

# IS: 3601-2006



Dimensions and Design Properties of Steel Tubes IS: 3601- 2006		
Outside Diameter	Thickness	Mass
mm	mm	Kg/m
1	2	3
21.3	1.8	0.866
	2	0.952
	2.6	1.2
	3.2	1.43
	4	1.71
26.9	1.8	1.11
	2	1.23
	2.3	1.4
	2.6	1.56
	3.2	1.87
33.7	2	1.56
	2.3	1.78
	2.6	1.99
	3.2	2.41
	4	2.93
42.4	2.3	2.27
	2.6	2.55
	3.2	3.09
	3.6	3.44
	4	3.79
48.3	5	4.61
	5.4	4.93
	2.3	2.61
	2.6	2.93
	2.9	3.25
	3.2	3.56
	3.6	3.97
	4	4.37
	4.9	5.24
5	5.34	
5.6	5.9	
5.9	6.16	
60.3	2.3	3.29
	2.6	3.7
	2.9	4.11
	3.2	4.51
	3.6	5.03
	4	5.55
	4.5	6.19
	5	6.82
	5.6	7.55
6.3	8.39	

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Outside Diameter	Thickness	Mass
mm	mm	Kg/m
1	2	3
76.1	2.6	5.24
	2.9	5.75
	3.2	6.44
	3.6	7.11
	4.5	7.95
	5	8.77
	5.4	9.42
	6.3	10.8
88.9	7.1	12.1
	2.9	6.15
	3.2	6.76
	4	8.38
	5	10.3
	5.4	11.1
	5.6	11.5
101.6	6.3	12.8
	8	16
	3.6	8.7
114.3	4	9.63
	5	11.9
	3.2	8.77
	3.6	9.83
	4.5	12.2
127	5.4	14.5
	6.3	16.8
	8	21
	8.8	22.9
	4.5	13.6
139.7	5	15
	5.4	16.2
	3.6	12.1
	4	13.4
	4.5	15
	5	16.6
152.4	5.4	17.9
	6.3	20.7
	8	26
	10	32
152.4	4.5	16.4
	5	18.2
	5.4	19.6

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Outside Diameter	Thickness	Mass
mm	mm	Kg/m
165.1	4.5	17.8
	5	19.7
	5.4	21.2
	6.3	24.8
168.3	4	16.2
	4.5	18.2
	5	20.1
	5.4	21.7
	6.3	25.2
	7.1	28.2
	8	31.6
193.7	5	23.3
	5.4	25.1
	5.9	27.3
	6.3	29.1
	8	36.6
219.1	4.5	23.8
	5	26.4
	5.6	29.5
	6.3	33.1
	8	41.6
	12.5	63.7
244.5	5.9	34.2
	7.1	41.7
	8	46.1
273	5	33
	6.3	41.4
	7.1	46.6
	10	64.9

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Mechanical Properties IS: 3601-2006					
S. No.	Tube Designation	Tensile Strength	Yield stress	Elongation	
		Min.	Min.	As welded (Less than or equal to 33.7mm OD)	As welded (more than 33.7 mm OD)
1	WT 160	310	160	15	22
2	WT 210	330	210	12	20
3	WT 240	410	240	10	15
4	WT 310	450	310	6	10
<b>Notes:</b>					
1	If tubes in the welded condition are subjected to annealing, brazing, welding or similar heating, these properties will				
2	Welding of wt 310 grade may require special welding technique.				
3	1Mpa= 0.1020kgf/mm <sup>2</sup>				

Manufacturing Tolerance			
S. No.	Over	Up to and including	Tolerance on outside diameter
	mm	mm	mm
1	-	25.4	±0.15
2	25.4	51	±0.18
3	51	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: The Tolerance on thickness excluding the weld shall be ± 10%

Chemical Composition	
Sulphur & Phosphorous	maximum 0.040%