

STEEL TUBES FOR MECHANICAL AND GENERAL ENGINEERING PURPOSES

Conforming to IS-3601:2006



Outside Diameter mm	Thickness mm	Mass Kg/m	Area of cross Section cm ²	Moment of Inertia cm ⁴	Modules of Sections cm ³	Radius of Gyration cm
21.3	1.8	0.866	1.10	0.53	0.50	0.69
	2.0	0.952	1.21	0.57	0.54	0.69
	2.6	1.20	1.53	0.68	0.64	0.67
	3.2	1.43	1.82	0.77	0.72	0.65
26.9	1.8	1.11	1.42	1.12	0.83	0.89
	2.0	1.23	1.56	1.22	0.91	0.88
	2.3	1.40	1.78	1.36	1.01	0.87
	2.6	1.56	1.98	1.48	1.10	0.86
	3.2	1.87	2.38	1.70	1.27	0.85
33.7	2.0	1.56	1.99	2.51	1.49	1.12
	2.3	1.78	2.27	2.81	1.67	1.11
	2.6	1.99	2.54	3.09	1.84	1.10
	3.2	2.41	3.07	3.60	2.14	1.08
	4.0	2.93	3.73	4.19	2.49	1.06
42.4	2.3	2.27	2.90	5.85	2.76	1.42
	2.6	2.55	3.25	6.46	3.05	1.41
	3.2	3.09	3.94	7.62	3.59	1.39
	3.6	3.44	4.39	8.33	3.93	1.38
	4.0	3.79	4.83	8.90	4.24	1.36
48.3	2.3	2.61	3.32	8.80	3.64	1.63
	2.6	2.93	3.73	9.77	4.05	1.62
	2.9	3.25	4.14	10.70	4.43	1.61
	3.2	3.56	4.53	11.59	4.80	1.60
	3.6	3.97	5.05	12.69	5.25	1.59
	4.0	4.37	5.57	13.77	5.70	1.57
60.3	2.3	3.29	4.19	17.65	5.85	2.05
	2.6	3.70	4.71	19.64	6.51	2.04
	2.9	4.11	5.23	21.59	7.16	2.03
	3.2	4.51	5.74	23.47	7.78	2.02
	3.6	5.03	6.41	25.87	8.58	2.01
	4.0	5.55	7.07	28.15	9.34	2.00
	4.5	6.19	7.89	30.90	10.20	1.98
76.1	2.6	5.24	6.00	40.57	10.66	2.60
	2.9	5.75	6.67	44.74	11.76	2.59
	3.2	6.44	7.33	48.78	12.80	2.58
	3.6	7.11	8.20	54.01	14.20	2.57
	4.5	7.95	10.10	65.12	17.10	2.54
	5.0	8.77	11.16	70.87	18.63	2.52
88.9	2.9	6.15	7.83	72.47	16.30	3.04
	3.2	6.76	8.62	79.21	17.80	3.03
	4.0	8.38	10.70	96.34	21.70	3.00
	5.0	10.30	13.20	116.40	26.20	2.97
	5.4	11.10	14.00	123.80	27.80	2.97
	5.6	11.50	14.65	127.64	28.72	2.95
101.6	3.6	8.70	11.10	133.20	26.20	3.47
	4.0	9.63	12.30	146.20	28.80	3.45
	5.0	11.90	15.20	177.50	34.90	3.42
114.3	3.2	8.77	11.16	172.33	30.15	3.93
	3.6	9.83	12.50	192.00	33.60	3.92
	4.5	12.20	15.50	234.30	41.00	3.89
	5.4	14.50	18.50	274.50	48.00	3.86
	6.3	16.80	21.20	315.00	55.10	3.83
139.7	3.6	12.10	15.38	356.36	51.02	4.81
	4.0	13.40	17.04	392.57	56.20	4.80
	4.5	15.00	19.10	437.20	62.60	4.78
	5.0	16.60	21.20	480.50	68.80	4.77
	5.4	17.90	22.80	514.50	73.70	4.75
165.1	4.5	17.80	22.70	732.60	88.70	5.68
	5.0	19.70	25.10	806.60	97.70	5.66
	5.4	21.20	27.10	864.70	105.00	5.65
193.7	5.0	23.30	29.60	1320.00	136.00	6.67
	5.4	25.10	31.90	1417.00	146.00	6.66
	5.9	27.30	34.80	1536.00	159.00	6.64



PHYSICAL PROPERTIES

Tube Designation	T.S. (Min.) (MPa)	Y.S. (Min.) (MPa)	Elongation % (Min.)	
			Less than or equal to 33.7mm OD	More than OD 33.7 mm
WT 210	330	210	12	20
WT 240	410	240	10	15
WT 310	450	310	6	10

MANUFACTURING TOLERANCES

S.No.	Over (mm)	Up to and Including (mm)	Tolerance on Outer Dia
1	-	25.4	±0.15
2	25.4	51.0	±0.18
3	51.0	63.5	±0.25
4	63.5	76.1	±0.25
5	76.1	88.9	±0.31
6	88.9	101.6	±0.36
7	101.6	114.3	±0.43
8	114.3	152.4	±0.58
9	152.4	168.3	±0.65
10	168.3	-	±0.75

Note:

- 1) Any OD & Thickness not covered in this table may be supplied as per customer requirement(Clause No. -10) of IS 3601:2006.
- 2) The Tolerance of thickness excluding the weld shall be $\pm 10\%$

