

Section properties Square : 50 mm x 50 mm to 120 mm x 120 mm

Dimensions			Mass	Area	Second moment of area		Radius of gyration		Elastic section modulus		Plastic section modulus		Torsional inertia constant	Torsional modulus constant	Superficial area per meter length	Nominal length per tonne
Nominal size	Thickness				Ix	Iy	ix	iy	Zx	Zy	Zpx	Zpy				
A x B mm	t mm	M kg/m	A cm ²	Ix cm ⁴	Iy cm ⁴	ix cm	iy cm	Zx cm ³	Zy cm ³	Zpx cm ³	Zpy cm ³	cm ⁴	cm ³	m ² /m	m	
50 x 50	1.6	2.38	3.032	11.7	11.7	1.96	1.96	4.68	4.68	5.46	5.46	18.5	7.03	0.195	420	
	2.0	2.93	3.737	14.1	14.1	1.95	1.95	5.66	5.66	6.66	6.66	22.6	8.51	0.193	341	
	2.3	3.34	4.252	15.9	15.9	1.93	1.93	6.34	6.34	7.52	7.52	25.6	9.55	0.192	300	
	2.5	3.60	4.589	16.9	16.9	1.92	1.92	6.78	6.78	8.07	8.07	27.5	10.2	0.191	278	
	3.0	4.25	5.408	19.5	19.5	1.90	1.90	7.79	7.79	9.39	9.39	32.1	11.8	0.190	236	
	3.2	4.50	5.727	20.4	20.4	1.89	1.89	8.16	8.16	9.89	9.89	33.9	12.3	0.189	222	
	4.0	5.45	6.948	23.7	23.7	1.85	1.85	9.49	9.49	11.7	11.7	40.4	14.4	0.186	183	
	4.5	6.02	7.669	25.5	25.5	1.82	1.82	10.2	10.2	12.8	12.8	44.1	15.6	0.185	166	
	5.0	6.56	8.356	27.0	27.0	1.80	1.80	10.8	10.8	13.7	13.7	47.5	16.6	0.183	152	
	6.0	7.56	9.633	29.5	29.5	1.75	1.75	11.8	11.8	15.3	15.3	53.2	18.2	0.179	132	
	60 x 60	1.6	2.88	3.672	20.7	20.7	2.37	2.37	6.89	6.89	7.99	7.99	32.4	10.4	0.235	347
		2.0	3.56	4.537	25.1	25.1	2.35	2.35	8.38	8.38	9.79	9.79	39.8	12.6	0.233	281
2.3		4.06	5.172	28.3	28.3	2.34	2.34	9.44	9.44	11.1	11.1	45.2	14.2	0.232	246	
2.5		4.39	5.589	30.3	30.3	2.33	2.33	10.1	10.1	11.9	11.9	48.7	15.2	0.231	228	
3.0		5.19	6.608	35.1	35.1	2.31	2.31	11.7	11.7	14.0	14.0	57.1	17.7	0.230	193	
3.2		5.50	7.007	36.9	36.9	2.30	2.30	12.3	12.3	14.7	14.7	60.3	18.6	0.229	182	
4.0		6.71	8.548	43.6	43.6	2.26	2.26	14.5	14.5	17.6	17.6	72.6	22.0	0.226	149	
4.5		7.43	9.469	47.2	47.2	2.23	2.23	15.7	15.7	19.3	19.3	79.8	23.9	0.225	135	
5.0		8.13	10.36	50.5	50.5	2.21	2.21	16.8	16.8	20.9	20.9	86.4	25.6	0.223	123	
6.0		9.45	12.03	56.1	56.1	2.16	2.16	18.7	18.7	23.7	23.7	98.4	28.6	0.219	106	
75 x 75		1.6	3.64	4.632	41.3	41.3	2.99	2.99	11.0	11.0	12.7	12.7	64.1	16.5	0.295	275
		2.0	4.50	5.737	50.5	50.5	2.97	2.97	13.5	13.5	15.6	15.6	79.0	20.2	0.293	222
	2.3	5.14	6.552	57.1	57.1	2.95	2.95	15.2	15.2	17.7	17.7	90.0	22.9	0.292	194	
	2.5	5.57	7.089	61.4	61.4	2.94	2.94	16.4	16.4	19.1	19.1	97.1	24.6	0.291	180	
	3.0	6.60	8.408	71.6	71.6	2.92	2.92	19.1	19.1	22.5	22.5	115	28.7	0.290	152	
	3.2	7.01	8.927	75.5	75.5	2.91	2.91	20.1	20.1	23.8	23.8	121	30.3	0.289	143	
	4.0	8.59	10.95	90.2	90.2	2.87	2.87	24.1	24.1	28.8	28.8	147	36.3	0.286	116	
	4.5	9.55	12.17	98.6	98.6	2.85	2.85	26.3	26.3	31.7	31.7	163	39.7	0.285	105	
	5.0	10.5	13.36	106	106	2.82	2.82	28.4	28.4	34.5	34.5	177	42.9	0.283	95.4	
	6.0	12.3	15.63	120	120	2.77	2.77	32.0	32.0	39.6	39.6	205	48.7	0.279	81.5	
	6.3	12.8	16.29	124	124	2.76	2.76	33.0	33.0	41.0	41.0	212	50.3	0.278	78.2	
	8.0	15.5	19.79	141	141	2.67	2.67	37.7	37.7	48.2	48.2	251	57.9	0.273	64.4	
80 x 80	1.6	3.89	4.952	50.4	50.4	3.19	3.19	12.6	12.6	14.5	14.5	78.0	18.9	0.315	257	
	2.0	4.82	6.137	61.7	61.7	3.17	3.17	15.4	15.4	17.8	17.8	96.3	23.2	0.313	208	
	2.3	5.51	7.012	69.9	69.9	3.16	3.16	17.5	17.5	20.3	20.3	110	26.2	0.312	182	
	2.5	5.96	7.589	75.1	75.1	3.15	3.15	18.8	18.8	21.9	21.9	119	28.2	0.311	168	
	3.0	7.07	9.008	87.8	87.8	3.12	3.12	22.0	22.0	25.8	25.8	140	33.0	0.310	141	
	3.2	7.51	9.567	92.7	92.7	3.11	3.11	23.2	23.2	27.3	27.3	148	34.9	0.309	133	
	4.0	9.22	11.75	111	111	3.07	3.07	27.8	27.8	33.1	33.1	180	41.8	0.306	108	
	4.5	10.3	13.07	122	122	3.05	3.05	30.4	30.4	36.5	36.5	200	45.9	0.305	97.5	
	5.0	11.3	14.36	131	131	3.03	3.03	32.9	32.9	39.7	39.7	218	49.7	0.303	88.7	
	6.0	13.2	16.83	149	149	2.98	2.98	37.3	37.3	45.8	45.8	252	56.6	0.299	75.7	
	6.3	13.8	17.55	154	154	2.96	2.96	38.5	38.5	47.5	47.5	262	58.5	0.298	72.6	
	8.0	16.8	21.39	177	177	2.88	2.88	44.3	44.3	56.1	56.1	311	67.8	0.293	59.6	
90 x 90	2.3	6.23	7.932	101	101	3.56	3.56	22.4	22.4	25.9	25.9	158	33.6	0.352	161	
	2.5	6.74	8.589	109	109	3.56	3.56	24.1	24.1	28.0	28.0	170	36.2	0.351	148	
	3.0	8.01	10.21	127	127	3.53	3.53	28.3	28.3	33.0	33.0	201	42.5	0.350	125	
	3.2	8.52	10.85	135	135	3.52	3.52	29.9	29.9	35.0	35.0	214	44.9	0.349	117	
	4.0	10.5	13.35	162	162	3.48	3.48	36.0	36.0	42.6	42.6	261	54.2	0.346	95.4	
	4.5	11.7	14.87	178	178	3.46	3.46	39.5	39.5	47.1	47.1	289	59.6	0.345	85.7	
	5.0	12.8	16.36	193	193	3.43	3.43	42.9	42.9	51.4	51.4	316	64.7	0.343	77.9	
	6.0	15.1	19.23	220	220	3.39	3.39	49.0	49.0	59.5	59.5	368	74.2	0.339	66.2	
	6.3	15.8	20.07	228	228	3.37	3.37	50.7	50.7	61.9	61.9	382	76.8	0.338	63.5	
	100 x 100	1.6	4.89	6.232	100	100	4.01	4.01	20.0	20.0	22.9	22.9	154	30.0	0.395	204
		2.0	6.07	7.737	123	123	3.99	3.99	24.6	24.6	28.3	28.3	191	36.9	0.393	165
		2.3	6.95	8.852	140	140	3.97	3.97	27.9	27.9	32.3	32.3	217	41.9	0.392	144
2.5		7.53	9.589	151	151	3.96	3.96	30.1	30.1	34.9	34.9	235	45.2	0.391	133	
3.0		8.96	11.41	177	177	3.94	3.94	35.4	35.4	41.2	41.2	279	53.2	0.390	112	
3.2		9.52	12.13	187	187	3.93	3.93	37.5	37.5	43.7	43.7	296	56.3	0.389	105	
4.0		11.7	14.95	226	226	3.89	3.89	45.3	45.3	53.3	53.3	362	68.1	0.386	85.2	
4.5		13.1	16.67	249	249	3.87	3.87	49.9	49.9	59.0	59.0	402	75.1	0.385	76.4	
5.0		14.4	18.36	271	271	3.84	3.84	54.2	54.2	64.6	64.6	441	81.7	0.383	69.4	
6.0		17.0	21.63	311	311	3.79	3.79	62.3	62.3	75.1	75.1	514	94.1	0.379	58.9	
6.3		17.7	22.59	323	323	3.78	3.78	64.6	64.6	78.1	78.1	535	97.6	0.378	56.4	
8.0		21.8	27.79	380	380	3.70	3.70	76.0	76.0	93.8	93.8	647	115	0.373	45.8	
9.0	24.1	30.67	408	408	3.65	3.65	81.6	81.6	102	102	706	124	0.369	41.5		
10.0	26.2	33.43	433	433	3.60	3.60	86.5	86.5	110	110	759	132	0.366	38.1		
12.0	30.3	38.53	471	471	3.50	3.50	94.3	94.3	123	123	852	146	0.359	33.1		
120 x 120	6.0	20.8	26.43	562	562	4.61	4.61	93.7	93.7	112	112	913	141	0.459	48.2	
	6.3	21.7	27.63	584	584	4.60	4.60	97.3	97.3	116	116	953	147	0.458	46.1	
	8.0	26.8	34.19	697	697	4.51	4.51	116	116	141	141	1,160	176	0.453	37.3	
	9.0	29.7	37.87	755	755	4.47	4.47	126	126	155	155	1,280	191	0.449	33.6	
	10.0	32.5	41.43	808	808	4.42	4.42	135	135	167	167	1,380	205	0.446	30.8	
	12.0	37.8	48.13	897	897	4.32	4.32	150	150	189	189	1,570	229	0.439	26.5	

Section properties Square : 125 mm x 125 mm to 350 mm x 350 mm

Dimensions			Mass	Area	Second moment of area		Radius of gyration		Elastic section modulus		Plastic section modulus		Torsional inertia constant	Torsional modulus constant	Superficial area per meter length	Nominal length per tonne
Nominal size	Thickness				Ix	Iy	ix	iy	Zx	Zy	Zpx	Zpy				
A x B mm	t mm	M kg/m	A cm ²	Ix cm ⁴	Iy cm ⁴	ix cm	iy cm	Zx cm ³	Zy cm ³	Zpx cm ³	Zpy cm ³	cm ⁴	cm ³	m ² /m	m	
125 x 125	2.3	8.75	11.15	278	278	4.99	4.99	44.5	44.5	51.1	51.1	430	66.8	0.492	114	
	2.5	9.49	12.09	300	300	4.98	4.98	48.1	48.1	55.3	55.3	465	72.1	0.491	105	
	3.0	11.3	14.41	355	355	4.96	4.96	56.7	56.7	65.6	65.6	553	85.1	0.490	88.4	
	3.2	12.0	15.33	376	376	4.95	4.95	60.1	60.1	69.6	69.6	587	90.2	0.489	83.1	
	4.0	14.9	18.95	457	457	4.91	4.91	73.2	73.2	85.3	85.3	722	110	0.486	67.2	
	4.5	16.6	21.17	506	506	4.89	4.89	80.9	80.9	94.8	94.8	804	122	0.485	60.2	
	5.0	18.3	23.36	553												

Section properties Square : 400 mm x 400 mm to 550 mm x 550 mm

Dimensions		Mass	Area	Second moment of area		Radius of gyration		Elastic section modulus		Plastic section modulus		Torsional inertia constant	Torsional modulus constant	Superficial area per meter length	Nominal length per tonne	
Nominal size	Thickness			I _x	I _y	i _x	i _y	Z _x	Z _y	Z _{px}	Z _{py}					
A mm	x B mm	t mm	M kg/m	A cm ²	I _x cm ⁴	I _y cm ⁴	i _x cm	i _y cm	Z _x cm ³	Z _y cm ³	Z _{px} cm ³	Z _{py} cm ³	cm ⁴	cm ³	m ² /m	m
400 x 400	9.0	109	138.7	35,100	35,100	15.9	15.9	1,750	1,750	2,020	2,020	54,500	2,630	1.57	9.19	
	10.0	120	153.4	38,600	38,600	15.9	15.9	1,930	1,930	2,230	2,230	60,200	2,890	1.57	8.30	
	12.0	143	182.5	45,300	45,300	15.8	15.8	2,270	2,270	2,640	2,640	71,300	3,400	1.56	6.98	
	12.5	149	189.7	47,000	47,000	15.7	15.7	2,350	2,350	2,740	2,740	74,100	3,530	1.56	6.71	
	16.0	188	239.2	57,900	57,900	15.6	15.6	2,900	2,900	3,410	3,410	92,700	4,360	1.55	5.33	
	19.0	220	280.3	66,600	66,600	15.4	15.4	3,330	3,330	3,960	3,960	108,000	5,020	1.53	4.55	
22.0	251	320.2	74,700	74,700	15.3	15.3	3,740	3,740	4,480	4,480	122,000	5,640	1.52	3.98		
450 x 450	9.0	123	156.7	50,400	50,400	17.9	17.9	2,240	2,240	2,580	2,580	78,100	3,360	1.77	8.13	
	10.0	136	173.4	55,500	55,500	17.9	17.9	2,470	2,470	2,850	2,850	86,300	3,700	1.77	7.35	
	12.0	162	206.5	65,400	65,400	17.8	17.8	2,910	2,910	3,370	3,370	102,000	4,370	1.76	6.17	
	12.5	169	214.7	67,800	67,800	17.8	17.8	3,020	3,020	3,500	3,500	106,000	4,530	1.76	5.93	
	16.0	213	271.2	84,100	84,100	17.6	17.6	3,740	3,740	4,380	4,380	134,000	5,620	1.75	4.70	
	19.0	250	318.3	97,100	97,100	17.5	17.5	4,310	4,310	5,090	5,090	156,000	6,490	1.73	4.00	
22.0	286	364.2	109,000	109,000	17.3	17.3	4,850	4,850	5,780	5,780	177,000	7,310	1.72	3.50		
500 x 500	9.0	137	174.7	69,800	69,800	20.0	20.0	2,790	2,790	3,200	3,200	108,000	4,190	1.97	7.29	
	10.0	152	193.4	76,900	76,900	19.9	19.9	3,080	3,080	3,540	3,540	119,000	4,610	1.97	6.59	
	12.0	181	230.5	90,800	90,800	19.8	19.8	3,630	3,630	4,200	4,200	141,000	5,450	1.96	5.53	
	12.5	188	239.7	94,100	94,100	19.8	19.8	3,770	3,770	4,360	4,360	147,000	5,650	1.96	5.31	
	16.0	238	303.2	117,000	117,000	19.6	19.6	4,680	4,680	5,460	5,460	185,000	7,030	1.95	4.20	
	19.0	280	356.3	136,000	136,000	19.5	19.5	5,420	5,420	6,370	6,370	216,000	8,150	1.93	3.58	
22.0	320	408.2	153,000	153,000	19.4	19.4	6,120	6,120	7,240	7,240	246,000	9,210	1.92	3.12		
550 x 550	12.0	200	254.5	122,000	122,000	21.9	21.9	4,430	4,430	5,110	5,110	189,000	6,650	2.16	5.00	
	12.5	208	264.7	126,000	126,000	21.9	21.9	4,600	4,600	5,310	5,310	197,000	6,900	2.16	4.81	
	16.0	263	335.2	158,000	158,000	21.7	21.7	5,730	5,730	6,670	6,670	248,000	8,610	2.15	3.80	
	19.0	310	394.3	183,000	183,000	21.5	21.5	6,660	6,660	7,790	7,790	290,000	10,000	2.13	3.23	
	22.0	355	452.2	207,000	207,000	21.4	21.4	7,530	7,530	8,870	8,870	331,000	11,300	2.12	2.82	

Section properties Rectangular : 100 mm x 40 mm to 150 mm x 80 mm

Dimensions		Mass	Area	Second moment of area		Radius of gyration		Elastic section modulus		Plastic section modulus		Torsional inertia constant	Torsional modulus constant	Superficial area per meter length	Nominal length per tonne	
Nominal size	Thickness			I _x	I _y	i _x	i _y	Z _x	Z _y	Z _{px}	Z _{py}					
A mm	x B mm	t mm	M kg/m	A cm ²	I _x cm ⁴	I _y cm ⁴	i _x cm	i _y cm	Z _x cm ³	Z _y cm ³	Z _{px} cm ³	Z _{py} cm ³	cm ⁴	cm ³	m ² /m	m
100 x 40	1.6	3.39	4.312	53.6	12.9	3.52	1.73	10.7	6.44	13.5	7.10	33.9	11.4	0.275	295	
	2.0	4.19	5.337	65.4	15.6	3.50	1.71	13.1	7.81	16.5	8.69	41.5	13.9	0.273	239	
	2.3	4.78	6.092	73.9	17.5	3.48	1.70	14.8	8.77	18.8	9.85	47.0	15.6	0.272	209	
	2.5	5.17	6.589	79.3	18.8	3.47	1.69	15.9	9.39	20.2	10.6	50.5	16.8	0.271	193	
	3.0	6.13	7.808	92.4	21.7	3.44	1.67	18.5	10.8	23.7	12.4	59.0	19.4	0.270	163	
	3.2	6.51	8.287	97.3	22.8	3.43	1.66	19.5	11.4	25.1	13.1	62.3	20.4	0.269	154	
100 x 50	4.0	7.97	10.15	116	26.7	3.38	1.62	23.2	13.3	30.3	15.7	74.5	24.0	0.266	126	
	4.5	8.85	11.27	126	28.8	3.35	1.60	25.2	14.4	33.3	17.1	81.5	26.1	0.265	113	
	1.6	3.64	4.632	61.3	21.1	3.64	2.13	12.3	8.43	15.0	9.33	50.1	14.5	0.295	275	
	2.0	4.50	5.737	75.0	25.7	3.62	2.12	15.0	10.3	18.5	11.5	61.6	17.7	0.293	222	
	2.3	5.14	6.552	84.8	29.0	3.60	2.10	17.0	11.6	21.0	13.0	69.9	20.0	0.292	194	
	2.5	5.57	7.089	91.2	31.1	3.59	2.09	18.2	12.4	22.7	14.0	75.4	21.5	0.291	180	
125 x 40	3.0	6.60	8.408	106	36.1	3.56	2.07	21.3	14.4	26.7	16.4	88.6	25.0	0.290	152	
	3.2	7.01	8.927	112	38.0	3.55	2.06	22.5	15.2	28.2	17.4	93.7	26.4	0.289	143	
	4.0	8.59	10.95	134	44.9	3.50	2.03	26.8	18.0	34.1	20.9	113	31.3	0.286	116	
	4.5	9.55	12.17	147	48.9	3.47	2.00	29.3	19.5	37.6	23.0	124	34.2	0.285	105	
	5.0	10.5	13.36	158	52.5	3.44	1.98	31.7	21.0	40.8	25.0	135	36.8	0.283	95.4	
	6.0	12.3	15.63	179	58.7	3.38	1.94	35.8	23.5	46.9	28.5	154	41.4	0.279	81.5	
125 x 50	1.6	4.01	5.112	94.4	15.8	4.30	1.76	15.1	7.91	19.4	8.63	44.9	14.4	0.325	249	
	2.0	4.98	6.337	116	19.2	4.27	1.74	18.5	9.61	23.8	10.6	55.1	17.5	0.323	201	
	2.3	5.69	7.242	131	21.6	4.25	1.73	20.9	10.8	27.1	12.0	62.4	19.7	0.322	176	
	2.5	6.15	7.839	141	23.2	4.24	1.72	22.5	11.6	29.3	12.9	67.1	21.2	0.321	163	
	3.0	7.31	9.308	165	26.8	4.21	1.70	26.4	13.4	34.4	15.2	78.5	24.5	0.320	137	
	3.2	7.76	9.887	174	28.2	4.19	1.69	27.8	14.1	36.5	16.0	82.8	25.8	0.319	129	
125 x 75	4.0	9.54	12.15	208	33.2	4.14	1.65	33.3	16.6	44.2	19.3	99.2	30.5	0.316	105	
	4.5	10.6	13.52	228	36.0	4.11	1.63	36.5	18.0	48.8	21.1	109	33.2	0.315	94.2	
	1.6	4.26	5.432	107	25.8	4.43	2.18	17.0	10.3	21.3	11.3	67.2	18.3	0.345	235	
	2.0	5.29	6.737	131	31.4	4.41	2.16	20.9	12.6	26.3	13.9	82.7	22.3	0.343	189	
	2.3	6.05	7.702	148	35.5	4.39	2.15	23.7	14.2	29.9	15.7	93.9	25.3	0.342	165	
	2.5	6.55	8.339	160	38.1	4.38	2.14	25.5	15.2	32.3	17.0	101	27.1	0.341	153	
150 x 50	3.0	7.78	9.908	187	44.4	4.34	2.12	29.9	17.7	38.1	20.0	119	31.6	0.340	129	
	3.2	8.26	10.53	198	46.7	4.33	2.11	31.6	18.7	40.4	21.1	126	33.4	0.339	121	
	4.0	10.2	12.95	238	55.6	4.28	2.07	38.0	22.2	49.0	25.5	152	39.8	0.336	98.4	
	4.5	11.3	14.42	261	60.6	4.25	2.05	41.7	24.2	54.2	28.1	167	43.5	0.335	88.4	
	5.0	12.5	15.86	283	65.2	4.22	2.03	45.2	26.1	59.1	30.6	182	47.0	0.333	80.3	
	6.0	14.6	18.63	322	73.3	4.16	1.98	51.6	29.3	68.3	35.1	209	53.1	0.329	68.4	
150 x 75	1.6	4.89	6.232	137	62.8	4.69	3.18	21.9	16.8	26.3	18.6	135	28.0	0.395	204	
	2.0	6.07	7.737	169	77.1	4.67	3.16	27.0	20.6	32.5	22.9	167	34.4	0.393	165	
	2.3	6.95	8.852	192	87.5	4.65	3.14	30.6	23.3	37.0	26.1	190	39.1	0.392	144	
	2.5	7.53	9.589	207	94.2	4.64	3.14	33.0	25.1	40.0	28.2	205	42.1	0.391	133	
	3.0	8.96	11.41	243	111	4.61	3.11	38.9	29.5	47.3	33.3	243	49.5	0.390	112	
	3.2	9.52	12.13	257	117	4.60	3.10	41.1	31.1	50.1	35.3	258	52.3	0.389	105	
150 x 80	4.0	11.7	14.95	311	141	4.56	3.07	49.7	37.5	61.1	43.0	315	63.1	0.386	85.2	
	4.5	13.1	16.67	342	155	4.53	3.04	54.8	41.2	67.7	47.5	349	69.5	0.385	76.4	
	5.0	14.4	18.36	373	168	4.51	3.02	59.6	44.7	74.1	52.0	382	75.6	0.383	69.4	
	6.0	17.0	21.63	428	192	4.45	2.98	68.6	51.1	86.2	60.3	444	86.7	0.379	58.9	
	6.3	17.7	22.59	444	198	4.43	2.96	71.1	52.9	89.6	62.7	462	89.9	0.378	56.4	
	8.0	21.8	27.79	523	232	4.34	2.89	83.7	61.8	108	75.0	554	106	0.373	45.8	
150 x 50	9.0	24.1	30.67	562	248	4.28	2.84	90.0	66.1	117	81.4	602	114	0.369	41.5	
	2.3	6.95	8.852	236	42.0	5.16	2.18	31.4	16.8	40.3	18.5	118				

Section properties Rectangular : 150 mm x 100 mm to 300 mm x 100 mm

Dimensions		Mass	Area	Second moment of area		Radius of gyration		Elastic section modulus		Plastic section modulus		Torsional inertia constant	Torsional modulus constant	Superficial area per meter length	Nominal length per tonne	
Nominal size	Thickness			I _x	I _y	Z _x	Z _y	Z _{px}	Z _{py}							
A x B mm	t mm	M kg/m	A cm ²	I _x cm ⁴	I _y cm ⁴	i _x cm	i _y cm	Z _x cm ³	Z _y cm ³	Z _{px} cm ³	Z _{py} cm ³	cm ⁴	cm ³	m ² /m	m	
150 x 100	2.3	8.75	11.15	361	195	5.69	4.18	48.2	38.9	57.3	43.5	395	63.9	0.492	114	
	2.5	9.49	12.09	390	210	5.68	4.17	52.0	42.0	62.0	47.0	427	69.0	0.491	105	
	3.0	11.3	14.41	461	248	5.65	4.15	61.4	49.5	73.5	55.8	507	81.4	0.490	88.4	
	3.2	12.0	15.33	488	262	5.64	4.14	65.1	52.5	78.0	59.2	539	86.2	0.489	83.1	
	4.0	14.9	18.95	595	319	5.60	4.10	79.3	63.7	95.7	72.5	662	105	0.486	67.2	
	4.5	16.6	21.17	658	352	5.58	4.08	87.8	70.4	106	80.5	736	116	0.485	60.2	
	5.0	18.3	23.36	719	384	5.55	4.05	95.9	76.8	117	88.3	809	127	0.483	54.5	
	6.0	21.7	27.63	835	444	5.50	4.01	111	88.8	137	103	948	147	0.479	46.1	
	6.3	22.7	28.89	868	461	5.48	4.00	116	92.2	142	108	989	153	0.478	44.1	
	8.0	28.1	35.79	1,040	549	5.39	3.92	139	110	173	131	1,210	183	0.473	35.6	
	9.0	31.1	39.67	1,130	595	5.34	3.87	151	119	190	143	1,320	199	0.469	32.1	
	10.0	34.1	43.43	1,210	636	5.28	3.83	161	127	206	155	1,430	213	0.466	29.3	
12.0	39.7	50.53	1,350	705	5.17	3.74	180	141	234	175	1,630	238	0.459	25.2		
175 x 125	4.5	20.2	25.67	1,120	669	6.61	5.11	128	107	153	122	1,330	174	0.585	49.6	
	5.0	22.3	28.36	1,230	733	6.59	5.08	141	117	169	134	1,460	191	0.583	44.9	
	6.0	26.4	33.63	1,440	853	6.53	5.04	164	137	198	158	1,720	222	0.579	37.9	
	6.3	27.6	35.19	1,490	888	6.52	5.02	171	142	207	164	1,800	232	0.578	36.2	
	8.0	34.4	43.79	1,810	1,070	6.43	4.95	207	171	254	201	2,210	280	0.573	29.1	
	9.0	38.2	48.67	1,980	1,170	6.38	4.90	226	187	280	222	2,440	307	0.569	26.2	
	10.0	41.9	53.43	2,140	1,260	6.32	4.85	244	201	304	241	2,660	331	0.566	23.8	
	12.0	49.1	62.53	2,420	1,420	6.22	4.76	276	227	350	276	3,060	375	0.559	20.4	
	200 x 100	3.2	14.5	18.53	981	337	7.28	4.27	98.1	67.5	120	74.7	801	116	0.589	68.8
		4.0	18.0	22.95	1,200	411	7.23	4.23	120	82.2	148	91.7	985	142	0.586	55.5
		4.5	20.2	25.67	1,330	455	7.20	4.21	133	90.9	165	102	1,100	157	0.585	49.6
		5.0	22.3	28.36	1,460	497	7.17	4.19	146	99.4	181	112	1,210	172	0.583	44.9
6.0		26.4	33.63	1,700	577	7.12	4.14	170	115	213	132	1,420	200	0.579	37.9	
6.3		27.6	35.19	1,770	600	7.10	4.13	177	120	223	137	1,480	208	0.578	36.2	
8.0		34.4	43.79	2,150	719	7.00	4.05	215	144	273	167	1,810	251	0.573	29.1	
9.0		38.2	48.67	2,350	782	6.94	4.01	235	156	300	184	1,990	273	0.569	26.2	
10.0		41.9	53.43	2,530	839	6.89	3.96	253	168	327	200	2,160	294	0.566	23.8	
12.0		49.1	62.53	2,860	939	6.77	3.87	286	188	375	228	2,470	331	0.559	20.4	
12.5		50.8	64.73	2,940	961	6.74	3.85	294	192	386	235	2,540	340	0.557	19.7	
200 x 150		4.5	23.7	30.17	1,760	1,130	7.64	6.13	176	151	209	172	2,170	243	0.685	42.2
	5.0	26.2	33.36	1,930	1,250	7.62	6.11	193	166	230	189	2,390	267	0.683	38.2	
	6.0	31.1	39.63	2,270	1,460	7.57	6.06	227	194	271	223	2,830	313	0.679	32.1	
	6.3	32.6	41.49	2,360	1,520	7.55	6.05	236	202	284	233	2,950	326	0.678	30.7	
	8.0	40.7	51.79	2,880	1,850	7.46	5.97	288	246	350	287	3,650	398	0.673	24.6	
	9.0	45.3	57.67	3,170	2,020	7.41	5.93	317	270	386	317	4,040	437	0.669	22.1	
	10.0	49.8	63.43	3,440	2,190	7.36	5.88	344	292	422	346	4,420	474	0.666	20.1	
	12.0	58.5	74.53	3,920	2,500	7.26	5.79	392	333	488	399	5,130	542	0.659	17.1	
	12.5	60.6	77.23	4,040	2,560	7.23	5.76	404	342	504	412	5,290	557	0.657	16.5	
	250 x 100	4.5	23.7	30.17	2,330	557	8.78	4.30	186	111	235	124	1,470	198	0.685	42.2
		5.0	26.2	33.36	2,550	610	8.75	4.28	204	122	259	136	1,620	217	0.683	38.2
		6.0	31.1	39.63	2,990	710	8.69	4.23	239	142	305	160	1,900	253	0.679	32.1
6.3		32.6	41.49	3,120	738	8.67	4.22	250	148	318	167	1,990	264	0.678	30.7	
8.0		40.7	51.79	3,800	889	8.57	4.14	304	178	392	204	2,430	319	0.673	24.6	
9.0		45.3	57.67	4,170	969	8.51	4.10	334	194	433	225	2,680	348	0.669	22.1	
10.0		49.8	63.43	4,520	1,040	8.44	4.05	362	209	473	245	2,910	376	0.666	20.1	
12.0		58.5	74.53	5,160	1,170	8.32	3.97	413	235	547	281	3,340	425	0.659	17.1	
225 x 175		4.5	27.2	34.67	2,610	1,780	8.67	7.16	232	203	273	230	3,300	323	0.785	36.7
		5.0	30.1	38.36	2,870	1,950	8.64	7.13	255	223	301	254	3,640	356	0.783	33.2
		6.0	35.8	45.63	3,370	2,290	8.59	7.09	300	262	356	300	4,310	418	0.779	27.9
250 x 150		4.5	27.2	34.67	3,000	1,370	9.31	6.29	240	183	290	205	2,980	306	0.785	36.7
	5.0	30.1	38.36	3,300	1,510	9.28	6.27	264	201	320	225	3,280	337	0.783	33.2	
	6.0	35.8	45.63	3,890	1,770	9.23	6.23	311	236	378	266	3,890	396	0.779	27.9	
	6.3	37.5	47.79	4,060	1,840	9.21	6.21	324	246	395	278	4,060	413	0.778	26.7	
	8.0	46.9	59.79	4,970	2,250	9.12	6.13	398	300	489	344	5,030	505	0.773	21.3	
	9.0	52.3	66.67	5,480	2,470	9.07	6.09	438	330	542	380	5,580	556	0.769	19.1	
	10.0	57.6	73.43	5,960	2,680	9.01	6.04	477	358	593	416	6,100	604	0.766	17.3	
	12.0	67.9	86.53	6,860	3,070	8.90	5.95	548	409	689	482	7,100	694	0.759	14.7	
	12.5	70.4	89.73	7,060	3,160	8.87	5.93	565	421	712	498	7,340	715	0.757	14.2	
	300 x 100	4.5	27.2	34.67	3,700	660	10.3	4.36	246	132	316	145	1,860	239	0.785	36.7
		5.0	30.1	38.36	4,070	723	10.3	4.34	271	145	348	160	2,040	262	0.783	33.2
		6.0	35.8	45.63	4,780	842	10.2	4.30	319	168	411	188	2,400	306	0.779	27.9
6.3		37.5	47.79	4,980	877	10.2	4.28	332	175	430	196	2,510	319	0.778	26.7	
8.0		46.9	59.79	6,100	1,060	10.1	4.21	407	212	532	241	3,070	386	0.773	21.3	
9.0		52.3	66.67	6,720	1,160	10.0	4.16	448	231	589	266	3,390	423	0.769	19.1	

Section properties Rectangular : 250 mm. x 200 mm to 600 mm x 300 mm

Dimensions		Mass	Area	Second moment of area		Radius of gyration		Elastic section modulus		Plastic section modulus		Torsional inertia constant	Torsional modulus constant	Superficial area per meter length	Nominal length per tonne
Nominal size	Thickness			I _x	I _y	Z _x	Z _y	Z _{px}	Z _{py}						
A x B mm	t mm	M kg/m	A cm ²	I _x cm ⁴	I _y cm ⁴	i _x cm	i _y cm	Z _x cm ³	Z _y cm ³	Z _{px} cm ³	Z _{py} cm ³	cm ⁴	cm ³	m ² /m	m
250 x 200	6.0	40.5	51.63	4,780	3,400	9.62	8.11	382	340	451	388	6,240	538	0.879	24.7
	6.3	42.5	54.09	4,990	3,550	9.61	8.10	399	355	472	406	6,530	562	0.878	23.6
	8.0	53.2	67.79	6,140	4,360	9.52	8.02	492	436	586	503	8,120	692	0.873	18.8
	9.0	59.4	75.67	6,790	4,810	9.47	7.97	543	481	650	5				