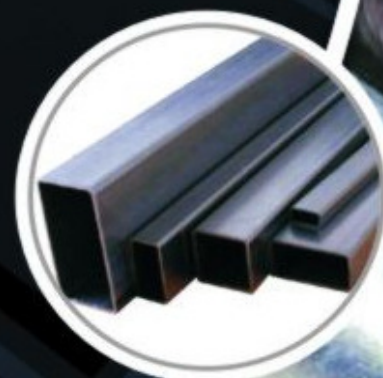
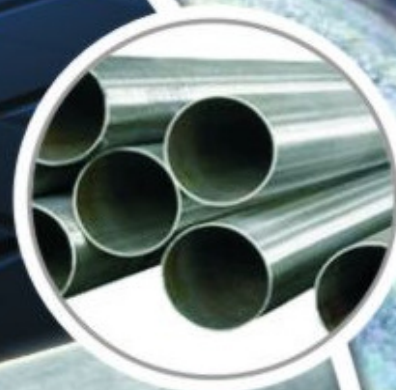
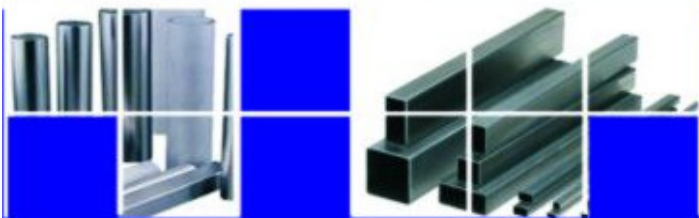




DANA STEELS Pvt. Ltd.
[A Division of DANA Group]
Manufacturers & Exporters of ERW Pipes
Tubes & Hollow Sections

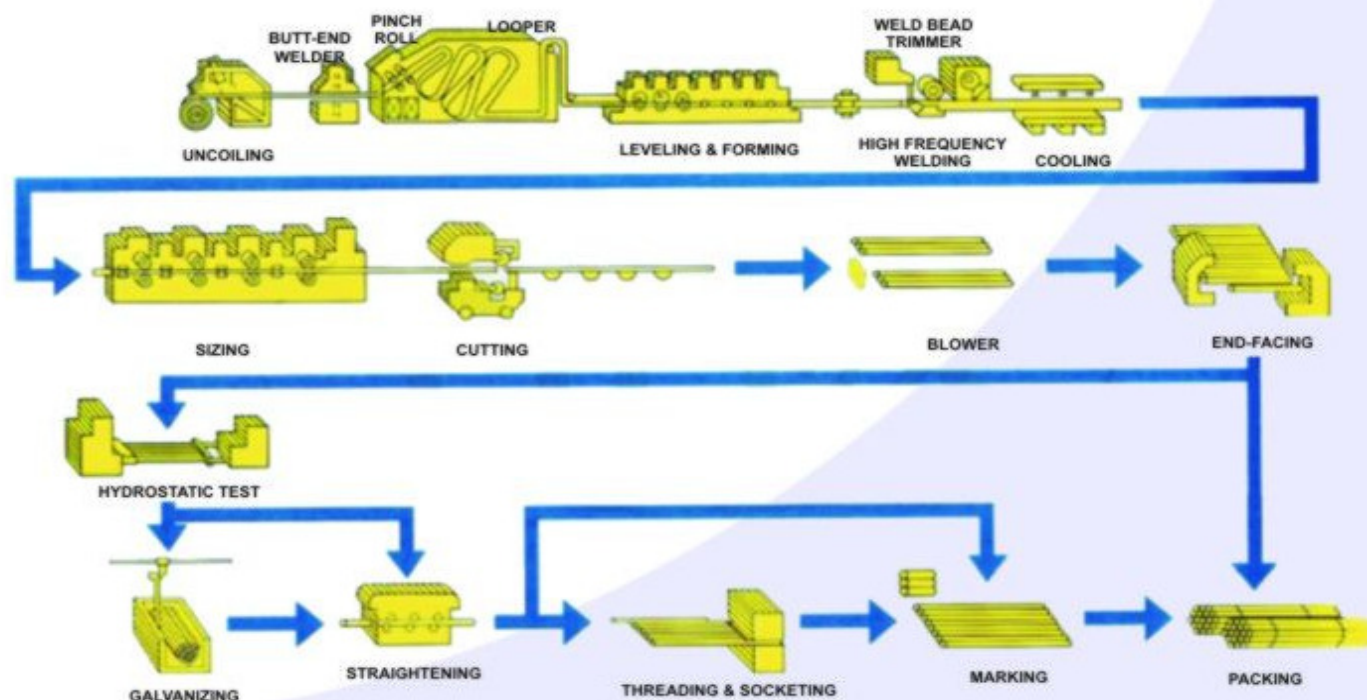


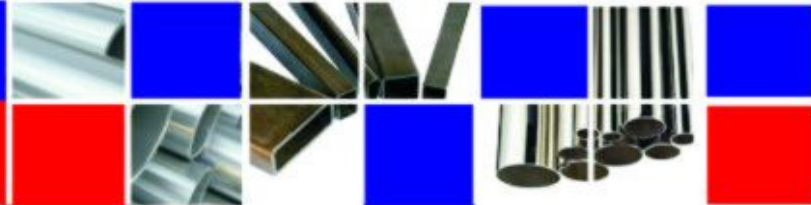
INTRODUCTION

DANA Steels Pvt Ltd, is a part of international conglomerate DANA GROUP [www.danagroups.com]. It is an ISO 9001:2008 certified organization, engaged in manufacturing & exporting of quality ERW Black and Galvanized Steel Pipes & Tubes & Pre Galvanized Tubes, with it's state-of-the-art manufacturing facilities located in a sprawling 35,000 square meters industrial complex in Chopanki Industrial Area, Bhiwadi, NCR, INDIA.

"DANA" offers pipes & tubes from 15 mm NB to 150 mm NB following IS:1239 (Part-1) 2004 [Equivalent to BS:1387//Equivalent to EN:10255], IS:1161 - 1998 [Equivalent to BS:1139//Equivalent to BS EN:39], IS:4270-2001(Part-5) [Equivalent to BS:879], IS:9537 (Part-II) 1981 [Equivalent to BS:4568//Equivalent to BS EN 50086-1:1994], IS:3589-2001, IS:3601-2006(Part-4) [Equivalent to BS:6323], IS : 9295-1983 specifications. In addition to these it also manufactures rectangular & square steel hollow sections as per IS:4923:1997.

Along with the development in the production range, "DANA" has given tremendous stress to the quality control research & development also. It's management & technical team consists of dedicated & highly experienced professionals, operating quality control through most advanced & modern testing machines like Hydro Testing, Bend Testing, Flattening Test & Tensile Test as per the norms of ISI & other International standards.





Technical Specifications

DIMENSIONS OF BLACK & GALVANISED STEEL TUBES AS PER IS : 1239 (PART-1) 2004 / BS " 1387/1985

NOMINAL	GLASS	OUTSIDE DIAMETER		WALL THICKNESS		PLAIN ENDS		SCREWED & SOCKETED	
BORE (NB) mm inches		MIN MM	MAX MM	MM	SWG	Kg/Mtr	Mtrs/Tonne	Kg/Mtr	Mtrs/Tonne
15 (½")	L	21.00	21.40	2.00	14	0.947	1056	0.956	1046
	M	21.00	21.80	2.60	12	1.21	826	1.22	820
	H	21.00	21.80	3.20	10	1.44	694	1.45	690
20 (¾")	L	26.40	26.90	2.30	13	1.38	725	1.39	719
	M	26.50	27.30	2.60	12	1.56	641	1.57	637
	H	26.50	27.30	3.20	10	1.87	535	1.88	532
25 (1")	L	33.20	33.80	2.60	12	1.98	505	2.00	500
	M	33.30	34.20	3.20	10	2.41	415	2.43	412
	H	33.30	34.20	4.00	8	2.93	341	2.95	339
32 (1¼")	L	41.90	42.50	2.60	12	2.54	394	2.57	389
	M	42.00	42.90	3.20	10	3.10	323	3.13	319
	H	42.00	42.90	4.00	8	3.79	264	3.82	262
40 (1½")	L	47.80	48.40	2.90	11	3.23	310	3.27	306
	M	47.90	48.80	3.20	10	3.56	281	3.60	278
	H	47.90	48.80	4.00	8	4.37	229	4.41	227
50 (2")	L	59.60	60.20	2.90	11	4.08	245	4.15	241
	M	59.70	60.80	3.60	9	5.03	199	5.10	196
	H	59.70	60.80	4.50	7	6.19	162	6.26	160
65 (2½")	L	75.20	76.00	3.20	10	5.71	175	5.83	172
	M	75.30	76.00	3.60	9	6.42	156	6.54	153
	H	75.30	76.60	4.50	7	7.93	126	8.05	124
80 (3")	L	87.90	88.70	3.20	10	6.72	149	6.89	145
	M	88.00	89.50	4.00	8	8.36	120	8.53	117
	H	88.00	89.50	4.80	6	9.90	101	10.10	99
100 (4")	L	113.00	113.90	3.60	9	9.75	103	10.00	100
	M	113.10	115.00	4.50	7	12.20	82	12.50	80
	H	113.10	115.00	5.40	5	14.50	69	14.80	68
125 (5")	M	138.50	140.80	4.80	6	15.90	63	16.40	61
	H	138.50	140.80	5.40	5	17.90	56	18.40	54
150 (6")	M	163.90	166.50	4.80	6	18.90	53	19.50	51
	H	163.90	166.50	5.40	5	21.30	47	21.90	46

TOLERANCES

Thickness Light tubes

Medium & Heavy tubes

Weight :

1. Single tube (Light series)

2. Single tube (Medium & Heavy Series)

3. For quantities per load of 10 tonnes min. (Light Series)

4. For quantities per load of 10 tonnes min. (Medium & Heavy Series)

Length

Light, Medium & Heavy tubes

: -8% + Not Limited

: -10% + Not Limited

: +10% -8%

: ±10%

: +7.5% - 5%

: +7.5%

: Random lengths of 4 to 7 meters unless specified otherwise.



Technical Specifications

RECTANGULAR & SQUARE STEEL HOLLOW SECTIONS CONFORMING TO IS:4923:1997.

SQUARE HOLLOW SECTIONS (SHS)

SECTION SHS (MM)	Depth D (mm)	Width D (mm)	Thickness T (mm)	Weight W (Kg/m)	Mts/Tonne
16×16	16.00	16.00	1.80	0.83	1204
	16.00	16.00	2.40	1.07	935
	19.00	19.00	1.80	0.99	1010
19×19	19.00	19.00	2.40	1.29	775
	25.00	25.00	2.60	1.69	592
25×25	25.00	25.00	3.20	1.98	505
	30.00	30.00	2.60	2.10	476
30×30	30.00	30.00	3.20	2.49	402
	30.00	30.00	4.00	2.94	340
	40.00	40.00	2.60	2.92	342
40×40	40.00	40.00	3.20	3.49	287
	40.00	40.00	3.60	3.85	260
	40.00	40.00	4.00	4.20	238
50×50	50.00	50.00	2.90	4.35	230
	50.00	50.00	3.20	4.77	210
70×70	70.00	70.00	3.20	6.71	149
	70.00	70.00	4.00	8.22	122
	70.00	70.00	4.80	9.66	104
80×80	80.00	80.00	3.60	9.38	107
	80.00	80.00	4.50	11.52	87
	80.00	80.00	4.90	12.44	80
100×100	100.00	100.00	3.60	9.67	103
	100.00	100.00	4.50	11.88	84
	100.00	100.00	5.40	14.01	71
120×120	120.00	120.00	4.80	15.92	63
	120.00	120.00	5.40	17.74	56
132×132	132.00	132.00	4.80	18.71	53
	132.00	132.00	5.40	20.88	48
150×150	150.00	150.00	5.00	22.26	45

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

TOLERANCES

O.D.
Thickness
Weight
(1) Single Pipe
(2) On lots of 10 Tonne

+/-0.5 mm
+/-10%
-8%=10%
+7.5%

RECTANGULAR HOLLOW SECTIONS (RHS)

SECTION SHS (MM)	Depth D (mm)	Width D (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
40x25	50.00	25.00	2.90	2.98	336
	50.00	25.00	3.20	3.24	309
60x40	60.00	40.00	2.90	4.12	243
66x33	66.00	33.00	2.90	4.07	246
	66.00	33.00	3.60	4.93	203
	66.00	33.00	4.50	5.95	168
70x30	70.00	30.00	2.90	4.12	243
	70.00	30.00	3.20	4.50	222
	70.00	30.00	4.00	5.45	183
80x40	80.00	40.00	2.90	5.03	199
	80.00	40.00	3.20	5.50	182
	80.00	40.00	4.00	6.71	149
96x48	96.00	48.00	3.20	6.71	149
	96.00	48.00	4.00	8.22	122
	96.00	48.00	4.80	9.66	104
122x61	122.00	61.00	3.60	9.67	103
	122.00	61.00	4.50	11.88	84
	122.00	61.00	5.40	14.01	71
145x82	145.00	82.00	4.80	15.92	63
	145.00	82.00	5.40	17.74	56
172x92	172.00	92.00	4.80	18.71	53
	172.00	92.00	5.40	20.88	48





Technical Specifications

STEEL TUBES FOR STRUCTURAL PURPOSES CONFORMING TO IS:1161-1998 [Equivalent to BS:1139//Equivalent to BS EN:39]

N.B. And Series	Outside Diameter	Thick- ness	Nominal Weight Black Tubes Plain End		Calculated Nominal Weight Galvanized tubes Plain End	
			kg/m	M/tonne	kg/m	M/tonne
15 L	21.3	2.0	0.947	1058	1.00	1003
M		2.6	1.21	826	1.26	794
H		3.2	1.44	694	1.49	671
20 L	26.9	2.3	1.38	725	1.43	699
M		2.6	1.56	641	1.61	621
H		3.2	1.87	535	1.92	521
25 L	33.7	2.6	1.98	505	2.03	493
M		3.2	2.41	415	2.46	407
H		4.0	2.93	341	2.98	336
32 L	42.4	2.6	2.54	394	2.62	382
M		3.2	3.10	323	3.18	314
H		4.0	3.79	264	3.87	258
40 L	48.3	2.9	3.23	310	3.34	299
M		3.2	3.56	281	3.67	272
H		4.0	4.37	229	4.48	223
50 L	60.3	2.9	4.08	245	4.20	238
M		3.6	5.03	199	5.15	194
H		4.5	6.19	162	6.31	158
65 L	76.1	3.2	5.71	175	5.86	171
M		3.6	6.42	156	6.57	152
H		4.5	7.93	126	8.10	123
80 L	88.9	3.2	6.72	149	6.90	145
M		4.0	8.36	120	8.54	117
H		4.8	9.90	101	10.08	99
90 L	101.6	3.6	8.70	115	8.97	111
M		4.0	9.63	144	7.20	139
H		4.8	11.50	87	11.77	85
100 L	114.3	3.6	9.75	103	9.97	100
M		4.5	12.20	82	12.42	81
H		5.4	14.50	69	14.72	68
110 L	127.0	4.5	13.60	74	13.90	72
M		4.8	14.50	69	14.80	68
H		5.4	16.20	62	14.80	61
125 L	139.7	4.5	15.00	67	15.25	66
M		4.8	15.90	63	16.15	62
H		5.4	17.90	56	18.15	55
135 L	152.4	4.5	16.40	61	16.78	60
M		4.8	17.50	57	17.88	56
H		5.4	19.60	51	19.98	55
150 L	165.1	4.5	17.80	56	18.20	55
M		4.8	18.90	52	19.80	51
H		5.4	21.30	47	21.70	46
150 L	168.3	4.5	18.20	55	18.66	54
M		4.8	19.40	52	19.88	50
H1		5.4	21.70	46	22.24	45
H2		6.3	25.20	40	41.00	24
175 L	193.7	4.8	22.40	45	22.94	44
M		5.4	25.10	40	25.64	39
H		5.9	27.30	37	27.84	36
200 L	219.1	4.8	25.40	39	25.95	39
M		5.6	29.50	34	30.05	33
H		5.9	31.00	32	31.55	32
225 H	244.5	5.9	34.70	29	35.36	28
250 H	273.0	5.9	38.90	26	39.68	25
300 H	323.9	6.3	49.30	20	50.28	20
350 H	355.6	8.0	68.60	15	69.58	14

TENSILE PROPERTIES

GRADE	Y.S. (MIN) Mpa (kg/mm ²)	T.S. (MIN) Mpa (Kg/mm ²)	% age Elongation
YST-210	210 (21.42)	330 (33.66)	20
YST-240	240 (24.48)	410 (41.82)	17

TOLERANCES

- i) On outside diameter up to & including 48.3 mm
= 0.4mm / -0.8 mm
ii) Over 48.3mm = +1%

THICKNESS

For all Sizes
Welded Tubes

WEIGHT

Single Tube

(i) Light Class

(ii) Medium & Heavy Class

10 Tonne Lot

(i) Light class

(ii) Medium & Heavy Class

TOLERANCES

+ Not limited
- 10%

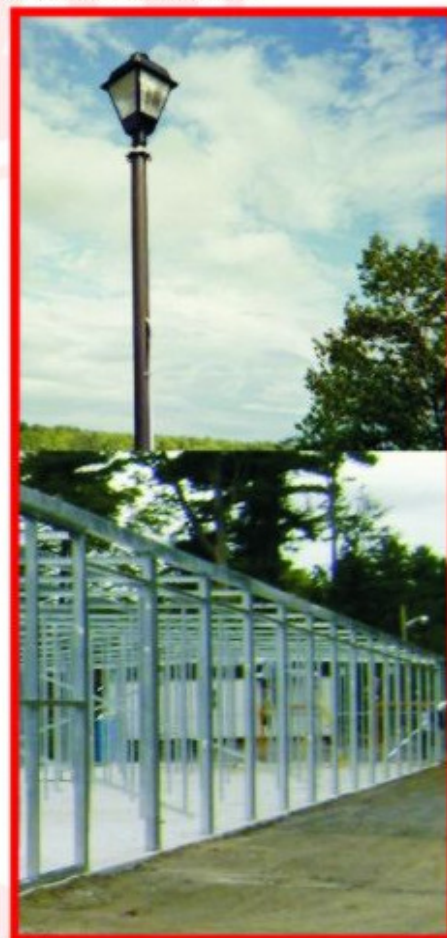
TOLERANCES

+10% / - 80%

±10%

+5%

±7.5%



Technical Specifications

ERW PIPES FOR WATER, GAS AND SEWERAGE PURPOSE CONFORMING TO IS:3589:2001

AS PER IS - 3589 / 2001				
NOMINAL SIZE (NB) mm	OUTER DIAMETER (OD) mm	THICKNESS mm	CALCULATED WEIGHT	
			Kg./Mtrs.	Mtrs./Ton
150	168.3	4.00	16.21	61.70
150	168.3	4.50	18.17	55.00
150	168.3	4.80	19.35	51.68
150	168.3	5.00	20.14	49.66
150	168.3	5.40	21.69	46.10
150	168.3	6.00	24.02	41.64
150	168.3	7.00	27.84	35.92
175	193.7	4.00	18.70	53.00
175	193.7	4.50	21.00	48.00
175	193.7	4.80	22.35	44.72
175	193.7	5.00	23.26	43.00
175	193.7	5.40	25.07	40.00
175	193.7	6.00	27.77	36.00
175	193.7	7.00	32.20	31.00
200	219.1	4.00	21.22	47.13
200	219.1	4.50	23.81	42.00
200	219.1	4.80	25.36	39.43
200	219.1	5.00	26.40	37.87
200	219.1	5.40	28.46	35.13
200	219.1	6.00	31.53	31.71
200	219.1	7.00	36.61	27.31
250	273.1	4.00	26.50	37.68
250	273.1	4.50	29.80	33.55
250	273.1	4.80	31.75	31.50
250	273.1	5.00	33.00	30.25
250	273.1	5.40	35.63	28.00
250	273.1	6.00	39.50	25.31
250	273.1	7.00	45.91	21.77
300	323.9	4.00	31.60	32.00
300	323.9	4.50	35.40	28.00
300	323.9	4.80	37.80	26.00
300	323.9	5.00	39.30	25.00
300	323.9	5.40	42.40	24.00
300	323.9	6.00	47.00	21.00
300	323.9	7.00	54.70	18.00
300	323.9	8.00	62.30	16.00
300	323.9	9.20	71.40	14.00
300	323.9	10.00	77.40	13.00

TOLERANCES

Thickness : $\pm 10\%$
 Outside Diameter : $\pm 0.75\%$
 Length : Random length 4 to 7 meters
 unless specified otherwise
 on request up to 12 meters



Technical Specifications

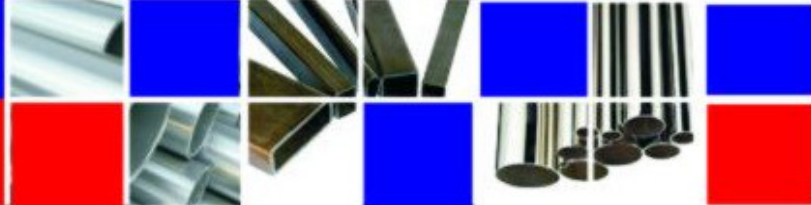
ERW PIPES FOR WATER, GAS AND SEWERAGE PURPOSE CONFORMING TO IS:3589:2001

AS PER IS - 3589 / 2001				
NOMINAL SIZE (NB) mm	OUTER DIAMETER (OD) mm	THICKNESS mm	CALCULATED WEIGHT	
			Kg./Mtrs.	Mtrs./Ton
150	168.3	4.00	16.21	61.70
150	168.3	4.50	18.17	55.00
150	168.3	4.80	19.35	51.68
150	168.3	5.00	20.14	49.66
150	168.3	5.40	21.69	46.10
150	168.3	6.00	24.02	41.64
150	168.3	7.00	27.84	35.92
175	193.7	4.00	18.70	53.00
175	193.7	4.50	21.00	48.00
175	193.7	4.80	22.35	44.72
175	193.7	5.00	23.26	43.00
175	193.7	5.40	25.07	40.00
175	193.7	6.00	27.77	36.00
175	193.7	7.00	32.20	31.00
200	219.1	4.00	21.22	47.13
200	219.1	4.50	23.81	42.00
200	219.1	4.80	25.36	39.43
200	219.1	5.00	26.40	37.87
200	219.1	5.40	28.46	35.13
200	219.1	6.00	31.53	31.71
200	219.1	7.00	36.61	27.31
250	273.1	4.00	26.50	37.68
250	273.1	4.50	29.80	33.55
250	273.1	4.80	31.75	31.50
250	273.1	5.00	33.00	30.25
250	273.1	5.40	35.63	28.00
250	273.1	6.00	39.50	25.31
250	273.1	7.00	45.91	21.77
300	323.9	4.00	31.60	32.00
300	323.9	4.50	35.40	28.00
300	323.9	4.80	37.80	26.00
300	323.9	5.00	39.30	25.00
300	323.9	5.40	42.40	24.00
300	323.9	6.00	47.00	21.00
300	323.9	7.00	54.70	18.00
300	323.9	8.00	62.30	16.00
300	323.9	9.20	71.40	14.00
300	323.9	10.00	77.40	13.00

TOLERANCES

Thickness : $\pm 10\%$
Outside Diameter : $\pm 0.75\%$
Length : Random length 4 to 7 meters
 unless specified otherwise
 on request up to 12 meters





Technical Specifications

TECHNICAL DATA OF PIPES CONFORMING TO ASTM A-53 GR. A & B SCH. 40

NSE Designator	DN Designator	Outside Diameter		Wall Thickness		Mass of Plain & Pipe		Test Pressure	
		Inch	mm	Inch	mm	Kg./Mtr	Lb/ft	Grade A Mpa	Grade B Mpa
½	15	0.840	21.3	0.109	2.77	1.27	0.85	4.8	4.8
¾	20	1.050	26.7	0.113	2.87	1.69	1.13	4.8	4.8
1	25	1.315	33.4	0.133	3.38	2.50	1.68	4.8	4.8
1¼	32	1.660	42.2	0.140	3.56	3.39	2.27	8.3	9.0
1½	40	1.900	48.3	0.145	3.68	4.05	2.72	8.3	9.0
2	50	2.375	60.3	0.154	3.91	5.44	3.66	15.9	17.2
2½	65	2.875	73.0	0.203	5.16	8.63	5.80	17.2	17.2
3	80	3.500	88.9	0.216	5.49	11.29	7.58	15.3	17.2
3½	90	4.00	101.6	0.226	5.74	13.57	9.12	14.0	16.3
4	100	4.500	114.3	0.237	6.02	16.07	10.80	13.1	15.2
5	125	5.563	141.3	0.258	6.55	21.77	14.63	1.5	13.4
6	150	6.625	168.3	0.280	7.11	28.26	18.99	10.5	12.3
8	200	8.625	219.1	0.322	8.18	42.55	28.58	9.2	10.8
10	250	10.750	273.0	0.365	9.27	60.29	40.52	8.4	9.9
12	300	12.750	323.8	0.406	10.31	79.70	53.57	7.9	9.2
14	350	14.00	356.6	0.438	11.13	94.55	63.50	7.8	9.0
16	400	16.00	406.4	0.500	12.7	123.30	82.85	7.7	9.0

Tolerances

Outside Diameter	Pipe Size up to & including DN 40	+/- 0.4 mm
	Pipe Size DN 50 or Larger	+/- 1%
Thickness	-12.5% (max)	
Weight	+/- 10%	

Testing

Online NDT	For Pipes NPS 2 (DN 50) or larger	
	Weld seam of each pipe shall be tested by Eddy Current Test	
Best Test	For pipes up to & including DN 50	
	Bending angle	90°
Flattening	Bending radius	12 times to the OD of Tube (no crack in body & weld)
	For pipes over DN 50	
Flattening	1. Flatten up to 2/3 of OD for ductility of weld	
	2. Flatten up to 1/3 of OD for ductility of steel	
	3. Full Flattening for testing of lamination	

Mechanical Properties

	Grade A	Grade B
Yield Strength	205 Mpa (Min)	240 Mpa (Min)
Tensile Strength	330 Mpa (Min)	415 Mpa (min)
Elongation	As per ASTM A-53	

Chemical Properties

Composition, Max, %

	Carbon	Manganese	Phosphorus	Sulphur	Copper	Nickel	Chromium	Molybdenum	Vanadium
Grade A	0.25	0.95	0.05	0.045	0.50	0.40	0.40	0.15	0.08
Grade B	0.30	1.20	0.05	0.045	0.50	0.40	0.40	0.15	0.08

Cu + N + Cr + Mb + V < 1%

Galvanizing

Minimum	0.490 Kg/Sq. Mtr.
Average	0.550 Kg/Sq. Mtr.

Technical Specifications

STAINLESS STEEL TUBES & PIPES

RANGE : Stainless Steel Tubes : 6mm to 102 mm

Stainless Steel Welded Pipes : ½" to 6"

Large Dia Stainless Steel Welded Pipes : 6" to 12"

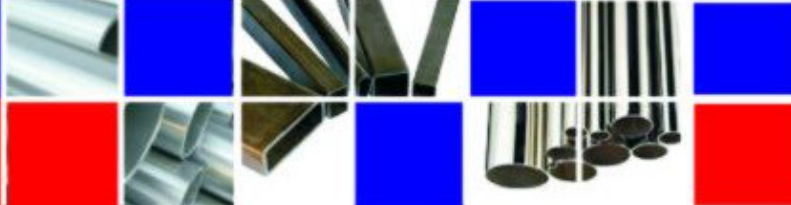
Grades Use : 201, 202, 301, 302, 304, 304L, 316, 316Ti, 409L, 410, 430

Pipe Size Outside Diameter		STAINLESS STEEL TUBE : DIMENSION & WEIGHT												
Inches	mm	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.5	1.6	2.0	2.5	3.0	
1/4"	6.35	0.073	0.087	0.099	0.111	0.122	0.133	0.154	-	-	-	-	-	
3/8"	9.52	0.113	0.134	0.155	0.175	0.194	0.212	0.250	-	-	-	-	-	
	10.00	0.199	0.141	0.163	0.184	0.205	0.225	0.262	-	-	-	-	-	
1/2"	12.70	0.153	0.182	0.210	0.238	0.266	0.293	0.345	-	-	-	-	-	
5/8"	15.97	0.192	0.229	0.265	0.302	0.337	0.372	0.441	0.540	-	-	-	-	
3/4"	19.05	0.232	0.277	0.321	0.365	0.409	0.452	0.536	0.659	0.699	0.854	-	-	
7/8"	22.23	-	-	0.377	0.429	0.481	0.531	0.632	0.778	0.826	1.013	-	-	
1"	25.40	-	-	0.432	0.493	0.552	0.611	0.727	0.897	0.953	1.171	1.442	1.682	
1 1/8"	28.57	-	-	0.488	0.556	0.623	0.690	0.822	1.016	1.080	1.330	1.631	1.920	
	30.00	-	-	-	-	-	0.725	0.865	1.070	1.137	1.402	1.732	2.027	
1 1/4"	31.75	-	-	-	-	-	0.769	0.918	1.374	1.207	1.489	1.830	2.159	
1 1/2"	38.10	-	-	-	-	-	0.928	1.108	1.108	1.462	1.807	2.227	2.636	
	40.00	-	-	-	-	-	0.976	1.165	1.445	1.537	1.902	2.362	2.778	
1 3/4"	44.45	-	-	-	-	-	1.087	1.299	1.613	1.716	2.125	2.625	3.112	
	45.00	-	-	-	-	-	1.101	1.315	1.633	1.738	2.153	2.677	3.154	
2"	50.80	-	-	-	-	-	1.246	1.490	1.851	1.970	2.443	3.042	3.589	
2 1/4"	63.50	-	-	-	-	-	-	1.871	2.328	2.328	3.079	3.843	4.543	
3"	76.20	-	-	-	-	-	-	2.252	2.805	2.479	3.714	4.612	5.497	
3 1/2"	88.90	-	-	-	-	-	-	-	3.281	3.496	4.350	5.443	6.450	
4"	101.60	-	-	-	-	-	-	-	3.758	4.005	4.987	6.243	7.404	



STAINLESS STEEL TUBE : DIMENSION & WEIGHT

Nominal Pipe Size		Outside Diameter		SCH 5 Wt. Thick		SCH 10S Wt. Thick		SCH 10 Wt. Thick		SCH 20 Wt. Thick		SCH 30 Wt. Thick		SCH 40S Wt. Thick		SCH 40 Wt. Thick	
mm	inch	inch	mm	mtr	mm	mtr	mm			mtr	mm	mtr	mm	mtr	mm	mtr	mm
15	1/2	0.840	21.34	0.80	1.65	1.00	2.11			-	-	-	-	1.27	2.77		
20	1/4	1.050	24.67	1.02	1.65	1.28	2.11			-	-	-	-	1.68	2.87		
25	1	1.315	33.40	1.30	1.65	2.09	2.77			-	-	-	-	2.50	3.38		
32	1 1/4	1.860	42.16	1.65	1.65	2.69	2.77	Identical to SCH 10S		-	-	-	-	3.38	3.58		
40	1 1/2	1.900	48.26	1.90	1.65	3.10	2.77			-	-	-	-	4.04	3.68		
50	2	2.375	60.33	2.39	1.65	3.92	2.77			-	-	-	-	5.44	3.91		
65	2 1/2	2.875	73.03	3.71	2.11	5.27	3.05			-	-	-	-	8.85	5.16		
80	3	3.500	88.90	4.51	2.11	6.45	3.05			-	-	-	-	11.27	5.49		
90	3 1/2	4.000	101.60	5.25	2.11	7.40	3.05			-	-	-	-	13.55	5.74		
100	4	4.500	114.30	5.92	2.11	8.35	3.05			-	-	-	-	16.06	6.02		
125	5	5.536	141.30	9.80	2.77	11.56	3.40			-	-	-	-	21.75	6.55		
150	6	6.625	168.28	11.47	2.77	14.04	3.40			-	-	-	-	28.23	7.11		
200	8	8.625	219.09	14.99	2.77	20.26	3.76			33.81	-	36.87	-	42.48	8.18		
250	10	19.750	273.05	22.97	3.40	28.20	4.19			42.38	6.35	51.10	7.80	61.20	9.27		
300	12	12.750	323.85	33.53	4.20	36.53	4.57			50.45	6.35	85.29	8.38	74.92	9.53		



Technical Specifications

LINE PIPES FOR USE IN OIL, GAS & PETROLEUM INDUSTRIES CONFORMING TO IS : 1978

NB (mm)	OD (mm)	Wall Thickness (mm)	Plain End Weight (Kg/m)	Test Pressure (Min)	
				Grade Yst 210 STD 100 Kpa	Grade Yst 240 STD 100 Kpa
80	88.90	3.20	6.76	89	104
		3.60	7.57	101	117
		4.00	8.37	112	130
		4.40	9.17	123	143
		4.80	9.95	134	156
90	101.60	5.50	11.31	154	172
		3.60	8.70	88	102
		4.00	9.63	98	114
		4.40	10.55	108	125
		4.80	11.46	117	137
100	114.30	5.70	13.48	139	162
		6.40	15.02	156	182
		7.10	16.55	174	193
		3.60	9.83	78	91
		4.00	10.88	87	101
125	141.30	4.80	12.96	104	121
		5.20	13.99	113	132
		5.60	15.01	122	142
		6.00	16.02	130	152
		6.40	17.03	139	162
150	168.30	7.10	18.77	154	180
		3.20	10.90	56	65
		4.00	13.94	70	82
		4.80	16.16	84	98
		5.60	18.74	98	115
		6.60	21.92	116	135
		7.10	28.50	125	145
		3.60	14.62	53	62
		4.00	16.21	59	76
		4.80	19.35	71	81
		5.20	20.91	77	89
		5.60	22.47	83	96
		6.40	25.55	94	110
		7.10	28.22	105	122

NB (mm)	OD (mm)	Wall Thickness (mm)	Plain End Weight (Kg/m)	Test Pressure (Min)	
				Grade Yst 210 STD 100 Kpa	Grade Yst 240 STD 100 Kpa
200	219.10	4.80	25.37	54	63
		5.60	29.48	63	74
		6.40	33.57	73	84
		7.00	36.61	79	92
		4.80	31.76	44	51
250	273.10	5.60	36.94	51	59
		6.40	42.09	58	68
		7.10	46.57	65	75
		7.80	51.03	71	83
		8.70	56.72	79	92
300	323.90	9.30	60.50	85	98
		4.80	37.77	37	43
		5.60	43.96	43	50
		6.40	50.11	49	57
		7.10	55.47	54	63
350	355.60	7.90	61.56	61	71
		8.40	65.35	64	75
		8.70	67.62	67	78
		9.50	73.65	73	85
		4.80	41.52	34	39
400	406.40	5.20	44.93	36	42
		6.40	55.11	45	52
		7.10	61.02	50	58
		7.90	67.74	55	64
		8.70	74.42	61	71
		9.50	81.08	66	77
		4.80	47.54	29	34
		5.20	51.45	32	37
		5.60	55.35	34	40
		6.40	63.13	39	46
		7.10	69.91	43	51
		7.90	77.63	48	56
		8.70	85.32	53	62
		9.50	92.98	58	68

A. Outside Diameter - The Outside Diameter Tolerances

Shall be as follows,
Pipe Body
For Size
48.3 mm and less
60.3 mm and above

Tolerance
+0.40mm
-0.80mm
+/-1%

B. Wall Thickness-The Tolerances on the wall thickness of line pipes shall be as follows:

Type	For	Tolerance
Welded Pipes	73.0 mm and smaller	+20.0% -12.5%
	88.9 mm Outer Dia & Higher Dia	+18.0% -12.5%

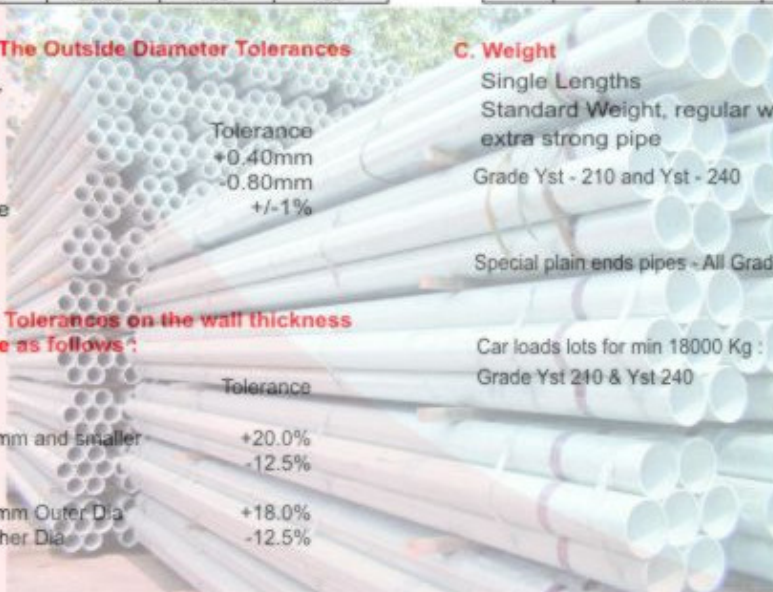
C. Weight

Single Lengths
Standard Weight, regular weight, extra strong and double
extra strong pipe

Grade Yst - 210 and Yst - 240 +10.0%
-3.5%

Special plain ends pipes - All Grades +10.0%
-5.0%

Car loads lots for min 18000 Kg :
Grade Yst 210 & Yst 240 +1.75%
-2.5%



Technical Specifications

ERW STEEL TUBES FOR IDLERS FOR BELT CONVEYORS

Conforming to IS : 9295-1983

Steel Tubes for Water Wells (ERW Black Casing Pipes Plain, Bevelled & Screwed & Socketed)

Conforming to IS:4270-2001 [Equivalent to BS:879] Grade FE-410

ERW STEEL TUBES FOR IDLERS FOR BELT CONVEYORS AS PER IS : 9295-1983 DIMENSIONS AND NOMINAL MASSES			
OUTSIDE DIAMETER-MM	THICKNESS MM	MASS KG.MTRS.	METERS TONNE
63.50	3.65	5.39	186
	4.05	5.94	168
	4.50	6.55	153
	4.85	7.01	143
	5.40	7.74	129
76.10	6.30	8.89	112
	3.65	6.52	153
	4.05	7.20	139
	4.50	7.95	126
	4.85	8.52	117
88.90	5.40	9.42	106
	6.30	10.84	92
	4.05	8.47	118
	4.50	9.37	107
	4.85	10.05	99
101.60	5.40	11.12	90
	6.30	12.83	78
	4.05	9.74	103
	4.50	10.78	93
	4.85	11.57	86
114.30	5.40	12.81	78
	6.30	14.81	68
	4.50	12.19	82
	4.85	13.09	76
	5.40	14.50	69
127.0	4.50	13.59	74
	4.85	14.61	68
	5.40	16.19	62
	6.30	18.75	53
139.70	4.50	15.00	67
	4.85	16.13	62
	5.40	17.89	56
	6.30	20.73	48
152.40	4.50	16.41	61
	4.85	17.65	57
	5.40	19.58	51
	6.30	22.70	44
159.00	4.50	17.15	58
	4.85	18.44	54
	5.40	20.46	49
	6.30	23.72	42
165.10	4.50	17.82	56
	4.85	19.17	52
	5.40	21.27	47
	6.30	24.67	41
168.30	4.50	18.18	55
	4.85	19.55	51
	5.40	21.69	46
	6.30	25.17	40
193.70	5.40	25.08	40
	6.30	29.12	34
219.10	5.40	28.46	35
	6.30	33.06	40

STEEL TUBES FOR WATER WELLS (CASING PIPES) CONFORMING TO US : 4270/2001				
N.B. & Series	Outside diameter mm	Thickness mm	Normal weight Black Tubes Plain End.	
			kg/m	m/tonne
100	114.30	5.00	13.48	74.20
125	141.30	5.00	16.81	59.50
150	168.30	5.00	20.14	49.66
175	193.70	5.40	25.08	39.88
200	219.10	5.40	28.46	35.14
225	244.50	6.00	35.29	28.34
250	273.10	7.10	46.58	21.47
300	323.90	7.10	55.47	18.03

A. PHYSICAL PROPERTIES

Grade	Y.S. (min) MPa	T.S (min) MPa
Fe 410	235	410
Fe 450	275	450

B. TOLERANCES

i)	Outside diameter of pipe	+ 1%
ii)	Thickness	+15% / -12.5%
	upto 406.4 mm OD	+ 15% - 10%
iii)	weight	+10%
iv)	Single Tube	-8%
	Length	
	Unless otherwise	
	specified 4 to 7 mtrs.	
	On request up to 12 mtrs.	

Tolerance on Outside Diameter + 0.8%

Ovality below 168.3mm : 0.5mm

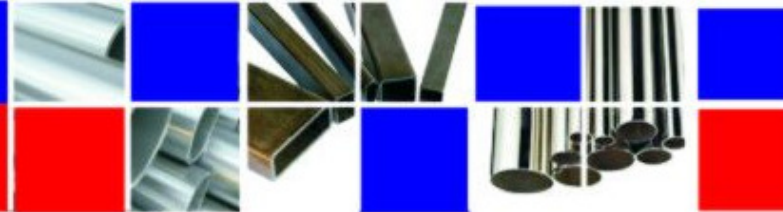
Ovality including 168.3mm and above : 1.0mm

Tolerance on Weight Kg/Mtr : Single Tube : + 10%

For Truck Load of 10 Tonnes : + 7.5%

Tolerance on Thickness : + 10%





Technical Specifications

Black & Galvanized Steel Tubes For Mechanical & General Engineering Purposes
Conforming to IS:3601-2006 (Equivalent to BS:6323)

Outside Diameter	Thickness	Mass
<i>mm</i>	<i>mm</i>	<i>kg / m</i>
21.00	1.80	0.866
	2.00	0.952
	2.60	1.20
	3.20	1.43
26.90	1.80	1.11
	2.00	1.23
	2.30	1.40
	2.60	1.56
	3.20	1.97
33.70	2.00	1.56
	2.30	1.78
	2.60	1.99
	3.20	2.41
	4.00	2.93
42.40	2.30	2.27
	2.60	2.55
	3.20	3.09
	3.60	3.44
	4.00	3.79
48.30	2.30	2.61
	2.60	2.93
	2.90	3.25
	3.20	3.56
	3.60	3.97
	4.00	4.37
60.30	2.30	3.29
	2.60	3.7
	2.90	4.11
	3.20	4.51
	3.60	5.03
	4.00	5.55
	4.50	6.19

B. Thickness

The tolerance on thickness excluding the weld shall be ± 10 Percent.

C. Length

Unless otherwise specified 4 to 7 meter

D. Chemical Composition

- Sulphur - 0.045% Max
- Phosphorus - 0.0045% Max

Outside Diameter	Thickness	Mass
<i>mm</i>	<i>mm</i>	<i>kg / m</i>
76.10	2.60	5.24
	2.90	5.75
	3.20	6.44
	3.60	7.11
	4.50	7.95
88.90	2.90	6.15
	3.20	6.76
	4.00	8.38
114.30	3.20	8.77
	3.60	9.83
	4.50	12.20
139.70	3.60	12.10
	4.00	13.40
	4.50	15.00
163.50	4.50	17.80

Tolerances

A. Outsider Diameter

S.No.	Over (mm)	Upto including (mm)	Tolerance of Diameter (mm)
i	-	25.4	± 0.15
ii	25.4	51.0	± 0.18
iii	51.0	63.5	± 0.25
iv	63.5	76.1	± 0.25
v	76.1	88.9	± 0.31
vi	88.9	101.6	± 0.36
vii	101.6	114.3	± 0.43
viii	114.3	152.4	± 0.58
ix	152.4	168.3	± 0.65

E. Mechanical Properties

Grade Tensile	Tensile Strength (Mpa)	Yield Stress Min. (Mpa)	Elongation %	
			Less than 33.7 mm OD	More than 33.7 mm OD
WT-210	330	210	12	20
WT-240	410	240	10	15

Note- Where the ratio of outside Diameter to thickness is greater than 33.1 the tolerance shall be as agreed to between the buyer and the manufacture.

Technical Specifications

ISO STANDARD FOR MILD STEEL TUBES [EXTRACT FROM ISO-65-2981 (E)]

DN	Designation of thread	Outside Diameter D mm	Thickness (T) and masses per unit length (M) according to the series							
			Heavy Series		Medium Series		Light Series 1		Light Series 2	
			T mm	Screw Socketed M kg/m	T mm	Screw Socketed M kg/m	T mm	Screw Socketed M kg/m	T mm	Screw Socketed M kg/m
15	½	21.3	3.2	1.45	2.6	1.22	2.3	1.09	2.0	0.956
20	¾	26.9	3.2	1.88	2.6	1.57	2.3	1.40	2.3	1.39
26	1	33.7	4.0	2.95	3.2	2.43	2.9	2.22	2.6	2.00
32	1¼	42.4	4.0	3.82	3.2	3.13	2.9	2.85	2.6	2.57
40	1½	48.3	4.0	4.41	3.6	3.60	2.9	3.28	2.9	3.27
50	2	60.3	4.5	6.26	3.6	5.10	3.2	4.56	2.9	4.15
65	2½	76.1	4.5	8.05	3.6	6.54	3.2	5.85	3.2	5.83
80	3	88.9	5.0	10.5	4.0	8.53	3.6	7.72	3.2	6.89
100	4	114.3	5.4	14.8	4.5	12.5	4.0	11.1	3.6	10.0
125	5	139.7	5.4	18.4	5.0	17.1				
150	6	165.1	5.4	21.9	5.0	20.4				

Tolerances

Thickness:	Heavy, Medium & Light Series 1 :	+ Not Limited - 12.5%
	Light Series 2 :	+ Not Limited - 8%

Technical Specifications

RIGID STEEL CONDUITS CONFORMING TO IS:9537 (PART-II) 1981 [EQUIVALENT TO BS:4568//EQUIVALENT TO BS EN 50086-1:1994]

Nominal Size	Outside Diameter	Tolerance on Outside Diameter	Minimum Outside Diameter	Wall Thickness	
				Minimum	Maximum
mm	mm	mm	mm	mm	mm
20.00	20.00	-0.30	19.70	1.40	1.80
25.00	25.00	-0.40	24.60	1.40	1.80
32.00	32.00	-0.40	31.60	1.40	1.80

Note :

1. Stove Enamelled for Medium Protection against Corrosion/External Influences.
2. Hot DIP Galvanized Steel Conduit Pipes for High Protection against Corrosion/External Influences.
3. Length : Unless otherwise specified 3 to 5 meters.