

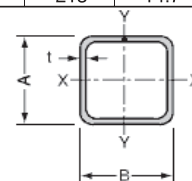
Section properties Square : 2 in. x 2 in. to 14 in. x 14 in.

Dimensions			Mass			Area	Second moment of area		Radius of gyration		Elastic section modulus		Plastic section modulus		Nominal length per tonne	
Nominal size		Thickness	M1	M2	M3	A	Ix	Iy	ix	iy	Zx	Zy	Zpx	Zpy	ft	
A in.	x B in.	t in.	kg/ft	lb/ft	kg/m	in ²	in ⁴	in ⁴	in.	in.	in ³	in ³	in ³	in ³		
2	x	2	0.180	1.89	4.17	6.21	1.227	0.653	0.653	0.729	0.729	0.653	0.653	0.817	0.817	529
			0.188	1.96	4.31	6.42	1.269	0.668	0.668	0.726	0.726	0.668	0.668	0.841	0.841	510
			0.250	2.45	5.40	8.04	1.589	0.766	0.766	0.694	0.694	0.766	0.766	1.00	1.00	408
2.5	x	2.5	0.180	2.45	5.39	8.03	1.587	1.38	1.38	0.934	0.934	1.11	1.11	1.35	1.35	408
			0.188	2.53	5.58	8.32	1.644	1.42	1.42	0.930	0.930	1.14	1.14	1.40	1.40	395
			0.250	3.22	7.09	10.6	2.089	1.69	1.69	0.899	0.899	1.35	1.35	1.71	1.71	311
3	x	3	0.180	3.00	6.61	9.85	1.947	2.52	2.52	1.14	1.14	1.68	1.68	2.03	2.03	333
			0.188	3.11	6.86	10.2	2.019	2.60	2.60	1.13	1.13	1.73	1.73	2.10	2.10	322
			0.250	3.99	8.79	13.1	2.589	3.16	3.16	1.10	1.10	2.10	2.10	2.61	2.61	251
			0.313	4.79	10.6	15.7	3.108	3.58	3.58	1.07	1.07	2.39	2.39	3.04	3.04	209
			0.375	5.51	12.1	18.1	3.576	3.88	3.88	1.04	1.04	2.59	2.59	3.38	3.38	181
3.5	x	3.5	0.180	3.56	7.83	11.7	2.307	4.16	4.16	1.34	1.34	2.38	2.38	2.84	2.84	281
			0.188	3.69	8.13	12.1	2.394	4.29	4.29	1.34	1.34	2.45	2.45	2.93	2.93	271
			0.250	4.76	10.5	15.6	3.089	5.29	5.29	1.31	1.31	3.02	3.02	3.69	3.69	210
4	x	4	0.180	4.11	9.06	13.5	2.667	6.38	6.38	1.55	1.55	3.19	3.19	3.78	3.78	243
			0.188	4.27	9.40	14.0	2.769	6.59	6.59	1.54	1.54	3.30	3.30	3.91	3.91	234
			0.250	5.53	12.2	18.2	3.589	8.22	8.22	1.51	1.51	4.11	4.11	4.97	4.97	181
			0.313	6.72	14.8	22.0	4.358	9.58	9.58	1.48	1.48	4.79	4.79	5.90	5.90	149
			0.375	7.83	17.2	25.7	5.076	10.7	10.7	1.45	1.45	5.35	5.35	6.72	6.72	128
			0.500	9.80	21.6	32.2	6.356	12.3	12.3	1.39	1.39	6.13	6.13	8.02	8.02	102
4.5	x	4.5	0.180	4.67	10.3	15.3	3.027	9.28	9.28	1.75	1.75	4.13	4.13	4.86	4.86	214
			0.188	4.85	10.7	15.9	3.144	9.60	9.60	1.75	1.75	4.27	4.27	5.03	5.03	206
			0.250	6.31	13.9	20.7	4.089	12.1	12.1	1.72	1.72	5.36	5.36	6.43	6.43	158
			0.313	7.68	16.9	25.2	4.983	14.2	14.2	1.69	1.69	6.30	6.30	7.68	7.68	130
5	x	5	0.180	5.22	11.5	17.1	3.387	12.9	12.9	1.96	1.96	5.18	5.18	6.07	6.07	192
			0.188	5.43	11.9	17.8	3.519	13.4	13.4	1.95	1.95	5.36	5.36	6.29	6.29	184
			0.250	7.08	15.6	23.2	4.589	16.9	16.9	1.92	1.92	6.78	6.78	8.07	8.07	141
			0.313	8.65	19.0	28.4	5.608	20.1	20.1	1.89	1.89	8.02	8.02	9.71	9.71	116
			0.375	10.1	22.3	33.3	6.576	22.8	22.8	1.86	1.86	9.11	9.11	11.2	11.2	99.0
0.500	12.9	28.4	42.3	8.356	27.0	27.0	1.80	1.80	10.8	10.8	13.7	13.7	77.5			
6	x	6	0.180	6.33	13.9	20.8	4.107	22.9	22.9	2.36	2.36	7.65	7.65	8.90	8.90	158
			0.188	6.58	14.5	21.6	4.269	23.8	23.8	2.36	2.36	7.93	7.93	9.24	9.24	152
			0.250	8.62	19.0	28.3	5.589	30.3	30.3	2.33	2.33	10.1	10.1	11.9	11.9	116
			0.313	10.6	23.3	34.7	6.858	36.3	36.3	2.30	2.30	12.1	12.1	14.4	14.4	94.3
			0.375	12.5	27.4	40.9	8.076	41.6	41.6	2.27	2.27	13.9	13.9	16.8	16.8	80.0
			0.500	16.0	35.2	52.4	10.36	50.5	50.5	2.21	2.21	16.8	16.8	20.9	20.9	62.5
7	x	7	0.180	7.44	16.4	24.4	4.827	37.1	37.1	2.77	2.77	10.6	10.6	12.3	12.3	134
			0.188	7.74	17.0	25.4	5.019	38.5	38.5	2.77	2.77	11.0	11.0	12.7	12.7	129
			0.250	10.2	22.4	33.3	6.589	49.4	49.4	2.74	2.74	14.1	14.1	16.5	16.5	98.0
			0.313	12.5	27.5	41.0	8.108	59.5	59.5	2.71	2.71	17.0	17.0	20.1	20.1	80.0
			0.375	14.8	32.5	48.4	9.576	68.7	68.7	2.68	2.68	19.6	19.6	23.5	23.5	67.6
0.500	19.1	42.0	62.5	12.36	84.6	84.6	2.62	2.62	24.2	24.2	29.6	29.6	52.4			
8	x	8	0.180	8.55	18.8	28.1	5.547	56.1	56.1	3.18	3.18	14.0	14.0	16.2	16.2	117
			0.188	8.90	19.6	29.2	5.769	58.2	58.2	3.18	3.18	14.6	14.6	16.8	16.8	112
			0.250	11.7	25.8	38.4	7.589	75.1	75.1	3.15	3.15	18.8	18.8	21.9	21.9	85.5
			0.313	14.4	31.8	47.3	9.358	90.9	90.9	3.12	3.12	22.7	22.7	26.7	26.7	69.4
			0.375	17.1	37.6	56.0	11.08	106	106	3.09	3.09	26.4	26.4	31.3	31.3	58.5
			0.500	22.1	48.8	72.6	14.36	131	131	3.03	3.03	32.9	32.9	39.7	39.7	45.2
0.625	26.9	59.2	88.2	17.43	153	153	2.96	2.96	38.3	38.3	47.2	47.2	37.2			
10	x	10	0.250	14.8	32.6	48.5	9.589	151	151	3.96	3.96	30.1	30.1	34.9	34.9	67.6
			0.313	18.3	40.3	60.0	11.86	183	183	3.93	3.93	36.7	36.7	42.8	42.8	54.6
			0.375	21.7	47.8	71.2	14.08	214	214	3.90	3.90	42.9	42.9	50.4	50.4	46.1
			0.500	28.3	62.3	92.9	18.36	271	271	3.84	3.84	54.2	54.2	64.6	64.6	35.3
			0.625	34.6	76.2	113	22.43	321	321	3.78	3.78	64.2	64.2	77.6	77.6	28.9
0.750	40.6	89.3	133	26.30	364	364	3.72	3.72	72.8	72.8	89.4	89.4	24.6			
12	x	12	0.250	17.9	39.4	58.6	11.59	265	265	4.78	4.78	44.1	44.1	50.8	50.8	55.9
			0.313	22.1	48.8	72.6	14.36	324	324	4.75	4.75	54.0	54.0	62.6	62.6	45.2
			0.375	26.3	58.0	86.4	17.08	380	380	4.72	4.72	63.4	63.4	73.9	73.9	38.0
			0.500	34.5	75.9	113	22.36	485	485	4.66	4.66	80.9	80.9	95.4	95.4	29.0
			0.625	42.3	93.2	139	27.43	580	580	4.60	4.60	96.7	96.7	116	116	23.6
0.750	49.8	110	163	32.30	665	665	4.54	4.54	111	111	134	134	20.1			
14	x	14	0.313	26.0	57.2	85.3	16.86	522	522	5.57	5.57	74.6	74.6	86.1	86.1	38.5
			0.375	31.0	68.2	102	20.08	615	615	5.54	5.54	87.9	87.9	102	102	32.3
			0.500	40.6	89.5	133	26.36	791	791	5.48	5.48	113	113	132	132	24.6
			0.625	50.0	110	164	32.43	952	952	5.42	5.42	136	136	161	161	20.0
			0.750	59.1	130	194	38.30	1,100	1,100	5.36	5.36	157	157	188	188	16.9
0.875	67.8	149	222	43.97	1,230	1,230	5.30	5.30	176	176	213	213	14.7			

NOTE

1)The calculations of section properties are based on the following corner geometry, as standard.

Thickness(T)	Inside corner profile	Outside corner profile
nominal	1.0T	2.0T



2)Refer to [these pages](#) for the section properties of SI.

3)When designing based on the design manual of AISC, the calculation standard of the section performance will be different. You shall use the section properties based on the calculation standard on AISC.

