

Dimensions & Sizes for Mild Steel Pipes Confirming to IS : 1239 (PART I) – MS Pipes Sizes in India

Nominal Bore		Outside Diameter		Light (A-Class) Thickness Weight		Medium (B-Class) Thickness Weight		Heavy (C-Class) Thickness Weight	
Inch	mm	Inch	mm	mm	kg/mtr	mm	kg/mtr	mm	kg/mtr
1/8"	3 mm	0.406	10.32	1.80	0.361	2.00	0.407	2.65	0.493
1/4"	6 mm	0.532	13.49	1.80	0.517	2.35	0.650	2.90	0.769
3/8"	10 mm	0.872	17.10	1.80	0.674	2.35	0.852	2.90	1.02
1/2"	15 mm	0.844	21.43	2.00	0.952	2.65	1.122	3.25	1.45
3/4"	20 mm	1.094	27.20	2.35	1.410	2.65	1.580	3.25	1.90
1"	25 mm	1.312	33.80	2.65	2.010	3.25	2.440	4.05	2.97
1.1/4"	32 mm	1.656	42.90	2.65	2.580	3.25	3.140	4.05	3.84
1.1/2"	40 mm	1.906	48.40	2.90	3.250	3.25	3.610	4.05	4.43
2"	50 mm	2.375	60.30	2.90	4.110	3.65	5.100	4.47	6.17
2.1/2"	65 mm	3.004	76.20	3.25	5.840	3.65	6.610	4.47	7.90
3"	80 mm	3.500	88.90	3.25	6.810	4.05	8.470	4.85	10.1
4"	100 mm	4.500	114.30	3.65	9.890	4.50	12.10	5.40	14.4
5"	125 mm	5.500	139.70	–	–	4.85	16.20	5.40	17.8
6"	150 mm	6.500	165.10	–	–	4.85	19.20	5.40	21.2

Dimensions of Big/Large Diameter ERW Pipes Confirming to IS 3589

Standard

Wall Thickness	Nominal Bore 7" NB 193.7 mm OD	Nominal Bore 8" NB 219.1 mm OD	Nominal Bore 10" NB 273 mm OD	Nominal Bore 12" NB 323.7 mm OD	Nominal Bore 14" NB 355.6 mm OD	Nominal Bore 16" NB 406.4 mm OD	Nominal Bore 18" NB 457mm OD	Nominal Bore 20" NB 508 mm OD
mm	Kg/mtr	Kg/mtr	Kg/mtr	Kg/mtr	Kg/mtr	Kg/mtr	Kg/mtr	Kg/mtr
4.85	22.59	25.62	32.07	38.13	–	–	–	–
5.20	24.17	27.43	34.34	40.85	–	–	–	–
5.60	26.00	29.28	36.93	43.93	48.11	–	–	–
6.00	27.88	31.53	39.50	47.02	51.49	61.00	69.00	–
6.35	29.34	33.28	41.73	49.67	54.43	62.35	70.50	78.50
7.01	32.77	36.76	46.43	55.45	61.82	69.04	–	–
7.94	–	41.00	50.95	61.85	67.98	77.94	87.80	–
8.18	–	42.56	53.42	65.12	–	–	–	–
9.53	–	51.50	60.24	73.75	81.21	93.13	105.00	117.00
12.70	–	–	–	–	107.28	123.30	139.00	155.00

Tolerance on Thickness and Weight : as per IS 1239 The following manufacturing tolerance shall be permitted on the tubes and sockets.

MAXIMUM PERMISSIBLE PRESSURE AND TEMPERATURE FOR TUBES WITH STEEL COUPLINGS OR SCREWED AND SOCKETED JOINTS

(a) Thickness			Nominal Bore mm	Maximum Permissible Pressure N/mm ²	Kg./cm ²	Maximum Permissible Temperature 0C
(1)	Butt welded Light tubes	+Not limited – 8 percent				
	Medium and Heavy tubes	+ Not Limited – 10 percent				
(2)	Seamless Tubes	+Not Limited – 12.5 percent	Over 25 mm up to and Including 40 mm	1.03	10.50	260
(b) Weight :			Over 40 mm up to and Including 80 mm	0.86	8.77	260
(1)	Single tube (light series)	+10 percent – 8 percent				
(2)	Single tube	+10 percent				

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(1)	Butt welded Light tubes	+Not limited – 8 percent				
	Medium and Heavy tubes	+ Not Limited – 10 percent				
(2)	Seamless Tubes	+Not Limited – 12.5 percent	Over 25 mm up to and Including 40 mm	1.03	10.50	260
(b) Weight :			Over 40 mm up to and Including 80 mm	0.86	8.77	260
(1)	Single tube (light series)	+10 percent – 8 percent	Over 80 mm up to and Including 100 mm	0.69	7.04	260
(2)	Single tube (medium & heavy Series)	+10 percent				
				0.83	8.77	177
			Over 100 mm up to and Including 125 mm	0.69	7.04	171
			Over 125 mm up to and Including 150 mm	0.50	5.10	160
For tubes fitted with appropriate flanges of suitably butt welded together, the Max, permissible pressure shall be 21.00 Kg/cm ² and Max. permissible temp. 260 C						

Square & Rectangular MS Welded Pipes – Hollow Sections Dimensions, as per IS 4923

SQUARE HOLLOW SECTIONS (SHS)					
SECTION SHS(MM)	Depth D (mm)	Width B (mm)	Thickness T (mm)	Weight W (Kg/m)	Mts./ Tonne
16×16	16.00, 16.00	16.00, 16.00	1.80, 2.40	0.83, 1.07	1204, 935
19×19	19.00, 19.00	19.00, 19.00	1.80, 2.40	0.99, 1.29	1010, 775
25×25	25.00, 25.00	25.00, 25.00	2.60, 3.20	1.69, 1.98	592, 505
30×30	30.00, 30.00, 30.00	30.00, 30.00, 30.00	2.60, 3.20, 4.00	2.10, 2.49, 2.94	476, 402, 340
40×40	40.00, 40.00, 40.00, 40.00	40.00, 40.00, 40.00, 40.00	2.60, 3.20, 3.60, 4.00	2.92, 3.49, 3.85, 4.20	342, 287, 260, 238
50×50	50.00, 50.00	50.00, 50.00	2.90, 3.20	4.35, 4.77	230, 210
70×70	70.00, 70.00, 70.00	70.00, 70.00, 70.00	3.20, 4.00, 4.80	6.71, 8.22, 9.66	149, 122, 104
80×80	80.00, 80.00, 80.00	80.00, 80.00, 80.00	3.60, 4.50, 4.90	9.38, 11.52, 12.44	107, 87, 80
100×100	100.00, 100.00, 100.00	100.00, 100.00, 100.00	3.60, 4.50, 5.40	9.67, 11.88, 14.01	103, 84, 71
120×120	120.00, 120.00	120.00, 120.00	4.80, 5.40	15.92, 17.74	63, 56
132×132	132.00, 132.00	132.00, 132.00	4.80, 5.40	18.71, 20.88	53, 48
150×150	150.00	150.00	5.00	22.26	45
RECTANGULAR HOLLOW SECTIONS (RHS)					
SECTION SHS (mm)	Depth D (mm)	Width B (mm)	Thickness T (mm)	Weight W (Kg/m)	Mts./Tonne
30X20	30.00	20.00	2.00	1.47	680
40X20	40.00	20.00	2.00	1.78	562
50X25	50.00, 50.00	25.00, 25.00	2.90, 3.20	2.98, 3.24	336, 309
60X40	60.00	40.00	2.90	4.12	243
66X33	66.00, 66.00, 66.00	33.00, 33.00, 33.00	2.90, 3.60, 4.50	4.07, 4.93, 5.95	246, 203, 168

70X30	70.00, 70.00, 70.00	30.00, 30.00, 30.00	2.90, 3.20, 4.00	4.12, 4.50, 5.45	243, 222, 183
80X40	80.00, 80.00, 80.00	40.00, 40.00, 40.00	2.90, 3.20, 4.00	5.03, 5.50, 6.71	199, 182, 149
96X48	96.00, 96.00, 96.00	48.00, 48.00, 48.00	3.20, 4.00, 4.80	6.71, 8.22, 9.66	149, 122, 104
122X61	122.00, 122.00, 122.00	61.00, 61.00, 61.00	3.60, 4.50, 5.40	9.67, 11.88, 14.01	103, 84, 71
145X82	145.00, 145.00	82.00, 82.00	4.80, 5.40	15.92, 17.74	63, 56
172X92	172.00, 172.00	92.00, 92.00	4.80, 5.40	18.71, 20.88	53, 48

Mechanical Properties of MS Welded Pipes as per IS Standard

GRADE	T.S. (min)	Y.S. (min)	Elongation	
	Mpa	Mpa	25.4 mm & under	Over 25.4 mm
YST-210, YST-240, YST-310	330, 410, 450	210, 240, 310	12, 10, 8	20, 15, 10

**Steel Pipes , Pipe Fittings, Stainless Steel
Sheets, Plates, Coils, Strips Manufacturers &
Suppliers - Seamless/Welded Steel Pipe
Manufacturers**