

# Structural Applications

## IS 1161~AS1163~EN10219

STEEL TUBES FOR STRUCTURAL  
PURPOSES CONFORMING TO IS 1161 : 2014

N B and Series (mm)	Outside Diameter (mm)	Thickness (mm)	Nominal Weight Black Tubes Plain End		Calculated Nominal Weight Galvanized Tubes Plain End		Grade	Y S (MIN) MPa (Kg/mm <sup>2</sup> )	T S (MIN) MPa (Kg/mm <sup>2</sup> )	% age Elongation
			(Kg/m)	(m/ton)	(Kg/m)	(m/ton)				
15	21.3	2.0	0.947	1058	1.00	1003	YST - 210	210 (21.42)	330 (33.66)	20
	-	2.6	1.21	826	1.26	794				
	-	3.2	1.44	694	1.49	671				
20	26.9	2.3	1.38	725	1.43	699				
	-	2.6	1.56	641	1.61	621				
	-	3.2	1.87	535	1.92	521				
25	33.7	2.6	1.98	505	2.03	439	YST - 240	240 (24.48)	410 (41.82)	17
	-	3.2	2.41	415	2.46	407				
	-	4.0	2.93	341	2.98	336				
32	42.4	2.6	2.54	394	2.62	382				
	-	3.2	3.10	323	3.18	314	YST - 310	310 (31.62)	450 (45.9)	14
	-	4.0	3.79	264	3.87	258				
40	48.3	2.9	3.23	310	3.34	299				
	-	3.2	3.56	281	3.67	272				
	-	4.0	4.37	229	4.48	223				
50	60.3	2.9	4.08	245	4.20	238	Tolerances:  Outside diameter upto & including 48.3 mm, + 0.4 mm/ - 0.8 mm, Over 48.3 mm ± 1%  Thickness:  For all sizes welded tubes ± 10%  Length:  4 M to 7 M  Galvanizing:  Minimum zinc coating 360 gm/m <sup>2</sup>  Weight:  Single tube = ± 10% 10 Ton Lot = ± 7.5%			
	-	3.6	5.03	199	5.15	194				
	-	4.5	6.19	162	6.31	158				
65	76.1	3.2	5.71	175	5.86	171				
	-	3.6	6.42	156	6.57	152				
	-	4.5	7.93	126	8.10	123				
80	88.9	3.2	6.72	149	6.90	145				
	-	4.0	8.36	120	8.54	117				
	-	4.8	9.90	101	10.08	99				
90	101.6	3.6	8.70	115	8.97	111				
	-	4.0	9.63	144	7.20	139				
	-	4.8	11.50	87	11.77	85				
100	114.3	3.6	9.75	103	9.97	100				
	-	4.5	12.20	82	12.42	81				
	-	5.4	14.50	69	14.72	68				
110	127.0	4.5	13.60	74	13.90	72				
	-	4.8	14.50	69	14.80	68				
	-	5.4	16.20	62	14.80	61				
125	139.7	4.5	15.00	67	15.25	66				
	-	4.8	15.90	63	16.15	62				
	-	5.4	17.90	56	18.15	55				
150	165.1	4.5	17.80	56	18.20	55				
	-	4.8	18.90	52	19.80	51				
	-	5.4	21.30	47	21.70	46				
150	168.3	4.5	18.2	55	18.66	54				
	-	4.8	19.4	52	19.88	50				
	-	5.4	21.7	46	22.10	45				
175	193.7	6.3	25.2	40	41.00	24				
	-	4.8	22.40	45	22.94	44				
	-	5.4	25.10	40	25.64	39				
200	219.1	5.9	27.30	37	27.84	36				
	-	6.3	29.10	34	29.60	34				
	-	4.8	25.40	39	25.95	39				
250	273.0	5.6	29.50	34	30.05	33				
	-	5.9	31.00	32	31.60	32				
	-	8.0	41.60	24	42.20	24				
300	323.9	10.0	51.60	19	52.10	19				
	-	5.9	38.90	26	39.50	25				
	-	8.0	52.30	19	53.00	19				
350	355.6	10.0	64.90	15	65.50	15				
	-	6.3	49.30	20	50.10	20				
	-	8.0	62.30	16	63.10	16				
	-	10.0	77.40	13	78.20	13				
	-	8.0	68.60	15	69.58	14				
	-	10.0	85.20	12	86.10	12				