track web depths are equal to the nominal stud depth plus 2 times the design thickness plus the inside bend radius.
- 2 If present, hems are ignored.

Track Designation	Base Design Thickness (mm)	F <sub>y</sub> (MPa)	GROSS							EFFECTIVE			TORSIONAL						
			Mass (kg/m)	Area (E+03) (mm <sup>2</sup> )	I <sub>x</sub> (E+06) (mm <sup>4</sup> )	r <sub>x</sub> (mm)	I <sub>y</sub> (E+06) (mm <sup>4</sup> )	r <sub>y</sub> (mm)	V <sub>rg</sub> (kN)	I <sub>xd</sub> (E+06) (mm <sup>4</sup> )	S <sub>xe</sub> (E+03) (mm <sup>3</sup> )	M <sub>rx</sub> (kN-m)	J (mm <sup>4</sup> )	C <sub>w</sub> (E+06) (mm <sup>6</sup> )	x <sub>o</sub> (mm)	m (mm)	r <sub>o</sub> (mm)	β	L <sub>u</sub> (mm)
162T125-18	0.478	230	0.393	0.0501	0.0174	18.6	0.00545	10.4	1.72	0.0122	0.413	0.0844	3.81	1.88	22.3	12.8	30.7	0.479	645
250T125-18	0.478	230	0.476	0.0607	0.0433	26.7	0.00624	10.2	1.39	0.0319	0.726	0.149	4.61	4.84	19.5	11.7	34.5	0.682	653
362T125-18	0.478	230	0.583	0.0743	0.0990	36.5	0.00695	9.65	0.947	0.0733	1.04	0.214	5.65	11.2	16.9	10.5	41.4	0.833	653
362T125-33	0.879	230	1.07	0.137	0.182	36.5	0.0125	9.58	5.82	0.159	2.85	0.584	35.2	20.3	16.7	10.4	41.4	0.836	653
362T125-43	1.146	230	1.40	0.178	0.238	36.6	0.0161	9.53	9.89	0.219	4.01	0.822	77.8	26.3	16.6	10.3	41.1	0.838	653
362T125-54	1.438	345	1.75	0.223	0.301	36.7	0.0200	9.47	19.2	0.279	5.11	1.59	154	33.1	16.5	10.3	41.4	0.841	531
362T125-68	1.811	345	2.21	0.281	0.383	36.9	0.0248	9.40	26.8	0.375	6.99	2.17	307	41.9	16.3	10.1	41.4	0.846	533
362T125-97	2.583	345	3.14	0.400	0.559	37.4	0.0342	9.25	37.7	0.559	11.1	3.43	891	60.6	15.9	9.9	41.7	0.854	544
362T150-33	0.879	230	1.16	0.148	0.208	37.5	0.0208	11.9	5.83	0.170	2.95	0.606	38.0	33.2	21.7	13.3	45.0	0.766	785
362T150-43	1.146	230	1.51	0.192	0.271	37.5	0.0268	11.8	9.92	0.236	4.18	0.856	84.2	43.1	21.6	13.2	45.0	0.768	787
362T150-54	1.438	345	1.90	0.241	0.343	37.7	0.0333	11.8	19.2	0.302	5.33	1.66	166	54.3	21.4	13.1	45.0	0.772	640
362T150-68	1.811	345	2.39	0.304	0.437	37.9	0.0414	11.7	26.8	0.409	7.36	2.28	332	69.1	21.2	13.0	45.0	0.777	643
362T150-97	2.583	345	3.40	0.434	0.639	38.4	0.0575	11.5	37.7	0.639	12.0	3.73	964	100	20.8	12.7	45.2	0.787	655
362T200-33	0.879	230	1.33	0.170	0.258	38.9	0.0456	16.4	5.83	0.191	3.11	0.638	43.8	72.3	32.3	19.2	53.1	0.631	1041
362T200-43	1.146	230	1.74	0.221	0.336	39.0	0.0591	16.3	9.92	0.266	4.42	0.907	96.9	93.9	32.1	19.1	53.1	0.633	1044
362T200-54	1.438	345	2.18	0.278	0.426	39.1	0.0736	16.3	19.2	0.341	5.65	1.76	192	119	32.0	19.0	53.1	0.638	848
362T200-68	1.811	345	2.75	0.350	0.544	39.4	0.0918	16.2	26.8	0.466	7.87	2.44	383	151	31.8	18.9	53.1	0.643	853
362T200-97	2.583	345	3.92	0.499	0.798	40.0	0.128	16.1	37.7	0.756	13.2	4.09	1110	222	31.3	18.6	53.3	0.655	871
362T300-33	0.879	230	1.69	0.215	0.358	40.8	0.136	25.2	5.82	0.222	3.23	0.661	55.3	218	54.8	31.3	72.9	0.434	1527
362T300-43	1.146	230	2.20	0.280	0.468	40.9	0.177	25.1	9.89	0.313	4.75	0.973	122	283	54.7	31.3	72.6	0.435	1534
362T300-54	1.438	345	2.75	0.351	0.593	41.1	0.221	25.1	19.2	0.402	6.08	1.89	242	359	54.5	31.2	72.6	0.439	1247
362T300-68	1.811	345	3.47	0.442	0.759	41.4	0.277	25.0	26.8	0.556	8.51	2.64	483	459	54.3	31.0	72.6	0.443	1257
362T300-97	2.583	345	4.95	0.630	1.12	42.1	0.390	24.9	37.7	0.924	14.5	4.51	1401	676	53.7	30.7	72.6	0.453	1280
400T125-18	0.478	230	0.619	0.079	0.124	39.6	0.00712	9.50	0.859	0.0897	1.15	0.235	6.00	14.0	16.2	10.2	43.9	0.864	650
400T125-33	0.879	230	1.14	0.145	0.228	39.7	0.0129	9.42	5.34	0.200	3.29	0.674	37.3	25.4	16.0	10.1	43.9	0.867	650
400T125-43	1.146	230	1.48	0.189	0.298	39.7	0.0166	9.37	9.89	0.275	4.62	0.945	82.6	32.8	15.9	10.0	43.7	0.868	650
400T125-54	1.438	345	1.86	0.237	0.376	39.9	0.0205	9.32	19.2	0.351	5.88	1.82	163	41.3	15.8	9.9	43.9	0.871	528
400T125-68	1.811	345	2.34	0.298	0.479	40.1	0.0254	9.25	29.6	0.469	8.00	2.48	326	52.2	15.6	9.8	43.9	0.874	531
400T125-97	2.583	345	3.34	0.425	0.696	40.5	0.0350	9.09	41.8	0.696	12.6	3.91	945	75.1	15.2	9.6	44.2	0.881	536
400T150-33	0.879	230	1.23	0.156	0.259	40.7	0.0214	11.7	5.34	0.214	3.41	0.699	40.2	41.5	20.9	12.9	47.2	0.805	782
400T150-43	1.146	230	1.60	0.203	0.338	40.7	0.0276	11.6	9.92	0.296	4.80	0.984	89.0	53.8	20.8	12.8	47.2	0.807	785
400T150-54	1.438	345	2.00	0.255	0.427	40.9	0.0342	11.6	19.2	0.378	6.13	1.90	176	67.8	20.6	12.7	47.2	0.810	638
400T150-68	1.811	345	2.52	0.321	0.544	41.1	0.0425	11.5	29.6	0.510	8.41	2.61	351	86.0	20.4	12.6	47.2	0.814	640
400T150-97	2.583	345	3.59	0.458	0.792	41.6	0.0590	11.4	41.8	0.792	13.6	4.23	1018	124	20.0	12.4	47.5	0.823	650



Track Designation	Base Design Thickness (mm)	F <sub>y</sub> (MPa)	GROSS							EFFECTIVE			TORSIONAL							L <sub>u</sub> (mm)
			Mass (kg/m)	Area (E+03) (mm <sup>2</sup> )	I <sub>x</sub> (E+06) (mm <sup>4</sup> )	r <sub>x</sub> (mm)	I <sub>y</sub> (E+06) (mm <sup>4</sup> )	r <sub>y</sub> (mm)	V <sub>rg</sub> (kN)	I <sub>xd</sub> (E+06) (mm <sup>4</sup> )	S <sub>xe</sub> (E+03) (mm <sup>3</sup> )	M <sub>rx</sub> (kN-m)	J (mm <sup>4</sup> )	C <sub>w</sub> (E+06) (mm <sup>6</sup> )	x <sub>o</sub> (mm)	m (mm)	r <sub>o</sub> (mm)	β		
400T200-33	0.879	230	1.40	0.179	0.320	42.3	0.0470	16.2	5.34	0.239	3.61	0.738	46.0	90.3	31.2	18.7	55.1	0.479	1041	
400T200-43	1.146	230	1.82	0.232	0.417	42.4	0.0608	16.2	9.92	0.333	5.10	1.04	102	117	31.1	18.6	54.9	0.680	1044	
400T200-54	1.438	345	2.29	0.292	0.528	42.5	0.0758	16.1	19.2	0.426	6.51	2.02	201	148	30.9	18.5	55.1	0.684	848	
400T200-68	1.811	345	2.88	0.367	0.673	42.8	0.0945	16.1	29.6	0.579	9.00	2.79	402	188	30.7	18.4	55.1	0.689	853	
400T200-97	2.583	345	4.11	0.523	0.984	43.4	0.132	15.9	41.8	0.933	14.9	4.63	1164	275	30.3	18.2	55.1	0.699	866	
400T300-33	0.879	230	1.75	0.223	0.441	44.5	0.141	25.1	5.34	0.279	3.58	0.732	57.4	271	53.4	30.8	73.9	0.478	1534	
400T300-43	1.146	230	2.28	0.291	0.576	44.5	0.183	25.1	9.89	0.391	5.47	1.12	127	352	53.3	30.7	73.9	0.479	1539	
400T300-54	1.438	345	2.86	0.365	0.730	44.7	0.228	25.0	19.2	0.501	6.99	2.17	251	446	53.1	30.6	73.9	0.482	1252	
400T300-68	1.811	345	3.60	0.459	0.932	45.1	0.286	24.9	29.6	0.689	9.73	3.02	502	570	52.9	30.5	73.7	0.487	1260	
400T300-97	2.583	345	5.14	0.655	1.37	45.7	0.403	24.8	41.8	1.14	16.5	5.11	1456	835	52.3	30.2	73.7	0.497	1280	
600T125-18	0.478	230	0.810	0.103	0.323	56.0	0.00778	8.69	0.569	0.205	1.69	0.346	7.84	35.2	13.3	8.66	58.2	0.948	632	
600T125-33	0.879	230	1.49	0.190	0.594	56.0	0.0141	8.61	3.54	0.500	4.86	0.996	48.8	63.8	13.1	8.56	58.2	0.949	630	
600T125-43	1.146	230	1.94	0.247	0.775	56.0	0.0181	8.56	7.82	0.715	7.55	1.55	108	82.4	13.0	8.51	58.2	0.950	627	
600T125-54	1.438	345	2.43	0.310	0.976	56.1	0.0224	8.51	15.5	0.912	9.70	3.01	214	103	12.9	8.43	58.2	0.951	511	
600T125-68	1.811	345	3.06	0.390	1.24	56.3	0.0278	8.43	30.4	1.21	14.1	4.36	427	130	12.8	8.36	58.4	0.952	508	
600T125-97	2.583	345	4.37	0.556	1.78	56.6	0.0383	8.31	61.9	1.78	22.1	6.85	1237	184	12.5	8.15	58.7	0.955	511	
600T150-33	0.879	230	1.58	0.201	0.662	57.4	0.0236	10.8	3.56	0.528	4.97	1.02	51.7	105	17.4	11.2	61.0	0.919	767	
600T150-43	1.146	230	2.05	0.261	0.862	57.4	0.0304	10.8	7.83	0.760	7.77	1.59	114	135	17.3	11.1	61.0	0.920	767	
600T150-54	1.438	345	2.58	0.328	1.09	57.6	0.0378	10.7	15.5	0.971	9.98	3.10	226	170	17.1	11.0	61.0	0.921	622	
600T150-68	1.811	345	3.24	0.414	1.38	57.7	0.0469	10.6	30.5	1.30	14.6	4.53	452	214	17.0	10.9	61.2	0.923	622	
600T150-97	2.583	345	4.62	0.589	1.99	58.1	0.0650	10.5	62.0	1.99	23.7	7.34	1310	305	16.7	10.7	61.5	0.926	625	
600T200-33	0.879	230	1.75	0.223	0.796	59.7	0.0526	15.3	3.56	0.624	5.46	1.12	57.4	227	26.6	16.6	67.1	0.843	1039	
600T200-43	1.146	230	2.28	0.291	1.04	59.8	0.0680	15.3	7.83	0.857	9.26	1.89	127	295	26.5	16.6	67.1	0.844	1039	
600T200-54	1.438	345	2.86	0.365	1.31	59.9	0.0847	15.2	15.5	1.09	11.7	3.65	251	371	26.4	16.5	67.3	0.846	843	
600T200-68	1.811	345	3.60	0.459	1.66	60.1	0.106	15.2	30.5	1.46	15.9	4.95	502	469	26.2	16.4	67.3	0.849	846	
600T200-97	2.583	345	5.14	0.655	2.40	60.6	0.148	15.0	62.0	2.29	25.7	7.97	1456	674	25.8	16.1	67.6	0.854	848	
600T300-33	0.879	230	2.10	0.268	1.07	63.1	0.160	24.4	3.54	0.678	5.42	1.11	68.9	677	47.1	28.2	82.3	0.674	1557	
600T300-43	1.146	230	2.74	0.349	1.39	63.1	0.207	24.4	7.82	0.995	9.10	1.86	153	880	46.9	28.2	82.3	0.675	1560	
600T300-54	1.438	345	3.44	0.438	1.75	63.3	0.259	24.3	15.5	1.27	11.8	3.67	302	1109	46.8	28.1	82.3	0.677	1267	
600T300-68	1.811	345	4.33	0.551	2.23	63.6	0.324	24.2	30.4	1.71	17.3	5.35	603	1407	46.6	27.9	82.6	0.681	1270	
600T300-97	2.583	345	6.17	0.786	3.23	64.1	0.456	24.1	61.9	2.74	28.2	8.76	1748	2036	46.1	27.7	82.6	0.688	1280	
800T125-43	1.146	230	2.40	0.305	1.57	71.7	0.0191	7.90	5.87	1.39	10.5	2.15	134	158	11.1	7.42	72.9	0.977	605	
800T125-54	1.438	345	3.01	0.383	1.98	71.8	0.0236	7.85	11.6	1.77	13.5	4.19	264	197	11.0	7.34	73.2	0.977	490	
800T125-68	1.811	345	3.79	0.483	2.50	72.0	0.0293	7.80	23.3	2.43	19.9	6.18	527	247	10.8	7.26	73.2	0.978	488	
800T125-97	2.583	345	5.40	0.688	3.59	72.2	0.0402	7.65	62.0	3.59	33.8	10.5	1529	348	10.6	7.09	73.4	0.979	485	

Track Designation	Base Design Thickness (mm)	F <sub>y</sub> (MPa)	GROSS							EFFECTIVE			TORSIONAL							L <sub>u</sub> (mm)
			Mass (kg/m)	Area (E+03) (mm <sup>2</sup> )	I <sub>x</sub> (E+06) (mm <sup>4</sup> )	r <sub>x</sub> (mm)	I <sub>y</sub> (E+06) (mm <sup>4</sup> )	r <sub>y</sub> (mm)	V <sub>rg</sub> (kN)	I <sub>xd</sub> (E+06) (mm <sup>4</sup> )	S <sub>xe</sub> (E+03) (mm <sup>3</sup> )	M <sub>rx</sub> (kN-m)	J (mm <sup>4</sup> )	C <sub>w</sub> (E+06) (mm <sup>6</sup> )	x <sub>o</sub> (mm)	m (mm)	r <sub>o</sub> (mm)	β		
800T150-43	1.146	230	2.51	0.320	1.72	73.4	0.0322	10.0	5.87	1.47	10.7	2.20	140	261	14.8	9.80	75.7	0.479	744	
800T150-54	1.438	345	3.15	0.401	2.17	73.6	0.0400	9.98	11.6	1.87	13.8	4.29	276	326	14.7	9.73	75.7	0.962	605	
800T150-68	1.811	345	3.97	0.505	2.74	73.7	0.0497	9.91	23.3	2.58	20.6	6.38	552	410	14.6	9.63	75.7	0.963	602	
800T150-97	2.583	345	5.65	0.720	3.95	74.0	0.0688	9.78	62.0	3.95	35.9	11.1	1602	581	14.3	9.45	75.9	0.965	602	
800T200-43	1.146	230	2.74	0.349	2.03	76.4	0.0728	14.5	5.87	1.59	11.1	2.27	153	570	23.2	14.9	81.0	0.918	1024	
800T200-54	1.438	345	3.44	0.438	2.56	76.5	0.0907	14.4	11.6	2.03	14.3	4.43	302	715	23.1	14.8	81.3	0.919	831	
800T200-68	1.811	345	4.33	0.551	3.24	76.7	0.113	14.3	23.3	2.83	21.5	6.66	603	901	22.9	14.7	81.3	0.921	831	
800T200-97	2.583	345	6.17	0.786	4.67	77.1	0.158	14.2	62.0	4.48	38.5	11.9	1748	1287	22.6	14.5	81.5	0.923	831	
800T300-43	1.146	230	3.20	0.407	2.65	80.7	0.225	23.5	5.85	1.91	12.1	2.47	178	1700	42.1	26.0	94.0	0.800	1560	
800T300-54	1.438	345	4.01	0.511	3.34	80.9	0.281	23.4	11.6	2.46	15.7	4.86	352	2138	42.0	25.9	94.0	0.801	1267	
800T300-68	1.811	345	5.05	0.643	4.23	81.1	0.351	23.4	23.2	3.35	25.4	7.87	703	2703	41.8	25.8	94.2	0.803	1267	
800T300-97	2.583	345	7.20	0.917	6.11	81.6	0.494	23.2	61.9	5.27	42.4	13.1	2040	3886	41.4	25.6	94.5	0.808	1273	
1000T125-54	1.438	345	3.58	0.456	3.47	87.2	0.0244	7.32	9.25	2.97	17.3	5.36	314	326	9.55	6.50	88.1	0.988	470	
1000T125-68	1.811	345	4.51	0.574	4.38	87.3	0.0303	7.26	18.5	4.10	25.8	8.01	628	407	9.45	6.43	88.1	0.989	467	
1000T125-97	2.583	345	6.43	0.819	6.28	87.6	0.0416	7.14	54.1	6.28	45.1	14.0	1821	570	9.22	6.27	88.4	0.989	465	
1000T150-54	1.438	345	3.72	0.474	3.77	89.2	0.0415	9.35	9.25	3.11	17.7	5.48	327	541	12.9	8.69	90.7	0.980	584	
1000T150-68	1.811	345	4.69	0.597	4.76	89.3	0.0516	9.30	18.5	4.33	26.6	8.24	653	677	12.8	8.61	90.7	0.980	584	
1000T150-97	2.583	345	6.68	0.852	6.83	89.6	0.0714	9.17	54.1	6.83	47.6	14.8	1894	955	12.6	8.43	90.9	0.981	582	
1000T200-54	1.438	345	4.01	0.511	4.38	92.6	0.0949	13.6	9.25	3.34	18.2	5.65	352	1191	20.5	13.5	95.8	0.954	813	
1000T200-68	1.811	345	5.05	0.643	5.53	92.7	0.118	13.6	18.5	4.70	27.6	8.56	703	1497	20.4	13.4	96.0	0.955	813	
1000T200-97	2.583	345	7.20	0.917	7.94	93.1	0.165	13.4	54.1	7.65	50.5	15.7	2040	2128	20.1	13.2	96.3	0.956	810	
1000T300-54	1.438	345	4.58	0.584	5.59	97.8	0.297	22.6	9.25	3.90	19.5	6.05	402	3569	38.1	24.1	107	0.874	1260	
1000T300-68	1.811	345	5.77	0.735	7.07	98.0	0.372	22.5	18.5	5.72	31.2	9.67	804	4504	37.9	24.0	107	0.876	1260	
1000T300-97	2.583	345	8.23	1.05	10.2	98.5	0.523	22.4	54.0	8.89	58.8	18.2	2332	6447	37.5	23.7	108	0.879	1260	
1200T125-68	1.811	345	5.23	0.666	7.00	103	0.0310	6.81	15.4	6.29	31.7	9.83	728	610	8.36	5.77	103	0.993	450	
1200T125-97	2.583	345	7.46	0.950	10.0	103	0.0426	6.71	45.0	9.81	56.4	17.5	2113	852	8.18	5.64	103	0.994	447	
1200T150-68	1.811	345	5.41	0.689	7.55	105	0.0530	8.76	15.4	6.60	32.6	10.1	754	1019	11.4	7.80	106	0.988	564	
1200T150-97	2.583	345	7.71	0.983	10.8	105	0.0734	8.64	45.0	10.6	59.3	18.4	2186	1433	11.2	7.65	106	0.989	561	
1200T200-68	1.811	345	5.77	0.735	8.65	108	0.122	12.9	15.4	7.11	33.7	10.5	804	2264	18.4	12.3	111	0.972	792	
1200T200-97	2.583	345	8.23	1.05	12.4	109	0.171	12.8	45.0	11.7	62.6	19.4	2332	3208	18.1	12.1	111	0.973	790	
1200T300-68	1.811	345	6.49	0.827	10.9	115	0.388	21.6	15.4	7.92	35.0	10.9	904	6840	34.8	22.4	122	0.918	1245	
1200T300-97	2.583	345	9.26	1.18	15.6	115	0.546	21.5	44.9	13.4	66.4	20.6	2624	9763	34.4	22.1	122	0.920	1245	
1400T125-68	1.811	345	5.95	0.758	10.5	118	0.0315	6.45	13.2	9.00	37.6	11.7	829	856	7.52	5.23	118	0.996	434	
1400T125-97	2.583	345	8.49	1.08	15.0	118	0.0433	6.32	38.5	14.2	67.7	21.0	2405	1194	7.34	5.11	118	0.996	429	
1400T150-68	1.811	345	6.13	0.781	11.2	120	0.0541	8.33	13.2	9.41	38.5	12.0	854	1436	10.3	7.11	121	0.993	546	
1400T150-97	2.583	345	8.74	1.11	16.1	120	0.0748	8.20	38.5	15.3	71.0	22.0	2478	2015	10.1	6.99	121	0.993	541	
1400T200-68	1.811	345	6.49	0.827	12.7	124	0.125	12.3	13.2	10.1	39.9	12.4	904	3207	16.8	11.3	126	0.982	775	
1400T200-97	2.583	345	9.26	1.18	18.2	124	0.175	12.2	38.5	16.8	74.7	23.2	2624	4534	16.5	11.2	126	0.983	770	
1400T300-68	1.811	345	7.22	0.919	15.7	131	0.401	20.9	13.2	11.1	41.3	12.8	1005	9736	32.1	21.0	136	0.944	1229	
1400T300-97	2.583	345	10.3	1.31	22.5	131	0.563	20.7	38.4	18.9	78.9	24.5	2916	13868	31.8	20.8	136	0.946	1227	