

AN ISO 9001, OHSAS 14001, 18001, COMPANY  
IS 1239(P.1): 2004  
IS 1161:2014  
IS 4923:2017

# Precision-crafted Pipes & Tubes with 100% Hot Rolled Coil

For further info  
please call us  
**+61 424 075 252**

or visit our website  
**[www.gsainfra.com](http://www.gsainfra.com)**

**Phone** : +61 424 075 252  
**Email** : [info@gsainfra.com](mailto:info@gsainfra.com)

AN ISO 9001, OHSAS 18001, 14001 COMPANY



## STEEL TUBES FOR STRUCTURAL PURPOSE

Conforming to IS:1161-2014

Nominal Size (N.B)		Outside Diameter	Thickness		Black Tubes Plain End	
mm	Inch		mm		Kg/Meter	Meter/Ton
15	1/2"	21.30	2.00	14	0.95	1050
			2.60	12	1.20	833
			3.20	10	1.43	699
20	3/4"	26.90	2.3	13	1.40	714
			2.6	12	1.56	641
			3.2	10	1.87	535
25	1"	33.70	2.6	12	1.99	503
			3.2	10	2.41	415
			4.0	8	2.93	341
32	1 1/4"	42.40	2.6	12	2.55	392
			3.2	10	3.09	324
			4.0	8	3.79	264
40	1 1/2"	48.30	2.9	11	3.25	308
			3.2	10	3.56	281
			4.0	8	4.37	229
50	2"	60.30	2.9	11	4.11	243
			3.6	9	5.03	199
			4.5	7	6.19	162
65	2 1/2"	76.10	2.9	10	5.24	191
			3.6	9	6.44	155
			4.5	7	7.95	126
80	3"	88.90	3.2	10	6.76	148
			4.0	8	8.38	119
			4.8	6	9.96	100
100	4"	114.30	3.6	9	9.83	102
			4.5	7	12.19	82
			5.4	5	14.50	69
125	5"	139.70	4.5	7	15.00	67
			4.8	6	15.97	63
			5.4	5	17.89	56
150	6"	165.10	4.5	7	17.82	56
			4.8	5	18.98	53
			5.4	5	21.27	47
			5.9	4	23.20	43
175	7"	193.70	4.8	6	22.36	45
			5.4	5	25.08	40
			5.4	4	27.33	37

### Physical Properties & Tolerances

Grade	T.S (Min) (Map)	Y.S (Min) (Map)	Elongation% (Min)
YSt210	330	210	20
YSt240	410	240	17
YSt310	450	310	14
YSt355	490	355	10

#### Note:

Elongation percentage for tubes upto and including 2fimm NB More for all grades shall ge 12 minimum.

Single Tube	:±10%
For 10 tonne lots	:±7.5%
Outside Diameter	
upto and Including 48.3mm	:+0.4,-0.8mm
48.3mm Over 48.3mm	:±1%
Thickness	
For All sizes	:±10%

#### Chemical Properties:

AS per IS-10748:2004 (GR-1 to GR-5)



AN ISO 9001, OHSAS 18001, 14001 COMPANY



## STEEL TUBES, TUBULARS AND OTHER WROUGHT STEEL FITTINGS

Conforming to IS:1239 (Part-1) 2004

Nominal Bore (N.B)		Outside Diameter		CLASS	WALTHICKNESS		NOMINAL WEIGHT Kg/Meter		Meter/Ton	
		Minimum	Maximum		mm	SWG	P.E	S&S	P.E	S&S
mm	Inch	mm	mm	(L,M&H)	mm	SWG	P.E	S&S	P.E	S&S
15	1/2"	21.0	21.4	L	2.00	14	0.947	0.956	1056	1046
		21.0	21.8	M	2.60	12	1.21	1.22	826	820
		21.0	21.8	H	3.20	10	1.44	1.45	694	690
20	3/4"	26.4	26.9	L	2.30	13	1.38	1.39	725	719
		26.5	27.3	M	2.60	12	1.56	1.57	641	637
		26.5	27.3	H	3.20	10	1.87	1.88	535	532
25	1"	33.2	33.8	L	2.60	12	1.98	2.00	505	500
		33.3	34.2	M	3.20	10	2.41	2.43	415	412
		33.3	34.2	H	4.00	8	2.93	2.95	341	339
32	1 1/4"	41.9	42.5	L	2.60	12	2.54	2.57	394	389
		42.0	42.9	M	3.20	10	3.10	3.13	323	319
		42.0	42.9	H	4.00	8	3.79	3.82	264	262
40	1 1/2"	47.8	48.4	L	2.90	11	3.23	3.27	310	306
		47.9	48.8	M	3.20	10	3.56	3.60	281	278
		47.9	48.8	H	4.00	8	4.37	4.41	229	227
50	2"	59.6	60.2	L	2.90	11	4.08	4.15	245	241
		59.7	60.8	M	3.60	9	5.03	5.10	199	196
		59.7	60.8	H	4.50	7	6.19	6.26	162	160
65	2 1/2"	75.2	76.0	L	3.20	10	5.71	5.83	175	172
		75.3	76.6	M	3.60	9	6.42	6.54	156	153
		75.3	76.6	H	4.50	7	7.93	8.05	126	124
80	3"	87.9	88.7	L	3.20	10	6.72	6.89	149	145
		88.0	89.5	M	4.00	8	8.36	8.53	120	117
		88.0	89.5	H	4.80	6	9.90	10.10	101	99
100	4"	113.0	113.9	L	3.60	9	9.75	10.00	103	100
		113.1	115.0	M	4.50	7	12.20	12.50	82	80
		113.1	115.0	H	5.40	5	14.50	14.80	69	68
125	5"	138.5	140.8	M	4.80	6	15.90	16.40	63	61
		138.5	140.8	H	5.40	5	17.90	18.40	56	54
150	6"	168.9	166.5	M	4.80	6	18.90	19.50	53	51
		163.9	166.5	H	5.40	5	21.30	21.90	47	46

### Physical Properties & Tolerances

<b>Thickness</b> Light Tubes : +not limited -8%  Medium & Heavy Tubes : +not limited -10%	<b>Weight</b> Single Tube : +10%, -8% (Light Series) Single Tube : ±10% (Medium & Heavy Series) For quantities per load of 10 to min.: +7.5% -5% (Light Series)	<b>Physical Properties</b> Tensile Strength : Min. 320MPa  Elongation(%age) : 12% Min. (For. <25mmNB) 10% Min. (For. >25mmNB)  Hydro Test Pressure : 5Mpa (Min)

AN ISO 9001, OHSAS 18001, 14001 COMPANY



## STEEL TUBES FOR MECHANICAL AND GENERAL ENGINEERING PURPOSES

Conforming to IS:3601-2006

Outside Diameter	Thickness	Mass	Area of Cross Section	Moment Of Inertia	Modulus Of Section	Radius of Gyration
mm	mm	Kg/m	CM <sup>4</sup>	CM <sup>4</sup>	CM <sup>3</sup>	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
33.7	3.2	1.87	2.38	1.70	1.27	0.85
	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
42.4	3.2	2.41	3.07	3.60	2.14	1.08
	4.0	2.93	3.73	4.19	2.49	1.06
	2.3	2.27	2.90	5.85	2.76	1.42
	2.6	2.55	3.25	6.46	3.05	1.41
48.3	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
	2.3	2.61	3.32	8.80	3.64	1.63
60.3	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
60.3	4.0	4.37	5.57	13.77	5.70	1.57
	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
60.3	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

Outside Diameter	Thickness	Mass	Area of Cross Section	Moment Of Inertia	Modulus Of Section	Radius of Gyration
mm	mm	Kg/m	CM <sup>4</sup>	CM <sup>4</sup>	CM <sup>3</sup>	cm
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	79.5	10.10	65.12	17.10	2.54
	5.0	8.77	11.6	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	16.40	26.20	2.97
101.6	5.4	1.10	14.00	123.80	27.80	2.97
	5.6	11.50	14.65	127.64	28.72	2.95
	3.6	8.70	11.0	133.20	26.20	3.47
	4.0	9.63	12.30	146.20	28.80	3.45
114.3	5.0	11.90	15.20	177.50	34.90	4.5
	3.2	87.7	11.16	1723.3	30.15	3.93
	3.6	9.83	12.50	192.00	33.60	3.92
	4.5	12.0	15.50	234.30	41.00	3.89
139.7	5.4	14.50	18.50	274.50	48.00	3.86
	6.3	16.80	21.20	315.00	55.10	3.83
	3.6	121.0	15.38	356.36	51.02	4.81
	4.0	13.40	17.04	392.57	56.20	4.80
165.1	4.5	15.00	19.10	437.20	62.60	4.78
	5.0	16.60	21.20	480.50	68.80	4.79
	5.4	17.90	22.80	514.50	73.70	4.75
	4.5	17.80	22.70	732.60	88.70	5.68
193.7	5.0	19.70	25.10	806.60	97.70	5.66
	5.4	21.20	27.10	864.70	105.00	5.65
	5.0	23.30	29.60	1320.00	136.00	6.67
	5.4	25.10	31.90	1417.00	146.00	6.66
193.7	5.9	27.30	34.80	1536.00	159.00	6.64

### Physical Properties

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

### Manufacturing Tolerances

Sr. 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	±0.18
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 SI 3601:2006.
- 2) The Tolerance of thickness excluding the weld shall be ±10%.

## Hollow STEEL SECTIONS FOR STRUCTURAL USE

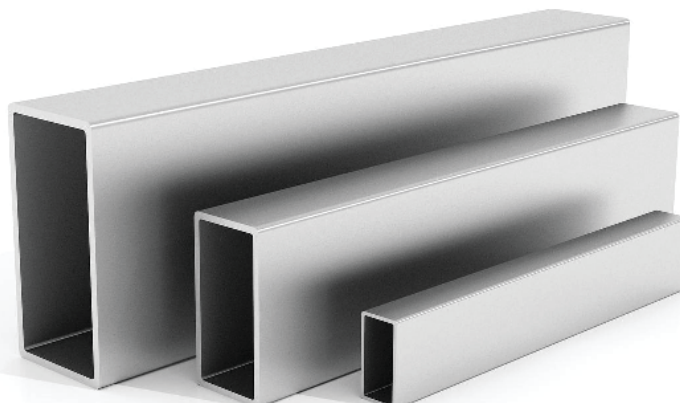
Conforming to IS:4923:2017

### Rectangular Hollow Section (RHS)

RHS (mm)	Thickness (mm)	Weight Kg/Meter	Meter/Ton	RHS (mm)	Thickness (mm)	Weight Kg/Meter	Meter/Ton
25x12	18.	0.88	136	100x50	3.2	7.01	143
	2.0	0.96	1042		4.0	8.59	116
	2.3	1.06	943		5.4	11.21	89
			6.0		12.27	81	
40x20	2.0	1.68	595	120x60	3.6	9.50	105
	2.6	2.10	476		4.5	11.67	86
	3.2	2.49	402		5.4	13.76	73
40x25	1.8	16.7	599	122x61	3.6	96.7	103
	2.0	18.3	546		4.5	11.88	84
	2.5	2.23	448		5.4	14.01	71
50x25	2.0	2.15	465	150x75	3.6	12.05	83
	2.6	2.71	369		4.5	14.85	67
	3.2	3.24	309		5.4	17.57	57
	3.5	3.49	287				
60x40	2.6	3.73	268	145x82	3.6	12.16	82
	3.2	4.50	222		4.5	14.99	67
	4.0	5.45	183		5.4	17.74	56
			6.0		19.53	51	
66x33	2.6	3.69	271	150x100	3.6	13.46	74
	3.2	4.45	225		4.5	16.62	60
	4.0	5.39	186		5.4	19.69	51
			6.0		21.69	46	
75x25	2.6	3.73	268	172x92	3.6	14.25	70
	3.2	4.50	222		4.5	17.61	57
	4.0	5.45	183		5.4	20.88	48
			6.0		23.01	43	
80x40	2.9	5.03	199	200x100	3.6	16.29	61
	3.5	5.96	168		4.5	20.15	50
	4.5	7.43	135		5.4	23.93	42
			6.0		26.40	38	
80x60	29	5.94	168				
	32	6.51	154				
	4.0	7.97	125				
96x48	3.2	6.71	149				
	4.0	8.22	122				
	5.0	10.01	100				

#### General Technical Specification and Tolerance

<b>Spec:</b>	I 4923: 2017
<b>Length:</b>	6.0mtrs. +/-6.0mm customized length ranging from 4mtrs. to 8mtrs. May be supplied
<b>Thickness:</b>	6.0mtrs. +/-6.0mm customized length ranging from 4mtrs. to 8mtrs. May be supplied
<b>Outside Dimensions:</b>	±1% with a Minimum of ±0.5mm
<b>Corner Radius:</b>	Max. 3t, where t is the thickness of section.
<b>Weight:</b>	On individual length : +10%, -8%. On lots of 10MT: 7%
<b>Straightness:</b>	Under 1/600th of length at the centre of length for finish straightened condition & for tube in mill straightened condition 1/200th of any length at the centre of length.
<b>Twist:</b>	Maximum 2m plus 0.5mm/m.
<b>End Finish:</b>	Plain Ended-Mechanically Sheared, mill-cut finish without further matching.
<b>Surface Finish:</b>	Black Section (Without any subsequent surface treatment).
<b>Raw Material:</b>	As per IS-10748-2004 (Gr-1 to Gr-5)



AN ISO 9001, OHSAS 18001, 14001 COMPANY



## Hollow STEEL SECTIONS FOR STRUCTURAL USE

Conforming to IS:3601-2006

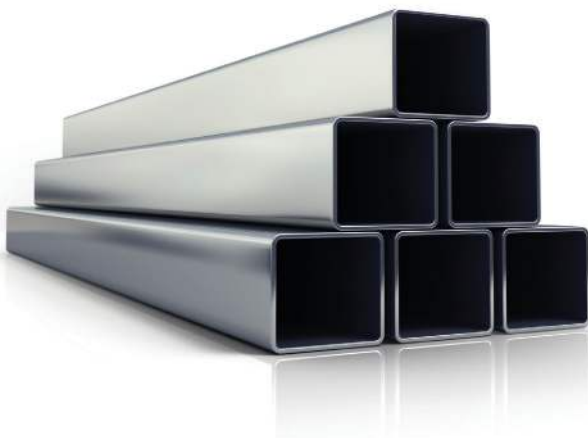
### Square Hollow Section (SHS)

RHS (mm)	Thickness (mm)	Weight Kg/Meter	Meter/Ton
15x15	1.80	0.68	1471
	2.00	0.74	1351
	2.30	0.81	1235
19x19	2.00	0.99	1010
	2.60	1.20	833
	2.90	1.30	769
25x25	2.00	1.36	735
	2.60	16.9	592
	3.20	1.98	505
30x30	2.00	1.68	595
	2.30	1.89	529
	2.60	21.0	476
	3.20	2.49	402
32x32	2.60	2.26	442
	2.90	2.48	403
	3.20	2.69	372
38x38	2.00	2.18	459
	2.60	27.5	364
	2.90	3.03	330
	3.20	3.29	304
40x40	2.00	2.31	433
	2.60	29.2	342
	3.20	3.49	287
	3.50	37.6	266
50x50	2.60	3.73	268
	3.20	4.50	222
	3.50	4.86	206
60x60	2.60	4.55	220
	3.20	5.50	182
	4.00	6.71	149
	4.50	7.43	135
72x72	3.20	6.71	149
	4.00	8.22	122
	5.00	10.01	100

RHS (mm)	Thickness (mm)	Weight Kg/Meter	Meter/Ton
80x80	2.90	6.85	146
	3.20	7.51	133
	4.00	9.22	108
	4.50	10.26	97
91.5x91.5	3.60	9.67	103
	4.50	11.88	84
	4.80	12.60	79
100x100	4.00	11.73	85
	5.00	14.41	69
	6.00	16.98	59
173.5x113.5	4.50	14.99	67
	4.80	15.92	63
	5.40	17.74	56
	6.00	19.53	51
125x125	4.50	16.62	60
	5.00	18.33	55
	6.00	21.69	46
132x132	4.50	17.61	57
	4.80	18.71	53
	5.40	20.88	48
	6.00	23.01	43
150x150	4.00	180.1	56
	5.00	22.26	45
	6.00	26.40	38

#### Tensile Properties

Grade	TS. (Min.) (Mpa)	YS. (Min.) (Mpa)	Elongation % (Min.)	
			For Size < 25.4 mm	For Size > 25.4 mm
YSt 210	210	330	12	20
YSt 240	240	410	10	15
YSt 310	310	450	8	10
YSt 355	355	490	8	10



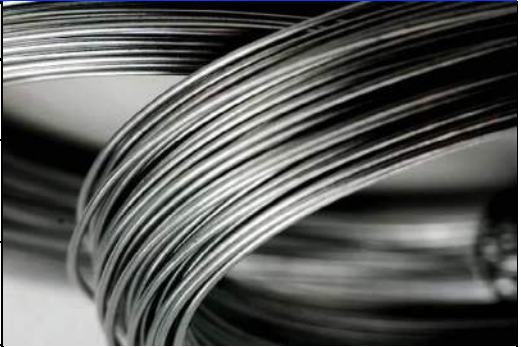


**REAL WIRE ROD**

GRADE	SIZE	CHEMICAL SPECIFICATION					MECHANICAL PROPERTIES		
		% C (MAX)	% Mn	% S (MAX)	% P (MAX)	% SI (MAX)	UTS N/mm (MAX)	%EL	Ys (N/mm)
COMMERCIAL	5MM, 5.5MM, 6MM, 7MM, 8MM, 10MM & 12MM	0.11-0.13	0.30-0.60	0.05	0.05	0.20	480	28%	385
LOW CARBON	5MM, 5.5MM, 6MM, 7MM, 8MM, 10MM & 12MM	0.1	0.30-0.60	0.05	0.05	0.2	450	32%	345
REAL 10 (SLC) EQV 1008	5MM, 5.5MM, 6MM, 7MM, 8MM, 10MM & 12MM	0.08	0.35-0.45	0.03	0.03	0.15	426	35%	320
REAL 8 (Eqv 1006 & CAQ) IS7887	5MM, 5.5MM, 6MM, 7MM, 8MM, 10MM & 12MM	0.08	0.35-0.40	0.03	0.03	0.14	415	38%	301
ELECTRODE QUALITY (EQ) AS PER IS2879	5MM, 5.5MM, 6MM, 7MM, 8MM, 10MM & 12MM	0.06	0.46	0.022	0.026	0.01	385	39%	291



HIGH BRIGHT WIRE (HB WIRE)		
GRADE	-	SIZE RANGE
COMMERCIAL	-	0/3 SWG - 14 SWG
LOW CARBON	-	0/3 SWG - 14 SWG
REAL 10 (SLC) EQV 1008	-	0/3 SWG - 14 SWG
REAL 8 ( Eqv 1006 & CAQ) IS7887	-	0/3 SWG - 14 SWG
ELECTRODE QUALITY (EQ) AS PER IS2879	-	0/3 SWG - 14 SWG



**PRODUCTION THROUGH CO: D DRAWING OF CAPTIVE WIRE ROD. WIDE RANGE AND CONSISTENT QUALITY PARAMETERS**

HOT DIPPED GALVANIZED WIRE (GI WIRE)					
GRADE	GALVANIZED TECHNIQUE	SIZE	COILWEIGHT	ZINC COATING	IS CERTIFICATION
COMMERCIAL	HOT DIP	SWG 8- SWG 14 (1.90mm-4.00mm)	35 GSM-40GSM	300-550 Nmm <sup>2</sup>	IS280-2006
LOW CARBON					
REAL 10 (SLC) EQV 1008					
REAL 8 ( Eqv 1006 & CAQ) IS7887					
ELECTRODE QUALITY (EQ) AS PER IS2879					







**GLOBAL**  
STEEL AND ALUMINUM

**Phone** : +61 424 075 252  
**Email** : [info@gsainfra.com](mailto:info@gsainfra.com)

