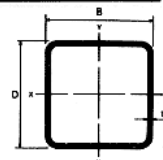


## Square



Section size	Thickness	Unit weight	Section area	Moment of inertia	Radius of gyration	Elastic modulus	Plastic modulus	Torsional	Constants	Superficial area	Approx. length
D x B	t	M	A	I	r	Z	S	J	C	per m	per tonne
mm	mm	kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>4</sup>	cm <sup>3</sup>	m <sup>2</sup>	m
<b>20 x 20</b>	2.0	1.12	1.42	0.76	0.73	0.76	0.95	1.22	1.07	0.076	893
	2.5 *	1.35	1.72	0.87	0.71	0.88	1.12	1.41	1.21	0.075	741
<b>25 x 25</b>	2.0 *	1.43	1.82	1.59	0.94	1.27	1.56	2.52	1.81	0.096	700
	2.5 *	1.74	2.22	1.85	0.91	1.48	1.86	2.97	2.09	0.095	574
	3.0 *	2.04	2.60	2.06	0.89	1.65	2.12	3.36	2.31	0.094	490
	3.2 *	2.15	2.74	2.14	0.88	1.71	2.21	3.49	2.38	0.093	466
<b>30 x 30</b>	2.5 *	2.14	2.72	3.40	1.12	2.27	2.79	5.40	3.22	0.115	469
	3.0 *	2.51	3.20	3.84	1.10	2.56	3.21	6.17	3.61	0.114	399
	3.2	2.65	3.38	4.00	1.09	2.67	3.37	6.45	3.75	0.113	378
<b>40 x 40</b>	2.5 *	2.92	3.72	8.67	1.53	4.33	5.21	13.6	6.23	0.155	343
	3.0 *	3.45	4.40	9.96	1.51	4.98	6.07	15.7	7.11	0.154	290
	3.2	3.66	4.66	10.4	1.50	5.22	6.40	16.5	7.43	0.153	274
	4.0	4.46	5.68	12.1	1.46	6.07	7.61	19.5	8.56	0.151	225
	5.0 *	5.40	6.88	13.8	1.42	6.92	8.92	22.6	9.65	0.149	185
<b>50 x 50</b>	2.5 *	3.71	4.72	17.7	1.94	7.07	8.38	27.4	10.2	0.195	270
	3.0 *	4.39	5.60	20.5	1.91	8.20	9.83	32.0	11.8	0.194	228
	3.2	4.66	5.94	21.6	1.91	8.62	10.4	33.8	12.4	0.193	215
	4.0	5.72	7.28	25.5	1.87	10.2	12.5	40.4	14.5	0.191	175
	5.0	6.97	8.88	29.6	1.83	11.9	14.9	47.6	16.7	0.189	144
	6.0	8.15	10.4	33.0	1.78	13.2	17.0	53.7	18.5	0.187	123
	6.3 *	8.49	10.8	33.9	1.77	13.6	17.5	55.3	18.9	0.186	118
<b>60 x 60</b>	3.0 *	5.34	6.80	36.6	2.32	12.2	14.5	56.9	17.7	0.234	188
	3.2	5.67	7.22	38.7	2.31	12.9	15.3	60.1	18.6	0.233	177
	4.0	6.97	8.88	46.1	2.28	15.4	18.6	72.4	22.1	0.231	144
	5.0	8.54	10.9	54.4	2.24	18.1	22.3	86.3	25.8	0.229	118
	6.0	10.0	12.8	61.5	2.19	20.5	25.7	98.6	28.9	0.227	100
	6.3 *	10.5	13.3	63.4	2.18	21.1	26.6	102	29.7	0.226	95.3
	8.0 *	12.8	16.3	72.4	2.11	24.1	31.4	119	33.5	0.223	78.1
<b>70 x 70</b>	3.0 *	6.28	8.0	59.6	2.73	17.0	20.0	92.1	24.8	0.274	160
	3.6	7.46	9.5	69.5	2.70	19.9	23.6	108	28.7	0.272	135
	5.0	10.1	12.9	90.1	2.64	25.7	31.2	142	36.8	0.269	99.1
	6.0	11.9	15.2	103	2.60	29.4	36.2	163	41.7	0.267	84.0
	6.3 *	12.5	15.9	106	2.59	30.4	37.6	169	43.0	0.266	80.0
	8.0 *	15.3	19.5	123	2.51	35.3	45.0	200	49.4	0.263	65.4
<b>75 x 75</b>	3.0	6.75	8.6	74.0	2.93	19.7	23.2	114	28.8	0.294	148
	3.6	8.02	10.2	86.5	2.91	23.1	27.3	134	33.4	0.292	125
	5.0	10.9	13.9	113	2.85	30.0	36.3	177	43.1	0.289	91.7
	6.0	12.9	16.4	129	2.81	34.4	42.2	204	49.0	0.287	77.5
	6.3	13.4	17.1	134	2.79	35.6	43.8	212	50.6	0.286	74.6
	8.0	16.6	21.1	156	2.72	41.7	52.6	252	58.6	0.283	60.2
<b>80 x 80</b>	3.0 *	7.22	9.2	90.6	3.14	22.7	26.5	139	33.1	0.314	139
	3.6	8.59	10.9	106	3.11	26.5	31.3	164	38.5	0.312	117
	5.0	11.7	14.9	139	3.05	34.7	41.7	217	49.8	0.309	85.5
	6.0	13.8	17.6	159	3.01	39.8	48.6	251	56.9	0.307	72.5
	6.3	14.4	18.4	165	3.00	41.3	50.5	261	58.8	0.306	69.5
	8.0 *	17.8	22.7	194	2.92	48.6	60.9	312	68.5	0.303	56.2

## Notes:

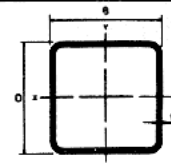
Sizes printed black on grey background are by the Continuous Weld Process. Sizes printed in bold type are by the Hot Finished Seamless Process.

\* Size not included in BS 4848 Part 2

† 43C only

Length per tonne rounded up

## Square



Section size D x B	Thickness t	Unit weight M	Section area A	Moment of inertia I	Radius of gyration r	Elastic modulus Z	Plastic modulus S	Torsional J	Constants C	Superficial area per m	Approx. length per tonne
mm	mm	kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>4</sup>	cm <sup>3</sup>	m <sup>2</sup>	m
<b>90 x 90</b>	3.6	9.72	12.4	154	3.52	34.1	40.0	237	49.7	0.352	103
	5.0	13.3	16.9	202	3.46	45.0	53.6	315	64.9	0.349	75.2
	6.0	15.7	20.0	234	3.42	51.9	62.7	367	74.4	0.347	63.7
	6.3	16.4	20.9	242	3.41	53.9	65.3	381	77.1	0.346	61.0
	8.0*	20.4	25.9	288	3.33	64.0	79.2	459	90.7	0.343	49.0
<b>100 x 100</b>	4.0	12.0	15.3	234	3.91	46.8	54.9	361	68.2	0.391	83.4
	5.0	14.8	18.9	283	3.87	56.6	67.1	439	81.9	0.389	67.6
	6.0	17.6	22.4	328	3.83	65.6	78.6	512	94.4	0.387	56.8
	6.3	18.4	23.4	341	3.81	68.2	82.0	533	97.9	0.386	54.4
	8.0	22.9	29.1	408	3.74	81.5	99.9	646	116	0.383	43.7
	10.0	27.9	35.5	474	3.65	94.9	119	761	134	0.379	35.9
<b>120 x 120</b>	5.0	18.0	22.9	503	4.69	83.8	98.4	775	122	0.469	55.6
	6.0	21.3	27.2	586	4.64	97.7	116	910	141	0.467	46.9
	6.3	22.3	28.5	610	4.63	102	121	949	147	0.466	44.9
	8.0	27.9	35.5	738	4.56	123	149	1,159	176	0.463	35.9
	10.0	34.2	43.5	870	4.47	145	178	1,381	206	0.459	29.3
	12.5*†	41.6	53.0	1,009	4.36	168	212	1,624	237	0.453	24.0
<b>140 x 140</b>	5.0*	21.1	26.9	814	5.50	116	136	1,251	170	0.549	47.4
	5.6*	23.5	30.0	899	5.48	128	151	1,385	187	0.548	42.6
	6.0	25.1	32.0	954	5.46	136	160	1,473	198	0.547	39.8
	6.3*	26.3	33.5	994	5.45	142	168	1,538	206	0.546	38.0
	7.1*	29.4	37.5	1,099	5.41	157	186	1,706	227	0.545	34.0
	8.0*	32.9	41.9	1,212	5.38	173	207	1,889	249	0.543	30.4
	10.0*	40.4	51.5	1,441	5.29	206	250	2,269	294	0.539	24.8
	12.5*	49.5	63.0	1,691	5.18	242	299	2,695	342	0.533	20.2
<b>150 x 150</b>	5.0	22.7	28.9	1,009	5.91	135	157	1,548	197	0.589	44.1
	6.0	27.0	34.4	1,185	5.87	158	185	1,826	230	0.587	37.0
	6.3	28.3	36.0	1,236	5.86	165	194	1,907	240	0.586	35.4
	8.0	35.4	45.1	1,510	5.78	201	240	2,348	291	0.583	28.3
	10.0	43.6	55.5	1,803	5.70	240	290	2,829	345	0.579	23.0
	12.5	53.4	68.0	2,125	5.59	283	348	3,372	403	0.573	18.8
	<b>16.0</b>	<b>66.4</b>	<b>84.5</b>	<b>2,500</b>	<b>5.44</b>	<b>333</b>	<b>421</b>	<b>4,029</b>	<b>468</b>	<b>0.566</b>	<b>15.1</b>

## Notes:

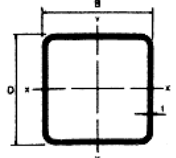
Sizes printed black on grey background are by the Continuous Weld Process. Sizes printed in bold type are by the Hot Finished Seamless Process.

\* Size not included in BS 4848 Part 2

† 43C only

Length per tonne rounded up

## Square



Section size D x B	Thickness t	Unit weight M	Section area A	Moment of inertia I	Radius of gyration r	Elastic modulus Z	Plastic modulus S	Torsional J	Constants C	Superficial area per m	Approx. length per tonne
mm	mm	kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>4</sup>	cm <sup>3</sup>	m <sup>2</sup>	m
<b>180 x 180</b>	6.0	32.6	41.6	2,093	7.09	233	271	3,211	340	0.707	30.7
	6.3	34.2	43.6	2,186	7.08	243	283	3,357	355	0.706	29.3
	8.0	43.0	54.7	2,689	7.01	299	352	4,156	434	0.703	23.3
	10.0	53.0	67.5	3,237	6.92	360	429	5,041	519	0.699	18.9
	12.5	65.2	83.0	3,856	6.82	428	519	6,062	613	0.693	15.4
	16.0	81.4	104	4,607	6.66	512	634	7,339	725	0.686	12.3
<b>200 x 200</b>	6.0	36.4	46.4	2,903	7.91	290	337	4,444	426	0.787	27.5
	6.3	38.2	48.6	3,033	7.90	303	353	4,647	444	0.786	26.2
	8.0	48.0	61.1	3,744	7.83	374	439	5,770	545	0.783	20.9
	10.0	59.3	75.5	4,525	7.74	452	536	7,020	655	0.779	16.9
	12.5	73.0	93.0	5,419	7.63	542	651	8,479	779	0.773	13.7
	16.0	91.5	117	6,524	7.48	652	799	10,330	929	0.766	11.0
<b>250 x 250</b>	6.0	45.8	58.4	5,784	9.95	463	534	8,816	681	0.987	21.8
	6.3	48.1	61.2	6,049	9.94	484	559	9,288	712	0.986	20.8
	8.0	60.5	77.1	7,510	9.87	601	699	11,511	880	0.983	16.6
	10.0	75.0	95.5	9,141	9.78	731	858	14,086	1,065	0.979	13.4
	12.5	92.6	118	11,050	9.68	884	1,048	17,139	1,279	0.973	10.8
	16.0	117	149	13,480	9.53	1,078	1,298	21,109	1,548	0.966	8.55
<b>300 x 300</b>	8.0 *	73.1	93.1	13,209	11.90	881	1,018	20,171	1,294	1.18	13.7
	10.0	90.7	116	16,150	11.80	1,077	1,254	24,776	1,575	1.18	11.1
	12.5	112	143	19,630	11.70	1,309	1,538	30,290	1,905	1.17	8.93
	16.0	142	181	24,160	11.60	1,610	1,916	37,566	2,327	1.17	7.05
<b>350 x 350</b>	8.0 *	85.7	109	21,240	14.00	1,214	1,398	32,352	1,789	1.38	11.7
	10.0	106	136	26,050	13.90	1,489	1,725	39,840	2,186	1.38	9.44
	12.5	132	168	31,810	13.80	1,817	2,122	48,869	2,655	1.37	7.58
	16.0	167	213	39,370	13.60	2,250	2,655	60,901	3,265	1.37	5.99
<b>400 x 400</b>	10.0	122	156	39,350	15.90	1,968	2,272	60,028	2,896	1.58	8.20
	12.5	152	193	48,190	15.80	2,409	2,800	73,815	3,530	1.57	6.58
	16.0	192	245	59,910	15.70	2,995	3,514	92,310	4,363	1.57	5.21
	20.0	237	302	72,396	15.50	3,620	4,292	112,324	5,240	1.56	4.22

## Notes:

Sizes printed black on grey background are by the Continuous Weld Process. Sizes printed in bold type are by the Hot Finished Seamless Process.

\* Size not included in BS 4848 Part 2

† 43C only

Length per tonne rounded up