

### Dimensions & Properties of Square Hollow Sections

SHS D x B mm	Thickness t mm	Sec Area A cm <sup>2</sup>	Unit Wt w kg/m	Moment of Inertia		Radius of Gyration		Elastic Modulus		Torsional Constants		Outer Surface
				I <sub>xx</sub> cm <sup>4</sup>	I <sub>yy</sub> cm <sup>4</sup>	r <sub>xx</sub> cm	r <sub>yy</sub> cm	Z <sub>xx</sub> cm <sup>3</sup>	Z <sub>yy</sub> cm <sup>3</sup>	J cm <sup>4</sup>	B cm <sup>3</sup>	Area per m m <sup>2</sup>
25 x 25	1.6	1.43	1.12	1.28	1.28	0.94	0.94	1.02	1.02	1.96	1.46	0.092
	2.0	1.74	1.36	1.48	1.48	0.92	0.92	1.19	1.19	2.29	1.68	0.090
	2.6	2.16	1.69	1.72	1.72	0.89	0.89	1.38	1.38	2.68	1.92	0.087
	3.2	2.53	1.98	1.89	1.89	0.86	0.86	1.51	1.51	2.96	2.07	0.084
32 x 32	2.0	2.30	1.80	3.36	3.36	1.21	1.21	2.10	2.10	5.30	3.05	0.118
	2.6	2.88	2.26	4.02	4.02	1.18	1.18	2.51	2.51	6.45	3.63	0.115
	3.2	3.42	2.69	4.54	4.54	1.15	1.15	2.84	2.84	7.41	4.07	0.112
38 x 38	2.0	2.78	2.18	5.88	5.88	1.46	1.46	3.10	3.10	9.31	4.54	0.142
	2.6	3.51	2.75	7.14	7.14	1.43	1.43	3.76	3.76	11.51	5.49	0.139
	3.2	4.19	3.29	8.18	8.18	1.40	1.40	4.30	4.30	13.45	6.28	0.136
	4.0	5.03	3.95	9.26	9.26	1.36	1.36	4.87	4.87	15.67	7.12	0.131
40 x 40	2.6	3.72	2.92	8.45	8.45	1.51	1.51	4.22	4.22	13.63	6.20	0.147
	2.9	4.09	3.21	9.11	9.11	1.49	1.49	4.56	4.56	14.85	6.68	0.145
	3.2	4.45	3.49	9.72	9.72	1.48	1.48	4.86	4.86	16.00	7.12	0.144
	4.0	5.35	4.20	11.07	11.07	1.44	1.44	5.54	5.54	18.75	8.12	0.139
50 x 5	2.6	4.76	3.74	17.47	17.47	1.92	1.92	6.99	6.99	28.53	10.37	0.187
	2.9	5.25	4.12	18.99	18.99	1.90	1.90	7.60	7.60	31.15	11.23	0.185
	3.6	6.35	4.98	22.15	22.15	1.87	1.87	8.86	8.86	36.58	12.98	0.181
	4.5	7.67	6.02	25.50	25.50	1.82	1.82	10.20	10.20	41.99	14.68	0.177
60 x 60	2.6	5.80	4.55	31.33	31.33	2.33	2.33	10.44	10.44	50.08	15.52	0.227
	2.9	6.41	5.03	34.21	34.21	2.31	2.31	11.40	11.40	56.12	16.95	0.225
	3.2	7.01	5.50	36.94	36.94	2.30	2.30	12.31	12.31	60.02	18.31	0.224
	4.0	8.55	6.71	43.55	43.55	2.26	2.26	14.52	14.52	72.41	21.62	0.219
	4.8	10.01	7.85	49.22	49.22	2.22	2.22	16.41	16.41	83.86	24.51	0.215
72 x 72	3.2	8.54	6.71	66.32	66.32	2.79	2.79	18.42	18.42	106.81	27.47	0.272
	4.0	10.47	8.22	79.03	79.03	2.75	2.75	21.95	21.95	129.85	32.78	0.267
	4.8	12.31	9.66	90.31	90.31	2.71	2.71	25.09	25.09	151.55	37.55	0.263
80 x 80*	3.2	9.57	7.51	92.71	92.71	3.11	3.11	23.18	23.18	148.55	34.60	0.304
	4.0	11.75	9.22	111.04	111.04	3.07	3.07	27.76	27.76	181.22	41.49	0.299
	4.8	13.85	10.87	127.58	127.58	3.04	3.04	31.89	31.89	212.26	47.77	0.295
91.5 x 91.5	3.6	12.32	9.67	156.49	156.49	3.56	3.56	34.21	34.21	251.17	51.14	0.347
	4.5	15.14	11.88	187.57	187.57	3.52	3.52	41.00	41.00	306.78	61.40	0.343
	5.4	17.85	14.01	215.68	215.68	3.48	3.48	47.14	47.14	359.76	70.77	0.338

113.5 x 113.5	4.8	20.28	15.92	393.30	393.30	4.40	4.40	69.30	69.30	637.45	103.89	0.429
	5.4	22.60	17.74	432.58	432.58	4.38	4.38	76.23	76.23	708.69	114.41	0.426
132 x 132	4.8	23.83	18.71	634.39	634.39	5.16	5.16	96.12	96.12	1018.30	144.11	0.503
	5.4	26.59	20.88	700.11	700.11	5.13	5.13	106.08	106.08	1134.25	159.18	0.500
150x150*	4.0	22.95	18.01	807.82	807.82	5.93	5.93	107.71	107.71	1273.46	161.38	0.579
	5.0	28.36	22.26	982.12	982.12	5.89	5.89	130.95	130.95	1569.09	196.38	0.574
	6.0	33.63	26.40	1145.91	1145.91	5.84	5.84	152.79	152.79	1856.18	229.44	0.569
	7.0	38.78	30.44	1299.44	1299.44	5.79	5.79	173.26	173.26	2134.99	260.65	0.564
	8.0	43.79	34.38	1443.00	1443.00	5.74	5.74	192.40	192.40	2405.78	290.12	0.559

### Dimensions & Properties of Rectangular Hollow Sections

SHS (mm) D X W mm	Thickness t mm	Sec Area A Cm <sup>2</sup>	Unit Wt w (Kg/m)	Moment of Inertia		Radius of Gyration		Elastic Modulus		Torsional Constants		Outer Surface (cm <sup>3</sup> )
				I <sub>xx</sub> cm <sup>4</sup>	I <sub>yy</sub> cm <sup>4</sup>	r <sub>xx</sub> cm	r <sub>yy</sub> cm	Z <sub>xx</sub> cm <sup>3</sup>	Z <sub>yy</sub> cm <sup>3</sup>	J cm <sup>3</sup>	B cm <sup>3</sup>	
50X25	2.0	2.74	2.15	8.38	2.81	1.75	1.01	3.35	2.25	6.79	3.79	0.142
	2.6	3.46	271	10.16	3.36	1.71	0.99	4.06	2.69	8.27	4.53	0.139
	3.2	4.13	3.24	11.63	3.80	1.68	0.96	4.65	3.04	9.52	5.52	0.134
	4.0	4.95	3.88	13.13	4.23	1.63	0.92	5.25	3.38	10.86	5.69	0.13
60X40	2.6	4.76	3.73	22.76	12.09	2.19	1.59	7.59	6.05	25.59	9.83	0.187
	29	5.25	4.12	24.74	13.11	2.17	1.58	8.25	6.56	28.02	10.66	0.181
	3.6	6.35	4.98	28.90	15.23	2.13	1.55	9.63	7.62	33.30	12.41	0.181
	4.5	7.67	6.02	33.31	17.44	2.08	1.51	11.10	8.72	39.34	14.29	0.177
66X33	2.6	4.70	3.69	25.15	8.43	2.31	1.34	7.62	5.11	20.75	8.71	0.185
	2.9	5.19	4.07	27.33	9.12	2.29	1.33	8.28	533	22.65	9.43	0.183
	3.6	6.28	4.93	31.87	10.52	2.25	1.29	9.66	6.37	26.71	10.90	0.179
	4.5	7.58	595	36.64	11.93	2.20	1.25	11.10	7.23	31.21	12.43	0.175
80X40	2.6	5.80	4.55	46.58	15.74	2.84	1.65	11.55	7.87	38.50	13.46	0.227
	2.9	6.41	5.03	50.87	17.11	2.82	1.63	12.72	8.56	42.23	14.66	0.225
	3.2	7.01	5.50	54.94	18.41	2.80	1.62	13.74	9.21	45.83	15.78	0.224
	4.0	8.55	6.71	64.79	21.49	2.75	1.59	16.20	10.74	54.77	18.49	0.219
	48	10.01	7.85	73.22	24.03	2.71	1.55	18.30	12.02	62.81	20.79	0.215
96 x 46	3.2	8.54	6.71	98.61	33.28	3.40	1.97	20.54	13.67	82.13	23.82	0.272
	3.8	10.47	8.22	117.54	39.32	3.35	1.94	24.49	16.38	99.11	28.24	2.67
	4.0	12.31	9.66	134.35	44.55	3.30	1.90	27.99	18.56	114.80	32.14	2.63
122 x 61	3.6	12.32	9.67	232.61	78.83	4.34	253	38.13	25.84	193.91	44.50	0.347
	4.5	15.14	11.88	278.94	93.78	4.29	2.49	45.73	30.75	235.39	53.13	0.343
	5.4	17.85	14.01	320.83	107.03	4.24	2.45	52.60	35.09	274.29	60.89	0.338
120 x 60	3.2	10.85	8.51	199.88	67.65	4.29	2.50	33.31	22.65	165.83	38.95	0.344
	3.6	12.11	9.5	220.75	74.77	4.27	2.48	36.79	24.92	184.10	42.91	0.341
	4.5	14.87	11.67	264.52	88.88	4.22	2.44	44.09	29.63	223.34	51.19	0.337
145 x 82	4.8	20.28	15.92	555.16	228.50	5.23	3.36	76.57	55.73	534.27	94.45	0.429
	5.4	22.60	17.74	610.85	250.59	5.20	3.33	84.26	61.12	292.70	103.81	0.426
172 x 92	4.8	23.83	18.71	917.13	346.91	6.20	3.82	106.64	75.41	826.04	128.85	0.503
	5.4	26.59	20.88	1012.47	381.74	6.17	3.79	117.73	82.99	592.70	142.4	0.500

<b>200 x 100</b>	<b>4.0</b>	<b>22.95</b>	<b>18.01</b>	<b>1199.71</b>	<b>410.78</b>	<b>7.23</b>	<b>4.23</b>	<b>119.97</b>	<b>82.16</b>	<b>991.47</b>	<b>141.46</b>	<b>0.579</b>
	<b>5.0</b>	<b>28.95</b>	<b>22.26</b>	<b>1759.25</b>	<b>496.94</b>	<b>7.17</b>	<b>4.19</b>	<b>119.97</b>	<b>99.39</b>	<b>1216.96</b>	<b>171.53</b>	<b>0.574</b>
	<b>6.0</b>	<b>33.63</b>	<b>26.40</b>	<b>1703.31</b>	<b>576.91</b>	<b>1.12</b>	<b>4.14</b>	<b>170.33</b>	<b>115.38</b>	<b>1434.03</b>	<b>199.68</b>	<b>0.569</b>
	<b>7.0</b>	<b>38.78</b>	<b>30.44</b>	<b>1932.19</b>	<b>650.93</b>	<b>7.06</b>	<b>4.10</b>	<b>193.22</b>	<b>130.19</b>	<b>1642.92</b>	<b>226.04</b>	<b>0.564</b>
	<b>8.0</b>	<b>43.79</b>	<b>34.38</b>	<b>2146.21</b>	<b>719.19</b>	<b>7.00</b>	<b>4.05</b>	<b>214.62</b>	<b>143.84</b>	<b>1843.86</b>	<b>255.68</b>	<b>0.559</b>



