



**PRODUCT SPECIFICATION**  
2023 Brochure



APPROVED BY



**BUILDING TRUST**  
FOR GENERATIONS



## HII BALIYO PRIME PIPES

HII Baliyo Prime Pipes are a premier offering from the [Hulas Iron Industries](#), specializing in the production of high-quality black pipes. These pipes are specifically designed to cater to the requirements of engineering & many other industries. One of the key strengths of HII Baliyo Prime Pipes lies in their versatility. This makes them a reliable choice for those seeking superior performance and longevity in their projects.

With their sleek black finish, HII Baliyo Prime Pipes not only provide a visually appealing aesthetic but also offer exceptional durability and reliability. These pipes have been carefully engineered to withstand demanding environments, ensuring their resilience and unwavering performance over time.

HII Baliyo Prime Pipes are known for their trustworthiness and enduring strength, making them an ideal solution for projects that require exceptional quality & reliability. Whether it's a complex mechanical system, a robust structural project or a general engineering application, including pipelines for water, gas, air, steam, & air, these pipes can deliver the performance needed to meet the demands of diverse industries.

### PRODUCT RANGE



**Circular Hollow Section**  
- 1/2" to 10"



**Rectangular Hollow Section**  
- 25 x 38mm to 48 x 96mm



**Square Hollow Section**  
- 19 x 19mm to 250 x 250mm

**THICKNESS RANGE : 0.90MM TO 6.4MM**

### AREA OF USAGE



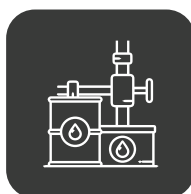
Construction



Fire Fighting



Gas Pipelines



Oil Pipelines

# Steel Tubes for Mechanical & General Engineering Purposes

Conforming to IS : 3601-2006

Outside Diameter mm	Thickness mm	Mass Kg/m	Outside Diameter mm	Thickness mm	Mass Kg/m	Outside Diameter mm	Thickness mm	Mass Kg/m
21.3	1.8	0.866	60.3	2.3	3.29	139.7	6.3	16.8
	2	0.952		2.6	3.7		8	21.0
	2.6	1.20		2.9	4.11		8.8	22.9
	3.2	1.43		3.2	4.51		3.6	12.1
	4	1.71		3.6	5.03		4	13.4
26.9	1.8	1.11		4	5.55		4.5	15
	2	1.23		4.5	6.19		5	16.6
	2.3	1.4		5	6.82		5	16.6
	2.6	1.56		5.6	7.65		5.4	17.9
	3.2	1.87		6.3	8.39		6.3	20.7
33.7	4	2.26	76.1	2.6	5.24	165.1	8	26
	2	1.56		2.9	5.75		10	32
	2.3	1.78		3.2	6.44		4.5	17.8
	2.6	1.99		3.6	7.11		5	19.7
	3.2	2.41		4.5	7.95		5.4	21.2
42.4	4	2.93		5	8.77		6.3	24.8
	4.5	3.24		5.4	9.42		168.3	4
	2.3	2.27	6.3	10.8	4.5			18.2
	2.6	2.55	7.1	12.1	5			20.1
	3.2	3.09	88.9	2.9	6.15			5.4
3.6	3.44	3.2		6.76	6.3	25.2		
4	3.79	4		8.38	7.1	28.2		
5	4.61	5		10.3	8	31.6		
5.4	4.93	5.4		11.1	6	23.3		
48.3	2.3	2.61		5.6	11.5	5.4		25.1
	2.6	2.93		6.3	12.8	5.9		27.3
	2.9	3.25	8	16	6.3	29.1		
	3.2	3.56	114.3	3.2	8.77	8	36.6	
	3.6	3.97		3.6	9.83			
	4	4.37		4.5	12.2			
	4.9	5.24	5.4	14.5				
5	5.34							
5.6	5.9							
5.9	6.16							

## Mechanical Properties IS : 3601-2006

S.No.	Tube Designation	Tensile Strength	Yield Stress	Elongation	
		Min.	Min.	As welded (Less than or equal to 33.7 mm OD)	As welded (more than 33.7mm 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

## Notes:

1. If tube in the as welded condition are subjected to annealing, brazing, welding or similar heating, it will deviate in the heat affected zone.
2. Welding of WT 310 grade may require special welding technique.
3. 1Mpa=0.1020kgt/mm<sup>2</sup>

## Manufacturing Tolerance

S.No.	Over MM	Upto & Including MM	Tolerance on outside diameter mm
1	-	25.4	± 0.15
2	25.4	51	± 0.18
3	51	53.5	± 0.25
4	53.5	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

# Technical Data of Hollow Steel Section RHS/SHS

## Conforming to IS : 4923-2017

A Square (SHS)								
Size	Depth or Width	Thickness	Weight	Area of Section	Moment of Inertia	Radius of Gyration	Elastic Modulus	Plastic Modulus
mm x mm	mm	mm	kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm	cm <sup>3</sup>	cm <sup>3</sup>
25 X 25	25	2.5	1.69	2.16	1.72	0.89	1.38	1.76
	25	3.2	1.98	2.53	1.89	0.86	1.51	1.98
32 x 32	32	2.5	2.26	2.88	4.02	1.18	2.51	3.11
	32	3.2	2.69	3.42	4.54	1.15	2.84	3.59
	32	4.0	3.19	4.07	5.02	1.11	3.14	4.11
38 x 38	38	3.2	3.29	4.19	8.18	1.40	4.3	5.34
	38	3.6	3.63	4.62	8.76	1.38	4.61	5.8
	38	4.0	3.95	5.03	9.26	1.36	4.87	6.22
49.5 x 49.5	49.5	2.9	4.07	5.19	18.37	1.88	7.42	8.93
	49.5	3.6	4.93	6.28	21.42	1.85	8.66	10.6
	49.5	4.5	5.95	7.58	24.64	1.80	9.96	12.47
60 x 60	60	3.2	5.5	7.00	36.94	2.3	12.31	14.73
	60	3.6	6.11	7.79	40.45	2.28	13.48	16.22
	60	4.5	7.43	9.47	47.2	2.23	15.73	19.32
72 x 72	72	3.2	6.71	8.54	66.32	2.79	18.42	21.8
	72	4	8.22	10.47	79.03	2.75	21.95	26.32
	72	4.8	9.66	12.31	90.31	2.71	25.09	30.49
91.5 x 91.5	91.5	3.6	9.67	12.32	156.49	3.56	34.21	40.24
	91.5	4.5	11.88	15.14	187.57	3.52	41.00	48.79
	91.5	5.4	14.01	17.85	215.68	3.48	47.14	56.77
100 x 100	100	4	11.74	14.95	226.35	3.89	45.27	53.3
	100	5	14.41	18.36	271.10	3.84	54.44	64.59
	100	6.0	16.98	21.63	311.47	3.79	62.29	75.10
113.5 x 113.5	113.5	4.5	14.99	19.10	372.88	4.42	65.71	77.33
	113.5	4.8	15.92	20.28	393.31	4.4	69.3	81.81
	113.5	5.4	17.74	22.6	432.58	4.38	76.23	90.55
132 x 132	132	4.8	18.71	23.83	634.39	5.16	96.12	112.69
	132	5.4	20.88	26.59	700.11	5.13	106.08	125.02
150 x 150	150	4.0	18.01	22.95	807.83	5.93	107.71	124.87
	150	5	22.26	28.36	982.13	5.89	130.95	152.98
	150	6	26.4	33.63	1145.92	5.84	152.79	179.89

Tolerance on Thickness & Mass	
Thickness for all Sizes	± 7.5%
On Individual Length	Weight
	+7%
On Lots Of 10 Tonnes	-8%
	± 7%
Outside Dimensions	± 1% of length of the side to be measured Of Sides with a minimum Of ± 0.5mm
Squareness of Corner	90° ± 2°
Radius Of Corners Outside	3T, max where T is the thickness Of section



**Steel Grade Available**  
**YST210/YST240/YST310**

**Can Roll in Specific**  
**Thickness & Length aslo**

B. Rectangular (RHS)													
Designation	Depth of Section	Width of Section	Thickness	Weight	Area of Section	Moment of Intertia		Radius of Gyration		Elastic Modulus		Plastic Modulus	
						X-X	Y-Y	X-X	Y-Y	X-X	Y-Y	X-X	Y-Y
mm x mm	mm	mm	mm	kg/m	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>3</sup>
50 x 25	50	25	2.9	2.98	3.8	10.93	3.6	1.70	0.97	4.37	2.88	5.72	3.48
	50	25	3.2	3.24	4.13	11.63	3.8	1.68	0.96	4.65	3.04	6.14	3.73
60 x 40	60	40	2.9	4.12	5.25	24.74	13.11	2.17	1.58	8.25	6.56	10.25	7.73
66 x 33	66	33	2.9	4.07	5.19	27.33	9.12	2.29	1.33	8.28	5.53	10.59	6.49
	66	33.0	3.6	4.93	6.28	31.87	10.52	2.25	1.29	9.66	6.37	12.56	7.66
	66	33	4.5	5.95	7.58	36.64	11.93	2.2	1.25	11.10	7.23	14.77	8.94
80 x 40	80	40	2.9	5.03	6.41	50.87	17.11	2.82	1.63	12.72	8.56	16.07	9.88
	80	40	3.2	5.5	7.01	54.94	18.41	2.8	1.62	13.74	9.21	17.46	10.72
	80	40	4	6.71	8.55	64.79	21.49	2.75	1.59	16.2	10.74	20.91	12.77
96 x 48	96	48	3.2	6.71	8.54	98.61	33.28	3.4	1.97	20.54	13.87	25.85	15.91
	96	48	4	8.22	10.47	117.54	39.32	3.55	1.94	24.49	16.3	31.21	19.14
	96	48	4.8	9.66	12.31	134.35	44.55	3.3	1.9	27.99	18.56	36.13	22.08



## For Use in Water, Gas, Steam & Air Pipelines

Conforming to IS : 1239 (Pt 1) - 2004, Equivalent to EN - 10255 : 2004

Class	Nominal Bore		Outside Diameter		Wall Thickness	Nominal weight of steel Tubes			
	mm	inch	Minimum	Maximum		Plain End		Screwed & Socketed	
	mm	inch	mm	mm	mm	kg/mtr	Mtrs/tonne	kg/mtrs	mtrs/tonne
Light	15 L	1 / 2	21	21.4	2	0.947	1056	0.956	1046
	20 L	3 / 4	25.4	26.9	2.3	1.38	725	1.39	719
	25 L	1	33.2	33.8	2.6	1.98	505	2	500
	32 L	1.1/4	41.9	42.5	2.6	2.54	394	2.57	389
	40 L	1.1/2	47.8	48.4	2.9	3.23	310	3.27	306
	50 L	2	59.6	60.2	2.9	4.08	245	4.15	241
	65 L	2.1/2	75.2	76	3.2	5.71	175	5.83	172
	80 L	3	87.9	88.7	3.2	6.72	149	6.89	145
Medium	100 L	4	113	113.9	3.6	9.75	103	10	100
	15 M	1/2	21	21.8	2.6	1.21	826	1.22	820
	20 M	3/4	25.5	27.3	2.6	1.56	641	1.57	637
	25 M	1	33.3	34.2	3.2	2.41	415	2.43	412
	32 M	1.1/4	42	42.9	3.2	3.1	323	3.13	319
	40 M	1.1/2	47.9	48.8	3.2	3.56	281	3.6	278
	50 M	2	59.7	60.8	3.6	5.03	199	5.1	196
	65 M	2.1/2	75.3	76.6	3.6	6.42	156	6.54	153
	80 M	3	88	89.5	4	8.36	120	8.53	117
	100 M	4	113.1	115	4.5	12.2	82	12.5	80
Heavy	125 M	5	138.5	140.8	4.8	15.9	63	16.4	61
	150M	6	163.9	166.5	4.8	18.9	53	19.5	51
	15 H	1/2	21.0	21.8	3.2	1.44	694	1.45	690
	20 H	3/4	25.5	27.3	3.2	1.87	535	1.88	532
	25 H	1	33.3	34.2	4	2.93	341	2.95	339
	32 H	1.1/4	42	42.9	4	3.79	264	3.82	262
	40 H	1.1/2	47.9	48.8	4	4.37	229	4.41	227
	50 H	2	59.7	60.8	4.5	5.19	162	5.26	160
	65 H	2.1/2	75.3	76.6	4.5	7.93	126	8.05	124
	80 H	3	88	89.5	4.8	9.9	101	10.1	99
	100 H	4	113.1	115	5.4	14.5	69	14.8	68
125 H	5	138.5	140.8	5.4	17.9	56	18.4	54	
150 H	6	163.9	166.5	5.4	21.3	47	21.9	46	

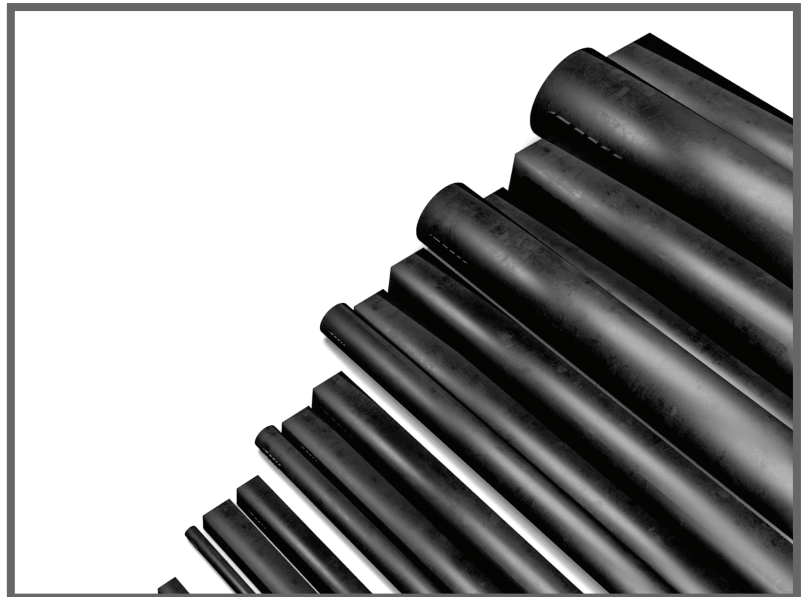
# Steel Tubes for Structural Purposes

## Conforming to IS : 1161-2014

NB	Outside diameter	Thickness	Nominal Weight of Black Tubes	
			Kg/Mrt.	Mtr/Ton
mm	mm	mm		
15	21.3	2.00	0.952	1050
		2.60	1.200	834
		3.20	1.430	699
20	26.9	2.30	1.400	714
		2.60	1.560	641
		3.20	1.870	535
25	33.7	2.60	1.990	503
		3.20	2.410	415
		4.00	2.930	341
32	42.4	2.60	2.550	392
		3.20	3.090	324
		4.00	3.790	264
40	48.3	2.90	3.250	308
		3.20	3.560	281
		4.00	4.370	229
50	60.3	2.90	4.110	243
		3.60	5.030	199
		4.50	6.190	162
65	76.1	2.90	5.240	191
		3.60	6.440	155
		4.50	7.950	126
80	88.9	3.20	6.760	148
		4.00	8.380	119
		4.80	9.960	100
90	101.6	3.60	8.700	115
		4.00	9.630	104
		4.80	11.460	87
100	114.3	3.60	9.830	102
		4.50	12.190	82
		5.40	14.500	69
110	127	4.50	13.590	74
		4.80	14.470	69
		5.40	16.190	62
125	139.7	4.50	15.000	67
		4.80	15.970	63
		5.40	17.890	56
135	152.4	4.50	16.410	61
		4.80	17.470	57
		5.40	19.580	51
150	165.1	4.50	17.820	56
		4.80	18.980	53
		5.40	21.270	47
150	168.3	4.50	18.180	55
		4.80	19.350	52
		5.40	21.690	46
		6.30	25.170	40
175	193.7	4.80	22.360	45
		5.40	25.080	40
		5.90	27.330	37
200	219.1	4.80	25.370	39
		5.60	29.490	34
		5.90	31.020	32

Physical Properties			
Grade	Y-S (min) MPa (kg/mm <sup>2</sup> )	T.S. (Min) MPa (kg/mm <sup>2</sup> )	Elongation
YST-210	210 (21.42)	330 (33.66)	20
YST-240	240 (24.48)	410 (41.82)	17
YST-310	310 (31.62)	450 (45.90)	14

Tolerance	
<b>Outside Diameter upto &amp; including 48.3 mm</b>	+ 0.4 mm
	- 0.8 mm
Over 48.3 mm	1%
<b>Thickness</b>	± 10%
<b>Weight</b>	
For Single Tube	± 10%
For 10 Tonne Lot	7.50%





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