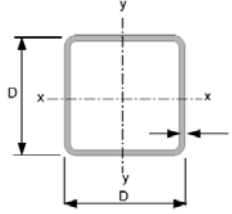


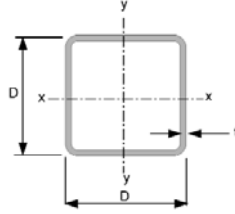
Cold Formed Hollow Sections Dimensions — Square



Imperial Units

Designation		Thickness t	Mass Per Metre	Area of Section A	Second Moment of Area I	Radius of Gyration r	Elastic Modulus Z	Plastic Modulus S	Torsional Constant		Surface Area per Metre
Size $D \times D$	J								C		
in	mm	mm	kg/m	cm ²	cm ⁴	cm	cm ³	cm ³	cm ⁴	cm ³	m ² /m
1/2x1/2	12.7x12.7	1.2	0.404	0.515	0.109	0.460	0.172	0.216	0.190	0.263	0.0467
		1.6	0.506	0.644	0.125	0.440	0.197	0.258	0.228	0.305	0.0453
5/8x5/8	15.9x15.9	1.2	0.525	0.669	0.234	0.591	0.294	0.361	0.395	0.446	0.0595
		1.6	0.667	0.849	0.277	0.572	0.349	0.442	0.487	0.534	0.0581
3/4x3/4	19.1x19.1	1.2	0.645	0.822	0.429	0.722	0.449	0.543	0.711	0.679	0.0723
		1.6	0.827	1.05	0.520	0.703	0.545	0.676	0.891	0.829	0.0709
		2.4	1.14	1.45	0.639	0.663	0.669	0.876	1.16	1.04	0.0682
1x1	25.4x25.4	1.2	0.883	1.12	1.08	0.980	0.850	1.01	1.75	1.28	0.0975
		1.6	1.14	1.46	1.34	0.960	1.06	1.28	2.23	1.60	0.0961
		2.3	1.56	1.99	1.70	0.926	1.34	1.68	2.95	2.05	0.0937
		2.4	1.62	2.06	1.75	0.921	1.37	1.73	3.04	2.10	0.0934
		3.0	1.93	2.46	1.95	0.891	1.53	1.99	3.51	2.37	0.0913
1.1/4x1.1/4	31.8x31.8	1.2	1.12	1.43	2.20	1.24	1.39	1.63	3.51	2.09	0.123
		1.6	1.47	1.87	2.79	1.22	1.75	2.09	4.53	2.64	0.122
		2.3	2.02	2.58	3.64	1.19	2.29	2.80	6.12	3.47	0.119
		2.4	2.10	2.67	3.74	1.18	2.35	2.89	6.32	3.57	0.119
		3.0	2.53	3.22	4.29	1.15	2.70	3.39	7.46	4.12	0.117
1.1/2x1.1/2	38.1x38.1	1.2	1.36	1.73	3.89	1.50	2.04	2.38	6.14	3.07	0.148
		1.6	1.78	2.27	4.97	1.48	2.61	3.08	7.97	3.92	0.147
		2.3	2.48	3.16	6.59	1.45	3.46	4.17	10.9	5.23	0.145
		2.4	2.57	3.28	6.80	1.44	3.57	4.32	11.3	5.40	0.144
		3.0	3.12	3.98	7.92	1.41	4.16	5.13	13.5	6.32	0.142
2x2	50.8x50.8	1.6	2.42	3.08	12.3	2.00	4.84	5.65	19.4	7.28	0.198
		2.3	3.40	4.33	16.7	1.96	6.57	7.78	26.9	9.89	0.195
		2.4	3.53	4.50	17.3	1.96	6.80	8.07	27.9	10.2	0.195
		3.0	4.32	5.50	20.5	1.93	8.07	9.72	33.8	12.2	0.193
		3.2	4.58	5.83	21.5	1.92	8.46	10.2	35.6	12.8	0.192
		4.0	5.55	7.08	25.0	1.88	9.86	12.2	42.6	15.0	0.189
		4.6	6.25	7.96	27.3	1.85	10.74	13.4	47.2	16.4	0.187
		4.8	6.47	8.24	27.9	1.84	11.00	13.8	48.6	16.8	0.187
		6.4	8.09	10.31	32.0	1.76	12.59	16.5	58.3	19.5	0.181
2.1/2x2.1/2	63.5x63.5	2.3	4.31	5.49	33.9	2.48	10.7	12.5	53.8	16.0	0.246
		2.4	4.49	5.72	35.1	2.48	11.1	13.0	55.9	16.6	0.246
		3.0	5.52	7.03	42.1	2.45	13.3	15.8	68.2	20.0	0.244
		3.2	5.85	7.45	44.4	2.44	14.0	16.6	72.1	21.1	0.243
		4.0	7.15	9.11	52.5	2.40	16.5	20.0	87.0	25.0	0.240
		4.6	8.08	10.29	57.9	2.37	18.2	22.3	97.4	27.6	0.238
		4.8	8.38	10.68	59.5	2.36	18.7	23.0	100.7	28.5	0.238
		6.4	10.65	13.56	70.6	2.28	22.2	28.2	124.1	34.1	0.232

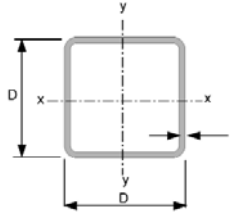
Cold Formed Hollow Sections Dimensions — Square



Imperial Units

Designation		Thickness t	Mass Per Metre	Area of Section A	Second Moment of Area I	Radius of Gyration r	Elastic Modulus Z	Plastic Modulus S	Torsional Constant		Surface Area per Metre
Size DxD									J	C	
in	mm	mm	kg/m	cm ²	cm ⁴	cm	cm ³	cm ³	cm ⁴	cm ³	m ² /m
3x3	76.2x76.2	2.3	5.23	6.66	60.0	3.00	15.8	18.3	94.5	23.7	0.297
		2.4	5.45	6.94	62.3	3.00	16.3	19.1	98.3	24.6	0.297
		3.0	6.71	8.55	75.3	2.97	19.8	23.3	120	29.7	0.294
		3.2	7.13	9.08	79.4	2.96	20.9	24.6	127	31.4	0.294
		4.0	8.74	11.1	94.9	2.92	24.9	29.8	155	37.6	0.291
		4.6	9.91	12.6	105.5	2.89	27.7	33.4	174	41.8	0.289
		4.8	10.30	13.1	108.8	2.88	28.6	34.6	180	43.2	0.288
		6.4	13.20	16.8	132.0	2.80	34.6	43.0	226	52.7	0.283
3.1/2x3.1/2	88.9x88.9	3.0	7.91	10.1	122	3.49	27.6	32.2	194	41.4	0.345
		3.2	8.40	10.7	129	3.48	29.1	34.1	206	43.8	0.345
		4.0	10.34	13.2	156	3.44	35.0	41.5	251	52.7	0.342
		4.5	11.52	14.7	171	3.41	38.5	45.9	278	58.0	0.340
		4.6	11.75	15.0	174	3.41	39.1	46.7	283	59.0	0.340
		4.8	12.21	15.6	180	3.40	40.4	48.4	294	61.0	0.339
		6.0	14.89	19.0	212	3.34	47.6	57.9	354	72.1	0.335
		6.4	15.48	19.7	214	3.30	48.2	59.3	372	74.9	0.328
4x4	101.6x101.6	3.0	9.11	11.6	186	4.00	36.6	42.6	293	55.0	0.396
		3.2	9.68	12.3	197	4.00	38.7	45.2	311	58.2	0.395
		4.0	11.94	15.2	238	3.96	46.9	55.1	380	70.5	0.393
		4.5	13.31	17.0	262	3.93	51.6	61.1	422	77.7	0.391
		4.6	13.58	17.3	267	3.93	52.5	62.2	431	79.1	0.391
		4.8	14.12	18.0	276	3.92	54.4	64.6	447	81.9	0.390
		6.0	17.28	22.0	328	3.86	64.6	77.8	541	97.5	0.386
		6.4	18.03	23.0	335	3.82	65.9	80.1	571	102	0.379
		7.9	21.56	27.5	383	3.74	75.5	93.6	673	118	0.372
		9.5	25.04	31.9	424	3.65	83.5	105.9	765	132	0.366
12.7	31.10	39.6	475	3.46	93.4	124.3	901	151	0.352		
5x5	127.0x127.0	4.0	15.13	19.3	481	4.99	75.7	88.2	758	114	0.494
		4.5	16.90	21.5	532	4.97	83.7	98.1	844	126	0.493
		4.6	17.25	22.0	542	4.97	85.3	100	861	128	0.492
		4.8	17.80	22.7	554	4.94	87.2	103	899	133	0.487
		6.0	22.07	28.1	674	4.90	106.2	126	1091	160	0.487
		6.4	23.13	29.5	695	4.86	109.5	131	1158	168	0.481
		7.9	27.86	35.5	810	4.78	127.6	155	1380	197	0.474
		9.5	32.62	41.6	914	4.69	144.0	178	1595	224	0.467
		12.7	41.23	52.5	1069	4.51	168.4	216	1951	266	0.453

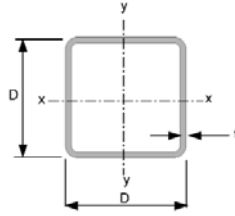
Cold Formed Hollow Sections Dimensions — Square



Imperial Units

Designation		Thickness t	Mass Per Metre	Area of Section A	Second Moment of Area I	Radius of Gyration r	Elastic Modulus Z	Plastic Modulus S	Torsional Constant		Surface Area per Metre
Size $D \times D$	in								mm	J	
6x6	152.4x152.4	4.0	18.32	23.3	849	6.03	111.4	129	1328	167	0.596
		4.5	20.49	26.1	942	6.01	123.6	144	1481	186	0.594
		4.6	20.92	26.7	960	6.00	126.0	147	1512	189	0.594
		4.8	21.78	27.7	996	5.99	130.8	152	1572	196	0.593
		6.0	26.85	34.2	1205	5.94	158.1	186	1925	238	0.589
		6.4	28.24	36.0	1251	5.90	164.1	194	2047	250	0.582
		7.9	34.16	43.5	1473	5.82	193.3	232	2459	297	0.576
		9.5	40.19	51.2	1682	5.73	220.8	268	2867	341	0.569
		12.7	51.36	65.4	2021	5.56	265.2	331	3581	415	0.555
7x7	177.8x177.8	4.6	20.92	26.7	960	6.00	126.0	147	1512	189	0.594
		4.8	21.78	27.7	996	5.99	130.8	152	1572	196	0.593
		6.4	28.24	36.0	1251	5.90	164.1	194	2047	250	0.582
		7.9	34.16	43.5	1473	5.82	193.3	232	2459	297	0.576
		9.5	40.19	51.2	1682	5.73	220.8	268	2867	341	0.569
		12.7	51.36	65.4	2021	5.56	265.2	331	3581	415	0.555
8x8	203.2x203.2	4.6	28.26	36.0	2348	8.08	231.1	267	3653	347	0.797
		4.8	29.44	37.5	2440	8.07	240.2	277	3802	361	0.796
		6.4	38.44	49.0	3113	7.97	306.4	358	4989	465	0.785
		7.9	46.76	59.6	3713	7.89	365.4	431	6041	557	0.779
		9.5	55.35	70.5	4302	7.81	423.4	504	7110	648	0.772
		12.7	71.62	91.2	5327	7.64	524.3	637	9080	809	0.758
10x10	254.0x254.0	6.4	48.65	62.0	6257	10.0	492.7	571	9898	746	0.989
		7.9	59.37	75.6	7518	9.97	592.0	691	12039	898	0.982
		9.5	70.50	89.8	8781	9.89	691.4	813	14243	1053	0.975
		12.7	91.88	117.0	11059	9.72	870.8	1041	18397	1334	0.961
		15.9	112.06	142.8	13019	9.55	1025.1	1246	22196	1583	0.948
12x12	304.8x304.8	6.4	58.86	75.0	11019	12.1	723.0	834	17279	1093	1.192
		7.9	71.97	91.7	13302	12.05	872.9	1012	21075	1322	1.185
		9.5	85.66	109.1	15617	11.96	1024.8	1196	25012	1555	1.178
		12.7	112.14	142.8	19883	11.80	1304.6	1543	32530	1991	1.165
		15.9	137.42	175.1	23676	11.63	1553.6	1862	39555	2384	1.151
14x14	355.6x355.6	9.5	100.81	128.4	25310	14.04	1423.5	1653	40165	2156	1.382
		12.7	132.39	168.7	32465	13.87	1825.9	2143	52479	2777	1.368
		15.9	162.78	207.4	38963	13.71	2191.4	2602	64139	3349	1.354
16x16	406.4x406.4	12.7	152.65	194.5	49470	15.95	2434.6	2842	79243	3695	1.571
		15.9	188.15	239.7	59714	15.78	2938.7	3464	97198	4478	1.557

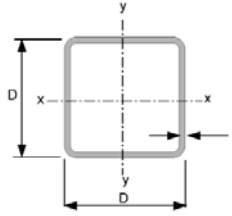
Cold Formed Hollow Sections Dimensions — Square



Metric Units

Designation		Mass Per Metre	Area of Section A	Second Moment of Area I	Radius of Gyration r	Elastic Modulus Z	Plastic Modulus S	Torsional Constant		Surface Area per Metre
Size DxD	Thickness t							J	C	
mm	mm	kg/m	cm ²	cm ⁴	cm	cm ³	cm ³	cm ⁴	cm ³	m ² /m
13x13	1.2	0.42	0.53	0.12	0.47	0.18	0.23	0.21	0.28	0.048
	1.6	0.52	0.66	0.14	0.45	0.21	0.27	0.25	0.32	0.047
16x16	1.2	0.53	0.67	0.24	0.60	0.30	0.37	0.40	0.45	0.060
	1.6	0.67	0.86	0.28	0.58	0.35	0.45	0.50	0.54	0.059
19x19	1.2	0.64	0.82	0.42	0.72	0.44	0.54	0.70	0.67	0.072
	1.6	0.82	1.05	0.51	0.70	0.54	0.67	0.88	0.82	0.071
25x25	1.2	0.87	1.11	1.03	0.96	0.82	0.97	1.66	1.24	0.096
	1.6	1.12	1.43	1.28	0.94	1.02	1.24	2.12	1.54	0.095
	2.3	1.53	1.95	1.61	0.91	1.29	1.62	2.80	1.97	0.092
	3.0	1.89	2.41	1.84	0.87	1.47	1.91	3.33	2.3	0.090
32x32	1.2	1.13	1.44	2.25	1.25	1.41	1.65	3.58	2.11	0.124
	1.6	1.48	1.88	2.84	1.23	1.78	2.12	4.62	2.68	0.123
	2.3	2.04	2.60	3.71	1.20	2.32	2.84	6.24	3.52	0.120
	3.0	2.55	3.25	4.38	1.16	2.74	3.44	7.62	4.2	0.118
38x38	1.2	1.13	1.44	2.25	1.25	1.41	1.65	3.58	2.11	0.124
	1.6	1.48	1.88	2.84	1.23	1.78	2.12	4.62	2.68	0.123
	2.3	2.04	2.60	3.71	1.20	2.32	2.84	6.24	3.52	0.120
	3.0	2.55	3.25	4.38	1.16	2.74	3.44	7.62	4.2	0.118
50x50	1.6	2.38	3.03	11.7	1.96	4.68	5.46	18.5	7.03	0.195
	2.3	3.34	4.25	15.9	1.93	6.34	7.52	25.6	9.55	0.192
	3.0	4.25	5.41	19.5	1.90	7.79	9.39	32.1	11.8	0.190
	3.2	4.50	5.73	20.4	1.89	8.16	9.89	33.9	12.3	0.189
	4.5	6.02	7.67	25.5	1.82	10.20	12.76	44.1	15.6	0.185
	6.0	7.56	9.63	29.5	1.75	11.78	15.32	53.2	18.2	0.179
60x60	1.6	2.88	3.67	20.7	2.37	6.89	7.99	32.4	10.4	0.235
	2.3	4.06	5.17	28.3	2.34	9.44	11.1	45.2	14.2	0.232
	3.0	5.19	6.61	35.1	2.31	11.71	13.95	57.1	17.7	0.230
	3.2	5.50	7.01	36.9	2.30	12.31	14.73	60.3	18.6	0.229
	4.5	7.43	9.47	47.2	2.23	15.73	19.32	79.8	23.9	0.225
63.5x63.5	6.0	9.45	12.03	56.1	2.16	18.69	23.68	98.4	28.6	0.219
	2.3	4.31	5.49	33.9	2.48	10.66	12.5	53.8	16.0	0.246
	3.0	5.52	7.03	42.1	2.45	13.27	15.76	68.2	20.0	0.244
	4.5	7.93	10.10	57.0	2.38	17.95	21.93	95.7	27.2	0.239
	6.0	10.11	12.87	68.2	2.30	21.48	27.03	118.7	32.8	0.233
75x75	2.3	5.14	6.55	57.1	2.95	15.2	17.7	90.0	22.9	0.292
	3.0	6.60	8.41	71.6	2.92	19.1	22.5	115	28.7	0.290
	3.2	7.01	8.93	75.5	2.91	20.1	23.8	121	30.3	0.289
	4.5	9.55	12.17	98.6	2.85	26.3	31.7	162.7	39.7	0.285
	6.0	12.27	15.63	120.2	2.77	32.0	39.6	205	48.7	0.279

Cold Formed Hollow Sections Dimensions — Square



Metric Units

Designation		Mass Per Metre	Area of Section A	Second Moment of Area I	Radius of Gyration r	Elastic Modulus Z	Plastic Modulus S	Torsional Constant		Surface Area per Metre
Size DxD	Thickness t							J	C	
mm	mm	kg/m	cm ²	cm ⁴	cm	cm ³	cm ³	cm ⁴	cm ³	m ² /m
100x100	2.3	6.95	8.85	140	3.97	27.9	32.3	217	41.9	0.392
	3.0	8.96	11.4	177	3.94	35.4	41.2	279	53.2	0.390
	3.2	9.52	12.1	187	3.93	37.5	43.7	296	56.3	0.389
	4.5	13.08	16.7	249	3.87	49.9	59.0	402	75.1	0.385
	6.0	16.98	21.6	311	3.79	62.3	75.1	514	94.1	0.379
	9.0	24.08	30.7	408	3.65	81.6	102.1	706	124.5	0.369
112.50x112.5	2.3	7.85	10.00	201	4.48	35.7	41.1	312	53.6	0.442
	3.0	10.13	12.9	256	4.45	45.4	52.7	400	68.2	0.440
	4.5	14.85	18.9	363	4.38	64.5	75.9	580	97.0	0.435
	6.0	19.34	24.6	457	4.31	81.2	97.1	746	122.4	0.429
125x125	2.3	8.75	11.2	278	4.99	44.5	51.1	430	66.8	0.492
	3.0	11.31	14.4	355	4.96	56.7	65.6	553	85.1	0.490
	3.2	12.03	15.3	376	4.95	60.1	69.6	587	90.2	0.489
	4.5	16.62	21.2	506	4.89	80.9	94.8	804	122	0.485
	6.0	21.69	27.6	641	4.82	103	122	1038	154	0.479
	9.0	31.14	39.7	865	4.67	138	169	1455	210	0.469
150x150	4.5	20.15	25.7	896	5.91	120	139	1411	180	0.585
	6.0	26.40	33.6	1146	5.84	153	180	1833	230	0.579
175x175	6.0	31.11	39.6	1864	6.86	213	249	2954	320	0.679
	9.0	45.27	57.7	2599	6.71	297	354	4233	448	0.669
200x200	6.0	35.82	45.6	2833	7.88	283	330	4459	426	0.779
	8.0	46.51	59.2	3566	7.76	357	421	5815	544	0.766
	9.0	51.79	66.0	3918	7.71	392	465	6454	599	0.761
	12.0	65.99	84.1	4730	7.50	473	576	8230	743	0.738
250x250	6.0	45.24	57.6	5672	9.92	454	524	8843	681	0.979
	9.0	65.92	84.0	7984	9.75	639	750	12913	972	0.961
	12.0	84.83	108	9859	9.55	789	944	16691	1226	0.938
300x300	6.0	54.66	69.6	9964	12.0	664	764	15434	997	1.18
	9.0	80.05	102	14183	11.8	946	1102	22661	1434	1.16
	12.0	104.64	133	18054	11.6	1204	1420	29439	1835	1.15
	16.0	134.06	171	22076	11.4	1472	1774	37837	2299	1.12
350x350	9.0	94.18	120	22967	13.8	1312	1522	36372	1987	1.36
	12.0	122.51	156	29054	13.6	1660	1949	47598	2552	1.34
	16.0	159.18	203	36511	13.4	2086	2488	61481	3238	1.32
400x400	9.0	108.31	138	34785	15.9	1739	2009	54721	2630	1.56
	12.0	141.35	180	44319	15.7	2216	2587	71843	3395	1.54
	16.0	184.30	235	56154	15.5	2808	3322	93279	4336	1.52