

DATABASE OF STRUCTURAL STEEL SECTIONS

I-sections (Parallel flange)

	Designation	h	b	t _w	t _f	r ₁	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	J	C _w	Z _{plx}	Z _{ply}	h/t _f	h _w
	mmxmmxkg/m	mm	mm	mm	mm	mm	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴	10 ⁹ mm ⁶	10 ³ mm ³	10 ³ mm ³		mm
Hot-rolled steel	IPE-AA 100	97.6	55	3.6	4.5	7	6.72	0.856	1.36	27.8	39.8	0.126	4.57	12.1	7.33	0.272	31.9	7.23	21.7	74.6
	IPE 100	100	55	4.1	5.7	7	8.1	1.03	1.71	34.2	40.7	0.159	5.79	12.4	12.1	0.354	39.4	9.15	17.5	74.6
	IPE-AA 120	117	64	3.8	4.8	7	8.36	1.06	2.44	41.7	47.9	0.211	6.59	14.1	9.55	0.663	47.6	10.4	24.4	93.4
	IPE 120	120	64	4.4	6.3	7	10.4	1.32	3.18	53	49	0.277	8.65	14.5	17.4	0.894	60.7	13.6	19	93.4
	IPE-AA 140	136.6	73	3.8	5.2	7	10.1	1.28	4.07	59.7	56.4	0.338	9.27	16.3	12	1.46	67.6	14.5	26.3	112
	IPE 140	140	73	4.7	6.9	7	12.9	1.64	5.41	77.3	57.4	0.449	12.3	16.5	24.6	1.99	88.3	19.2	20.3	112
	IPE-AA 160	156.4	82	4	5.6	9	12.3	1.57	6.59	84.3	64.8	0.517	12.6	18.1	18.2	2.94	95.2	19.7	27.9	127
	IPE 160	160	82	5	7.4	9	15.8	2.01	8.69	109	65.8	0.683	16.7	18.4	36.2	3.98	124	26.1	21.6	127
	IPE-AA 180	176.4	91	4.3	6.2	9	14.9	1.9	10.2	116	73.2	0.781	17.2	20.3	24.9	5.66	130	26.7	28.5	146
	IPE 180	180	91	5.3	8	9	18.8	2.39	13.2	146	74.2	1.01	22.2	20.5	48.1	7.46	166	34.6	22.5	146
	IPE-AA 200	196.4	100	4.5	6.7	12	18	2.29	15.3	156	81.9	1.12	22.4	22.1	38.7	10.1	176	35	29.3	159
	IPE 200	200	100	5.6	8.5	12	22.4	2.85	19.4	194	82.6	1.42	28.5	22.4	70.2	13.1	221	44.6	23.5	159
	152x89x16	152.4	88.9	4.6	7.7	7.6	16.1	2.05	8.38	110	64	0.904	20.3	21	36.1	4.73	124	31.4	19.8	122
	178x102x19	177.8	101.6	4.7	7.9	7.6	19	2.42	13.6	153	74.9	1.38	27.2	23.9	43.8	9.98	171	41.9	22.5	147
203x133x25	203.2	133.4	5.8	7.8	7.6	25.3	3.22	23.5	231	85.4	3.09	46.3	31	62.1	29.5	259	71.2	26.1	172	
203x133x30	206.8	133.8	6.3	9.6	7.6	29.8	3.8	28.9	279	87.2	3.84	57.4	31.8	103	37.3	313	88	21.5	172	
254x146x31	251.5	146.1	6.1	8.6	7.6	31.3	3.99	44.3	352	105	4.48	61.3	33.5	88.2	66	395	94.2	29.2	219	
254x146x37	256	146.4	6.4	10.9	7.6	37.2	4.74	55.5	433	108	5.71	78	34.7	155	85.7	485	119	23.5	219	
254x146x43	259.6	147.3	7.3	12.7	7.6	43.2	5.5	65.5	505	109	6.77	92	35.1	242	103	568	141	20.4	219	
305x102x25	304.8	101.6	5.8	6.8	7.6	24.5	3.12	43.6	286	118	1.19	23.5	19.6	48	26.5	336	37.8	44.8	276	
305x102x29	308.9	101.9	6.1	8.9	7.6	28.6	3.64	54.4	352	122	1.58	30.9	20.8	78.3	35.5	408	49.2	34.7	276	
305x102x33	312.7	102.4	6.6	10.8	7.6	32.8	4.18	65	416	125	1.94	37.9	21.5	123	44.2	481	60	29	276	
305x165x41	303.8	165.1	6.1	10.2	8.9	40.5	5.16	85.5	563	129	7.66	92.8	38.5	149	165	626	142	29.8	266	
305x165x46	307.1	165.7	6.7	11.8	8.9	46.1	5.88	99.3	647	130	8.96	108	39	223	195	722	166	26	266	
305x165x54	310.9	166.8	7.7	13.7	8.9	53.5	6.82	117	752	131	10.6	127	39.4	345	234	843	195	22.7	266	
356x171x45	352	171	6.9	9.7	10.2	44.8	5.7	121	686	146	8.1	94.7	37.7	160	237	773	146	36.3	312	
356x171x51	355.6	171.5	7.3	11.5	10.2	50.7	6.46	142	796	148	9.68	113	38.7	238	287	895	174	30.9	312	
356x171x57	358.6	172.1	8	13	10.2	56.7	7.22	161	896	149	11.1	129	39.1	334	330	1010	198	27.6	312	
356x171x67	364	173.2	9.1	15.7	10.2	67.2	8.55	195	1070	151	13.6	157	39.9	560	413	1210	243	23.2	312	
406x140x39	397.3	141.8	6.3	8.6	10.2	38.6	4.92	124	625	159	4.1	57.8	28.9	108	155	718	90.7	46.2	360	
406x140x46	402.3	142.4	6.9	11.2	10.2	46.3	5.9	157	779	163	5.4	75.9	30.3	194	207	889	119	35.9	359	
406x178x54	402.6	177.6	7.6	10.9	10.2	53.8	6.86	187	927	165	10.2	115	38.6	233	391	1050	178	36.9	360	
406x178x60	406.4	177.8	7.8	12.8	10.2	59.7	7.61	215	1060	168	12	135	39.7	332	465	1200	209	31.7	360	
406x178x67	409.4	178.8	8.8	14.3	10.2	67.1	8.55	243	1190	169	13.6	153	39.9	465	533	1350	237	28.6	360	
406x178x75	412.8	179.7	9.7	16	10.2	74.8	9.53	274	1330	170	15.5	173	40.3	642	610	1510	268	25.8	360	
457x191x67	453.6	189.9	8.5	12.7	10.2	67.1	8.55	294	1300	185	14.5	153	41.2	376	706	1470	237	35.7	408	
457x191x75	457.2	190.5	9.1	14.5	10.2	74.7	9.51	334	1460	187	16.7	176	42	527	820	1660	273	31.5	408	
457x191x82	460.2	191.3	9.9	16	10.2	82	10.5	371	1610	188	18.7	196	42.3	699	923	1830	304	28.8	408	
457x191x90	463.6	192	10.6	17.7	10.2	89.7	11.4	411	1770	190	20.9	218	42.8	921	1040	2020	339	26.2	408	
457x191x98	467.6	192.8	11.4	19.6	10.2	98.4	12.5	458	1960	191	23.5	243	43.3	1220	1180	2230	379	23.9	408	
533x210x82	528.3	208.7	9.6	13.2	12.7	82.2	10.5	475	1800	213	20	192	43.8	527	1330	2060	300	40	476	
533x210x93	533.1	209.3	10.2	15.6	12.7	92.5	11.8	553	2080	217	23.9	228	45	772	1600	2370	356	34.2	476	
533x210x101	536.7	210.1	10.9	17.4	12.7	101	12.9	616	2300	218	27	257	45.7	1030	1820	2620	400	30.8	476	
533x210x109	539.5	210.7	11.6	18.8	12.7	109	13.9	668	2480	219	29.4	279	46	1280	1990	2830	435	28.7	476	
533x210x122	544.6	211.9	12.8	21.3	12.7	122	15.6	762	2800	221	33.9	320	46.6	1810	2320	3200	500	25.6	477	
533x210x138	549	214	14.7	23.6	12.7	138	17.6	861	3140	221	38.7	362	46.9	2540	2670	3610	569	23.3	476	

I-sections (Taper flange)

	Designation	h	b	t _w	t _f	r ₁	r ₂	β	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	J	C _w	Z _{plx}	Z _{ply}	h/t _f	h _w
	mmxmmxkg/m	mm	mm	mm	mm	mm	mm	deg	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴	10 ⁹ mm ⁶	10 ³ mm ³	10 ³ mm ³		mm
127x76x13	127	76.2	4.5	7.6	7.9	2.4	95	13.4	1.7	4.76	74.9	52.9	0.502	13.2	17.2	37.6	1.79	85.2	21.3	16.7	94.2	
152x89x17	152.4	88.9	4.9	8.3	7.9	2.4	95	17.1	2.18	8.84	116	63.7	0.865	19.5	19.9	53.9	4.49	131	31.5	18.4	118	
178x102x22	177.8	101.6	5.3	9	9.4	3.2	95	21.4	2.73	15.1	170	74.4	1.38	27.3	22.5	81.5	9.86	192	44.2	19.8	138	
203x102x25	203.2	101.6	5.8	10.4	9.4	3.2	95	25.3	3.23	23	226	84.4	1.63	32.1	22.5	117	15.2	257	51.9	19.5	161	
203x152x52	203	152	8.9	16.5	15.5	7.6	98	52.1	6.64	47.8	471	84.8	8.1	107	34.9	667	70.4	539	175	12.3	133	

H-sections (Parallel flange)

Designation mmxmmxkg/m	h	b	t _w	t _t	r ₁	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	J	C _w	Z _{plx}	Z _{ply}	h/t _t	h _w
	mm	mm	mm	mm	mm	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴	10 ⁹ mm ⁶	10 ³ mm ³	10 ³ mm ³		mm
152x152x23	152.4	152.4	6.1	6.8	7.6	23.3	2.97	12.6	165	65.1	4.02	52.7	36.8	51.1	21.3	184	80.5	22.4	124
152x152x30	157.5	152.9	6.6	9.4	7.6	30.1	3.84	17.5	222	67.5	5.6	73.3	38.2	108	30.7	248	112	16.8	123
152x152x37	161.8	154.4	8.1	11.5	7.6	37.1	4.73	22.1	274	68.4	7.06	91.5	38.7	197	39.9	309	140	14.1	124
203x203x46	203.2	203.2	7.3	11	10.2	46.2	5.88	45.6	449	88.1	15.4	151	51.2	225	142	497	230	18.5	161
203x203x52	206.2	203.9	8	12.5	10.2	52.1	6.64	52.5	510	89	17.7	173	51.6	322	166	567	263	16.5	161
203x203x60	209.6	205.2	9.3	14.2	10.2	59.7	7.6	61	582	89.6	20.5	199	51.9	475	195	654	303	14.8	161
203x203x71	215.9	206.2	10.3	17.3	10.2	71.4	9.09	76.3	707	91.6	25.3	245	52.8	817	249	801	373	12.5	161
203x203x86	222.3	208.8	13	20.5	10.2	86.4	11	94.6	851	92.7	31.1	298	53.2	1400	317	978	455	10.8	161
254x254x73	254.2	254	8.6	14.2	12.7	73	9.29	114	896	111	38.8	306	64.6	578	559	990	463	17.9	200
254x254x89	260.4	255.9	10.5	17.3	12.7	89.2	11.4	143	1100	112	48.3	378	65.2	1040	714	1230	574	15.1	200
254x254x107	266.7	258.3	13	20.5	12.7	107	13.7	175	1310	113	58.9	456	65.7	1750	893	1480	695	13	200
254x254x132	276.4	261	15.6	25.1	12.7	132	16.8	224	1620	116	74.5	571	66.6	3180	1180	1860	870	11	201
254x254x167	289.1	264.5	19.2	31.7	12.7	167	21.2	299	2070	119	97.9	740	67.9	6340	1620	2420	1130	9.12	200
305x305x97	307.8	304.8	9.9	15.4	15.2	96.8	12.3	222	1440	134	72.7	477	76.8	919	1550	1590	724	20	247
305x305x118	314.5	306.8	11.9	18.7	15.2	118	15	276	1760	136	90.1	587	77.6	1620	1970	1950	892	16.8	247
305x305x137	320.5	308.7	13.8	21.7	15.2	137	17.4	328	2040	137	106	690	78.2	2510	2380	2290	1050	14.8	247
305x305x158	327.2	310.6	15.7	25	15.2	158	20.1	387	2360	139	125	805	78.9	3810	2850	2670	1230	13.1	247
305x305x198	339.9	314.1	19.2	31.4	15.2	198	25.2	509	2990	142	162	1030	80.2	7440	3860	3440	1580	10.8	247

Channels (Parallel flange)

Designation mmxmmxkg/m	h	b	t _w	t _t	r ₁	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	J	C _w	Z _{plx}	Z _{ply}	h/t _t	h _w	a _c	a _y
	mm	mm	mm	mm	mm	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴	10 ⁹ mm ⁶	10 ³ mm ³	10 ³ mm ³		mm	mm	mm
PFC 100x50	100	50	5	8.4	8.4	10.1	1.29	2.05	41.1	40	0.32	9.79	15.8	24.2	0.49	48.3	17.4	11.9	66.4	34.1	17.3
PFC 180x70	180	70	7	10.9	10.9	21.1	2.68	13.5	150	71	1.27	26.2	21.8	82.3	6.52	177	47.6	16.5	136	43.5	21.5
PFC 200x75	200	75	7.5	11.4	11.4	24.3	3.09	19.1	191	78.6	1.67	31.8	23.2	104	10.6	225	57.7	17.5	154	45.7	22.5
200x90x30	200	90	7	14	12	29.7	3.79	25.2	252	81.6	3.14	53.4	28.8	183	19.7	291	94.6	14.3	148	63.6	31.2
230x75x26	230	75	6.5	12.5	12	25.7	3.27	27.5	239	91.7	1.81	34.8	23.5	118	15.3	278	63.2	18.4	181	47.4	23
230x90x32	230	90	7.5	14	12	32.2	4.1	35.2	306	92.7	3.34	55	28.6	193	27.9	355	99.1	16.4	178	60	29.2
260x75x28	260	75	7	12	12	27.6	3.51	36.2	278	101	1.85	34.4	23	117	20.4	328	62	21.7	212	43.6	21
260x90x35	260	90	8	14	12	34.8	4.44	47.3	364	103	3.53	56.3	28.2	206	38	425	102	18.6	208	56.5	27.4
300x90x41	300	90	9	15.5	12	41.4	5.27	72.2	481	117	4.04	63.1	27.7	288	58.2	568	114	19.4	245	53.3	26
300x100x46	300	100	9	16.5	12	45.3	5.76	81.7	545	119	5.67	81.7	31.4	358	81	636	148	18.2	243	63.1	30.6

Channels (Taper flange)

Designation mmxmmxkg/m	h	b	t _w	t _t	r ₁	r ₂	b ₁	á	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	J	C _w	Z _{plx}	Z _{ply}	h/t _t	h _w	a _c	a _y
	mm	mm	mm	mm	mm	mm	mm	deg	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴	10 ⁹ mm ⁶	10 ³ mm ³	10 ³ mm ³		mm	mm	mm
DIN taper f	lance																							
100x50x11	100	50	6	8.5	8.5	4.5	25.6	94.57	10.5	1.34	2.05	40.9	39.1	0.29	8.4	14.7	26.8	0.372	48.8	16.1	11.8	64.4	31.7	15.5
120x55x13	120	55	7	9	9	4.5	27.5	94.57	13.3	1.7	3.64	60.7	46.3	0.431	11.1	15.9	39.7	0.826	72.7	21.3	13.3	82.1	32.7	16.1
140x60x16	140	60	7	10	10	5	30	94.57	16	2.04	6.05	86.4	54.5	0.625	14.7	17.5	54.8	1.64	103	28.3	14	97.9	36.4	17.6
160x65x19	160	65	7.5	10.5	10.5	5.5	32.5	94.57	18.9	2.4	9.25	116	62.1	0.851	18.3	18.8	71.2	2.95	138	35.2	15.2	116	38.5	18.4
180x70x22	180	70	8	11	11	5.5	35	94.57	22	2.8	13.5	150	69.6	1.14	22.4	20.1	91.1	5.06	179	43.1	16.4	133	40.6	19.3
200x75x25	200	75	8.5	11.5	11.5	6	37.5	94.57	25.3	3.22	19.1	191	77.1	1.48	26.9	21.4	115	8.19	228	51.9	17.4	151	42.7	20.1
BS taper flange																								
76x38x7	76.2	38.1	5.1	6.8	7.6	2.4	16.5	95	6.72	0.855	0.743	19.5	29.5	0.107	4.09	11.2	12	0.085	23.5	7.78	11.2	45.8	23.3	11.9
127x64x15	127	63.5	6.4	9.2	10	2.4	28.5	95	14.9	1.9	4.83	76	50.4	0.672	15.2	18.8	47.2	1.49	89.5	29.3	13.8	84	40.2	19.4
152x76x18	152.4	76.2	6.4	9	12.2	2.4	34.9	95	17.9	2.28	8.51	112	61.1	1.14	21	22.3	56.9	3.62	130	41.2	16.9	106	47.8	22.1
178x54x15	177.8	54	5.8	8.3	8.3	3.2	24.1	92	14.6	1.85	8.6	96.8	68.1	0.461	11.6	15.8	32.8	2.29	115	21.4	21.4	143	29.3	14.2

Angles (Equal leg)

Designation hxbxt mm	r ₁	r ₂	m	A	I _x	Z _x	r _x	I _u	Z _u	r _u	I _v	Z _v	r _v	J	a _y
	mm	mm	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴	mm
25x25x3	3.5	2	1.11	0.142	0.008	0.448	7.49	0.013	0.714	9.43	0.003	0.324	4.83	0.476	7.21
25x25x5	3.5	2	1.77	0.226	0.012	0.708	7.3	0.019	1.07	9.14	0.005	0.462	4.8	1.98	7.98
30x30x3	5	2.5	1.36	0.174	0.014	0.649	8.99	0.022	1.05	11.3	0.006	0.496	5.81	0.635	8.35
30x30x5	5	2.5	2.18	0.278	0.022	1.04	8.83	0.034	1.61	11.1	0.009	0.706	5.75	2.58	9.18
40x40x3	6	3	1.85	0.235	0.035	1.18	12.1	0.055	1.93	15.3	0.014	0.951	7.84	0.882	10.7
40x40x4	6	3	2.42	0.308	0.045	1.55	12.1	0.071	2.51	15.2	0.019	1.17	7.77	1.92	11.2
40x40x5	6	3	2.97	0.379	0.054	1.91	12	0.086	3.04	15.1	0.023	1.38	7.73	3.56	11.6

Hot-rolled steel	40x40x6	6	3	3.52	0.448	0.063	2.26	11.9	0.1	3.53	14.9	0.027	1.56	7.7	5.92	12
	45x45x3	7	3.5	2.1	0.268	0.05	1.52	13.7	0.079	2.49	17.2	0.021	1.25	8.88	1.06	11.9
	45x45x4	7	3.5	2.74	0.349	0.064	1.97	13.6	0.102	3.2	17.1	0.027	1.53	8.76	2.27	12.3
	45x45x5	7	3.5	3.38	0.43	0.078	2.43	13.5	0.124	3.9	17	0.033	1.8	8.71	4.17	12.8
	45x45x6	7	3.5	4	0.509	0.092	2.88	13.4	0.145	4.56	16.9	0.038	2.05	8.67	6.9	13.2
Hot-rolled steel	50x50x3	7	3.5	2.34	0.298	0.07	1.89	15.3	0.11	3.12	19.2	0.029	1.58	9.92	1.15	13.1
	50x50x4	7	3.5	3.06	0.389	0.09	2.46	15.2	0.142	4.02	19.1	0.037	1.94	9.79	2.48	13.6
	50x50x5	7	3.5	3.77	0.48	0.11	3.05	15.1	0.174	4.92	19	0.046	2.29	9.73	4.58	14
	50x50x6	7	3.5	4.47	0.569	0.128	3.61	15	0.203	5.75	18.9	0.053	2.61	9.68	7.62	14.5
	50x50x8	7	3.5	5.82	0.741	0.163	4.68	14.8	0.257	7.27	18.6	0.069	3.19	9.63	17	15.2
	60x60x4	8	4	3.7	0.471	0.158	3.59	18.3	0.25	5.9	23	0.066	2.92	11.8	3.07	16
	60x60x5	8	4	4.57	0.582	0.194	4.45	18.2	0.307	7.24	23	0.08	3.45	11.7	5.64	16.4
	60x60x6	8	4	5.42	0.691	0.228	5.29	18.2	0.361	8.52	22.9	0.094	3.96	11.7	9.36	16.9
	60x60x8	8	4	7.09	0.903	0.292	6.89	18	0.461	10.9	22.6	0.122	4.86	11.6	21	17.7
	60x60x10	8	4	8.69	1.11	0.349	8.41	17.8	0.551	13	22.3	0.148	5.67	11.6	39.2	18.5
	70x70x6	9	4.5	6.38	0.813	0.369	7.27	21.3	0.585	11.8	26.8	0.153	5.6	13.7	11.2	19.3
	70x70x8	9	4.5	8.36	1.06	0.475	9.52	21.1	0.753	15.2	26.6	0.197	6.92	13.6	25	20.1
	70x70x10	9	4.5	10.3	1.31	0.572	11.7	20.9	0.905	18.3	26.3	0.24	8.1	13.5	46.8	20.9
Hot-rolled steel	80x80x6	10	5	7.34	0.935	0.558	9.57	24.4	0.885	15.6	30.8	0.231	7.55	15.7	13	21.7
	80x80x8	10	5	9.63	1.23	0.722	12.6	24.3	1.15	20.3	30.6	0.299	9.37	15.6	29.1	22.6
	80x80x10	10	5	11.9	1.51	0.875	15.4	24.1	1.39	24.5	30.3	0.364	11	15.5	54.5	23.4
	80x80x12	10	5	14	1.79	1.02	18.2	23.9	1.61	28.4	30	0.427	12.5	15.5	91.2	24.1
	90x90x6	11	5.5	8.3	1.06	0.803	12.2	27.6	1.27	20	34.7	0.333	9.8	17.8	15	24.1
	90x90x8	11	5.5	10.9	1.39	1.04	16.1	27.4	1.66	26	34.5	0.431	12.2	17.6	33.3	25
	90x90x10	11	5.5	13.4	1.71	1.27	19.8	27.2	2.01	31.6	34.3	0.526	14.4	17.5	62.4	25.8
	90x90x12	11	5.5	15.9	2.03	1.48	23.3	27	2.34	36.8	34	0.617	16.4	17.4	104	26.6
	100x100x8	12	6	12.2	1.55	1.45	19.9	30.6	2.3	32.5	38.5	0.599	15.5	19.6	37.6	27.4
	100x100x10	12	6	15	1.92	1.77	24.6	30.4	2.8	39.6	38.3	0.73	18.3	19.5	70.3	28.2
	100x100x12	12	6	17.8	2.27	2.07	29.1	30.2	3.28	46.3	38	0.857	20.9	19.4	118	29
	100x100x15	12	6	21.9	2.79	2.49	35.6	29.8	3.93	55.5	37.5	1.04	24.4	19.3	221	30.2
	120x120x8	13	6.5	14.7	1.87	2.55	29.1	36.9	4.05	47.8	46.5	1.05	23.1	23.7	45.4	32.3
120x120x10	13	6.5	18.2	2.32	3.13	36	36.7	4.97	58.6	46.3	1.29	27.5	23.6	85.1	33.1	
120x120x12	13	6.5	21.6	2.75	3.68	42.7	36.5	5.84	68.8	46	1.52	31.6	23.5	143	34	
120x120x15	13	6.5	26.6	3.39	4.45	52.4	36.2	7.05	83.1	45.6	1.85	37.1	23.3	269	35.1	
150x150x10	16	8	23	2.93	6.24	56.9	46.2	9.91	93.4	58.2	2.58	45.1	29.7	110	40.3	
150x150x12	16	8	27.3	3.48	7.37	67.7	46	11.7	110	58	3.03	52	29.5	184	41.2	
150x150x15	16	8	33.8	4.3	8.98	83.5	45.7	14.3	134	57.6	3.7	61.6	29.3	347	42.5	
150x150x18	16	8	40.1	5.1	10.5	98.7	45.4	16.6	157	57.1	4.35	70.5	29.2	584	43.7	
200x200x16	18	9	48.5	6.18	23.4	162	61.6	37.2	263	77.6	9.6	123	39.4	564	55.2	
200x200x18	18	9	54.2	6.91	26	181	61.3	41.3	292	77.3	10.7	135	39.3	790	56	
200x200x20	18	9	59.9	7.63	28.5	199	61.1	45.3	320	77	11.7	146	39.2	1070	56.8	
200x200x24	18	9	71.1	9.06	33.3	235	60.6	52.8	374	76.4	13.8	167	39	1800	58.4	

Angles (Unequal leg)

Hot-rolled steel	Designation	r ₁	r ₂	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	I _u	Z _u	r _u	I _v	Z _v	r _v	J	a _x	a _y	α
	hxbxt mm	mm	mm	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴	mm	mm	deg
	65x50x6	6	3	5.16	0.658	0.272	6.1	20.3	0.14	3.77	14.6	0.338	7.48	22.7	0.074	3.11	10.6	8.44	20.4	12.9	29.9
	65x50x8	6	3	6.75	0.86	0.348	7.93	20.1	0.177	4.89	14.4	0.43	9.57	22.4	0.096	3.99	10.5	19.1	21.1	13.7	29.7
	75x50x6	7	3.5	5.65	0.719	0.405	8.01	23.7	0.144	3.81	14.2	0.466	9.1	25.5	0.084	3.17	10.8	9.42	24.4	12.1	23.5
	75x50x8	7	3.5	7.39	0.941	0.52	10.4	23.5	0.184	4.95	14	0.596	11.7	25.2	0.108	4.1	10.7	21.3	25.2	12.9	23.3
	80x60x6	8	4	6.37	0.811	0.514	9.29	25.2	0.248	5.49	17.5	0.628	11.3	27.8	0.134	4.58	12.9	10.8	24.7	14.8	28.7
	80x60x8	8	4	8.34	1.06	0.663	12.2	25	0.318	7.16	17.3	0.808	14.6	27.6	0.173	5.91	12.7	24.4	25.5	15.6	28.6
	90x65x6	8	4	7.07	0.901	0.734	11.8	28.5	0.323	6.53	18.9	0.879	14.1	31.2	0.178	5.44	14.1	11.9	27.9	15.6	27
	90x65x8	8	4	9.29	1.18	0.949	15.5	28.3	0.415	8.54	18.7	1.13	18.3	31	0.23	7.05	13.9	26.9	28.8	16.4	26.9
	90x65x10	8	4	11.4	1.46	1.15	19	28.1	0.499	10.4	18.5	1.37	22.2	30.7	0.279	8.58	13.8	50.9	29.6	17.2	26.7
	100x65x8	10	5	9.94	1.27	1.27	18.9	31.6	0.422	8.54	18.3	1.44	21.2	33.7	0.248	7.14	14	29.9	32.7	15.5	22.5
	100x65x10	10	5	12.3	1.56	1.54	23.2	31.4	0.51	10.5	18.1	1.75	25.9	33.5	0.302	8.73	13.9	56.2	33.6	16.3	22.3
d steel	100x75x6	10	5	8.04	1.02	1.02	14.7	31.6	0.495	8.67	22	1.25	17.9	34.9	0.268	7.29	16.2	14.1	30.1	17.9	28.7
	100x75x8	10	5	10.6	1.35	1.33	19.3	31.4	0.641	11.4	21.8	1.62	23.4	34.7	0.346	9.48	16	31.6	31	18.7	28.7
	100x75x10	10	5	13	1.66	1.62	23.8	31.2	0.776	14	21.6	1.97	28.5	34.5	0.422	11.6	15.9	59.5	31.9	19.5	28.6

Hot-rolled	100x75x12	10	5	15.4	1.97	1.89	28	31	0.902	16.5	21.4	2.3	33.3	34.2	0.495	13.5	15.9	99.8	32.7	20.3	28.4
	125x75x8	11	5.5	12.2	1.55	2.47	29.6	40	0.676	11.6	20.9	2.74	32.5	42.1	0.409	9.75	16.3	36.7	41.4	16.8	19.8
	125x75x10	11	5.5	15	1.91	3.02	36.5	39.7	0.821	14.3	20.7	3.34	39.9	41.8	0.499	12	16.1	69	42.3	17.6	19.7
	125x75x12	11	5.5	17.8	2.27	3.54	43.2	39.5	0.955	16.9	20.5	3.91	46.9	41.5	0.585	14.1	16.1	116	43.1	18.4	19.5
	150x75x10	11	5.5	17	2.16	5.01	51.8	48.1	0.858	14.6	19.9	5.32	54.4	49.6	0.553	12.3	16	77.4	53.2	16.1	14.6
	150x75x12	11	5.5	20.2	2.57	5.89	61.4	47.9	0.999	17.2	19.7	6.24	64.2	49.3	0.649	14.6	15.9	130	54.1	16.9	14.5
	150x75x15	11	5.5	24.8	3.16	7.13	75.3	47.5	1.2	21	19.4	7.54	78.4	48.8	0.788	17.9	15.8	246	55.3	18.1	14.2
	150x90x10	12	6	18.2	2.32	5.33	53.3	48	1.46	21	25.1	5.91	58.5	50.5	0.883	17.5	19.5	83.6	50	20.4	19.8
	150x90x12	12	6	21.6	2.75	6.27	63.3	47.7	1.71	24.8	24.9	6.94	69.1	50.2	1.04	20.7	19.4	141	50.8	21.2	19.7
	150x90x15	12	6	26.6	3.39	7.61	77.7	47.4	2.05	30.4	24.6	8.41	84.2	49.8	1.26	25.3	19.3	266	52.1	22.3	19.5

Circular hollow sections

	Designation	m	A	I _x	Z _x	r _x	J	Z _{plx}
	D x t mm	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴	10 ³ mm ³
Hollow sections	32.0x2.0	1.48	0.188	0.021	1.33	10.6	0.043	1.80
	32.0x2.5	1.82	0.232	0.025	1.59	10.5	0.051	2.18
	34.1x2.0	1.58	0.202	0.026	1.53	11.4	0.052	2.07
	34.1x2.5	1.95	0.248	0.031	1.83	11.2	0.063	2.51
	34.1x3.0	2.64	0.337	0.040	2.34	10.9	0.080	3.30
	34.1x4.0	2.97	0.379	0.044	2.56	10.7	0.087	3.65
	38.0x2.0	1.78	0.227	0.037	1.95	12.8	0.074	2.61
	38.0x2.5	2.19	0.280	0.045	2.34	12.6	0.089	3.17
	38.0x3.0	2.60	0.331	0.051	2.69	12.5	0.103	3.71
	38.0x4.0	3.36	0.429	0.063	3.31	12.1	0.126	4.67
Hollow sections	42.8x2.0	2.01	0.256	0.053	2.50	14.4	0.107	3.33
	42.8x2.5	2.48	0.317	0.065	3.01	14.3	0.129	4.07
	42.8x3.0	2.94	0.375	0.075	3.49	14.1	0.149	4.76
	42.8x4.0	3.83	0.488	0.093	4.33	13.8	0.185	6.04
	48.4x2.0	2.29	0.292	0.079	3.25	16.4	0.157	4.31
	48.4x2.5	2.83	0.360	0.095	3.93	16.3	0.190	5.27
	48.4x3.0	3.36	0.428	0.111	4.58	16.1	0.221	6.19
	48.4x3.5	3.88	0.494	0.125	5.17	15.9	0.250	7.07
	48.4x4.0	4.38	0.558	0.139	5.73	15.8	0.277	7.91
	Hollow sections	60.3x2.0	2.88	0.366	0.156	5.17	20.6	0.312
60.3x2.5		3.56	0.454	0.190	6.30	20.5	0.380	8.36
60.3x3.0		4.24	0.540	0.223	7.38	20.3	0.445	9.87
60.3x3.5		4.91	0.625	0.253	8.39	20.1	0.506	11.32
60.3x4.0		5.56	0.708	0.282	9.35	20.0	0.564	12.71
60.3x4.5		6.20	0.789	0.310	10.26	19.8	0.619	14.06
63.5x2.0		3.03	0.386	0.183	5.76	21.8	0.366	7.57
63.5x2.5		3.76	0.479	0.223	7.03	21.6	0.446	9.31
63.5x3.0		4.48	0.570	0.262	8.24	21.4	0.523	10.99
63.5x3.5		5.18	0.660	0.298	9.38	21.2	0.596	12.61
63.5x4.0	5.87	0.748	0.332	10.47	21.1	0.665	14.18	
63.5x4.5	6.55	0.834	0.365	11.50	20.9	0.730	15.69	
Hollow sections	76.2x2.5	4.54	0.579	0.393	10.33	26.1	0.787	13.58
	76.2x3.0	5.42	0.690	0.463	12.15	25.9	0.926	16.08
	76.2x3.5	6.28	0.799	0.529	13.89	25.7	1.059	18.51
	76.2x4.0	7.12	0.907	0.593	15.56	25.6	1.186	20.87
	76.2x4.5	7.96	1.014	0.654	17.16	25.4	1.308	23.16
	76.2x5.0	8.78	1.118	0.712	18.69	25.2	1.424	25.39
	76.2x6.0	10.39	1.323	0.821	21.55	24.9	1.642	29.64
	88.9x2.5	5.33	0.679	0.634	14.26	30.6	1.267	18.67
	88.9x3.0	6.36	0.810	0.748	16.82	30.4	1.495	22.15
	88.9x3.5	7.37	0.939	0.857	19.29	30.2	1.715	25.54
88.9x4.0	8.38	1.067	0.963	21.67	30.0	1.927	28.85	
88.9x4.5	9.37	1.193	1.065	23.97	29.9	2.131	32.09	
88.9x5.0	10.35	1.318	1.164	26.18	29.7	2.327	35.24	
88.9x6.0	12.27	1.563	1.349	30.36	29.4	2.699	41.31	
Hollow sections	101.6x2.5	6.11	0.778	0.956	18.82	35.0	1.912	24.56
	101.6x3.0	7.29	0.929	1.130	22.25	34.9	2.261	29.17
	101.6x3.5	8.47	1.079	1.299	25.58	34.7	2.598	33.70
	101.6x4.0	9.63	1.226	1.463	28.80	34.5	2.926	38.12

	101.6x4.5	10.78	1.373	1.621	31.92	34.4	3.243	42.46	
	101.6x5.0	11.91	1.517	1.775	34.93	34.2	3.549	46.70	
	101.6x6.0	14.15	1.802	2.067	40.68	33.9	4.134	54.91	
	114.3x2.5	6.89	0.878	1.373	24.02	39.5	2.745	31.25	
	114.3x3.0	8.23	1.049	1.625	28.44	39.4	3.251	37.17	
	114.3x3.5	9.56	1.218	1.871	32.75	39.2	3.743	42.98	
	114.3x4.0	10.88	1.386	2.111	36.93	39.0	4.221	48.69	
	114.3x4.5	12.19	1.552	2.343	41.00	38.9	4.686	54.28	
	114.3x5.0	13.48	1.717	2.569	44.96	38.7	5.138	59.77	
	114.3x6.0	16.03	2.041	3.002	52.53	38.3	6.004	70.45	
Hollow sections	127.0x2.5	7.68	0.978	1.895	29.85	44.0	3.791	38.76	
	127.0x3.0	9.17	1.169	2.248	35.39	43.9	4.495	46.14	
	127.0x3.5	10.66	1.358	2.591	40.80	43.7	5.182	53.40	
	127.0x4.0	12.13	1.546	2.926	46.08	43.5	5.852	60.54	
	127.0x4.5	13.59	1.732	3.253	51.23	43.3	6.506	67.56	
	127.0x5.0	15.04	1.916	3.571	56.24	43.2	7.143	74.46	
	127.0x6.0	17.90	2.281	4.184	65.90	42.8	8.369	87.92	
	139.7x3.0	10.11	1.288	3.011	43.11	48.3	6.022	56.07	
	139.7x3.5	11.76	1.498	3.475	49.75	48.2	6.950	64.94	
139.7x4.0	13.39	1.705	3.929	56.24	48.0	7.857	73.68		
139.7x4.5	15.00	1.911	4.372	62.59	47.8	8.744	82.29		
139.7x5.0	16.61	2.116	4.805	68.80	47.7	9.611	90.76		
139.7x6.0	19.78	2.520	5.643	80.78	47.3	11.285	107.33		
	152.4x3.0	11.05	1.408	3.930	51.58	52.8	7.860	66.97	
	152.4x3.5	12.85	1.637	4.540	59.58	52.7	9.080	77.61	
	152.4x4.0	14.64	1.865	5.137	67.42	52.5	10.275	88.11	
	152.4x4.5	16.41	2.091	5.722	75.10	52.3	11.445	98.47	
	152.4x5.0	18.18	2.315	6.295	82.62	52.1	12.591	108.68	
	152.4x6.0	21.66	2.760	7.406	97.19	51.8	14.811	128.67	
Hollow sections	165.1x3.0	11.99	1.528	5.020	60.81	57.3	10.039	78.84	
	165.1x3.5	13.95	1.777	5.803	70.30	57.1	11.606	91.42	
	165.1x4.0	15.89	2.024	6.572	79.61	57.0	13.143	103.83	
	165.1x4.5	17.82	2.270	7.326	88.74	56.8	14.651	116.10	
	165.1x5.0	19.74	2.515	8.065	97.70	56.6	16.131	128.20	
	165.1x6.0	23.54	2.999	9.503	115.11	56.3	19.005	151.95	
Hollow sections	177.8x3.5	15.04	1.917	7.281	81.90	61.6	14.562	106.35	
	177.8x4.0	17.14	2.184	8.251	92.81	61.5	16.502	120.85	
	177.8x4.5	19.23	2.450	9.204	103.53	61.3	18.407	135.18	
	177.8x5.0	21.31	2.714	10.140	114.06	61.1	20.279	149.34	
	177.8x6.0	25.42	3.238	11.962	134.56	60.8	23.924	177.16	
	193.7x3.5	16.42	2.091	9.460	97.68	67.3	18.921	126.63	
	193.7x4.0	18.71	2.384	10.728	110.77	67.1	21.456	143.97	
	193.7x4.5	21.00	2.675	11.975	123.65	66.9	23.950	161.12	
	193.7x6.0	27.77	3.538	15.597	161.05	66.4	31.194	211.46	
Hollow sections	219.1x3.5	18.60	2.370	13.759	125.65	76.2	27.518	162.56	
	219.1x4.0	21.21	2.702	15.617	142.62	76.0	31.233	184.92	
	219.1x4.5	23.80	3.032	17.448	159.34	75.9	34.896	207.08	
	219.1x6.0	31.52	4.015	22.787	208.10	75.3	45.575	272.29	
	219.1x8.0	41.63	5.303	29.554	269.90	74.7	59.109	356.34	
	219.1x10.0	51.54	6.566	35.933	328.15	74.0	71.866	437.14	
Hollow sections	273.1x6.0	39.52	5.035	44.921	328.97	94.5	89.843	428.13	
	273.1x8.0	52.30	6.663	58.583	429.03	93.8	117.167	562.39	
	273.1x10.0	64.88	8.266	71.622	524.51	93.1	143.245	692.55	
	273.1x12.0	77.27	9.843	84.058	615.58	92.4	168.116	818.65	
	323.9x6.0	47.04	5.992	75.725	467.58	112.4	151.449	606.43	
	323.9x8.0	62.32	7.939	99.101	611.92	111.7	198.202	798.51	
	323.9x10.0	77.41	9.861	121.583	750.75	111.0	243.167	985.67	
	323.9x12.0	92.30	11.758	143.196	884.20	110.4	286.391	1167.96	
	355.6x6.0	51.73	6.590	100.706	566.40	123.6	201.411	733.39	
	355.6x8.0	68.58	8.736	132.014	742.48	122.9	264.027	966.78	
	355.6x10.0	85.23	10.857	162.235	912.46	122.2	324.470	1194.73	
	355.6x12.0	101.68	12.953	191.395	1076.46	121.6	382.789	1417.31	
Sections	406.4x6.0*	59.25	7.547	151.283	744.50	141.6	302.567	961.99	
	406.4x8.0	78.60	10.013	198.739	978.05	140.9	397.478	1269.95	
	406.4x10.0	97.76	12.453	244.758	1204.52	140.2	489.516	1571.66	
	406.4x12.0	116.72	14.869	289.370	1424.07	139.5	578.740	1867.19	

Hollow se	457.0x6.0*	66.73	8.501	216.181	946.09	159.5	432.362	1220.48
	457.0x8.0	88.58	11.285	284.464	1244.92	158.8	568.927	1612.98
	457.0x10.0	110.24	14.043	350.913	1535.73	158.1	701.826	1998.42
	457.0x12.0	131.69	16.776	415.563	1818.66	157.4	831.126	2376.88
	508.0x8.0	98.65	12.566	392.800	1546.46	176.8	785.599	2000.17
	508.0x10.0	122.81	15.645	485.202	1910.25	176.1	970.405	2480.37
	508.0x12.0	146.79	18.699	575.361	2265.20	175.4	1150.722	2952.77

Square hollow sections

Designation	r ₁	m	A	I _x	Z _x	r _x	J	Z _{plx}	
	hxbxt mm	mm	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴	10 ³ mm ³
Hollow sections	25x25x2.0		1.48	0.170	0.014	1.14	9.2	0.025	1.42
	25x25x2.5		1.82	0.204	0.016	1.28	8.9	0.029	1.64
	25x25x3.0		2.15	0.233	0.017	1.38	8.6	0.032	1.82
	32x32x2.5		2.31	0.274	0.038	2.36	11.8	0.066	2.93
	32x32x3.0		2.74	0.317	0.042	2.61	11.5	0.075	3.31
	38x38x2.0		2.29	0.274	0.058	3.03	14.5	0.096	3.63
	38x38x3.0		3.36	0.397	0.079	4.13	14.1	0.133	5.10
	38x38x3.5		3.88	0.451	0.086	4.54	13.8	0.150	5.69
	50x50x2.5		3.76	0.459	0.169	6.78	19.2	0.275	8.07
	50x50x3.0		4.48	0.541	0.195	7.79	19.0	0.321	9.39
	50x50x3.5		5.18	0.619	0.217	8.69	18.7	0.364	10.61
	50x50x4.0		5.87	0.695	0.237	9.49	18.5	0.404	11.73
	50x50x4.5		6.55	0.767	0.255	10.20	18.2	0.441	12.76
	60x60x2.5		4.54	0.559	0.303	10.11	23.3	0.487	11.93
	60x60x3.0		5.42	0.661	0.351	11.71	23.1	0.571	13.95
	60x60x3.5		6.28	0.759	0.395	13.18	22.8	0.651	15.86
	60x60x4.0		7.12	0.855	0.436	14.52	22.6	0.726	17.64
	60x60x4.5		7.96	0.947	0.472	15.73	22.3	0.798	19.32
	75x75x2.5		5.70	0.709	0.614	16.37	29.4	0.971	19.12
	75x75x3.0		6.81	0.841	0.716	19.10	29.2	1.145	22.49
	75x75x3.5		7.90	0.969	0.812	21.66	28.9	1.313	25.70
	75x75x4.0		8.98	1.095	0.902	24.05	28.7	1.473	28.76
	75x75x4.5		10.04	1.217	0.986	26.28	28.5	1.627	31.68
	75x75x5.0		11.10	1.336	1.063	28.35	28.2	1.774	34.46
	75x75x6.0		13.17	1.563	1.202	32.04	27.7	2.046	39.58
	80x80x3.0		7.29	0.901	0.878	21.96	31.2	1.399	25.78
	80x80x3.5		8.47	1.039	0.998	24.95	31.0	1.606	29.50
	80x80x4.0		9.63	1.175	1.110	27.76	30.7	1.804	33.07
	80x80x4.5		10.78	1.307	1.216	30.40	30.5	1.995	36.48
	80x80x5.0		11.91	1.436	1.314	32.86	30.3	2.178	39.74
	80x80x6.0		14.15	1.683	1.492	37.29	29.8	2.521	45.79
	100x100x2.5*		7.68	0.959	1.506	30.13	39.6	2.352	34.86
	100x100x3.0		9.17	1.141	1.770	35.41	39.4	2.787	41.21
	100x100x3.5		10.66	1.319	2.023	40.46	39.2	3.209	47.35
	100x100x4.0		12.13	1.495	2.264	45.27	38.9	3.620	53.30
	100x100x4.5		13.59	1.667	2.493	49.86	38.7	4.019	59.04
	100x100x5.0		15.04	1.836	2.711	54.22	38.4	4.405	64.59
	100x100x6.0		17.90	2.163	3.115	62.29	37.9	5.142	75.10
	120x120x3.0*		11.05	1.381	3.123	52.06	47.6	4.877	60.24
	120x120x3.5		12.85	1.599	3.582	59.69	47.3	5.630	69.40
	120x120x4.0		14.64	1.815	4.023	67.05	47.1	6.366	78.33
	120x120x4.5		16.41	2.027	4.447	74.12	46.8	7.084	87.01
	120x120x5.0		18.18	2.236	4.855	80.91	46.6	7.785	95.45
	120x120x6.0		21.66	2.643	5.622	93.69	46.1	9.135	111.61
	150x150x4.0		18.40	2.295	8.078	107.71	59.3	12.648	124.87
	150x150x4.5		20.64	2.567	8.963	119.51	59.1	14.108	139.08
	150x150x6.0		27.30	3.363	11.459	152.79	58.4	18.327	179.88
	150x150x8.0		36.01	4.324	14.118	188.24	57.1	23.641	225.96
	150x150x10.0		44.51	5.257	16.525	220.34	56.1	28.392	269.17
	175x175x4.0*		21.22	2.695	13.031	148.93	69.5	20.278	171.90
	175x175x4.5		23.82	3.017	14.488	165.58	69.3	22.649	191.75
	175x175x6.0		31.53	3.963	18.640	213.03	68.6	29.542	249.15
	175x175x8.0		41.65	5.124	23.255	265.77	67.4	38.357	315.91
	175x175x10.0		51.57	6.257	27.509	314.39	66.3	46.407	379.25

ions

Hollow secti	195x195x6.0	35.22	4.443	26.172	268.43	76.7	41.245	312.66				
	195x195x8.0	46.56	5.764	32.895	337.39	75.5	53.751	398.67				
	195x195x10.0	57.71	7.057	39.159	401.63	74.5	65.307	480.81				
	200x200x6.0	35.82	4.563	28.327	283.27	78.8	44.588	329.67				
	200x200x8.0	46.51	5.924	35.663	356.63	77.6	58.152	420.86				
	200x200x10.0	56.96	7.257	42.511	425.11	76.5	70.717	508.08				
	220x220x6.0*	39.51	5.043	38.134	346.67	87.0	59.762	402.18				
	220x220x8.0	52.28	6.564	48.280	438.91	85.8	78.148	515.62				
	220x220x10.0	64.86	8.057	57.825	525.68	84.7	95.328	624.65				
	250x250x6.0*	45.24	5.763	56.720	453.76	99.2	88.425	524.45				
250x250x8.0	59.07	7.524	72.292	578.34	98.0	115.978	675.77					
250x250x10.0	72.66	9.257	87.067	696.53	97.0	141.972	822.00					
260x260x6.0*	47.04	6.003	64.045	492.66	103.3	99.698	568.80					
260x260x8.0	62.32	7.844	81.780	629.08	102.1	130.869	733.95					
260x260x10.0	77.41	9.657	98.646	758.82	101.1	160.355	893.78					
285x285x8.0	68.58	8.644	109.050	765.27	112.3	173.541	889.90					
285x285x10.0	85.23	10.657	131.983	926.20	111.3	213.080	1086.36					

Hollow sections

* Class 4 sections

Rectangular hollow sections

Designation	r1	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	J	Z _{plx}	Z _{ply}
	hxbxt mm	mm	kg/m	10 ⁸ mm ⁴	10 ³ mm ³	mm	10 ⁸ mm ⁴	10 ³ mm ³	mm	10 ¹⁰ mm ⁴	10 ³ mm ³	10 ³ mm ³
50x25x2.0*		2.29	0.270	0.082	3.27	17.4	0.028	2.20	10.1	0.071	4.18	2.57
50x25x2.5		2.83	0.334	0.099	3.95	17.2	0.033	2.62	9.9	0.084	5.11	3.12
50x25x3.0		3.36	0.391	0.112	4.47	16.9	0.037	2.93	9.7	0.096	5.86	3.56
50x25x3.5		3.88	0.444	0.122	4.90	16.6	0.040	3.19	9.5	0.107	6.54	3.96
50x38x2.0		2.72	0.322	0.112	4.47	18.6	0.073	3.85	15.1	0.146	5.42	4.50
50x38x2.5		3.37	0.394	0.132	5.29	18.3	0.086	4.55	14.8	0.177	6.51	5.40
50x38x3.0		4.00	0.461	0.150	6.00	18.0	0.098	5.15	14.6	0.205	7.50	6.21
50x38x3.5		4.63	0.531	0.172	6.79	18.0	0.110	5.77	14.4	0.237	8.61	7.06
60x40x2.5		3.76	0.459	0.221	7.36	21.9	0.117	5.87	16.0	0.251	9.06	6.84
60x40x3.0		4.48	0.541	0.254	8.46	21.7	0.134	6.72	15.8	0.293	10.53	7.94
60x40x3.5		5.18	0.619	0.283	9.45	21.4	0.150	7.48	15.5	0.331	11.90	8.96
60x40x4.0		5.87	0.695	0.310	10.33	21.1	0.163	8.14	15.3	0.367	13.16	9.89
60x40x4.5		6.55	0.767	0.333	11.10	20.8	0.174	8.72	15.1	0.399	14.32	10.75
76x38x2.5		4.35	0.529	0.383	10.08	26.9	0.129	6.81	15.6	0.320	12.68	7.81
76x38x3.0		5.18	0.625	0.443	11.66	26.6	0.149	7.82	15.4	0.373	14.80	9.09
76x38x3.5		6.00	0.717	0.497	13.09	26.3	0.166	8.72	15.2	0.422	16.80	10.28
76x38x4.0		6.81	0.807	0.547	14.39	26.0	0.181	9.52	15.0	0.468	18.66	11.38
76x38x4.5		7.60	0.893	0.591	15.56	25.7	0.194	10.22	14.8	0.510	20.39	12.40
80x40x2.5		4.54	0.559	0.451	11.28	28.4	0.153	7.63	16.5	0.376	14.15	8.72
80x40x3.0		5.42	0.661	0.523	13.06	28.1	0.176	8.78	16.3	0.439	16.54	10.16
80x40x3.5		6.28	0.759	0.588	14.70	27.8	0.196	9.81	16.1	0.498	18.79	11.52
80x40x4.0		7.12	0.855	0.648	16.20	27.5	0.215	10.74	15.9	0.552	20.91	12.77
80x40x4.5		7.96	0.947	0.702	17.56	27.2	0.231	11.57	15.6	0.603	22.89	13.94
100x50x2.5*		5.70	0.709	0.912	18.24	35.9	0.311	12.42	20.9	0.754	22.67	14.01
100x50x3.0		6.81	0.841	1.065	21.29	35.6	0.361	14.42	20.7	0.886	26.66	16.44
100x50x3.5		7.90	0.969	1.208	24.15	35.3	0.407	16.27	20.5	1.011	30.47	18.74
100x50x4.0		8.98	1.095	1.341	26.83	35.0	0.449	17.98	20.3	1.130	34.10	20.93
100x50x4.5		10.04	1.217	1.466	29.32	34.7	0.489	19.55	20.0	1.243	37.56	23.00
100x50x5.0		11.10	1.336	1.582	31.64	34.4	0.525	20.98	19.8	1.349	40.84	24.95
100x50x6.0		13.17	1.563	1.788	35.75	33.8	0.587	23.47	19.4	1.542	46.90	28.52
120x60x3.0*		8.23	1.021	1.891	31.52	43.0	0.644	21.47	25.1	1.563	39.18	24.21
120x60x3.5		9.56	1.179	2.156	35.94	42.8	0.731	24.36	24.9	1.792	44.94	27.72
120x60x4.0		10.88	1.335	2.407	40.12	42.5	0.812	27.08	24.7	2.011	50.49	31.08
120x60x4.5		12.19	1.487	2.645	44.09	42.2	0.889	29.63	24.4	2.221	55.82	34.30
120x60x5.0		13.48	1.636	2.870	47.83	41.9	0.960	32.00	24.2	2.422	60.95	37.38
120x60x6.0		16.03	1.923	3.280	54.67	41.3	1.088	36.26	23.8	2.797	70.57	43.12
160x80x3.0*		11.05	1.381	4.638	57.98	58.0	1.590	39.76	33.9	3.803	71.41	44.26
160x80x3.5*		12.85	1.599	5.320	66.50	57.7	1.818	45.45	33.7	4.380	82.28	50.92
160x80x4.0*		14.64	1.815	5.977	74.71	57.4	2.035	50.89	33.5	4.941	92.86	57.39
160x80x4.5		16.41	2.027	6.609	82.62	57.1	2.243	56.08	33.3	5.485	103.15	63.66
160x80x5.0		18.18	2.236	7.217	90.21	56.8	2.441	61.03	33.0	6.013	113.16	69.74

Hollow sections

160x80x6.0		21.66	2.643	8.360	104.50	56.2	2.809	70.22	32.6	7.021	132.32	81.31
200x100x4.0*		18.40	2.295	11.997	119.97	72.3	4.108	82.16	42.3	9.854	148.04	91.70
200x100x4.5		20.64	2.567	13.314	133.14	72.0	4.546	90.93	42.1	10.971	164.89	102.02
200x100x6.0		27.30	3.363	17.033	170.33	71.2	5.769	115.38	41.4	14.170	213.27	131.50
200x100x8.0		36.01	4.324	20.908	209.08	69.5	7.054	141.07	40.4	18.107	267.26	164.65
200x100x10.0		44.51	5.257	24.444	244.44	68.2	8.177	163.55	39.4	21.541	318.08	195.25
250x100x4.0*		21.22	2.695	20.917	167.33	88.1	5.030	100.60	43.2	13.225	210.41	110.90
250x100x4.5*		23.82	3.017	23.257	186.05	87.8	5.573	111.46	43.0	14.730	234.68	123.51
250x100x6.0*		31.53	3.963	29.923	239.39	86.9	7.096	141.93	42.3	19.045	304.85	159.70
250x100x8.0		41.65	5.124	37.141	297.13	85.1	8.751	175.01	41.3	24.387	385.37	201.45
250x100x10.0		51.57	6.257	43.842	350.73	83.7	10.211	204.22	40.4	29.096	462.00	240.25
250x150x6.0*		35.82	4.563	38.856	310.84	92.3	17.683	235.78	62.3	38.858	378.05	266.28
250x150x8.0		46.51	5.924	48.858	390.86	90.8	22.192	295.90	61.2	50.504	482.17	339.56
250x150x10.0		56.96	7.257	58.250	466.00	89.6	26.342	351.23	60.2	61.207	582.00	409.17
300x140x6.0*		39.51	5.043	58.142	387.61	107.4	17.829	254.70	59.5	44.219	481.99	283.97
300x140x8.0		52.28	6.564	73.424	489.50	105.8	22.433	320.47	58.5	57.420	616.91	363.14
300x140x10.0		64.86	8.057	87.887	585.91	104.4	26.663	380.91	57.5	69.554	746.91	438.38
320x200x6.0*		47.04	6.003	86.043	537.77	119.7	41.881	418.81	83.5	88.878	646.66	469.35
320x200x8.0*		62.32	7.844	109.797	686.23	118.3	53.367	533.67	82.5	116.421	833.92	605.18
320x200x10.0		77.41	9.657	132.484	828.03	117.1	64.191	641.91	81.5	142.354	1015.48	736.08
340x180x6.0*		47.04	6.003	92.891	546.42	124.4	34.903	387.82	76.2	80.893	667.82	431.39
340x180x8.0*		62.32	7.844	118.451	696.77	122.9	44.406	493.40	75.2	105.769	860.84	555.86
340x180x10.0		77.41	9.657	142.879	840.47	121.6	53.315	592.39	74.3	129.096	1048.05	675.51

* Class 4 sections

Cold-formed lipped channels

	Designation	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	J	a _y
	hxbxcxt mm	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴	mm
Cold-formed sections	75x50x20x2.0	3.14	0.4	0.36	9.59	30	0.15	5.12	19.3	0.534	20.8
	75x50x20x2.5	3.85	0.491	0.433	11.5	29.7	0.178	6.1	19.1	1.02	20.8
	75x50x20x3.0	4.54	0.578	0.5	13.3	29.4	0.204	6.98	18.8	1.73	20.7
	100x50x20x2.0	3.53	0.45	0.705	14.1	39.6	0.167	5.32	19.3	0.6	18.6
	100x50x20x2.5	4.35	0.554	0.854	17.1	39.3	0.2	6.35	19	1.15	18.6
	100x50x20x3.0	5.13	0.653	0.991	19.8	39	0.229	7.27	18.7	1.96	18.5
	100x75x20x2.0	4.32	0.55	0.945	18.9	41.4	0.439	9.65	28.2	0.734	29.5
	100x75x20x2.5	5.33	0.679	1.15	23	41.2	0.53	11.6	27.9	1.41	29.5
	100x75x20x3.0	6.3	0.803	1.34	26.9	40.9	0.614	13.5	27.7	2.41	29.4
Cold-formed sections	125x50x20x2.0	3.93	0.5	1.19	19.1	48.8	0.181	5.46	19	0.667	16.8
	125x50x20x2.5	4.84	0.616	1.45	23.2	48.5	0.216	6.52	18.7	1.28	16.8
	125x50x20x3.0	5.72	0.728	1.69	27	48.1	0.248	7.47	18.5	2.18	16.8
	125x65x20x2.0	4.4	0.56	1.42	22.7	50.3	0.338	8.03	24.6	0.747	22.9
	125x65x20x2.5	5.42	0.691	1.73	27.7	50	0.407	9.67	24.3	1.44	22.9
	125x65x20x3.0	6.42	0.818	2.02	32.3	49.7	0.471	11.2	24	2.45	22.8
	125x75x20x2.0	4.71	0.6	1.57	25.1	51.1	0.476	9.95	28.2	0.8	27.2
	125x75x20x2.5	5.82	0.741	1.92	30.7	50.9	0.575	12	27.9	1.54	27.1
	125x75x20x3.0	6.89	0.878	2.24	35.9	50.6	0.668	13.9	27.6	2.63	27
Cold-formed sections	150x50x20x2.0	4.32	0.55	1.83	24.5	57.7	0.192	5.56	18.7	0.734	15.4
	150x50x20x2.5	5.33	0.679	2.23	29.8	57.4	0.23	6.65	18.4	1.41	15.4
	150x50x20x3.0	6.3	0.803	2.61	34.8	57	0.264	7.62	18.1	2.41	15.3
	150x65x20x2.0	4.79	0.61	2.16	28.8	59.5	0.36	8.21	24.3	0.814	21.1
	150x65x20x2.5	5.92	0.754	2.64	35.2	59.2	0.434	9.88	24	1.57	21.1
	150x65x20x3.0	7.01	0.893	3.1	41.3	58.9	0.502	11.4	23.7	2.68	21
	150x65x20x3.5	8.08	1.03	3.53	47	58.5	0.564	12.8	23.4	4.2	21
	150x75x20x2.0	5.1	0.65	2.38	31.8	60.5	0.507	10.2	27.9	0.867	25.2
	150x75x20x2.5	6.31	0.804	2.91	38.8	60.2	0.614	12.3	27.6	1.67	25.1
150x75x20x3.0	7.48	0.953	3.42	45.6	59.9	0.713	14.3	27.3	2.86	25	
150x75x20x3.5	8.63	1.1	3.9	52	59.6	0.804	16.1	27	4.49	25	
175x50x20x2.0	4.71	0.6	2.65	30.3	66.4	0.202	5.64	18.3	0.8	14.2	

Cold-formed sections	175x50x20x2.5	5.82	0.741	3.23	36.9	66	0.242	6.75	18.1	1.54	14.2
	175x50x20x3.0	6.89	0.878	3.78	43.2	65.6	0.277	7.74	17.8	2.63	14.2
	175x50x20x3.5	7.94	1.01	4.3	49.2	65.2	0.309	8.63	17.5	4.13	14.1
	175x65x20x2.0	5.18	0.66	3.1	35.4	68.5	0.379	8.34	23.9	0.88	19.6
	175x65x20x2.5	6.41	0.816	3.79	43.3	68.1	0.457	10.1	23.7	1.7	19.6
	175x65x20x3.0	7.6	0.968	4.45	50.8	67.8	0.528	11.6	23.4	2.9	19.5
	175x65x20x3.5	8.76	1.12	5.08	58	67.4	0.594	13	23.1	4.56	19.5
	175x65x20x4.5	11	1.4	6.24	71.3	66.7	0.707	15.5	22.5	9.46	19.4
	175x75x20x2.5	6.8	0.866	4.16	47.6	69.3	0.647	12.5	27.3	1.8	23.4
	175x75x20x3.0	8.07	1.03	4.89	55.9	69	0.751	14.5	27	3.08	23.3
	175x75x20x3.5	9.31	1.19	5.59	63.9	68.6	0.848	16.4	26.7	4.84	23.3
	175x75x20x4.5	11.7	1.49	6.89	78.7	68	1.02	19.6	26.1	10.1	23.1
Cold-formed sections	200x75x20x2.5	7.29	0.929	5.68	56.8	78.2	0.676	12.7	27	1.93	21.9
	200x75x20x3.0	8.66	1.1	6.69	66.9	77.9	0.785	14.8	26.7	3.31	21.8
	200x75x20x3.5	10	1.27	7.65	76.5	77.5	0.886	16.6	26.4	5.2	21.8
	200x75x20x4.5	12.6	1.6	9.45	94.5	76.8	1.06	19.9	25.7	10.8	21.7
	225x50x20x2.5	6.8	0.866	5.94	52.8	82.8	0.26	6.89	17.3	1.8	12.3
	225x50x20x3.0	8.07	1.03	6.98	62	82.4	0.298	7.91	17	3.08	12.3
	225x50x20x3.5	9.31	1.19	7.96	70.8	81.9	0.332	8.82	16.7	4.84	12.3
	225x75x20x2.5	7.78	0.991	7.49	66.6	86.9	0.701	12.9	26.6	2.06	20.6
	225x75x20x3.0	9.25	1.18	8.83	78.4	86.6	0.814	14.9	26.3	3.53	20.5
	225x75x20x3.5	10.7	1.36	10.1	89.9	86.2	0.919	16.9	26	5.56	20.5
	225x75x20x4.5	13.5	1.72	12.5	111	85.4	1.1	20.2	25.3	11.6	20.4
	250x75x20x2.5	8.27	1.05	9.61	76.9	95.5	0.723	13	26.2	2.19	19.4
250x75x20x3.0	9.84	1.25	11.3	90.7	95.1	0.839	15.1	25.9	3.76	19.4	
250x75x20x3.5	11.4	1.45	13	104	94.7	0.948	17	25.6	5.92	19.4	
250x75x20x4.5	14.4	1.83	16.1	129	93.9	1.14	20.4	24.9	12.3	19.3	
300x75x20x4.5	16.1	2.05	25.1	167	110	1.2	20.8	24.1	13.9	17.4	
300x75x20x4.0	14.5	1.84	22.7	151	111	1.1	19.1	24.5	9.82	17.4	

Cold-formed lipped zeds

Designation	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	J	r _y	
											hxbxcxt mm
Cold-formed sections	100x50x20x2.0	3.53	0.45	0.705	14.1	39.6	0.307	6.26	26.1	0.6	14.9
	100x50x20x2.5	4.35	0.554	0.854	17.1	39.3	0.366	7.5	25.7	1.15	14.7
	100x50x20x3.0	5.13	0.653	0.991	19.8	39	0.418	8.62	25.3	1.96	14.5
	125x50x20x2.0	3.93	0.5	1.19	19.1	48.8	0.307	6.26	24.8	0.667	15.2
	125x50x20x2.5	4.84	0.616	1.45	23.2	48.5	0.366	7.5	24.4	1.28	15
	125x50x20x3.0	5.72	0.728	1.69	27	48.1	0.418	8.62	24	2.18	14.8
	125x65x20x2.0	4.4	0.56	1.42	22.7	50.3	0.608	9.49	32.9	0.747	18.7
	125x65x20x2.5	5.42	0.691	1.73	27.7	50	0.731	11.5	32.5	1.44	18.4
	125x65x20x3.0	6.42	0.818	2.02	32.3	49.7	0.843	13.3	32.1	2.45	18.2
	125x75x20x2.0	4.71	0.6	1.57	25.1	51.1	0.887	12	38.4	0.8	20.6
	125x75x20x2.5	5.82	0.741	1.92	30.7	50.9	1.07	14.5	38	1.54	20.3
	125x75x20x3.0	6.89	0.878	2.24	35.9	50.6	1.24	16.9	37.6	2.63	20.1
Cold-formed sections	150x50x20x2.0	4.32	0.55	1.83	24.5	57.7	0.307	6.26	23.6	0.734	15.3
	150x50x20x2.5	5.33	0.679	2.23	29.8	57.4	0.366	7.5	23.2	1.41	15
	150x50x20x3.0	6.3	0.803	2.61	34.8	57	0.418	8.62	22.8	2.41	14.8
	150x65x20x2.0	4.79	0.61	2.16	28.8	59.5	0.608	9.49	31.6	0.814	19.1
	150x65x20x2.5	5.92	0.754	2.64	35.2	59.2	0.731	11.5	31.1	1.57	18.9
	150x65x20x3.0	7.01	0.893	3.1	41.3	58.9	0.843	13.3	30.7	2.68	18.6
	150x75x20x2.0	5.1	0.65	2.38	31.8	60.5	0.887	12	36.9	0.867	21.4
	150x75x20x2.5	6.31	0.804	2.91	38.8	60.2	1.07	14.5	36.5	1.67	21.1
	150x75x20x3.0	7.48	0.953	3.42	45.6	59.9	1.24	16.9	36.1	2.86	20.9
	150x75x20x3.5	8.63	1.1	3.9	52	59.6	1.4	19.1	35.7	4.49	20.6
	150x75x20x4.5	10.8	1.38	4.79	63.9	58.9	1.67	22.9	34.8	9.31	20.2
	formed sections	175x75x20x2.5	6.8	0.866	4.16	47.6	69.3	1.07	14.5	35.2	1.8
175x75x20x3.0		8.07	1.03	4.89	55.9	69	1.24	16.9	34.7	3.08	21.2
175x75x20x3.5		9.31	1.19	5.59	63.9	68.6	1.4	19.1	34.3	4.84	21
175x75x20x4.5		11.7	1.49	6.89	78.7	68	1.67	22.9	33.4	10.1	20.5
200x75x20x2.5		7.29	0.929	5.68	56.8	78.2	1.07	14.5	34	1.93	21.6

Cold-	200x75x20x3.0	8.66	1.1	6.69	66.9	77.9	1.24	16.9	33.5	3.31	21.4	
	200x75x20x3.5	10	1.27	7.65	76.5	77.5	1.4	19.1	33.1	5.2	21.1	
	200x75x20x4.5	12.6	1.6	9.45	94.5	76.8	1.67	22.9	32.3	10.8	20.6	
	225x75x20x2.5	7.78	0.991	7.49	66.6	86.9	1.07	14.5	32.9	2.06	21.6	
	225x75x20x3.0	9.25	1.18	8.83	78.4	86.6	1.24	16.9	32.5	3.53	21.4	
	225x75x20x3.5	10.7	1.36	10.1	89.9	86.2	1.4	19.1	32	5.56	21.1	
	225x75x20x4.5	13.5	1.72	12.5	111	85.4	1.67	22.9	31.2	11.6	20.6	

Cold-formed lipped angles

Designation	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	J	a _x	a _y	r _v
75x50x20x2.0	2.42	0.308	0.229	4.83	27.3	0.097	2.78	17.8	0.427	27.7	15.1	14.6
75x50x20x2.5	2.96	0.378	0.275	5.82	27	0.116	3.32	17.5	0.828	27.8	15.1	14.4
75x50x20x3.0	3.49	0.445	0.317	6.73	26.7	0.132	3.8	17.3	1.42	27.9	15.2	14.2
100x50x25x2.0	2.96	0.378	0.504	8.33	36.5	0.119	3.33	17.7	0.52	39.5	14.3	15.4
100x50x25x2.5	3.65	0.465	0.611	10.1	36.2	0.142	3.99	17.5	1.01	39.6	14.4	15.2
100x50x25x3.0	4.32	0.55	0.711	11.8	36	0.164	4.6	17.3	1.73	39.8	14.4	15
100x75x25x2.0	3.36	0.428	0.57	8.76	36.5	0.31	5.89	26.9	0.587	35	22.4	21.1
100x75x25x2.5	4.14	0.528	0.692	10.7	36.2	0.375	7.14	26.7	1.14	35.1	22.5	20.9
100x75x25x3.0	4.9	0.625	0.807	12.5	35.9	0.435	8.29	26.4	1.96	35.2	22.5	20.7
115x75x25x2.0	3.59	0.458	0.802	10.9	41.9	0.323	5.98	26.5	0.627	41.2	21	21.3
115x75x25x2.5	4.44	0.565	0.977	13.2	41.6	0.391	7.24	26.3	1.22	41.2	21.1	21.1
115x75x25x3.0	5.26	0.67	1.14	15.5	41.3	0.454	8.42	26	2.09	41.3	21.1	20.9
125x75x25x2.5	4.63	0.59	1.2	15.1	45.1	0.4	7.3	26	1.27	45.4	20.2	21.2
125x75x25x3.0	5.49	0.7	1.4	17.7	44.8	0.465	8.49	25.8	2.18	45.5	20.3	20.9
125x75x25x3.5	6.33	0.807	1.6	20.1	44.5	0.525	9.6	25.5	3.45	45.6	20.3	20.7
125x75x25x4.5	7.95	1.01	1.95	24.6	43.9	0.631	11.6	25	7.26	45.8	20.4	20.3
150x75x25x2.5	5.12	0.653	1.89	20.1	53.8	0.42	7.43	25.4	1.4	56.2	18.4	21
150x75x25x3.0	6.08	0.775	2.22	23.7	53.5	0.489	8.64	25.1	2.41	56.3	18.4	20.8
150x75x25x3.5	7.02	0.894	2.53	27	53.2	0.552	9.77	24.9	3.81	56.4	18.5	20.6
150x75x25x4.5	8.83	1.12	3.1	33.3	52.5	0.665	11.8	24.3	8.02	56.7	18.6	20.1

User defined properties

Designation	m	A	I _x	Z _x	r _x	I _y	Z _y	r _y	J
	kg/m	10 ³ mm ²	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ⁶ mm ⁴	10 ³ mm ³	mm	10 ³ mm ⁴