



Designation	Mass per metre	Depth of Section h	Width of Section b	Thickness Web s	Thickness Flange t	Root Radius r	Depth between Fillets d	Ratios for Local Buckling		Second Moment of Area		Radius of Gyration		Elastic Modulus		Plastic Modulus		Buckling Parameter u	Torsional Index x	Warping Constant H	Torsional Constant J	Area of Section
								Flange b/2t	Web d/s	Axis x-x	Axis y-y	Axis x-x	Axis y-y	Axis x-x	Axis y-y	Axis x-x	Axis y-y					
457 x 152 x 82	82.1	465.8	155.3	10.5	18.9	10.2	407.6	4.11	38.8	36590	1185.0	18.70	3.37	1571.0	153	1811.0	240.0	0.873	27.4	0.59100	89.20	105.0
457 x 152 x 74	74.2	462.0	154.4	9.6	17.0	10.2	407.6	4.54	42.5	32670	1047.0	18.60	3.33	1414.0	136	1627.0	213.0	0.873	30.1	0.51800	65.90	94.5
457 x 152 x 67	67.2	458.0	153.8	9.0	15.0	10.2	407.6	5.13	45.3	28930	913.0	18.40	3.27	1263.0	119	1453.0	187.0	0.869	33.6	0.44800	47.70	85.6
457 x 152 x 60	59.8	454.6	152.9	8.1	13.3	10.2	407.6	5.75	50.3	25500	795.0	18.30	3.23	1122.0	104	1287.0	163.0	0.868	37.5	0.38700	33.80	76.2
457 x 152 x 52	52.3	449.8	152.4	7.6	10.9	10.2	407.6	6.99	53.6	21370	645.0	17.90	3.11	950.0	84.6	1096.0	133.0	0.859	43.9	0.31100	21.40	66.6
406 x 178 x 74	74.2	412.8	179.5	9.5	16.0	10.2	360.4	5.61	37.9	27310	1545.0	17.00	4.04	1323.0	172	1501.0	267.0	0.882	27.6	0.60800	62.80	94.5
406 x 178 x 67	67.1	409.4	178.8	8.8	14.3	10.2	360.4	6.25	41.0	24330	1365.0	16.90	3.99	1189.0	153	1346.0	237.0	0.880	30.5	0.53300	46.10	85.5
406 x 178 x 60	60.1	406.4	177.9	7.9	12.8	10.2	360.4	6.95	45.6	21600	1203.0	16.80	3.97	1063.0	135	1199.0	209.0	0.880	33.8	0.46600	33.30	76.5
406 x 178 x 54	54.1	402.6	177.7	7.7	10.9	10.2	360.4	8.15	46.8	18720	1021.0	16.50	3.85	930.0	115	1055.0	178.0	0.871	38.3	0.39200	23.10	69.0
406 x 140 x 46	46.0	403.2	142.2	6.8	11.2	10.2	360.4	6.35	53.0	15690	538.0	16.40	3.03	778.0	75.7	888.0	118.0	0.871	38.9	0.20700	19.00	58.6
406 x 140 x 39	39.0	398.0	141.8	6.4	8.6	10.2	360.4	8.24	56.3	12510	410.0	15.90	2.87	629.0	57.8	724.0	90.8	0.858	47.5	0.15500	10.70	49.7
356 x 171 x 67	67.1	363.4	173.2	9.1	15.7	10.2	311.6	5.52	34.2	19460	1362.0	15.10	3.99	1071.0	157	1211.0	243.0	0.886	24.4	0.41200	55.70	85.5
356 x 171 x 57	57.0	358.0	172.2	8.1	13.0	10.2	311.6	6.62	38.5	16040	1108.0	14.90	3.91	896.0	129	1010.0	199.0	0.882	28.8	0.33000	33.40	72.6
356 x 171 x 51	51.0	355.0	171.5	7.4	11.5	10.2	311.6	7.46	42.1	14140	968.0	14.80	3.86	796.0	113	896.0	174.0	0.881	32.1	0.28600	23.80	64.9
356 x 171 x 45	45.0	351.4	171.1	7.0	9.7	10.2	311.6	8.82	44.5	12070	811.0	14.50	3.76	687.0	94.8	775.0	147.0	0.874	36.8	0.23700	15.80	57.3
356 x 127 x 39	39.1	353.4	126.0	6.6	10.7	10.2	311.6	5.89	47.2	10170	580.0	14.30	2.68	576.0	56.8	659.0	89.1	0.871	35.2	0.10500	15.10	49.8
356 x 127 x 33	33.1	349.0	125.4	6.0	8.5	10.2	311.6	7.38	51.9	8249	380.0	14.00	2.58	473.0	44.7	543.0	70.3	0.863	42.2	0.08120	8.79	42.1
305 x 165 x 54	54.0	310.4	166.9	7.9	13.7	8.9	265.2	6.09	33.6	11700	1063.0	13.00	3.93	754	127.0	846.0	196.0	0.889	23.6	0.23400	34.80	68.8
305 x 165 x 46	46.1	306.6	165.7	6.7	11.8	8.9	265.2	7.02	39.6	9899	896.0	13.00	3.90	646	108.0	720.0	166.0	0.891	27.1	0.19500	22.20	58.7
305 x 165 x 40	40.3	303.4	165.0	6.0	10.2	8.9	265.2	8.09	44.2	8503	764.0	12.90	3.86	560	92.6	623.0	142.0	0.889	31.0	0.16400	14.70	51.3
305 x 127 x 48	48.1	311.0	125.3	9.0	14.0	8.9	265.2	4.47	29.5	9575	461.0	12.50	2.74	616	73.6	711.0	116.0	0.873	23.3	0.10200	31.80	61.2
305 x 127 x 42	41.9	307.2	124.3	8.0	12.1	8.9	265.2	5.14	33.2	8196	389.0	12.40	2.70	534	62.6	614.0	98.4	0.872	26.5	0.08460	21.10	53.4
305 x 127 x 37	37.0	304.4	123.3	7.1	10.7	8.9	265.2	5.77	37.4	7171	336.0	12.30	2.67	471	54.5	539.0	85.4	0.872	29.9	0.07250	14.80	47.2
305 x 102 x 33	32.8	312.7	102.4	6.6	10.8	7.6	275.9	4.74	41.8	6501	194.0	12.50	2.15	416	37.9	481.0	60.0	0.866	31.6	0.04420	12.20	41.8
305 x 102 x 28	28.2	308.7	101.8	6.0	8.8	7.6	275.9	5.78	46.0	5366	155.0	12.20	2.08	348	30.5	403.0	48.5	0.859	37.4	0.03490	7.40	35.9
305 x 102 x 25	24.8	305.1	101.6	5.8	7.0	7.6	275.9	7.26	47.6	4455	123.0	11.90	1.97	292	24.2	342.0	38.8	0.846	43.4	0.02730	4.77	31.6
254 x 146 x 43	43.0	259.6	147.3	7.2	12.7	7.6	219.0	5.80	30.4	6544	677.0	10.90	3.52	504	92.0	566.0	141.0	0.891	21.2	0.10300	23.90	54.8
254 x 146 x 37	37.0	256.0	146.4	6.3	10.9	7.6	219.0	6.72	34.8	5537	571.0	10.80	3.48	433	78.0	483.0	119.0	0.890	27.3	0.08570	15.30	47.2
254 x 146 x 31	31.1	251.4	146.1	6.0	8.6	7.6	219.0	8.49	36.5	4413	448.0	10.50	3.36	351	61.3	393.0	94.1	0.880	29.6	0.06600	8.55	39.7
254 x 102 x 28	28.3	260.4	102.2	6.3	10.0	7.6	225.2	5.11	35.7	4005	179.0	10.50	2.22	308	34.9	353.0	54.8	0.874	27.5	0.02800	9.57	36.1
254 x 102 x 25	25.2	257.2	101.9	6.0	8.4	7.6	225.2	6.07	37.5	3415	149.0	10.30	2.15	266	29.2	306.0	46.0	0.866	31.5	0.02300	6.42	32.0
254 x 102 x 22	22.0	254.0	101.6	5.7	6.8	7.6	225.2	7.47	39.5	2841	119.0	10.10	2.06	224	23.5	259.0	37.3	0.856	36.4	0.01820	4.15	28.0
203 x 133 x 30	30.0	206.8	133.9	6.4	9.6	7.6	172.4	6.97	26.9	2896	385.0	8.71	3.17	280	57.5	314.0	88.2	0.881	21.5	0.03740	10.30	38.2
203 x 133 x 25	25.1	203.2	133.2	5.7	7.8	7.6	172.4	8.54	30.2	2340	308.0	8.56	3.10	230	46.2	258.0	70.9	0.877	25.6	0.02940	5.96	32.0
203 x 102 x 23	23.1	203.2	101.8	5.4	9.3	7.6	169.4	5.47	31.4	2105	164.0	8.46	2.36	207	32.2	234.0	49.8	0.888	22.5	0.01540	7.02	29.4
178 x 102 x 19	19.0	177.8	101.2	4.8	7.9	7.6	146.8	6.41	30.6	1356	137.0	7.48	2.37	153	27.0	171.0	41.6	0.888	22.6	0.00987	4.41	24.3
152 x 89 x 16	16.0	152.4	88.7	4.5	7.7	7.6	121.8	5.76	27.1	834	89.8	6.41	2.10	109	20.2	123.0	31.2	0.890	19.6	0.00470	3.56	20.3
127 x 76 x 13	13.0	127.0	76.0	4.0	7.6	7.6	96.6	5.00	24.1	473	55.7	5.35	1.84	74.6	14.7	84.2	22.6	0.895	16.3	0.00199	2.85	16.5