



SHRI
OM SAI
STEELS PVT. LTD.

COMPANY OVERVIEW

"**Shri Om Sai Steels Pvt. Ltd.**" was founded in the year 1984 by an amensnt visionary business man "Shri Tukaram Nagare". The sole vision of the company is to cater every hard metal solutions to the customer under one roof. The company has its customers across Karnataka.

"Shri Om Sai Steels Pvt. Ltd." believes in providing quality products to the customers which is also cost effective. The main motto of the company is to deliver the products on time and cater a customer with a smile. "Shri Om Sai Steels Pvt. Ltd." believes in customer satisfaction and long term relationships and it has also been the root of success to build a strong business empire for more than 30 years.

AUTHORIZED DISTRIBUTOR



Vision



Having 50+ years of experience in the field "Shri Tukaram Nagare" has a vision to establish a steel empire which would cater the needs of large customer base and which would be recognized as one of the prominent steel product suppliers across Karnataka & India.



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T. ANGLE

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
T-20X20X3	0.90	5.40
T-25X25X3	1.15	6.90
T-30X30X3	1.40	8.40
T-40X40X6	3.50	21.00
T-50X50X6	4.50	27.00
T-60X60X6	5.40	32.40



MS BEAM

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
ISLB 100X60	8.00	50.00
ISMB 100X50	8.90	55.00
ISLB 125X65	9.80	60.00
ISMB 125X70	13.30	80.00
ISMB 150X75	15.00	90.00
ISMB 175X85	19.60	120.00
ISMB 200X100	24.20	150.00
ISMB 250X125	37.30	227.00
ISMB 300X140	46.00	280.00
ISMB 350X140	52.40	320.00
ISMB 400X140	61.50	375.00
ISMB 450X150	72.40	442.00
ISMB 500X180	86.90	530.00
ISMB 600X210	123.00	750.00

MS FLAT

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
FLAT 12X3	0.282	1.70
FLAT 12X5	0.471	2.80
FLAT 20X3	0.471	2.80
FLAT 20X4	0.620	3.70
FLAT 20X5	0.785	4.70
FLAT 20X6	0.942	5.60
FLAT 25X3	0.589	3.60
FLAT 25X5	1.10	6.60
FLAT 25X6	1.20	7.20
FLAT 25X8	1.60	9.60
FLAT 25X10	2.00	12.00

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
FLAT 25X12	2.40	14.40
FLAT 32X3	1.80	10.80
FLAT 32X5	1.25	7.50
FLAT 32X6	1.50	9.00
FLAT 32X8	2.00	12.00
FLAT 32X10	2.50	15.00
FLAT 32X12	3.00	18.00
FLAT 32X16	4.00	24.00
FLAT 40X3	0.950	5.70
FLAT 40X5	1.57	9.40
FLAT 40X6	1.90	11.40
FLAT 40X8	2.50	15.00
FLAT 40X10	3.20	19.10
FLAT 40X12	3.80	22.80
FLAT 40X16	5.00	30.00
FLAT 40X20	6.30	37.80
FLAT 40X25	7.85	47.10
FLAT 50X3	1.20	7.20
FLAT 50X5	2.00	12.00
FLAT 50X6	2.40	14.40
FLAT 50X8	3.20	19.20
FLAT 50X10	4.00	24.00
FLAT 50X12	4.70	28.20
FLAT 50X16	6.30	37.80
FLAT 50X20	7.85	47.10
FLAT 50X25	9.80	58.80
FLAT 50X32	12.60	75.60

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
FLAT 65X6	3.10	18.60
FLAT 65X8	4.10	24.60
FLAT 65X10	5.10	30.60
FLAT 65X12	6.20	37.20
FLAT 65X16	8.20	49.20
FLAT 65X20	10.20	61.20
FLAT 65X25	12.80	76.80
FLAT 65X32	16.40	98.40
FLAT 65X40	20.40	122.40
FLAT 75X6	3.50	21
FLAT 75X8	4.70	28.20
FLAT 75X10	5.90	35.40
FLAT 75X12	7.10	42.60
FLAT 75X16	9.40	56.40
FLAT 75X20	11.80	70.80
FLAT 75X25	14.70	88.20
FLAT 75X32	18.80	112.80
FLAT 75X40	23.50	141
FLAT 100X6	4.70	28.2
FLAT 100X8	6.30	37.80
FLAT 100X10	7.85	47.10
FLAT 100X12	9.40	56.40
FLAT 100X16	12.60	75.60
FLAT 100X20	15.70	94.20
FLAT 100X25	19.60	117.60
FLAT 100X32	25.10	150.60
FLAT 100X40	31.40	188.40
FLAT 125X6	5.90	35.40
FLAT 125X8	7.85	47.10
FLAT 125X10	9.20	55.20
FLAT 125X12	9.80	58.80
FLAT 125X16	15.70	94.20
FLAT 125X20	19.80	118.80
FLAT 125X25	24.50	147.00
FLAT 125X32	31.40	188.40
FLAT 150X6	7.10	42.60

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
FLAT 150X8	9.40	56.40
FLAT 150X10	11.80	70.80
FLAT 150X12	14.20	85.20
FLAT 150X16	18.80	112.80
FLAT 150X20	23.60	141.60
FLAT 150X25	29.40	176.40
FLAT 200X6	9.40	56.40
FLAT 200X8	12.60	75.60
FLAT 200X10	15.70	94.20
FLAT 200X12	18.90	113.40
FLAT 200X16	25.10	150.60
FLAT 200X20	31.40	188.40
FLAT 200X25	39.25	235.50
FLAT 250X8	15.70	94.20
FLAT 250X10	19.60	117.60
FLAT 250X12	23.60	141.60
FLAT 250X16	31.40	188.40
FLAT 250X20	39.30	235.80
FLAT 250X25	49.00	294.00
FLAT 300X8	18.90	113.40
FLAT 300X10	23.60	141.60
FLAT 300X12	28.30	169.80
FLAT 300X16	37.70	226.20
FLAT 300X20	47.10	282.60
FLAT 300X25	58.90	353.40

MS ROUND BARS

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
ROUND BAR 6mm	0.220	1.32
ROUND BAR 8mm	0.395	2.37
ROUND BAR 10mm	0.617	3.70
ROUND BAR 12mm	0.888	5.30
ROUND BAR 16mm	1.578	9.40
ROUND BAR 18mm	1.998	12.00
ROUND BAR 20mm	2.466	14.80
ROUND BAR 22mm	2.984	18.00
ROUND BAR 25mm	3.853	23.20
ROUND BAR 28mm	4.824	29.00

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
ROUND BAR 32mm	6.133	36.80
ROUND BAR 36mm	7.990	48.00
ROUND BAR 40mm	9.865	59.20
ROUND BAR 45mm	12.485	75.00
ROUND BAR 50mm	15.413	92.40
ROUND BAR 56mm	19.335	116.00
ROUND BAR 60mm	22.195	133.20
ROUND BAR 63mm	24.470	146.80
ROUND BAR 65mm	26.049	156.20
ROUND BAR 71mm	31.400	188.40
ROUND BAR 80mm	39.458	236.80
ROUND BAR 90mm	49.939	27.68
ROUND BAR 95mm	55.642	333.80
ROUND BAR 100mm	61.654	370.00
ROUND BAR 105mm	67.973	407.80
ROUND BAR 110mm	74.601	447.60
ROUND BAR 115mm	81.537	489.20
ROUND BAR 120mm	88.781	532.60
ROUND BAR 125mm	96.337	578.00
ROUND BAR 130mm	104.195	625.20
ROUND BAR 140mm	120.841	728.20
ROUND BAR 150mm	138.721	832.40
ROUND BAR 160mm	157.833	946.00
ROUND BAR 170mm	178.179	1070.00
ROUND BAR 180mm	198.757	1192.60
ROUND BAR 190mm	222.570	1335.40
ROUND BAR 200mm	246.614	1480.00

MS ANGLE

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
ISA 20X20X3	0.87	5.00
ISA 25X25X3	1.10	6.60
ISA 25X25X5	1.55	9.20
ISA 25X25X6	1.90	11.50
ISA 32X32X3	1.40	8.40
ISA 35X35X4	2.00	12.00
ISA 35X35X5	2.60	16.00
ISA 35X35X6	3.00	18.00
ISA 37X37X3	1.60	9.60
ISA 40X40X4	2.40	14.40
ISA 40X40X5	2.90	17.40
ISA 40X40X6	3.50	21.00
ISA 50X50X4	2.90	17.40
ISA 50X50X5	3.70	22.00
ISA 50X50X6	4.50	27.00
ISA 65X65X5	4.90	29.40
ISA 65X65X6	5.80	35.00
ISA 65X65X8	7.70	46.00
ISA 65X65X10	9.40	56.00
ISA 75X75X5	5.60	33.60
ISA 75X75X6	6.80	41.00

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
ISA 75X75X8	8.90	53.40
ISA 75X75X10	11.00	66.00
ISA 80X80X6	7.30	44.00
ISA 80X80X8	9.60	58.00
ISA 80X80X10	11.80	70.00
ISA 80X80X12	14.00	84.00
ISA 90X90X6	8.20	49.20
ISA 90X90X8	10.80	65.00
ISA 90X90X10	13.40	80.00
ISA 90X90 X12	15.80	94.80
ISA 100X100X6	9.20	55.20
ISA 100X100X5	12.10	72.6
ISA 100X100X10	14.9	89.40
ISA 100X100X12	17.7	106.20
ISA 110X110X5	13.4	80.40
ISA 110X110X10	16.70	100.20
ISA 110X110X12	19.70	115.20
ISA 130X130X8	15.90	95.40
ISA 130X130X10	19.70	115.20
ISA 130X130X12	23.40	140.40
ISA 150X150X10	22.80	136.80
ISA 150X150X12	27.20	163.20
ISA 150X150X16	35.80	214.80
ISA 150X150X20	44.10	264.60
ISA 200X200X12	36.60	220.00
ISA 200X200X16	48.50	291.00
ISA 200X200X20	60.00	360.00

MS SQUARE BAR

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
SQUARE BAR 6X6	0.280	1.68
SQUARE BAR 8X8	0.502	3.00
SQUARE BAR 10X10	0.785	4.70
SQUARE BAR 12X12	1.130	6.80
SQUARE BAR 16X16	2.010	12.00
SQUARE BAR 20X20	3.140	18.80
SQUARE BAR 25X25	4.996	30.00
SQUARE BAR 32X32	8.038	48.00
SQUARE BAR 40X40	12.650	76.00
SQUARE BAR 50X50	19.625	118.00

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
SQUARE BAR 65X65	33.166	199.00
SQUARE BAR 75X75	44.156	265.00
SQUARE BAR 90X90	63.585	381.60
SQUARE BAR 100X100	78.500	471.00
SQUARE BAR 110X110	94.980	570.00
SQUARE BAR 125X125	122.656	736.00
SQUARE BAR 150X150	176.625	1060.00

CHEQUERED PLATES

Thickness & Size In MM	Weight in kgs Per Sheet
3.00 X 1250 X 5000	150
4.00 X 1250 X 5000	200
5.00 X 1250 X 5000	250
6.00 X 1250 X 5000	300
8.00 X 1250 X 5000	400

MS PLATES

Thickness & Size in MM	Weight in kgs Per Plate
5.00 X 1020 X 6300	252.00
5.00 X 1250 X 2500	123.00
5.00 X 1250 X 6300	315.00
5.00 X 1500 X 6300	370.00
5.00 X 1830 X 3050	220.00
6.00 X 1250 X 2500	148.00
6.00 X 1250 X 6300	375.00
6.00 X 1500 X 6300	450.00
6.00 X 1830 X 3050	263.00
8.00 X 1250 X 2500	200.00
8.00 X 1250 X 6300	500.00
8.00 X 1500 X 6300	600.00
8.00 X 1830 X 6300	725.00

Thickness & Size in MM	Weight in kgs Per Plate
8.00 X 2000 X 6300	790.00
10.00 X 1250 X 2500	245.00
10.00 X 1250 X 6300	620.00
10.00 X 1500 X 6300	740.00
10.00 X 1830 X 6300	905.00
10.00 X 2000 X 6300	990.00
12.00 X 1250 X 6300	740.00
12.00 X 1500 X 6300	890.00
12.00 X 2000 X 6300	1190.00
14.00 X 1600 X 6300	1110.00
16.00 X 1250 X 6300	990.00
16.00 X 1500 X 6300	1190.00
16.00 X 2000 X 6300	1580.00
20.00 X 1250 X 6300	1240.00
20.00 X 1600 X 6300	1580.00
20.00 X 2000 X 6300	1980.00
22.00 X 1600 X 6300	1740.00
25.00 X 1250 X 6300	1390.00
25.00 X 1600 X 6300	1980.00
28.00 X 1600 X 6300	2215.00
30.00 X 1600 X 6300	2370.00
32.00 X 1600 X 6300	2530.00
36.00 X 1600 X 6300	2850.00
40.00 X 1600 X 6300	3165.00
45.00 X 1600 X 6300	3560.00
50.00 X 1600 X 6300	3950.00
56.00 X 1600 X 6300	4430.00
63.00 X 1600 X 6300	4985.00

MS CHANNEL

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
ISLC 70X35	4.0	24.00
ISLC 75X40	5.0	30.00
ISLC 75X40	6.0	36.00
ISMC 75X40	7.14	44.00
ISLC 95X45	6.0	36.00
ISMC 100X50	8.50	51.00
ISMC 100X50	9.56	59.00
ISMC 125X65	13.10	82.00
ISMC 150X75	16.80	103.00
ISMC 175X75	19.6	120.00

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
ISMC 200X75	22.30	136.00
ISMC 250X82	34.20	210.00
ISMC 300X90	36.30	222.00
ISMC 400X100	50.10	306.00

MS TMT BARS (CTD BAR /TMT BAR)

Size in mm	Weight in kgs Per Mtr	Weight for 20 Feet Length
8	0.400	4.90
10	0.620	7.60
12	0.890	10.80
16	1.580	19.20
20	2.470	30.20
25	3.860	47.00
28	4.830	59.00
32	8.040	98.00
36	10.180	124.20
40	12.570	153.40

HR SHEETS

Thickness & Size in MM	Thickness & Size in Guage and Feet	Weight in kgs Per Sheet
1.60 X 900 X 2500	16G X 3' X 8'	28.00
1.60 X 1250 X 2280	16G X 4' X 7.6'	36.00
1.60 X 1250 X 2500	16G X 4' X 5'	40.00
2.00 X 900 X 2500	14G X 3' X 5'	35.00
2.00 X 1250 X 2500	14G X 4' X 8'	50.00
2.00 X 1250 X 3660	14G X 4' X 12'	72.00
2.00 X 1500 X 2500	14G X 5' X 8'	59.00
2.00 X 1500 X 3660	14G X 5' X 12'	86.00
2.50 X 1250 X 2500	12G X 4' X 5'	61.00
2.50 X 1250 X 3660	12G X 4' X 12'	90.00
2.50 X 1500 X 2500	12G X 5' X 5'	74.00
2.50 X 1500 X 3660	12G X 5' X 12'	108.00
3.00 X 1250 X 2500	10G X 4' X 5'	74.00
3.00 X 1250 X 3660	10G X 4' X 12'	108.00
3.00 X 1250 X 4420	10G X 4' X 14.6'	130.00
3.00 X 1500 X 2500	10G X 5' X 5'	90.00
3.00 X 1500 X 3660	10G X 5' X 12'	130.00
3.00 X 1020 X 3660	10G X 3.4' X 12'	90.00
4.00 X 1250 X 2500	8G X 4' X 5'	100.00
4.00 X 1250 X 3050	8G X 4' X 10'	120.00
4.00 X 1250 X 3660	8G X 4' X 12'	145.00
4.00 X 1250 X 4420	5G X 4' X 14.6'	175.00
4.00 X 1250 X 5000	5G X 4' X 16.4'	200.00
4.00 X 1250 X 6300	8G X 4' X 20.6'	250.00
4.00 X 1500 X 2500	5G X 5' X 5'	120.00
4.00 X 1500 X 3050	5G X 5' X 10'	144.00
4.00 X 1500 X 3660	5G X 5' X 12'	175.00
4.00 X 1830 X 3050	8G X 6' X 10'	175.00
4.50 X 1830 X 3050	5G X 6' X 10'	200.00



HOT ROLLED ROUND PIPES

NB (mm)	OD PIPES (mm)	1.60	2.00	2.50	2.60	3.00	3.20	3.60	4.00	4.50	5.00
15NB	21.30	4.70	5.70								
20NB	26.90	6.00	7.40	9.00	9.40	10.60	11.20	13.60	13.50	15.00	16.20
25NB	33.70	7.60	9.40	11.50	12.00	13.60	14.40	16.00	17.60	19.40	21.20
32NB	42.40	9.65	12.00	14.80	15.30	17.50	18.60	20.70	22.70	25.20	27.70
40NB	48.30	11.00	13.70	17.00	17.60	20.10	23.20	24.00	26.20	29.20	32.00
50NB	60.30	14.00	17.30	21.40	22.20	25.40	27.20	30.20	33.30	37.20	41.00
65NB	76.10	17.60	22.00	27.20	28.30	32.50	34.50	38.60	42.70	47.70	52.60
80NE	88.20	20.70	25.70	32.00	33.00	38.20	40.60	45.40	50.20	56.00	62.00
100NB	114.20	26.70	33.20	41.50	43.00	49.00	52.00	59.00	65.00	73.00	80.00
125NB	139.70	32.70	40.70	50.75	52.70	60.70	64.70	72.50	80.30	90.00	99.70
150NB	165.10	38.70	48.30	60.20	62.50	73.00	76.70	86.00	95.40	95.40	118.50
200NB	219.10	51.50	64.20	80.20	83.40	96.00	102.40	114.80	127.40	143.00	158.40
250NB	273.00	64.20	80.20	100.00	104.00	120.00	127.80	143.60	159.20	178.80	198.30
300NB	323.90	76.30	95.30	119.00	124.00	143.00	152.00	170.00	189.40	212.70	236.00

CRCA SHEETS

THICKNESS	WT PER METER (KG)				
	900	1000	1100	1250	1500
0.40	2.8	3.1	3.5	3.9	
0.45	3.2	3.5	3.9	4.4	
0.60	4.5	4.7	5.2	5.9	
0.63	4.5	4.9	5.4	6.2	
0.70	4.9	5.5	6.0	6.9	
0.80	5.7	6.3	6.9	7.9	
0.90	6.4	7.1	7.8	8.8	
1.00	7.1	7.9	8.6	9.8	
1.25	8.8	9.8	10.8	12.3	14.7
1.50	10.6	11.8	13.0	14.7	17.7
1.60	11.3	12.6	13.8	15.7	18.8
1.85	13.1	14.5	16.0	18.2	21.8
2.00	14.1	15.7	17.3	19.6	23.6

SQUARE HOLLOW SECTION



SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx}	I _{yy}	R _{xx}	R _{yy}	Z _{xx}	Z _{yy}	S _{xx}	S _{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
12X12X1.6	0.47	0.60	0.10	0.10	0.41	0.41	0.17	0.17	0.22	0.22	0.12	0.18
12X12X2.0	0.55	0.70	0.11	0.11	0.40	0.40	0.19	0.19	0.25	0.25	0.07	0.13
15X15X1.6	0.62	0.79	0.23	0.23	0.54	0.54	0.31	0.31	0.39	0.39	0.32	0.38
15X15X2.0	0.74	0.94	0.25	0.25	0.52	0.52	0.34	0.34	0.44	0.44	0.28	0.35
15X15X2.2	0.79	1.00	0.25	0.25	0.50	0.50	0.34	0.34	0.46	0.46	0.24	0.32
20X20X1.6	0.87	1.11	0.61	0.61	0.74	0.74	0.61	0.61	0.75	0.75	0.95	0.84
20X20X2.0	1.05	1.34	0.69	0.69	0.72	0.72	0.69	0.69	0.88	0.88	1.01	0.90
20X20X2.2	1.13	1.44	0.73	0.73	0.71	0.71	0.73	0.73	0.93	0.93	1.00	0.90
20X20X2.5	1.25	1.59	0.77	0.77	0.70	0.70	0.77	0.77	1.00	1.00	0.95	0.87
25X25X1.6	1.12	1.43	1.28	1.28	0.95	0.95	1.03	1.03	1.24	1.24	2.05	1.46
25X25X2.0	1.37	1.74	1.48	1.48	0.92	0.92	1.19	1.19	1.47	1.47	2.32	1.64
25X25X2.2	1.48	1.88	1.57	1.57	0.91	0.91	1.26	1.26	1.57	1.57	2.40	1.70
25X25X2.5	1.64	2.09	1.69	1.69	0.90	0.90	1.36	1.36	1.71	1.71	2.46	1.75
25X25X2.8	1.79	2.28	1.79	1.79	0.89	0.89	1.44	1.44	1.84	1.84	2.44	1.76
30X30X1.6	1.37	1.75	2.31	2.31	1.15	1.15	1.54	1.54	1.84	1.84	3.73	2.24
30X30X2.0	1.68	2.14	2.72	2.72	1.13	1.13	1.82	1.82	2.21	2.21	4.35	2.59
30X30X2.2	1.82	2.32	2.91	2.91	1.12	1.12	1.94	1.94	2.37	2.37	4.60	2.72
30X30X2.5	2.03	2.59	3.16	3.16	1.10	1.10	2.11	2.11	2.61	2.61	4.89	2.89
30X30X2.8	2.23	2.84	3.37	3.37	1.09	1.09	2.25	2.25	2.83	2.83	5.06	2.99
30X30X3.2	2.49	3.17	3.62	3.62	1.07	1.07	2.42	2.42	3.08	3.08	5.10	3.05
30X30X3.6	2.72	3.47	3.82	3.82	1.05	1.05	2.55	2.55	3.31	3.31	4.92	2.99
30X30X4.0	2.94	3.75	3.97	3.97	1.03	1.03	2.65	2.65	3.50	3.50	4.52	2.84
30X30X4.5	3.19	4.07	4.09	4.09	1.00	1.00	2.73	2.73	3.70	3.70	3.72	2.49
30X30X5.0	3.42	4.36	4.16	4.16	0.98	0.98	2.78	2.78	3.84	3.84	2.69	1.98
30X30X5.4	3.58	4.56	4.17	4.17	0.96	0.96	2.78	2.78	3.93	3.93	1.80	1.49
30X30X6.0	3.79	4.83	4.12	4.12	0.92	0.92	2.75	2.75	4.01	4.01	0.69	0.76
32X32X1.6	1.48	1.88	2.84	2.84	1.23	1.23	1.78	1.78	2.12	2.12	4.59	2.60
32X32X2.0	1.81	2.30	3.36	3.36	1.21	1.21	2.10	2.10	2.54	2.54	5.40	3.02
32X32X2.2	1.96	2.50	3.60	3.60	1.20	1.20	2.25	2.25	2.74	2.74	5.74	3.19
32X32X2.5	2.19	2.79	3.92	3.92	1.19	1.19	2.45	2.45	3.02	3.02	6.15	3.41
32X32X2.8	2.41	3.07	4.21	4.21	1.17	1.17	2.64	2.64	3.28	3.28	6.44	3.56
32X32X3.2	2.68	3.42	4.54	4.54	1.15	1.15	2.84	2.84	3.59	3.59	6.62	3.68
38X38X1.6	1.77	2.26	4.92	4.92	1.48	1.48	2.59	2.59	3.06	3.06	7.93	3.82
38X38X2.0	2.18	2.78	5.88	5.88	1.45	1.45	3.10	3.10	3.70	3.70	9.49	4.51
38X38X2.2	2.38	3.03	6.32	6.32	1.44	1.44	3.33	3.33	4.00	4.00	10.19	4.81
38X38X2.5	2.66	3.39	6.94	6.94	1.43	1.43	3.66	3.66	4.44	4.44	11.11	5.21
38X38X2.8	2.94	3.74	7.51	7.51	1.42	1.42	3.96	3.96	4.84	4.84	11.88	5.55
38X38X3.2	3.29	4.19	8.18	8.18	1.40	1.40	4.31	4.31	5.34	5.34	12.64	5.89
38X38X3.6	3.63	4.62	8.76	8.76	1.38	1.38	4.62	4.62	5.80	5.80	13.07	6.10
40X40X1.6	1.88	2.39	5.79	5.79	1.56	1.56	2.90	2.90	3.41	3.41	9.32	4.28
40X40X2.0	2.31	2.94	6.94	6.94	1.54	1.54	3.47	3.47	4.13	4.13	11.20	5.07
40X40X2.2	2.51	3.20	7.47	7.47	1.53	1.53	3.74	3.74	4.48	4.48	12.05	5.42

SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx}	I _{yy}	R _{xx}	R _{yy}	Z _{xx}	Z _{yy}	S _{xx}	S _{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
40X40X2.5	2.82	3.59	8.22	8.22	1.51	1.51	4.11	4.11	4.97	4.97	13.19	5.90
40X40X2.8	3.11	3.96	8.90	8.90	1.50	1.50	4.45	4.45	5.43	5.43	14.17	6.30
40X40X3.2	3.49	4.45	9.72	9.72	1.48	1.48	4.86	4.86	6.01	6.01	15.19	6.73
40X40X3.6	3.85	4.91	10.45	10.45	1.46	1.46	5.23	5.23	6.53	6.53	15.86	7.02
40X40X4.0	4.20	5.35	11.07	11.07	1.44	1.44	5.54	5.54	7.01	7.01	16.15	7.19
40X40X4.5	4.61	5.87	11.73	11.73	1.41	1.41	5.87	5.87	7.55	7.55	15.97	7.20
40X40X5.0	4.99	6.36	12.26	12.26	1.39	1.39	6.13	6.13	8.02	8.02	15.15	6.99
40X40X5.4	5.28	6.72	12.59	12.59	1.37	1.37	6.30	6.30	8.35	8.35	14.06	6.66
40X40X6.0	5.68	7.23	12.94	12.94	1.34	1.34	6.47	6.47	8.76	8.76	11.76	5.89
40X40X8.0	6.74	8.59	13.03	13.03	1.23	1.23	6.52	6.52	9.50	9.50	2.17	1.81
45X45X1.6	2.13	2.71	8.41	8.41	1.76	1.76	3.74	3.74	4.38	4.38	13.47	5.54
45X45X2.0	2.62	3.34	10.12	10.12	1.74	1.74	4.50	4.50	5.32	5.32	16.31	6.61
45X45X2.2	2.86	3.64	10.92	10.92	1.73	1.73	4.86	4.86	5.78	5.78	17.63	7.10
45X45X2.5	3.21	4.09	12.06	12.06	1.72	1.72	5.36	5.36	6.43	6.43	19.45	7.77
45X45X2.8	3.55	4.52	13.12	13.12	1.70	1.70	5.84	5.84	7.05	7.05	21.07	8.37
45X45X3.2	4.00	5.09	14.41	14.41	1.68	1.68	6.41	6.41	7.83	7.83	22.91	9.05
45X45X3.6	4.42	5.63	15.57	15.57	1.66	1.66	6.92	6.92	8.55	8.55	24.33	9.58
45X45X4.0	4.83	6.15	16.61	16.61	1.64	1.64	7.39	7.39	9.22	9.22	25.31	9.96
50X50X1.6	2.38	3.03	11.71	11.71	1.97	1.97	4.69	4.69	5.46	5.46	18.68	6.95
50X50X2.0	2.94	3.74	14.15	14.15	1.95	1.95	5.66	5.66	6.66	6.66	22.75	8.35
50X50X2.2	3.20	4.08	15.30	15.30	1.94	1.94	6.12	6.12	7.24	7.24	24.66	9.00
50X50X2.5	3.60	4.59	16.94	16.94	1.92	1.92	6.78	6.78	8.07	8.07	27.35	9.90
50X50X2.8	3.99	5.08	18.49	18.49	1.91	1.91	7.40	7.40	8.87	8.87	29.81	10.72
50X50X3.2	4.50	5.73	20.40	20.40	1.89	1.89	8.16	8.16	9.89	9.89	32.72	11.68
50X50X3.6	4.98	6.35	22.15	22.15	1.87	1.87	8.86	8.86	10.84	10.84	35.16	12.49
50X50X4.0	5.46	6.95	23.74	23.74	1.85	1.85	9.50	9.50	11.73	11.73	37.09	13.14
50X50X4.5	6.02	7.67	25.50	25.50	1.82	1.82	10.20	10.20	12.76	12.76	38.72	13.72
50X50X5.0	6.56	8.36	27.04	27.04	1.80	1.80	10.82	10.82	13.70	13.70	39.43	14.04
50X50X5.4	6.97	8.88	28.11	28.11	1.78	1.78	11.25	11.25	14.39	14.39	39.32	14.10
50X50X6.0	7.56	9.63	29.45	29.45	1.75	1.75	11.78	11.78	15.32	15.32	37.97	13.86
50X50X8.0	9.26	11.79	31.94	31.94	1.65	1.65	12.78	12.78	17.55	17.55	24.10	10.19
60X60X2.0	3.56	4.54	25.14	25.14	2.35	2.35	8.38	8.38	9.79	9.79	40.19	12.44
60X60X2.2	3.89	4.96	27.27	27.27	2.34	2.34	9.09	9.09	10.66	10.66	43.74	13.46
60X60X2.5	4.39	5.59	30.34	30.34	2.33	2.33	10.12	10.12	11.93	11.93	48.84	14.91
60X60X2.8	4.87	6.20	33.27	33.27	2.32	2.32	11.09	11.09	13.16	13.16	53.66	16.26
60X60X3.2	5.50	7.01	36.94	36.94	2.30	2.30	12.32	12.32	14.73	14.73	59.61	17.92
60X60X3.6	6.12	7.79	40.37	40.37	2.28	2.28	13.46	13.46	16.22	16.22	64.96	19.39
60X60X4.0	6.71	8.55	43.55	43.55	2.26	2.26	14.52	14.52	17.64	17.64	69.66	20.68
60X60X4.5	7.43	9.47	47.20	47.20	2.23	2.23	15.74	15.74	19.32	19.32	74.54	22.04
60X60X5.0	8.13	10.36	50.49	50.49	2.21	2.21	16.83	16.83	20.88	20.88	78.24	23.09
60X60X5.4	8.67	11.04	52.88	52.88	2.19	2.19	17.63	17.63	22.05	22.05	80.29	23.71
60X60X6.0	9.44	12.03	56.07	56.07	2.16	2.16	18.69	18.69	23.68	23.68	81.77	24.26

SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx}	I _{yy}	R _{xx}	R _{yy}	Z _{xx}	Z _{yy}	S _{xx}	S _{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
60X60X8.0	11.77	14.99	63.48	63.48	2.06	2.06	21.16	21.16	28.01	28.01	72.24	22.68
72X72X2.0	4.32	5.50	44.46	44.46	2.84	2.84	12.35	12.35	14.34	14.34	70.60	18.39
72X72X2.2	4.73	6.02	48.35	48.35	2.83	2.83	13.44	13.44	15.64	15.64	77.05	19.96
72X72X2.5	5.33	6.79	53.99	53.99	2.82	2.82	15.00	15.00	17.55	17.55	86.43	22.23
72X72X2.8	5.93	7.55	59.42	59.42	2.81	2.81	16.51	16.51	19.41	19.41	95.47	24.39
72X72X3.2	6.70	8.54	66.32	66.32	2.79	2.79	18.43	18.43	21.80	21.80	106.90	27.08
72X72X3.6	7.47	9.52	72.86	72.86	2.77	2.77	20.24	20.24	24.11	24.11	117.58	29.57
72X72X4.0	8.22	10.47	79.03	79.03	2.75	2.75	21.96	21.96	26.32	26.32	127.44	31.84
72X72X4.5	9.13	11.63	86.24	86.24	2.72	2.72	23.96	23.96	28.97	28.97	138.51	34.38
72X72X5.0	10.02	12.76	92.91	92.91	2.70	2.70	25.81	25.81	31.47	31.47	148.08	36.58
72X72X5.4	10.70	13.63	97.87	97.87	2.68	2.68	27.19	27.19	33.38	33.38	154.57	38.08
72X72X6.0	11.70	14.91	104.71	104.71	2.65	2.65	29.09	29.09	36.08	36.08	162.23	39.90
72X72X8.0	14.78	18.83	122.48	122.48	2.55	2.55	34.03	34.03	43.72	43.72	168.14	42.04
75X75X2.0	4.51	5.74	50.49	50.49	2.97	2.97	13.47	13.47	15.61	15.61	80.04	20.06
75X75X2.2	4.93	6.28	54.93	54.93	2.96	2.96	14.65	14.65	17.03	17.03	87.39	21.79
75X75X2.5	5.57	7.09	61.38	61.38	2.94	2.94	16.37	16.37	19.12	19.12	98.13	24.29
75X75X2.8	6.19	7.88	67.60	67.60	2.93	2.93	18.03	18.03	21.16	21.16	108.48	26.67
75X75X3.2	7.01	8.93	75.53	75.53	2.91	2.91	20.15	20.15	23.79	23.79	121.65	29.66
75X75X3.6	7.81	9.95	83.06	83.06	2.89	2.89	22.15	22.15	26.32	26.32	134.02	32.44
75X75X4.0	8.60	10.95	90.19	90.19	2.87	2.87	24.06	24.06	28.76	28.76	145.52	34.99
75X75X4.5	9.55	12.17	98.55	98.55	2.85	2.85	26.28	26.28	31.68	31.68	158.59	37.87
75X75X5.0	10.49	13.36	106.33	106.33	2.82	2.82	28.36	28.36	34.46	34.46	170.06	40.40
75X75X5.4	11.21	14.28	112.13	112.13	2.80	2.80	29.91	29.91	36.58	36.58	178.01	42.15
75X75X6.0	12.27	15.63	120.16	120.16	2.77	2.77	32.05	32.05	39.58	39.58	187.76	44.34
80X80X2.0	4.82	6.14	61.70	61.70	3.17	3.17	15.43	15.43	17.85	17.85	97.58	23.00
80X80X2.2	5.28	6.72	67.17	67.17	3.16	3.16	16.80	16.80	19.49	19.49	106.61	25.01
80X80X2.5	5.96	7.59	75.15	75.15	3.15	3.15	18.79	18.79	21.90	21.90	119.85	27.91
80X80X2.8	6.63	8.44	82.85	82.85	3.13	3.13	20.72	20.72	24.25	24.25	132.67	30.70
80X80X3.2	7.51	9.57	92.71	92.71	3.11	3.11	23.18	23.18	27.29	27.29	149.08	34.21
80X80X3.6	8.38	10.67	102.11	102.11	3.09	3.09	25.53	25.53	30.23	30.23	164.62	37.50
80X80X4.0	9.22	11.75	111.04	111.04	3.07	3.07	27.76	27.76	33.07	33.07	179.21	40.56
80X80X4.5	10.26	13.07	121.58	121.58	3.05	3.05	30.40	30.40	36.48	36.48	196.03	44.05
80X80X5.0	11.27	14.36	131.44	131.44	3.03	3.03	32.86	32.86	39.74	39.74	211.11	47.16
80X80X5.4	12.06	15.36	138.85	138.85	3.01	3.01	34.72	34.72	42.23	42.23	221.85	49.38
80X80X6.0	13.21	16.83	149.18	149.18	2.98	2.98	37.30	37.30	45.79	45.79	235.58	52.23
91.5X91.5X2.0	5.54	7.06	93.52	93.52	3.64	3.64	20.45	20.45	23.57	23.57	147.16	30.52
91.5X91.5X2.2	6.07	7.73	101.95	101.95	3.63	3.63	22.29	22.29	25.76	25.76	160.99	33.24
91.5X91.5X2.5	6.86	8.74	114.29	114.29	3.62	3.62	24.99	24.99	28.98	28.98	181.36	37.20
91.5X91.5X2.8	7.64	9.73	126.27	126.27	3.60	3.60	27.60	27.60	32.14	32.14	201.23	41.03
91.5X91.5X3.2	8.67	11.04	141.69	141.69	3.58	3.58	30.98	30.98	36.25	36.25	226.89	45.90
91.5X91.5X3.6	9.67	12.32	156.49	156.49	3.56	3.56	34.21	34.21	40.24	40.24	251.52	50.52
91.5X91.5X4.0	10.67	13.59	170.68	170.68	3.54	3.54	37.31	37.31	44.12	44.12	275.03	54.88

SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx}	I _{yy}	R _{xx}	R _{yy}	Z _{xx}	Z _{yy}	S _{xx}	S _{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
91.5X91.5X4.5	11.88	15.14	187.57	187.57	3.52	3.52	41.00	41.00	48.79	48.79	302.71	59.96
91.5X91.5X5.0	13.08	16.66	203.55	203.55	3.50	3.50	44.50	44.50	53.29	53.29	328.34	64.62
91.5X91.5X5.4	14.01	17.85	215.68	215.68	3.48	3.48	47.15	47.15	56.77	56.77	347.27	68.04
91.5X91.5X6.0	15.38	19.59	232.81	232.81	3.45	3.45	50.89	50.89	61.76	61.76	372.82	72.65
100X100X2.2	6.66	8.48	134.20	134.20	3.98	3.98	26.84	26.84	30.95	30.95	211.23	40.07
100X100X2.5	7.53	9.59	150.63	150.63	3.96	3.96	30.13	30.13	34.86	34.86	238.22	44.92
100X100X2.8	8.38	10.68	166.62	166.62	3.95	3.95	33.33	33.33	38.69	38.69	264.65	49.61
100X100X3.2	9.52	12.13	187.28	187.28	3.93	3.93	37.46	37.46	43.69	43.69	298.95	55.63
100X100X3.6	10.64	13.55	207.19	207.19	3.91	3.91	41.44	41.44	48.56	48.56	332.08	61.37
100X100X4.0	11.74	14.95	226.35	226.35	3.89	3.89	45.27	45.27	53.30	53.30	363.96	66.82
100X100X4.5	13.09	16.67	249.29	249.29	3.87	3.87	49.86	49.86	59.04	59.04	401.89	73.25
100X100X5.0	14.41	18.36	271.10	271.10	3.84	3.84	54.22	54.22	64.59	64.59	437.53	79.22
100X100X5.4	15.45	19.68	287.77	287.77	3.82	3.82	57.56	57.56	68.89	68.89	464.27	83.66
100X100X6.0	16.98	21.63	311.47	311.47	3.79	3.79	62.30	62.30	75.10	75.10	501.21	89.77
100X100X8.0	21.82	27.79	379.77	379.77	3.70	3.70	75.96	75.96	93.83	93.83	593.41	105.11
110X110X2.5	8.31	10.59	202.38	202.38	4.37	4.37	36.80	36.80	42.47	42.47	318.92	54.92
110X110X2.8	9.26	11.80	224.13	224.13	4.36	4.36	40.76	40.76	47.18	47.18	354.70	60.75
110X110X3.2	10.53	13.41	252.31	252.31	4.34	4.34	45.88	45.88	53.33	53.33	401.33	68.25
110X110X3.6	11.77	14.99	279.58	279.58	4.32	4.32	50.84	50.84	59.34	59.34	446.64	75.46
110X110X4.0	12.99	16.55	305.94	305.94	4.30	4.30	55.63	55.63	65.21	65.21	490.52	82.35
110X110X4.5	14.50	18.47	337.63	337.63	4.28	4.28	61.39	61.39	72.35	72.35	543.21	90.54
110X110X5.0	15.98	20.36	367.95	367.95	4.25	4.25	66.90	66.90	79.27	79.27	593.30	98.24
110X110X5.4	17.14	21.84	391.23	391.23	4.23	4.23	71.14	71.14	84.65	84.65	631.37	104.04
110X110X6.0	18.86	24.03	424.57	424.57	4.20	4.20	77.20	77.20	92.46	92.46	684.89	112.13
110X110X8.0	24.33	30.99	522.39	522.39	4.11	4.11	94.98	94.98	116.29	116.29	828.32	133.69
120X120X2.8	10.14	12.92	293.54	293.54	4.77	4.77	48.93	48.93	56.50	56.50	463.02	73.00
120X120X3.2	11.53	14.69	330.88	330.88	4.75	4.75	55.15	55.15	63.93	63.93	524.57	82.16
120X120X3.6	12.90	16.43	367.12	367.12	4.73	4.73	61.19	61.19	71.21	71.21	584.63	90.98
120X120X4.0	14.25	18.15	402.28	402.28	4.71	4.71	67.05	67.05	78.33	78.33	643.08	99.48
120X120X4.5	15.91	20.27	444.70	444.70	4.68	4.68	74.12	74.12	87.01	87.01	713.71	109.63
120X120X5.0	17.55	22.36	485.47	485.47	4.66	4.66	80.92	80.92	95.45	95.45	781.43	119.26
120X120X5.4	18.84	24.00	516.92	516.92	4.64	4.64	86.16	86.16	102.03	102.03	833.37	126.57
120X120X6.0	20.75	26.43	562.16	562.16	4.61	4.61	93.70	93.70	111.61	111.61	907.27	136.89
120X120X8.0	26.84	34.19	696.82	696.82	4.51	4.51	116.14	116.14	141.14	141.14	1114.50	165.47
125X125X2.8	10.58	13.48	333.05	333.05	4.97	4.97	53.29	53.29	61.48	61.48	524.57	79.55
125X125X3.2	12.03	15.33	375.64	375.64	4.95	4.95	60.11	60.11	69.59	69.59	594.61	89.59
125X125X3.6	13.46	17.15	417.03	417.03	4.93	4.93	66.73	66.73	77.54	77.54	663.08	99.29
125X125X4.0	14.88	18.95	457.23	457.23	4.91	4.91	73.16	73.16	85.33	85.33	729.85	108.65
125X125X4.5	16.62	21.17	505.83	505.83	4.89	4.89	80.94	80.94	94.84	94.84	810.75	119.85
125X125X5.0	18.34	23.36	552.62	552.62	4.86	4.86	88.42	88.42	104.10	104.10	888.58	130.52
125X125X5.4	19.69	25.08	588.77	588.77	4.85	4.85	94.21	94.21	111.33	111.33	948.47	138.65
125X125X6.0	21.69	27.63	640.89	640.89	4.82	4.82	102.55	102.55	121.87	121.87	1034.09	150.16

SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx}	I _{yy}	R _{xx}	R _{yy}	Z _{xx}	Z _{yy}	S _{xx}	S _{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
125X125X8.0	28.10	35.79	796.96	796.96	4.72	4.72	127.52	127.52	154.47	154.47	1278.30	182.55
140X140X3.2	13.54	17.25	533.76	533.76	5.56	5.56	76.26	76.26	88.01	88.01	841.30	113.80
140X140X3.6	15.16	19.31	593.44	593.44	5.54	5.54	84.78	84.78	98.18	98.18	939.53	126.36
140X140X4.0	16.76	21.35	651.62	651.62	5.52	5.52	93.09	93.09	108.15	108.15	1035.76	138.54
140X140X4.5	18.74	23.87	722.24	722.24	5.50	5.50	103.18	103.18	120.37	120.37	1153.06	153.21
140X140X5.0	20.69	26.36	790.56	790.56	5.48	5.48	112.94	112.94	132.30	132.30	1266.79	167.29
140X140X5.4	22.23	28.32	843.58	843.58	5.46	5.46	120.52	120.52	141.65	141.65	1355.03	178.10
140X140X6.0	24.52	31.23	920.43	920.43	5.43	5.43	131.49	131.49	155.33	155.33	1482.50	193.59
140X140X8.0	31.86	40.59	1153.92	1153.92	5.33	5.33	164.85	164.85	198.05	198.05	1859.75	238.59
150X150X3.6	16.29	20.75	735.09	735.09	5.95	5.95	98.02	98.02	113.28	113.28	1160.76	146.21
150X150X4.0	18.02	22.95	807.82	807.82	5.93	5.93	107.71	107.71	124.87	124.87	1280.69	160.46
150X150X4.5	20.15	25.67	896.30	896.30	5.91	5.91	119.51	119.51	139.08	139.08	1427.31	177.70
150X150X5.0	22.26	28.36	982.12	982.12	5.88	5.88	130.95	130.95	152.98	152.98	1570.02	194.30
150X150X5.4	23.93	30.48	1048.88	1048.88	5.87	5.87	139.86	139.86	163.89	163.89	1681.17	207.11
150X150X6.0	26.40	33.63	1145.91	1145.91	5.84	5.84	152.79	152.79	179.88	179.88	1842.55	225.53
150X150X8.0	34.38	43.79	1443.00	1443.00	5.74	5.74	192.40	192.40	230.11	230.11	2328.39	279.93
150X150X10.0	41.93	53.42	1701.21	1701.21	5.64	5.64	226.83	226.83	275.67	275.67	2720.95	323.18
175X175X4.0	21.16	26.95	1303.12	1303.12	6.95	6.95	148.93	148.93	171.90	171.90	2053.97	222.27
175X175X4.5	23.68	30.17	1448.83	1448.83	6.93	6.93	165.59	165.59	191.75	191.75	2293.76	246.80
175X175X5.0	26.19	33.36	1590.86	1590.86	6.91	6.91	181.82	181.82	211.24	211.24	2528.72	270.58
175X175X5.4	28.17	35.88	1701.86	1701.86	6.89	6.89	194.50	194.50	226.57	226.57	2712.97	289.06
175X175X6.0	31.11	39.63	1864.03	1864.03	6.86	6.86	213.04	213.04	249.15	249.15	2982.78	315.88
175X175X8.0	40.66	51.79	2367.89	2367.89	6.76	6.76	270.62	270.62	320.75	320.75	3818.44	397.28
175X175X10.0	49.78	63.42	2817.20	2817.20	6.66	6.66	321.97	321.97	386.83	386.83	4540.40	465.99
180X180X4.0	21.78	27.75	1421.74	1421.74	7.16	7.16	157.98	157.98	182.21	182.21	2238.61	235.83
180X180X4.5	24.39	31.07	1581.26	1581.26	7.13	7.13	175.70	175.70	203.30	203.30	2500.75	261.96
180X180X5.0	26.97	34.36	1736.87	1736.87	7.11	7.11	192.99	192.99	224.02	224.02	2757.85	287.33
180X180X6.0	32.05	40.83	2036.52	2036.52	7.06	7.06	226.28	226.28	264.35	264.35	3255.59	335.75
180X180X8.0	41.91	53.39	2590.73	2590.73	6.97	6.97	287.86	287.86	340.68	340.68	4175.84	423.14
180X180X10.0	51.35	65.42	3086.93	3086.93	6.87	6.87	343.00	343.00	411.31	411.31	4978.18	497.54
200X200X4.5	27.22	34.67	2191.54	2191.54	7.95	7.95	219.16	219.16	252.86	252.86	3452.29	327.13
200X200X5.0	30.11	38.36	2410.09	2410.09	7.93	7.93	241.01	241.01	278.87	278.87	3811.54	359.35
200X200X5.4	32.40	41.28	2581.45	2581.45	7.91	7.91	258.15	258.15	299.39	299.39	4094.48	384.51
200X200X6.0	35.82	45.63	2832.75	2832.75	7.88	7.88	283.28	283.28	329.67	329.67	4511.01	421.22
200X200X8.0	46.94	59.79	3621.63	3621.63	7.78	7.78	362.17	362.17	426.39	426.39	5823.37	534.59
200X200X10.0	57.63	73.42	4337.63	4337.63	7.69	7.69	433.77	433.77	516.73	516.73	7000.54	633.74
200X200X12.0	67.93	86.53	4983.59	4983.59	7.59	7.59	498.36	498.36	600.81	600.81	8019.34	718.18
220X220X5.0	33.25	42.36	3238.02	3238.02	8.74	8.74	294.37	294.37	339.73	339.73	5102.67	439.36
220X220X5.4	35.80	45.60	3470.96	3470.96	8.72	8.72	315.55	315.55	364.93	364.93	5485.51	470.58
220X220X6.0	39.59	50.43	3813.36	3813.36	8.70	8.70	346.67	346.67	402.18	402.18	6050.76	516.29
220X220X8.0	51.96	66.19	4894.99	4894.99	8.60	8.60	445.00	445.00	521.70	521.70	7848.38	658.83
220X220X10.0	63.91	81.42	5887.19	5887.19	8.50	8.50	535.20	535.20	634.16	634.16	9492.81	785.91

SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx}	I _{yy}	R _{xx}	R _{yy}	Z _{xx}	Z _{yy}	S _{xx}	S _{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
220X220X12.0	75.46	96.13	6793.08	6793.08	8.41	8.41	617.56	617.56	739.66	739.66	10958.24	897.07
225X225X5.0	34.04	43.36	3471.05	3471.05	8.95	8.95	308.54	308.54	355.88	355.88	5465.36	460.61
225X225X5.4	36.64	46.68	3721.40	3721.40	8.93	8.93	330.80	330.80	382.32	382.32	5876.33	493.45
225X225X6.0	40.53	51.63	4089.57	4089.57	8.90	8.90	363.52	363.52	421.43	421.43	6483.49	541.55
225X225X8.0	53.22	67.79	5254.21	5254.21	8.80	8.80	467.05	467.05	547.03	547.03	8418.11	691.89
225X225X10.0	65.48	83.42	6325.02	6325.02	8.71	8.71	562.23	562.23	665.39	665.39	10194.92	826.45
225X225X12.0	77.35	98.53	7305.19	7305.19	8.61	8.61	649.36	649.36	776.62	776.62	11787.46	944.78
250X250X6.0	45.24	57.63	5672.00	5672.00	9.92	9.92	453.76	453.76	524.45	524.45	8956.46	676.88
250X250X8.0	59.50	75.79	7315.65	7315.65	9.82	9.82	585.26	585.26	682.67	682.67	11677.65	869.16
250X250X10.0	73.33	93.42	8841.86	8841.86	9.73	9.73	707.35	707.35	832.79	832.79	14217.20	1044.13
250X250X12.0	86.77	110.53	10254.21	10254.21	9.63	9.63	820.34	820.34	974.94	974.94	16545.51	1201.32
275X275X6.0	49.95	63.63	7617.53	7617.53	10.94	10.94	554.01	554.01	638.71	638.71	11986.16	827.20
275X275X8.0	65.78	83.79	9855.94	9855.94	10.85	10.85	716.80	716.80	833.31	833.31	15676.96	1066.43
275X275X10.0	81.18	103.42	11950.66	11950.66	10.75	10.75	869.14	869.14	1018.95	1018.95	19161.08	1286.77
275X275X12.0	96.19	122.53	13905.64	13905.64	10.65	10.65	1011.32	1011.32	1195.75	1195.75	22405.82	1487.80
300X300X8.0	72.06	91.79	12925.07	12925.07	11.87	11.87	861.68	861.68	998.95	998.95	20491.03	1283.68
300X300X10.0	89.03	113.42	15713.90	15713.90	11.77	11.77	1047.60	1047.60	1223.86	1223.86	25120.26	1554.40
300X300X12.0	105.61	134.53	18334.49	18334.49	11.67	11.67	1222.30	1222.30	1439.07	1439.07	29480.79	1804.25

ALLOWABLE STRESS VALUES (IN MPa) AND DIMENSIONAL TOLERANCE IS 4923:2017, TABLE 4, (Clauses 19.2)

S. No.	Grade	Tensile Strength	Yield Strength	Elongation	DIMENSIONAL TOLERANCE					
		Min	Min	Min	Outside Dimensional	Thickness	Squareness	Corner radius	Weight	
		MPa	MPa	Percent					Individual Lengths	On lot of 10 MT
1	YSt 210	330	210	20	+/-1% with a minimum of +/-0.50 min	±7.5%	90 deg. +/-2 deg.	3t max	10% -8%	±7%
2	YSt 240	410	240	15						
3	YSt 310	450	310	10						
4	YSt 355	490	355	10						

*Galvanised sections can also be manufactured

*Customised sections can also be manufactured.

TENSILE PROPERTIES OF STEEL TUBES FOR STRUCTURAL PURPOSE IS 1161:2014, TABLE 2, (Clauses 3.1 and 11.2)

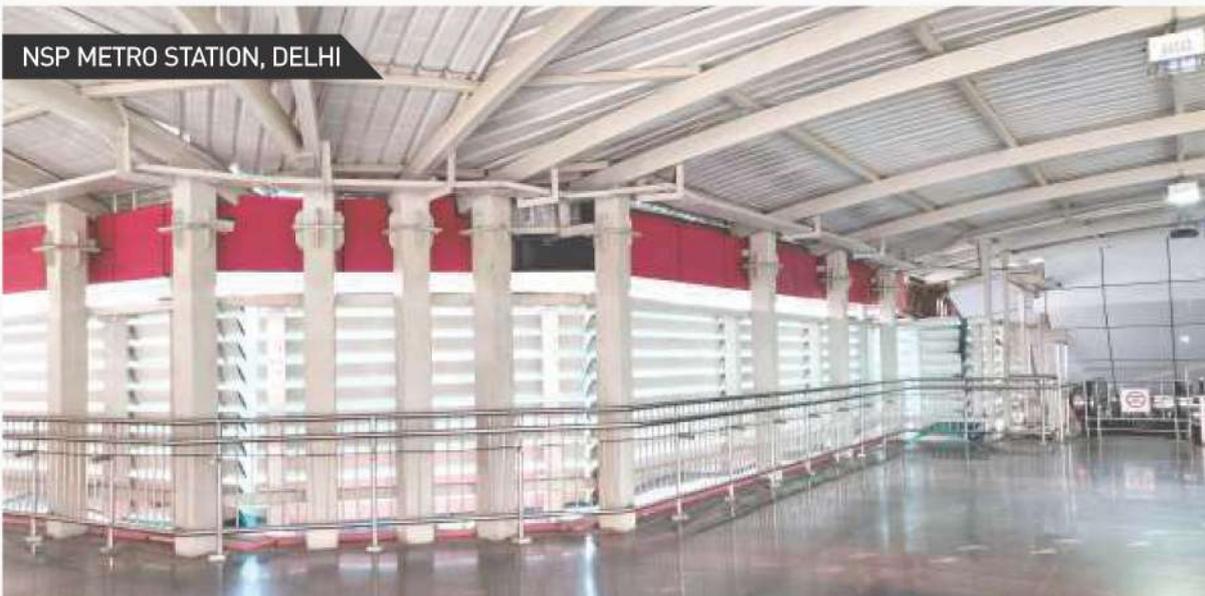
S. No.	Grade	Tensile Strength	Yield Strength	Elongation on Gauge Length
		Min	Min	5.65 √S ₀ Min
		MPa	MPa	Percent
1	YSt 210	330	210	20
2	YSt 240	410	240	17
3	YSt 310	450	310	14
4	YSt 355	490	355	10

TENSILE PROPERTIES OF STEEL TUBES SECTIONS IS 4923:2017, TABLE 4, (Clauses 19.2)

S. No.	Grade	Tensile Strength	Yield Strength	Elongation
		Min	Min	Min
		MPa	MPa	Percent
1	YSt 210	330	210	20
2	YSt 240	410	240	15
3	YSt 310	450	310	10
4	YSt 355	490	355	10

SQUARE HOLLOW SECTION (SHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx}	I _{yy}	R _{xx}	R _{yy}	Z _{xx}	Z _{yy}	S _{xx}	S _{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
200X200X14.0	77.80	99.11	5562.26	5562.26	7.49	7.49	556.23	556.23	678.74	678.74	8857.57	787.40
220X220X14.0	86.59	110.31	7615.74	7615.74	8.31	8.31	692.34	692.34	838.33	838.33	12219.62	991.79
225X225X14.0	88.79	113.11	8197.88	8197.88	8.51	8.51	728.71	728.71	880.86	880.86	13170.00	1046.37
250X250X14.0	99.78	127.11	11556.23	11556.23	9.53	9.53	924.50	924.50	1109.22	1109.22	18633.47	1340.24
275X275X14.0	110.77	141.11	15724.81	15724.81	10.56	10.56	1143.63	1143.63	1363.84	1363.84	25378.84	1669.04
300X300X14.0	121.76	155.11	20791.11	20791.11	11.58	11.58	1386.08	1386.08	1644.70	1644.70	33537.11	2032.77
300X300X16.0	137.51	175.17	23088.02	23088.02	11.48	11.48	1539.21	1539.21	1840.89	1840.89	37254.21	2239.48
325X325X14.0	132.75	169.11	26842.64	26842.64	12.60	12.60	1651.86	1651.86	1951.82	1951.82	43239.38	2431.45
325X325X16.0	150.07	191.17	29879.43	29879.43	12.50	12.50	1838.74	1838.74	2188.44	2188.44	48219.82	2688.89
350X350X8.0	84.62	107.79	20849.89	20849.89	13.91	13.91	1191.43	1191.43	1375.23	1375.23	32863.45	1778.17
350X350X10.0	104.73	133.42	25453.75	25453.75	13.81	13.81	1454.50	1454.50	1689.92	1689.92	40459.45	2164.61
350X350X12.0	124.45	158.53	29824.41	29824.41	13.72	13.72	1704.26	1704.26	1993.20	1993.20	47724.46	2527.06
350X350X14.0	143.74	183.11	33966.90	33966.90	13.62	13.62	1940.97	1940.97	2285.19	2285.19	54616.80	2865.08
350X350X16.0	162.63	207.17	37886.23	37886.23	13.52	13.52	2164.93	2164.93	2566.00	2566.00	61095.07	3178.23
400X400X10.0	120.43	153.42	38561.41	38561.41	15.85	15.85	1928.08	1928.08	2230.98	2230.98	60984.67	2874.77
400X400X12.0	143.29	182.53	45323.97	45323.97	15.76	15.76	2266.20	2266.20	2637.33	2637.33	72176.20	3369.78
400X400X14.0	165.72	211.11	51783.59	51783.59	15.66	15.66	2589.18	2589.18	3030.67	3030.67	82921.80	3837.25
400X400X16.0	187.75	239.17	57946.03	57946.03	15.57	15.57	2897.31	2897.31	3411.12	3411.12	93173.85	4276.74
450X450X10.0	136.13	173.42	55536.88	55536.88	17.90	17.90	2468.31	2468.31	2847.04	2847.04	87445.83	3684.90
450X450X12.0	162.13	206.53	65433.18	65433.18	17.80	17.80	2908.15	2908.15	3371.45	3371.45	103735.86	4332.43
450X450X14.0	187.70	239.11	74941.19	74941.19	17.70	17.70	3330.72	3330.72	3881.15	3881.15	119501.71	4949.30
450X450X16.0	212.87	271.17	84067.43	84067.43	17.61	17.61	3736.34	3736.34	4376.24	4376.24	134689.76	5535.09
500X500X12.0	180.97	230.53	90752.04	90752.04	19.84	19.84	3630.09	3630.09	4195.58	4195.58	143303.32	5415.05
500X500X14.0	209.68	267.11	104139.70	104139.70	19.75	19.75	4165.59	4165.59	4836.63	4836.63	165406.33	6201.28
500X500X16.0	237.99	303.17	117050.41	117050.41	19.65	19.65	4682.02	4682.02	5461.36	5461.36	186842.34	6953.31



RECTANGULAR HOLLOW SECTION



RECTANGULAR HOLLOW SECTION (RHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

Dimension	Weight	Area	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I_{xx}	I_{yy}	R_{xx}	R_{yy}	Z_{xx}	Z_{yy}	S_{xx}	S_{yy}	J	C
mm	kg/m	cm ²	cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
26 X 13 X 1.6	0.85	1.08	0.83	0.27	0.88	0.50	0.64	0.42	0.84	0.51	0.63	0.66
26 X 13 X 2.0	1.02	1.30	0.94	0.30	0.85	0.48	0.73	0.47	0.98	0.59	0.64	0.67
30 X 20 X 1.6	1.12	1.43	1.66	0.88	1.08	0.78	1.11	0.88	1.39	1.05	1.85	1.38
30 X 20 X 2.0	1.37	1.74	1.94	1.02	1.06	0.77	1.30	1.02	1.65	1.24	2.08	1.55
30 X 20 X 2.2	1.48	1.88	2.05	1.08	1.04	0.76	1.37	1.08	1.76	1.32	2.15	1.60
40 X 10 X 1.6	1.12	1.43	2.25	0.22	1.25	0.39	1.13	0.44	1.57	0.54	0.65	0.76
40 X 10 X 2.0	1.37	1.74	2.60	0.25	1.22	0.38	1.30	0.50	1.85	0.63	0.65	0.78
40 X 20 X 1.6	1.37	1.75	3.43	1.15	1.40	0.81	1.72	1.15	2.18	1.34	2.83	1.92
40 X 20 X 2.0	1.68	2.14	4.05	1.34	1.38	0.79	2.03	1.34	2.61	1.60	3.25	2.19
40 X 20 X 2.2	1.82	2.32	4.32	1.43	1.36	0.79	2.16	1.43	2.81	1.71	3.40	2.29
40 X 20 X 2.5	2.03	2.59	4.69	1.54	1.35	0.77	2.35	1.54	3.09	1.88	3.55	2.40
40 X 25 X 1.6	1.50	1.91	4.02	1.93	1.45	1.01	2.01	1.55	2.49	1.80	4.25	2.51
40 X 25 X 2.0	1.84	2.34	4.77	2.28	1.43	0.99	2.39	1.83	2.99	2.16	4.99	2.91
40 X 25 X 2.2	1.99	2.54	5.11	2.43	1.42	0.98	2.56	1.95	3.23	2.32	5.28	3.07
40 X 25 X 2.5	2.23	2.84	5.57	2.64	1.40	0.96	2.79	2.12	3.56	2.56	5.64	3.27
50 X 25 X 1.6	1.75	2.23	7.02	2.37	1.77	1.03	2.81	1.90	3.53	2.17	5.83	3.21
50 X 25 X 2.0	2.15	2.74	8.38	2.81	1.75	1.01	3.36	2.25	4.26	2.62	6.90	3.76
50 X 25 X 2.2	2.34	2.98	9.01	3.01	1.74	1.01	3.61	2.41	4.61	2.82	7.35	3.99
50 X 25 X 2.5	2.62	3.34	9.89	3.28	1.72	0.99	3.96	2.63	5.11	3.12	7.93	4.29
50 X 30 X 1.6	1.88	2.39	7.96	3.60	1.82	1.23	3.19	2.40	3.91	2.75	8.07	3.96
50 X 30 X 2.0	2.31	2.94	9.54	4.29	1.80	1.21	3.82	2.86	4.74	3.33	9.65	4.67
50 X 30 X 2.2	2.51	3.20	10.27	4.61	1.79	1.20	4.11	3.08	5.14	3.60	10.35	4.99
50 X 30 X 2.5	2.82	3.59	11.30	5.05	1.77	1.19	4.52	3.37	5.70	3.98	11.28	5.40
50 X 30 X 2.8	3.11	3.96	12.24	5.45	1.76	1.17	4.90	3.64	6.23	4.35	12.05	5.75
50 X 30 X 3.2	3.49	4.45	13.38	5.93	1.73	1.15	5.36	3.96	6.89	4.80	12.81	6.11
50 X 30 X 3.6	3.85	4.91	14.38	6.34	1.71	1.14	5.76	4.23	7.50	5.21	13.25	6.33
50 X 30 X 4.0	4.20	5.35	15.25	6.69	1.69	1.12	6.10	4.46	8.05	5.58	13.33	6.42
50 X 30 X 4.5	4.61	5.87	16.16	7.05	1.66	1.10	6.47	4.70	8.67	5.99	12.94	6.35
50 X 30 X 5.0	4.99	6.36	16.87	7.33	1.63	1.07	6.75	4.89	9.20	6.34	12.00	6.06
50 X 30 X 6.0	5.68	7.23	17.77	7.65	1.57	1.03	7.11	5.10	10.04	6.89	8.67	4.86
50 X 30 X 8.0	6.74	8.59	17.66	7.57	1.43	0.94	7.07	5.05	10.83	7.36	1.34	1.45
60 X 40 X 1.6	2.38	3.03	15.22	8.16	2.24	1.64	5.08	4.08	6.12	4.64	17.10	6.63
60 X 40 X 2.0	2.94	3.74	18.41	9.83	2.22	1.62	6.14	4.92	7.47	5.65	20.77	7.96
60 X 40 X 2.2	3.20	4.08	19.92	10.62	2.21	1.61	6.64	5.31	8.12	6.14	22.49	8.56
60 X 40 X 2.5	3.60	4.59	22.07	11.74	2.19	1.60	7.36	5.87	9.06	6.84	24.89	9.41
60 X 40 X 2.8	3.99	5.08	24.10	12.78	2.18	1.59	8.04	6.39	9.95	7.51	27.08	10.17
60 X 40 X 3.2	4.50	5.73	26.61	14.07	2.15	1.57	8.87	7.04	11.09	8.36	29.63	11.05
60 X 40 X 3.6	4.98	6.35	28.90	15.23	2.13	1.55	9.64	7.62	12.16	9.15	31.72	11.79
60 X 40 X 4.0	5.46	6.95	30.99	16.28	2.11	1.53	10.33	8.14	13.16	9.89	33.31	12.36
60 X 40 X 4.5	6.02	7.67	33.31	17.44	2.08	1.51	11.11	8.72	14.32	10.75	34.57	12.85
60 X 40 X 5.0	6.56	8.36	35.33	18.43	2.06	1.48	11.78	9.22	15.38	11.52	34.95	13.08
60 X 40 X 6.0	7.56	9.63	38.50	19.95	2.00	1.44	12.84	9.98	17.20	12.84	33.01	12.74

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Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx} cm ⁴	I _{yy} cm ⁴	R _{xx} cm	R _{yy} cm	Z _{xx} cm ³	Z _{yy} cm ³	S _{xx} cm ³	S _{yy} cm ³	J cm ⁴	C cm ³
60 X 40 X 8.0	9.26	11.79	41.68	21.39	1.88	1.35	13.90	10.70	19.69	14.62	19.37	8.85
66 X 33 X 1.6	2.36	3.00	16.85	5.74	2.37	1.38	5.11	3.48	6.34	3.92	14.01	5.94
66 X 33 X 2.0	2.90	3.70	20.37	6.90	2.35	1.37	6.18	4.19	7.73	4.77	16.94	7.09
66 X 33 X 2.2	3.17	4.04	22.03	7.43	2.34	1.36	6.68	4.51	8.40	5.17	18.28	7.61
66 X 33 X 2.5	3.56	4.54	24.40	8.19	2.32	1.34	7.40	4.97	9.37	5.75	20.14	8.33
66 X 33 X 2.8	3.95	5.03	26.62	8.90	2.30	1.33	8.07	5.40	10.29	6.31	21.80	8.97
66 X 33 X 3.2	4.44	5.66	29.37	9.75	2.28	1.31	8.90	5.91	11.46	7.01	23.67	9.70
70 X 30 X 3.0	4.25	5.41	30.57	7.90	2.38	1.21	8.74	5.27	11.38	6.20	20.51	8.87
70 X 30 X 3.2	4.50	5.73	32.04	8.24	2.36	1.20	9.16	5.50	11.98	6.51	21.26	9.18
70 X 30 X 3.6	4.98	6.35	34.76	8.87	2.34	1.18	9.94	5.92	13.12	7.11	22.45	9.69
70 X 30 X 4.0	5.46	6.95	37.23	9.42	2.31	1.16	10.64	6.28	14.20	7.66	23.22	10.04
70 X 30 X 4.5	6.02	7.67	39.95	10.01	2.28	1.14	11.42	6.68	15.43	8.29	23.55	10.27
70 X 30 X 5.0	6.56	8.36	42.30	10.49	2.25	1.12	12.09	7.00	16.56	8.84	23.16	10.25
70 X 30 X 6.0	7.56	9.63	45.88	11.18	2.18	1.08	13.11	7.46	18.47	9.77	20.29	9.46
70 X 30 X 8.0	9.26	11.79	48.98	11.61	2.04	0.99	14.00	7.74	21.02	10.88	8.59	5.18
70 X 50 X 3.0	5.19	6.61	44.05	26.10	2.58	1.99	12.59	10.44	15.40	12.21	53.15	16.52
70 X 50 X 3.2	5.50	7.01	46.33	27.42	2.57	1.98	13.24	10.97	16.25	12.88	55.82	17.28
70 X 50 X 3.6	6.12	7.79	50.65	29.92	2.55	1.96	14.48	11.97	17.91	14.18	60.72	18.68
70 X 50 X 4.0	6.71	8.55	54.67	32.22	2.53	1.94	15.62	12.89	19.48	15.41	64.99	19.90
70 X 50 X 5.0	8.13	10.36	63.46	37.20	2.47	1.89	18.14	14.88	23.06	18.20	72.57	22.12
70 X 50 X 6.0	9.44	12.03	70.52	41.14	2.42	1.85	20.15	16.46	26.15	20.60	75.26	23.11
70 X 50 X 8.0	11.77	14.99	79.91	46.23	2.31	1.76	22.84	18.50	30.94	24.27	64.82	21.23
75 X 25 X 1.6	2.38	3.03	19.74	3.47	2.55	1.07	5.27	2.78	6.81	3.11	9.94	4.97
75 X 25 X 2.0	2.94	3.74	23.84	4.14	2.52	1.05	6.36	3.32	8.31	3.77	11.88	5.88
75 X 25 X 2.2	3.20	4.08	25.77	4.44	2.51	1.04	6.88	3.56	9.02	4.08	12.75	6.28
75 X 25 X 2.6	3.74	4.76	29.40	5.00	2.49	1.02	7.84	4.00	10.40	4.67	14.26	6.99
75 X 50 X 1.6	3.01	3.83	30.51	16.39	2.82	2.07	8.14	6.56	9.75	7.40	34.07	10.70
75 X 50 X 2.0	3.72	4.74	37.16	19.91	2.80	2.05	9.91	7.97	11.96	9.06	41.75	12.96
75 X 50 X 2.2	4.07	5.18	40.35	21.59	2.79	2.04	10.76	8.64	13.03	9.87	45.43	14.02
75 X 50 X 2.5	4.58	5.84	44.95	24.00	2.77	2.03	11.99	9.60	14.59	11.04	50.72	15.54
75 X 50 X 2.8	5.09	6.48	49.35	26.30	2.76	2.01	13.16	10.52	16.10	12.18	55.71	16.96
75 X 50 X 3.2	5.75	7.33	54.90	29.18	2.74	2.00	14.64	11.68	18.04	13.63	61.88	18.69
75 X 50 X 3.6	6.40	8.15	60.10	31.86	2.72	1.98	16.03	12.75	19.90	15.01	67.44	20.23
75 X 50 X 4.0	7.03	8.95	64.96	34.34	2.69	1.96	17.33	13.74	21.66	16.33	72.33	21.59
80 X 40 X 1.6	2.88	3.67	30.71	10.52	2.89	1.69	7.68	5.26	9.47	5.87	25.48	8.99
80 X 40 X 2.0	3.56	4.54	37.36	12.72	2.87	1.67	9.34	6.36	11.61	7.17	31.08	10.84
80 X 40 X 2.2	3.89	4.96	40.53	13.76	2.86	1.67	10.14	6.88	12.64	7.80	33.72	11.71
80 X 40 X 2.5	4.39	5.59	45.11	15.26	2.84	1.65	11.28	7.63	14.15	8.72	37.49	12.92
80 X 40 X 2.8	4.87	6.20	49.46	16.66	2.82	1.64	12.37	8.33	15.60	9.60	40.99	14.05
80 X 40 X 3.2	5.50	7.01	54.94	18.41	2.80	1.62	13.74	9.21	17.46	10.72	45.21	15.39
80 X 40 X 3.6	6.12	7.79	60.05	20.02	2.78	1.60	15.02	10.01	19.23	11.77	48.88	16.56
80 X 40 X 4.0	6.71	8.55	64.79	21.49	2.75	1.59	16.20	10.75	20.91	12.77	51.97	17.55

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Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx}	I _{yy}	R _{xx}	R _{yy}	Z _{xx}	Z _{yy}	S _{xx}	S _{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
96 X 48 X 1.6	3.49	4.44	54.03	18.57	3.49	2.05	11.26	7.74	13.82	8.58	44.69	13.26
96 X 48 X 2.0	4.32	5.50	66.04	22.59	3.47	2.03	13.76	9.42	17.00	10.52	54.83	16.09
96 X 48 X 2.2	4.73	6.02	71.82	24.51	3.45	2.02	14.97	10.22	18.54	11.47	59.70	17.44
96 X 48 X 2.5	5.33	6.79	80.23	27.29	3.44	2.00	16.72	11.38	20.81	12.85	66.75	19.37
96 X 48 X 2.8	5.93	7.55	88.32	29.94	3.42	1.99	18.40	12.48	23.01	14.19	73.46	21.19
96 X 48 X 3.2	6.70	8.54	98.61	33.28	3.40	1.97	20.55	13.87	25.85	15.91	81.83	23.43
96 X 48 X 3.6	7.47	9.52	108.35	36.40	3.37	1.96	22.58	15.17	28.58	17.56	89.50	25.47
96 X 48 X 4.0	8.22	10.47	117.54	39.32	3.35	1.94	24.49	16.39	31.21	19.14	96.41	27.30
96 X 48 X 4.5	9.13	11.63	128.30	42.68	3.32	1.92	26.73	17.79	34.34	21.01	103.91	29.30
100 X 50 X 1.6	3.63	4.63	61.29	21.08	3.64	2.13	12.26	8.44	15.04	9.33	50.65	14.45
100 X 50 X 2.0	4.51	5.74	74.98	25.67	3.61	2.11	15.00	10.27	18.50	11.46	62.21	17.57
100 X 50 X 2.2	4.93	6.28	81.59	27.87	3.60	2.11	16.32	11.15	20.19	12.50	67.79	19.05
100 X 50 X 2.5	5.57	7.09	91.20	31.06	3.59	2.09	18.24	12.43	22.67	14.01	75.87	21.18
100 X 50 X 2.8	6.19	7.88	100.47	34.10	3.57	2.08	20.10	13.64	25.09	15.48	83.59	23.19
100 X 50 X 3.2	7.01	8.93	112.29	37.95	3.55	2.06	22.46	15.18	28.20	17.37	93.28	25.70
100 X 50 X 3.6	7.81	9.95	123.51	41.56	3.52	2.04	24.71	16.63	31.21	19.19	102.23	27.99
100 X 50 X 4.0	8.60	10.95	134.14	44.95	3.50	2.03	26.83	17.98	34.10	20.93	110.37	30.06
100 X 50 X 4.5	9.55	12.17	146.61	48.87	3.47	2.00	29.33	19.55	37.56	23.00	119.34	32.35
100 X 50 X 5.0	10.49	13.36	158.19	52.45	3.44	1.98	31.64	20.98	40.84	24.95	126.87	34.28
100 X 50 X 6.0	12.27	15.63	178.75	58.67	3.38	1.94	35.75	23.47	46.90	28.52	137.24	37.07
100 X 50 X 8.0	15.54	19.79	210.07	67.65	3.26	1.85	42.02	27.06	57.03	34.35	137.46	38.16
120 X 60 X 1.6	4.39	5.59	107.43	37.05	4.38	2.57	17.91	12.35	21.89	13.60	88.45	21.18
120 X 60 X 2.0	5.45	6.94	131.92	45.33	4.36	2.56	21.99	15.11	27.00	16.75	109.10	25.89
120 X 60 X 2.2	5.97	7.60	143.82	49.33	4.35	2.55	23.97	16.45	29.51	18.29	119.15	28.15
120 X 60 X 2.5	6.74	8.59	161.23	55.15	4.33	2.53	26.88	18.39	33.20	20.56	133.86	31.43
120 X 60 X 2.8	7.50	9.56	178.13	60.77	4.32	2.52	29.69	20.26	36.81	22.77	148.10	34.58
120 X 60 X 3.2	8.52	10.85	199.88	67.95	4.29	2.50	33.32	22.65	41.51	25.63	166.31	38.56
120 X 60 X 3.6	9.51	12.11	220.75	74.77	4.27	2.48	36.80	24.93	46.07	28.40	183.57	42.29
120 X 60 X 4.0	10.48	13.35	240.74	81.25	4.25	2.47	40.13	27.09	50.49	31.08	199.79	45.76
120 X 60 X 4.5	11.67	14.87	264.52	88.88	4.22	2.44	44.09	29.63	55.82	34.30	218.51	49.75
120 X 60 X 5.0	12.84	16.36	286.97	95.99	4.19	2.42	47.83	32.00	60.95	37.38	235.39	53.33
120 X 60 X 6.0	15.10	19.23	328.01	108.77	4.13	2.38	54.67	36.26	70.57	43.12	263.07	59.24
150 X 25 X 1.6	4.26	5.43	124.73	6.76	4.79	1.12	16.64	5.41	22.68	5.92	22.78	10.23
150 X 25 X 2.0	5.29	6.74	152.77	8.11	4.76	1.10	20.37	6.49	27.95	7.22	27.42	12.24
150 X 25 X 2.2	5.79	7.38	166.32	8.74	4.75	1.09	22.18	7.00	30.52	7.84	29.56	13.16
150 X 25 X 2.6	6.80	8.66	192.52	9.91	4.71	1.07	25.67	7.93	35.54	9.04	33.47	14.85
150 X 50 X 1.6	4.89	6.23	168.78	30.45	5.20	2.21	22.51	12.18	28.62	13.21	85.50	21.95
150 X 50 X 2.0	6.08	7.74	207.53	37.20	5.18	2.19	27.68	14.88	35.35	16.26	105.19	26.79
150 X 50 X 2.2	6.66	8.48	226.40	40.45	5.17	2.18	30.19	16.18	38.65	17.75	114.73	29.11
150 X 50 X 2.5	7.53	9.59	254.08	45.17	5.15	2.17	33.88	18.07	43.52	19.95	128.65	32.47
150 X 50 X 2.8	8.38	10.68	281.01	49.72	5.13	2.16	37.47	19.89	48.30	22.09	142.06	35.68
150 X 50 X 3.2	9.52	12.13	315.76	55.50	5.10	2.14	42.11	22.20	54.52	24.86	159.12	39.73

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Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx}	I _{yy}	R _{xx}	R _{yy}	Z _{xx}	Z _{yy}	S _{xx}	S _{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
150 X 50 X 3.6	10.64	13.55	349.22	60.98	5.08	2.12	46.57	24.40	60.58	27.54	175.17	43.51
150 X 50 X 4.0	11.74	14.95	381.39	66.16	5.05	2.10	50.86	26.47	66.47	30.13	190.15	47.02
150 X 50 X 4.5	13.09	16.67	419.82	72.23	5.02	2.08	55.98	28.90	73.60	33.24	207.28	51.02
150 X 50 X 5.0	14.41	18.36	456.29	77.87	4.99	2.06	60.84	31.15	80.48	36.20	222.54	54.59
150 X 75 X 2.5	8.51	10.84	322.07	110.68	5.45	3.20	42.95	29.52	52.74	32.72	266.35	50.56
150 X 75 X 2.8	9.48	12.08	356.85	122.36	5.44	3.18	47.58	32.63	58.60	36.32	295.74	55.86
150 X 75 X 3.2	10.78	13.73	401.98	137.44	5.41	3.16	53.60	36.66	66.26	41.02	333.85	62.65
150 X 75 X 3.6	12.05	15.35	445.69	151.94	5.39	3.15	59.43	40.52	73.75	45.60	370.65	69.13
150 X 75 X 4.0	13.31	16.95	488.00	165.88	5.37	3.13	65.07	44.24	81.07	50.06	406.04	75.31
150 X 75 X 5.0	16.38	20.86	587.74	198.36	5.31	3.08	78.37	52.90	98.61	60.71	487.77	89.38
150 X 75 X 6.0	19.33	24.63	679.08	227.56	5.25	3.04	90.55	60.69	115.08	70.63	558.76	101.46
150 X 100 X 2.8	10.58	13.48	432.70	232.78	5.67	4.16	57.70	46.56	68.90	52.30	481.30	76.06
150 X 100 X 3.2	12.03	15.33	488.19	262.27	5.64	4.14	65.10	52.46	78.01	59.18	545.15	85.60
150 X 100 X 3.6	13.46	17.15	542.16	290.86	5.62	4.12	72.29	58.18	86.93	65.91	607.44	94.81
150 X 100 X 4.0	14.88	18.95	594.60	318.57	5.60	4.10	79.28	63.72	95.67	72.50	668.04	103.67
150 X 100 X 5.0	18.34	23.36	719.20	384.02	5.55	4.05	95.90	76.81	116.73	88.34	811.48	124.31
150 X 100 X 6.0	21.69	27.63	834.69	444.19	5.50	4.01	111.30	88.84	136.68	103.30	941.95	142.74
150 X 100 X 8.0	28.10	35.79	1039.29	549.48	5.39	3.92	138.58	109.90	173.31	130.63	1157.28	172.73
200 X 100 X 2.8	12.78	16.28	867.33	298.93	7.30	4.29	86.74	59.79	106.12	65.91	714.79	102.51
200 X 100 X 3.2	14.55	18.53	980.69	337.26	7.27	4.27	98.07	67.46	120.32	74.67	810.37	115.59
200 X 100 X 3.6	16.29	20.75	1091.47	374.54	7.25	4.25	109.15	74.91	134.30	83.26	903.95	128.26
200 X 100 X 4.0	18.02	22.95	1199.71	410.78	7.23	4.23	119.98	82.16	148.04	91.70	995.40	140.54
200 X 100 X 5.0	22.26	28.36	1459.25	496.94	7.17	4.19	145.93	99.39	181.37	112.09	1213.91	169.44
200 X 100 X 6.0	26.40	33.63	1703.31	576.91	7.12	4.14	170.34	115.39	213.27	131.50	1416.41	195.77
200 X 100 X 8.0	34.38	43.79	2146.21	719.19	7.00	4.05	214.63	143.84	272.79	167.43	1765.96	240.49
240 X 120 X 4.0	21.78	27.75	2110.72	725.35	8.72	5.11	175.90	120.90	216.01	134.01	1745.55	207.11
200 X 100 X 6.0	26.40	33.63	1703.31	576.91	7.12	4.14	170.34	115.39	213.27	131.50	1416.41	195.77
200 X 100 X 8.0	34.38	43.79	2146.21	719.19	7.00	4.05	214.63	143.84	272.79	167.43	1765.96	240.49
240 X 120 X 4.0	21.78	27.75	2110.72	725.35	8.72	5.11	175.90	120.90	216.01	134.01	1745.55	207.11
240 X 120 X 5.0	26.97	34.36	2579.67	882.47	8.66	5.07	214.98	147.08	265.58	164.45	2141.72	251.48
240 X 120 X 6.0	32.05	40.83	3025.91	1030.45	8.61	5.02	252.16	171.75	313.41	193.69	2517.16	292.80
240 X 120 X 8.0	41.91	53.39	3851.84	1299.95	8.49	4.93	320.99	216.66	403.89	248.66	3196.64	366.11
250 X 100 X 4.0	21.16	26.95	2091.66	502.99	8.81	4.32	167.34	100.60	210.41	110.90	1335.40	177.41
250 X 100 X 5.0	26.19	33.36	2553.76	609.85	8.75	4.28	204.31	121.97	258.51	135.84	1631.59	214.59
250 X 100 X 6.0	31.11	39.63	2992.34	709.63	8.69	4.23	239.39	141.93	304.85	159.70	1908.64	248.83
250 X 100 X 8.0	40.66	51.79	3800.53	888.89	8.57	4.14	304.05	177.78	392.27	204.23	2397.53	308.31
250 X 150 X 4.0	24.30	30.95	2696.87	1234.24	9.33	6.31	215.75	164.57	259.61	183.27	2696.49	274.12
250 X 150 X 5.0	30.11	38.36	3304.18	1507.95	9.28	6.27	264.34	201.06	319.76	225.48	3322.96	334.43
250 X 150 X 6.0	35.82	45.63	3885.56	1768.35	9.23	6.23	310.85	235.78	378.05	266.28	3924.87	391.36
250 X 150 X 8.0	46.94	59.79	4972.24	2250.41	9.12	6.14	397.78	300.06	489.07	343.71	5043.97	494.90
250 X 150 X 10.0	57.63	73.42	5960.20	2682.88	9.01	6.04	476.82	357.72	592.79	415.67	6032.07	584.33
280 X 100 X 4.0	23.04	29.35	2785.31	558.32	9.74	4.36	198.96	111.67	252.63	122.42	1543.27	199.54

RECTANGULAR HOLLOW SECTION (RHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I_{xx}	I_{yy}	R_{xx}	R_{yy}	Z_{xx}	Z_{yy}	S_{xx}	S_{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
280 X 100 X 5.0	28.54	36.36	3406.60	677.60	9.68	4.32	243.33	135.52	310.80	150.09	1886.82	241.68
280 X 100 X 6.0	33.94	43.23	3998.76	789.27	9.62	4.27	285.63	157.86	367.00	176.62	2209.32	280.67
300 X 150 X 4.0	27.44	34.95	4196.67	1447.46	10.96	6.44	279.78	193.00	341.98	212.47	3455.16	330.97
300 X 150 X 5.0	34.04	43.36	5153.13	1770.87	10.90	6.39	343.55	236.12	421.90	261.73	4261.58	404.51
300 X 150 X 6.0	40.53	51.63	6073.51	2079.57	10.85	6.35	404.91	277.28	499.63	309.48	5039.24	474.31
300 X 150 X 8.0	53.22	67.79	7807.95	2654.12	10.73	6.26	520.53	353.89	648.55	400.51	6496.60	602.47
300 X 150 X 10.0	65.48	83.42	9403.90	3173.71	10.62	6.17	626.93	423.17	788.86	485.67	7804.31	715.07
300 X 200 X 4.0	30.58	38.95	5072.88	2736.56	11.41	8.38	338.20	273.66	401.18	304.84	5589.58	447.72
300 X 200 X 5.0	37.96	48.36	6241.05	3360.92	11.36	8.34	416.07	336.10	495.65	376.37	6919.17	549.43
300 X 200 X 6.0	45.24	57.63	7370.23	3962.19	11.31	8.29	491.35	396.22	587.83	446.07	8214.59	646.97
300 X 200 X 8.0	59.50	75.79	9513.66	5097.04	11.20	8.20	634.25	509.71	765.35	579.99	10688.71	829.36
300 X 200 X 10.0	73.33	93.42	11507.24	6144.30	11.10	8.11	767.15	614.43	933.86	706.73	12983.61	994.50
300 X 200 X 12.0	86.77	110.53	13354.97	7107.11	10.99	8.02	890.34	710.72	1093.47	826.41	15071.27	1141.95
350 X 250 X 5.0	45.81	58.36	10519.88	6305.84	13.43	10.39	601.14	504.47	709.04	564.76	12375.85	814.43
350 X 250 X 6.0	54.66	69.63	12457.31	7458.44	13.38	10.35	711.85	596.68	842.61	670.85	14733.26	962.58
350 X 250 X 8.0	72.06	91.79	16170.48	9659.06	13.27	10.26	924.03	772.73	1101.63	876.27	19295.99	1243.82
350 X 250 X 10.0	89.03	113.42	19672.08	11723.53	13.17	10.17	1124.12	937.89	1349.92	1072.79	23627.09	1504.66
350 X 250 X 12.0	105.61	134.53	22966.89	13655.73	13.07	10.08	1312.40	1092.46	1587.60	1260.54	27692.08	1744.69
400 X 200 X 5.0	45.81	58.36	12489.82	4311.75	14.63	8.60	624.50	431.18	762.43	473.87	10269.69	739.55
400 X 200 X 6.0	54.66	69.63	14789.35	5091.63	14.57	8.55	739.47	509.17	905.99	562.47	12205.15	872.78
400 X 200 X 8.0	72.06	91.79	19195.28	6572.45	14.46	8.46	959.77	657.25	1184.31	733.59	15926.47	1124.29
400 X 200 X 10.0	89.03	113.42	23348.08	7950.97	14.35	8.37	1167.41	795.10	1450.98	896.73	19422.50	1355.55
400 X 200 X 12.0	105.61	134.53	27252.93	9230.63	14.23	8.28	1362.65	923.07	1706.13	1052.01	22662.53	1566.20

MOTERA STADIUM, AHMADABAD



RECTANGULAR HOLLOW SECTION (RHS) IS : 4923 : 2017/EN 10219-1 : 2006*/ASTM A-500

Dimension mm	Weight kg/m	Area cm ²	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsional Constants	
			I _{xx}	I _{yy}	R _{xx}	R _{yy}	Z _{xx}	Z _{yy}	S _{xx}	S _{yy}	J	C
			cm ⁴	cm ⁴	cm	cm	cm ³	cm ³	cm ³	cm ³	cm ⁴	cm ³
300 X 200 X 14.0	99.78	127.11	15060.82	7988.55	10.89	7.93	1004.06	798.86	1244.30	939.14	16924.33	1271.23
400 X 200 X 16.0	137.51	175.17	34339.42	11507.00	14.00	8.10	1716.98	1150.70	2182.32	1339.45	28255.38	1923.95
400 X 300 X 6.0	64.08	81.63	19446.79	12557.11	15.43	12.40	972.34	837.15	1142.39	940.63	23929.98	1338.20
400 X 300 X 8.0	84.62	107.79	25342.70	16336.49	15.33	12.31	1267.14	1089.10	1497.91	1232.55	31464.16	1738.28
400 X 300 X 10.0	104.73	133.42	30954.74	19920.57	15.23	12.22	1547.74	1328.04	1840.98	1513.86	38709.68	2114.80
400 X 300 X 12.0	124.45	158.53	36288.45	23314.01	15.13	12.13	1814.43	1554.27	2171.73	1784.67	45625.84	2467.39
400 X 300 X 14.0	143.74	183.11	41349.30	26521.41	15.03	12.03	2067.47	1768.10	2490.27	2045.10	52172.04	2795.60
400 X 300 X 16.0	162.63	207.17	46142.73	29547.33	14.92	11.94	2307.14	1969.83	2796.72	2295.29	58308.01	3098.98
500 X 200 X 6.0	64.08	81.63	25690.13	6221.07	17.74	8.73	1027.61	622.11	1284.16	678.87	16353.70	1098.63
500 X 200 X 8.0	84.62	107.79	33466.50	8047.87	17.62	8.64	1338.66	804.79	1683.27	887.19	21366.48	1419.28
500 X 200 X 10.0	104.73	133.42	40860.16	9757.63	17.50	8.55	1634.41	975.77	2068.10	1086.73	26105.40	1716.72
500 X 200 X 12.0	124.45	158.53	47877.48	11354.15	17.38	8.46	1915.10	1135.42	2438.78	1277.61	30538.24	1990.64
500 X 200 X 14.0	143.74	183.11	54524.82	12841.14	17.26	8.37	2181.00	1284.12	2795.43	1459.94	34633.43	2240.67
500 X 200 X 16.0	162.63	207.17	60808.49	14222.30	17.13	8.29	2432.34	1422.23	3138.16	1633.85	38360.40	2466.45
500 X 300 X 8.0	97.18	123.79	43149.92	19747.90	18.67	12.63	1726.00	1316.53	2076.87	1466.15	43143.80	2192.97
500 X 300 X 10.0	120.43	153.42	52866.82	24127.24	18.56	12.54	2114.68	1608.49	2558.10	1803.86	53167.39	2675.40
500 X 300 X 12.0	143.29	182.53	62169.00	28293.53	18.46	12.45	2486.76	1886.24	3024.38	2130.27	62797.85	3130.85
500 X 300 X 14.0	165.72	211.11	71063.12	32251.70	18.35	12.36	2842.53	2150.12	3475.83	2445.50	71991.13	3558.92
500 X 300 X 16.0	187.75	239.17	79555.80	36006.64	18.24	12.27	3182.24	2400.45	3912.56	2749.69	80703.46	3959.20
600 X 200 X 6.0	73.50	93.63	40672.54	7350.51	20.84	8.86	1355.76	735.06	1722.32	795.27	20598.47	1324.49
600 X 200 X 8.0	97.18	123.79	53127.31	9523.28	20.72	8.77	1770.92	952.33	2262.23	1040.79	26928.52	1714.30
600 X 200 X 10.0	120.43	153.42	65043.47	11564.30	20.59	8.68	2168.12	1156.43	2785.23	1276.73	32934.16	2077.94
600 X 200 X 12.0	143.29	182.53	76428.61	13477.67	20.46	8.59	2547.63	1347.77	3291.44	1503.21	38582.25	2415.16
600 X 200 X 14.0	165.72	211.11	87290.27	15267.43	20.33	8.50	2909.68	1526.75	3780.99	1720.34	43840.48	2725.67
600 X 200 X 16.0	187.75	239.17	97635.94	16937.61	20.20	8.42	3254.54	1693.77	4254.00	1928.25	48677.53	3009.14
600 X 300 X 8.0	109.74	139.79	67146.73	23159.31	21.92	12.87	2238.23	1543.96	2735.83	1699.75	55282.51	2647.72
600 X 300 X 10.0	136.13	173.42	82450.14	28333.90	21.80	12.78	2748.34	1888.93	3375.23	2093.86	68185.35	3236.10
600 X 300 X 12.0	162.13	206.53	97176.13	33273.05	21.69	12.69	3239.21	2218.21	3997.04	2475.87	80627.77	3794.47
600 X 300 X 14.0	187.70	239.11	111332.56	37981.99	21.58	12.60	3711.09	2532.14	4601.39	2845.90	92563.22	4322.49
600 X 300 X 16.0	212.87	271.17	124927.25	42465.94	21.46	12.51	4164.25	2831.07	5188.40	3204.09	103945.54	4819.77
600 X 400 X 8.0	122.30	155.79	81166.14	43784.94	22.83	16.76	2705.54	2189.25	3209.43	2438.71	89433.21	3581.75
600 X 400 X 10.0	151.83	193.42	99856.81	53774.74	22.72	16.67	3328.57	2688.74	3965.23	3010.98	110706.68	4395.41
600 X 400 X 12.0	180.97	230.53	117923.65	63395.01	22.62	16.58	3930.79	3169.76	4702.64	3568.53	131433.38	5175.73
600 X 400 X 14.0	209.68	267.11	135374.85	72652.18	22.51	16.49	4512.50	3632.61	5421.79	4111.47	151556.54	5922.35
600 X 400 X 16.0	237.99	303.17	152218.55	81552.65	22.41	16.40	5073.96	4077.64	6122.80	4639.92	171019.37	6634.88



CIRCULAR HOLLOW SECTION



CIRCULAR HOLLOW SECTION IS:1161 : 2014

Outside Diameter	Thickness	Mass	Area of Cross Section	Internal Volume	Moment of Inertia	Elastic Modulus	Plastic Modulus	Radius of Gyration	Square of Radius of Gyration	Torsional Constant
mm	mm	kg/m	cm ²	cm ³ /m	cm ⁴	cm ³	cm ³	cm	cm ²	cm ³
21.3	1.6	0.78	0.99	257	0.48	0.45	0.62	0.70	0.49	0.91
21.3	1.8	0.87	1.10	246	0.53	0.50	0.69	0.69	0.48	0.99
21.3	2.0	0.95	1.21	235	0.57	0.54	0.75	0.69	0.47	1.07
21.3	2.2	1.04	1.32	224	0.61	0.57	0.81	0.68	0.46	1.15
21.3	2.5	1.16	1.48	209	0.66	0.62	0.89	0.67	0.45	1.25
21.3	2.8	1.28	1.63	194	0.71	0.67	0.97	0.66	0.44	1.34
26.4	1.6	0.98	1.25	423	0.96	0.73	0.99	0.88	0.77	1.46
26.4	1.8	1.09	1.39	408	1.06	0.80	1.09	0.87	0.76	1.60
26.4	2.0	1.20	1.53	394	1.15	0.87	1.19	0.87	0.75	1.74
26.4	2.2	1.31	1.67	380	1.23	0.94	1.29	0.86	0.74	1.87
26.4	2.5	1.47	1.88	360	1.35	1.03	1.43	0.85	0.72	2.05
26.4	2.8	1.63	2.08	340	1.47	1.11	1.57	0.84	0.71	2.22
33.7	1.6	1.27	1.61	731	2.08	1.24	1.65	1.14	1.29	2.47
33.7	1.8	1.42	1.80	712	2.30	1.37	1.83	1.13	1.28	2.73
33.7	2.0	1.56	1.99	693	2.51	1.49	2.01	1.12	1.26	2.98
33.7	2.2	1.71	2.18	674	2.71	1.61	2.19	1.12	1.25	3.22
33.7	2.5	1.92	2.45	647	3.00	1.78	2.44	1.11	1.22	3.56
33.7	2.8	2.13	2.72	620	3.27	1.94	2.68	1.10	1.20	3.88
33.7	3.2	2.41	3.07	585	3.60	2.14	2.99	1.08	1.18	4.28
33.7	3.6	2.67	3.40	552	3.91	2.32	3.28	1.07	1.15	4.64
38.1	3.2	2.75	3.51	789	5.39	2.83	3.91	1.24	1.54	5.66
38.1	3.6	3.06	3.90	750	5.87	3.08	4.30	1.23	1.50	6.16
38.1	4.0	3.36	4.29	712	6.31	3.31	4.67	1.21	1.47	6.63
38.1	4.5	3.73	4.75	665	6.82	3.58	5.11	1.20	1.44	7.16
38.1	5.0	4.08	5.20	620	7.28	3.82	5.52	1.18	1.40	7.65
38.1	6.0	4.75	6.05	535	8.07	4.23	6.25	1.15	1.33	8.47
38.1	8.0	5.94	7.56	384	9.17	4.82	7.42	1.10	1.21	9.63
42.4	1.6	1.61	2.05	1207	4.27	2.02	2.66	1.44	2.08	4.03
42.4	1.8	1.80	2.30	1182	4.74	2.24	2.97	1.44	2.06	4.47
42.4	2.0	1.99	2.54	1158	5.19	2.45	3.27	1.43	2.05	4.90
42.4	2.3	2.27	2.90	1122	5.84	2.76	3.70	1.42	2.02	5.51
42.4	2.6	2.55	3.25	1087	6.46	3.05	4.12	1.41	1.99	6.10
42.4	2.9	2.83	3.60	1052	7.06	3.33	4.53	1.40	1.96	6.66
42.4	3.2	3.09	3.94	1018	7.62	3.59	4.93	1.39	1.93	7.19
42.4	3.6	3.45	4.39	973	8.33	3.93	5.44	1.38	1.90	7.86
48.3	1.6	1.84	2.35	1598	6.41	2.65	3.49	1.65	2.73	5.31
48.3	1.8	2.06	2.63	1569	7.12	2.95	3.89	1.65	2.71	5.89
48.3	2.0	2.28	2.91	1541	7.81	3.23	4.29	1.64	2.68	6.47
48.3	2.3	2.61	3.32	1500	8.81	3.65	4.87	1.63	2.65	7.30
48.3	2.6	2.93	3.73	1459	9.78	4.05	5.44	1.62	2.62	8.10
48.3	2.9	3.25	4.14	1419	10.70	4.43	5.99	1.61	2.59	8.86
48.3	3.2	3.56	4.53	1379	11.59	4.80	6.52	1.60	2.56	9.59
48.3	3.6	3.97	5.06	1327	12.71	5.26	7.21	1.59	2.51	10.52
48.3	4.0	4.37	5.57	1276	13.77	5.70	7.87	1.57	2.47	11.40
48.3	4.5	4.86	6.19	1213	15.01	6.21	8.66	1.56	2.42	12.43
48.3	5.0	5.34	6.80	1152	16.15	6.69	9.42	1.54	2.37	13.38
48.3	6.0	6.26	7.97	1035	18.19	7.53	10.81	1.51	2.28	15.07

CIRCULAR HOLLOW SECTION IS:1161 : 2014

Outside Diameter	Thickness	Mass	Area of Cross Section	Internal Volume	Moment of Inertia	Elastic Modulus	Plastic Modulus	Radius of Gyration	Square of Radius of Gyration	Torsional Constant
mm	mm	kg/m	cm ²	cm ³ /m	cm ⁴	cm ³	cm ³	cm	cm ²	cm ³
48.3	8.0	7.95	10.13	819	21.37	8.85	13.16	1.45	2.11	17.70
60.3	1.6	2.32	2.95	2561	12.72	4.22	5.51	2.08	4.31	8.44
60.3	2.0	2.88	3.66	2489	15.58	5.17	6.80	2.06	4.25	10.34
60.3	2.3	3.29	4.19	2437	17.65	5.85	7.74	2.05	4.21	11.71
60.3	2.6	3.70	4.71	2384	19.65	6.52	8.66	2.04	4.17	13.04
60.3	2.9	4.11	5.23	2333	21.59	7.16	9.56	2.03	4.13	14.32
60.3	3.2	4.51	5.74	2282	23.47	7.78	10.44	2.02	4.09	15.57
60.3	3.6	5.03	6.41	2215	25.87	8.58	11.59	2.01	4.03	17.16
60.3	4.0	5.55	7.07	2148	28.17	9.34	12.70	2.00	3.98	18.69
60.3	4.5	6.19	7.89	2067	30.90	10.25	14.04	1.98	3.92	20.50
60.3	5.0	6.82	8.69	1987	33.48	11.10	15.33	1.96	3.85	22.21
60.3	6.0	8.04	10.24	1832	38.18	12.66	17.76	1.93	3.73	25.33
60.3	8.0	10.32	13.14	1541	45.99	15.25	22.05	1.87	3.50	30.51
71.5	3.2	5.39	6.87	3329	40.13	11.22	14.94	2.42	5.84	22.45
71.5	3.6	6.03	7.68	3247	44.38	12.41	16.61	2.40	5.78	24.83
71.5	4.0	6.66	8.48	3167	48.48	13.56	18.25	2.39	5.72	27.12
71.5	5.0	8.20	10.45	2971	58.07	16.24	22.15	2.36	5.56	32.49
71.5	6.0	9.69	12.35	2781	66.77	18.68	25.81	2.33	5.41	37.35
71.5	8.0	12.53	15.96	2419	81.72	22.86	32.43	2.26	5.12	45.72
76.2	2.0	3.66	4.66	4094	32.11	8.43	11.01	2.62	6.89	16.85
76.2	2.3	4.19	5.34	4026	36.49	9.58	12.56	2.61	6.83	19.15
76.2	2.6	4.72	6.01	3959	40.76	10.70	14.09	2.60	6.78	21.40
76.2	2.9	5.24	6.68	3893	44.92	11.79	15.59	2.59	6.73	23.58
76.2	3.2	5.76	7.34	3826	48.98	12.86	17.06	2.58	6.67	25.71
76.2	3.6	6.45	8.21	3739	54.23	14.23	18.99	2.57	6.60	28.47
76.2	4.0	7.12	9.07	3653	59.30	15.56	20.87	2.56	6.54	31.13
76.2	4.5	7.96	10.14	3547	65.39	17.16	23.16	2.54	6.45	34.33
76.2	5.0	8.78	11.18	3442	71.22	18.69	25.39	2.52	6.37	37.39
76.2	6.0	10.39	13.23	3237	82.11	21.55	29.64	2.49	6.21	43.10
76.2	8.0	13.46	17.14	2846	101.03	26.52	37.38	2.43	5.89	53.03
88.9	2.0	4.29	5.46	5661	51.57	11.60	15.11	3.07	9.44	23.20
88.9	2.3	4.91	6.26	5581	58.70	13.21	17.25	3.06	9.38	26.41
88.9	2.6	5.53	7.05	5502	65.68	14.78	19.37	3.05	9.32	29.55
88.9	2.9	6.15	7.84	5424	72.52	16.31	21.46	3.04	9.26	32.63
88.9	3.2	6.76	8.62	5346	79.21	17.82	23.51	3.03	9.19	35.64
88.9	3.6	7.57	9.65	5242	87.90	19.77	26.21	3.02	9.11	39.55
88.9	4.0	8.38	10.67	5140	96.34	21.67	28.85	3.00	9.03	43.35
88.9	4.5	9.37	11.93	5014	106.54	23.97	32.09	2.99	8.93	47.94
88.9	5.0	10.35	13.18	4889	116.37	26.18	35.24	2.97	8.83	52.36
88.9	6.0	12.27	15.63	4645	134.94	30.36	41.31	2.94	8.64	60.72
88.9	8.0	15.96	20.33	4174	167.97	37.79	52.53	2.87	8.26	75.58
88.9	10.0	19.46	24.79	3728	195.98	44.09	62.59	2.81	7.91	88.18
88.9	5.0	10.35	13.18	4889	116.37	26.18	35.24	2.97	8.83	52.36
101.6	2.0	4.91	6.26	7482	77.63	15.28	19.84	3.52	12.41	30.56
101.6	2.3	5.63	7.18	7390	88.48	17.42	22.68	3.51	12.33	34.84
101.6	2.6	6.35	8.09	7299	99.14	19.52	25.49	3.50	12.26	39.03
101.6	2.9	7.06	8.99	7208	109.59	21.57	28.26	3.49	12.19	43.15

CIRCULAR HOLLOW SECTION IS:1161 : 2014

Outside Diameter	Thickness	Mass	Area of Cross Section	Internal Volume	Moment of Inertia	Elastic Modulus	Plastic Modulus	Radius of Gyration	Square of Radius of Gyration	Torsional Constant
mm	mm	kg/m	cm ²	cm ³ /m	cm ⁴	cm ³	cm ³	cm	cm ²	cm ³
101.6	3.2	7.77	9.89	7118	119.85	23.59	31.00	3.48	12.12	47.19
101.6	3.6	8.70	11.08	6999	133.24	26.23	34.59	3.47	12.02	52.46
101.6	4.0	9.63	12.26	6881	146.28	28.80	38.12	3.45	11.93	57.59
101.6	4.5	10.78	13.73	6735	162.13	31.92	42.46	3.44	11.81	63.83
101.6	5.0	11.91	15.17	6590	177.47	34.93	46.70	3.42	11.70	69.87
114.3	2.0	5.54	7.06	9555	111.27	19.47	25.23	3.97	15.77	38.94
114.3	2.3	6.35	8.09	9452	126.95	22.21	28.86	3.96	15.69	44.43
114.3	2.6	7.16	9.12	9348	142.37	24.91	32.45	3.95	15.60	49.82
114.3	2.9	7.97	10.15	9246	157.55	27.57	36.00	3.94	15.52	55.13
114.3	3.2	8.77	11.17	9144	172.47	30.18	39.51	3.93	15.44	60.36
114.3	3.6	9.83	12.52	9009	191.98	33.59	44.13	3.92	15.33	67.19
114.3	4.0	10.88	13.86	8875	211.07	36.93	48.69	3.90	15.23	73.86
114.3	4.5	12.19	15.52	8709	234.32	41.00	54.28	3.89	15.10	82.00
114.3	5.0	13.48	17.17	8544	256.92	44.96	59.77	3.87	14.96	89.91
114.3	6.0	16.03	20.41	8219	300.21	52.53	70.45	3.83	14.71	105.06
127.0	2.6	7.98	10.16	11652	196.65	30.97	40.24	4.40	19.35	61.94
127.0	2.9	8.88	11.31	11537	217.78	34.30	44.67	4.39	19.26	68.59
127.0	3.2	9.77	12.45	11423	238.60	37.57	49.06	4.38	19.17	75.15
127.0	3.6	10.96	13.96	11272	265.87	41.87	54.83	4.36	19.05	83.74
127.0	4.0	12.14	15.46	11122	292.61	46.08	60.54	4.35	18.93	92.16
127.0	4.5	13.60	17.32	10936	325.29	51.23	67.56	4.33	18.78	102.45
127.0	5.0	15.05	19.16	10751	357.14	56.24	74.46	4.32	18.64	112.48
127.0	6.0	17.91	22.81	10387	418.44	65.90	87.92	4.28	18.35	131.79
139.7	2.6	8.79	11.20	14208	263.21	37.68	48.88	4.85	23.50	75.36
139.7	2.9	9.79	12.46	14082	291.68	41.76	54.28	4.84	23.40	83.52
139.7	3.2	10.77	13.72	13956	319.78	45.78	59.63	4.83	23.30	91.56
139.7	3.6	12.09	15.39	13789	356.65	51.06	66.70	4.81	23.17	102.12
139.7	4.0	13.39	17.05	13623	392.86	56.24	73.68	4.80	23.04	112.49
139.7	4.5	15.01	19.11	13417	437.20	62.59	82.29	4.78	22.87	125.18
139.7	5.0	16.61	21.16	13212	480.54	68.80	90.76	4.77	22.71	137.59
139.7	6.0	19.79	25.20	12808	564.26	80.78	107.33	4.73	22.39	161.56
139.7	8.0	25.99	33.10	12018	720.29	103.12	138.93	4.66	21.76	206.24
165.1	2.6	10.42	13.27	20081	438.23	53.09	68.66	5.75	33.02	106.17
165.1	2.9	11.60	14.78	19931	486.13	58.89	76.30	5.74	32.90	117.78
165.1	3.2	12.78	16.28	19781	533.48	64.63	83.89	5.73	32.78	129.25
165.1	3.6	14.34	18.27	19582	595.79	72.17	93.91	5.71	32.62	144.35
165.1	4.0	15.89	20.24	19384	657.16	79.61	103.83	5.70	32.46	159.22
165.1	4.5	17.83	22.70	19138	732.57	88.74	116.10	5.68	32.27	177.49
165.1	5.0	19.75	25.15	18894	806.54	97.70	128.20	5.66	32.07	195.41
165.1	6.0	23.55	29.99	18409	950.25	115.11	151.95	5.63	31.69	230.22
165.1	8.0	31.00	39.48	17460	1221.25	147.94	197.61	5.56	30.93	295.88
168.3	2.6	10.63	13.53	20893	464.63	55.21	71.39	5.86	34.33	110.43
168.3	2.9	11.83	15.07	20739	515.46	61.26	79.34	5.85	34.21	122.51
168.3	3.2	13.03	16.60	20587	565.74	67.23	87.24	5.84	34.09	134.46
168.3	3.6	14.63	18.63	20384	631.90	75.09	97.67	5.82	33.92	150.18
168.3	4.0	16.21	20.65	20182	697.09	82.84	108.00	5.81	33.76	165.68
168.3	4.5	18.18	23.16	19931	777.22	92.36	120.77	5.79	33.56	184.72

CIRCULAR HOLLOW SECTION IS:1161 : 2014

Outside Diameter	Thickness	Mass	Area of Cross Section	Internal Volume	Moment of Inertia	Elastic Modulus	Plastic Modulus	Radius of Gyration	Square of Radius of Gyration	Torsional Constant
mm	mm	kg/m	cm ²	cm ³ /m	cm ⁴	cm ³	cm ³	cm	cm ²	cm ³
168.3	5.0	20.14	25.65	19681	855.85	101.70	133.38	5.78	33.36	203.41
168.3	6.0	24.02	30.59	19187	1008.69	119.87	158.12	5.74	32.97	239.74
168.3	8.0	31.63	40.29	18218	1297.27	154.16	205.74	5.67	32.20	308.32
193.7	2.6	12.26	15.61	27907	712.68	73.59	94.96	6.76	45.66	147.17
193.7	2.9	13.65	17.38	27730	791.21	81.69	105.58	6.75	45.52	163.39
193.7	3.2	15.04	19.15	27553	869.00	89.73	116.14	6.74	45.38	179.45
193.7	3.6	16.88	21.50	27318	971.55	100.31	130.11	6.72	45.19	200.63
193.7	4.0	18.72	23.84	27084	1072.79	110.77	143.97	6.71	45.00	221.54
193.7	4.5	21.00	26.75	26793	1197.52	123.65	161.12	6.69	44.77	247.29
193.7	5.0	23.27	29.64	26504	1320.23	136.32	178.08	6.67	44.54	272.63
193.7	6.0	27.78	35.38	25930	1559.72	161.05	211.46	6.64	44.08	322.09
193.7	8.0	36.64	46.67	24801	2015.54	208.11	276.05	6.57	43.19	416.22
219.7	2.6	13.92	17.73	36136	1044.90	95.12	122.55	7.68	58.92	190.24
219.7	2.9	15.51	19.75	35934	1160.68	105.66	136.31	7.67	58.76	211.32
219.7	3.2	17.09	21.76	35733	1275.49	116.11	150.00	7.66	58.60	232.22
219.7	3.6	19.19	24.44	35466	1427.08	129.91	168.13	7.64	58.39	259.82
219.7	4.0	21.28	27.11	35199	1576.96	143.56	186.13	7.63	58.18	287.11
219.7	5.0	26.48	33.72	34537	1944.29	177.00	230.52	7.59	57.65	353.99
219.7	6.0	31.63	40.28	33882	2301.27	209.49	274.08	7.56	57.13	418.98
219.7	8.0	41.77	53.21	32589	2984.92	271.73	358.71	7.49	56.10	543.45
219.7	10.0	51.72	65.88	31322	3629.46	330.40	440.07	7.42	55.09	660.80
254.0	4.0	24.67	31.42	47529	2455.00	193.31	250.02	8.84	78.15	386.61
254.0	5.0	30.71	39.11	46759	3032.52	238.78	310.05	8.81	77.53	477.56
254.0	6.0	36.70	46.75	45996	3596.01	283.15	369.10	8.77	76.93	566.30
254.0	8.0	48.54	61.83	44488	4681.82	368.65	484.30	8.70	75.73	737.29
254.0	10.0	60.19	76.65	43005	5714.24	449.94	595.69	8.63	74.55	899.88
273.1	5.0	33.06	42.11	54367	3785.05	277.19	359.43	9.48	89.88	554.38
273.1	6.0	39.53	50.35	53543	4492.13	328.97	428.13	9.45	89.22	657.95
273.1	8.0	52.31	66.63	51915	5858.34	429.03	562.39	9.38	87.93	858.05
273.1	10.0	64.90	82.66	50312	7162.25	524.51	692.55	9.31	86.65	1049.03
273.1	12.0	77.28	98.43	48735	8405.78	615.58	818.65	9.24	85.40	1231.17
323.9	5.0	39.33	50.09	77388	6369.42	393.30	508.53	11.28	127.15	786.59
323.9	6.0	47.05	59.92	76405	7572.47	467.58	606.43	11.24	126.37	935.16
323.9	8.0	62.34	79.39	74458	9910.08	611.92	798.51	11.17	124.82	1223.84
323.9	10.0	77.43	98.61	72536	12158.34	750.75	985.67	11.10	123.29	1501.49
323.9	12.0	92.32	117.58	70639	14319.56	884.20	1167.96	11.04	121.78	1768.39
355.6	6.0	51.74	65.90	92725	10070.55	566.40	733.39	12.36	152.82	1132.80
355.6	8.0	68.59	87.36	90579	13201.37	742.48	966.78	12.29	151.11	1484.97
355.6	10.0	85.25	108.57	88457	16223.50	912.46	1194.73	12.22	149.42	1824.92

CIRCULAR HOLLOW SECTION IS:1161 : 2014

Outside Diameter	Thickness	Mass	Area of Cross Section	Internal Volume	Moment of Inertia	Elastic Modulus	Plastic Modulus	Radius of Gyration	Square of Radius of Gyration	Torsional Constant
mm	mm	kg/m	cm ²	cm ³ /m	cm ⁴	cm ³	cm ³	cm	cm ²	cm ²
355.6	12.0	101.70	129.53	86361	19139.47	1076.46	1417.31	12.16	147.76	2152.92
377.0	6.0	54.91	69.93	104635	12035.01	638.46	825.92	13.12	172.10	1276.92
377.0	8.0	72.81	92.74	102354	15791.85	837.76	1089.46	13.05	170.28	1675.53
377.0	10.0	90.52	115.30	100098	19425.87	1030.55	1347.22	12.98	168.49	2061.10
377.0	12.0	108.04	137.60	97868	22939.76	1216.96	1599.28	12.91	166.71	2433.93
406.4	6.0	59.26	75.47	122170	15128.33	744.50	961.99	14.16	200.45	1489.01
406.4	8.0	78.62	100.13	119704	19873.89	978.05	1269.95	14.09	198.48	1956.09
406.4	10.0	97.78	124.53	117264	24475.81	1204.52	1571.66	14.02	196.54	2409.04
406.4	12.0	116.74	148.69	114849	28937.01	1424.07	1867.19	13.95	194.62	2848.13

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