



# KAMDHENU STRUCTURAL STEEL

STEEL TUBES & PIPES



# KAMDHENU

## A TRUE GLOBAL BRAND HAVING INDIAN ROOTS

**K**amdhenu Limited is a dynamic business entity, growing with commendable rate in different business vertical, representing a creditable market size in a number of product categories including TMT Rebars, Structural Steel Products, MS Pipes & Tubes, Wirebond, Decorative Paints, Color Coated Roofing Sheets etc. Driven growth with greater consumer satisfaction on the basis of the core values of trust, transparency and integrity, Kamdhenu is the name of quality and innovation.

Striding on a continued growth trajectory since its inception over two decades ago, Kamdhenu is relentlessly serving an extensive segment of the markets and contribute towards stronger infrastructures, beautiful landscapes and public good.

A frontrunner Infrastructure company and most selling TMT Brand of India, Kamdhenu is engaged in the manufacturing, marketing, branding and distribution of a broad spectrum of construction products, with overall brand turnover of more than Rs. 16000 crores. The company is an ISO 9001 : 2015 certified entity, having more than 80 franchisee manufacturing units and 11500 dealers and distributors spread across the country.

Conferred with prestigious awards such as World's Greatest Brands 2015 amongst Asia & GCC | Asia's Most Promising Brands 2015-16 by World Consulting & Research Corporation | Indian Power Brand 2016 & 2019-20 | World's Greatest Brands 2017-18 amongst Asia & GCC | Icon of Trust Extraordinaire Brand 2020-22.



KAMDHENU Nxt



KAMDHENU  
PAS 10000



KAMDHENU  
WIREBOND



KAMDHENU PIPES



KAMDHENU  
STRUCTURAL STEEL



COLOUR MAX COLOUR  
COATED SHEETS



KAMDHENU  
SHRESTH



KAMDHENU K+  
SCREW



PRE ENGINEERED  
BUILDING



KAMDHENU PAINTS



# KAMDHENU STRUCTURAL PRODUCTS

## ANGLES

## CHANNELS

## BEAMS

## FLATS

### CHEMICAL COMPOSITION

Kamdhenu structural products are produced in E250 (Fe 410W) A grade as per IS 2062 : 2011. Carbon & Manganese levels are restricted to lower than the specification, which results in excellent ductility, high bendability and superior weldability.

### CHEMICAL PROPERTIES

Chemistry	Unit	IS 2062, E250 (Fe 410W) A	Kamdhenu
Carbon	%	0.23 Max	0.22 Max
Manganese	%	1.50 Max	1.00 Max
Sulphur	%	0.045 Max	0.045 Max
Phosphorus	%	0.045 Max	0.045 Max
Silicon	%	0.40 Max	0.35 Max
CE	%	0.42 Max	0.40 Max

### MECHANICAL PROPERTIES

Because of their unique method of manufacturer, Kamdhenu structural products possess a combination of strength and ductility that is far in excess of minimum limits specified in the standard.

### MECHANICAL PROPERTIES

Mechanical Properties	Unit	Dia/Thickness (mm)	IS 2062, E250 (Fe 410W) A	KAMDHENU
Yield Stress	N/mm <sup>2</sup>	<20	250 min	270 min
		20-40	240 min	260 min
		>40	230 min	250 min
Tensile Strength	N/mm <sup>2</sup>		410 min	440 min
Elongation	%		23 min	24 min

### Advantage of Kamdhenu Structural Products

**High Strength and High Ductility:** This combination results in added safety of structure.

**Superior Bendability, Weldability and Straightness:** The superior bendability, Weldability & Straightness of Kamdhenu structural product compared to others, the Kamdhenu structural product is easy to fabricate with.

**Economic in Application:** Steel saving due to lower sectional weight and higher strength technique, Adopted by Kamdhenu Engineers.



## DIMENSIONAL TOLERANCES

Kamdhenu structural product is supplied with section Weight & dimension lower than the nominal, Section Weight lower than the nominal up to 3 % .

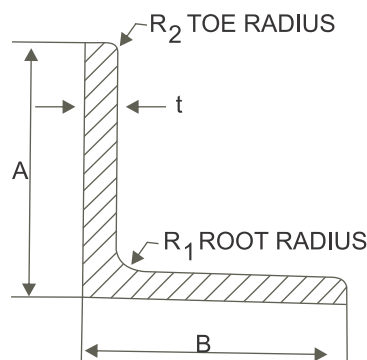
## EQUAL LEG ANGLES

Designation	Mass (kg/m)	Dimension (mm)			
		AXB	t	R1	R2
∠ 35X35X4	2.1	35X35	4.0	5.0	Should be Reasonably Square
∠ 35X35X5	2.6	35X35	5.0	5.0	
∠ 35X35X6	3.0	35X35	6.0	5.0	
∠ 40X40X4	2.4	40X40	4.0	5.5	
∠ 40X40X5	3.0	40X40	5.0	5.5	
∠ 40X40X6	3.5	40X40	6.0	5.5	
∠ 45X45X4	2.7	45X45	4.0	5.5	
∠ 45X45X5	3.4	45X45	5.0	5.5	
∠ 45X45X6	4.0	45X45	6.0	5.5	
∠ 50X50X4	3.0	50X50	4.0	6.0	
∠ 50X50X5	3.8	50X50	5.0	6.0	
∠ 50X50X6	4.5	50X50	6.0	6.0	
∠ 55X55X5	4.1	55X55	5.0	6.5	
∠ 55X55X6	4.9	55X55	6.0	6.5	
∠ 55X55X8	6.4	55X55	8.0	6.5	
∠ 55X55X10	7.9	55X55	10.0	6.5	
∠ 60X60X5	4.5	60X60	5.0	6.5	
∠ 60X60X6	5.4	60X60	6.0	6.5	
∠ 60X60X8	7.0	60X60	8.0	6.5	
∠ 60X60X10	8.6	60X60	10.0	6.5	
∠ 65X65X5	4.9	65X65	5.0	6.5	
∠ 65X65X6	5.8	65X65	6.0	6.5	
∠ 65X65X8	7.7	65X65	8.0	6.5	
∠ 65X65X10	9.4	65X65	10.0	6.5	
∠ 70X70X5	5.3	70X70	5.0	7.0	
∠ 70X70X6	6.3	70X70	6.0	7.0	
∠ 70X70X8	8.3	70X70	8.0	7.0	
∠ 70X70X10	10.2	70X70	10.0	7.0	
∠ 75X75X5	5.7	75X75	5.0	7.0	
∠ 75X75X6	6.8	75X75	6.0	7.0	
∠ 75X75X8	8.9	75X75	8.0	7.0	
∠ 75X75X10	11.0	75X75	10.0	7.0	
∠ 90X90X6	8.2	90X90	6.0	8.5	
∠ 90X90X8	10.8	90X90	8.0	8.5	
∠ 90X90X10	13.4	90X90	10.0	8.5	
∠ 90X90X12	15.8	90X90	12.0	8.5	
∠ 100X100X6	9.2	100X100	6.0	8.5	
∠ 100X100X8	12.1	100X100	8.0	8.5	
∠ 100X100X10	14.9	100X100	10.0	8.5	
∠ 100X100X12	17.7	100X100	12.0	8.5	

### Angles...

### The promise of reliability

Kamdhenu Limited is Manufacturing all high Quality angles with the finest raw materials usage.



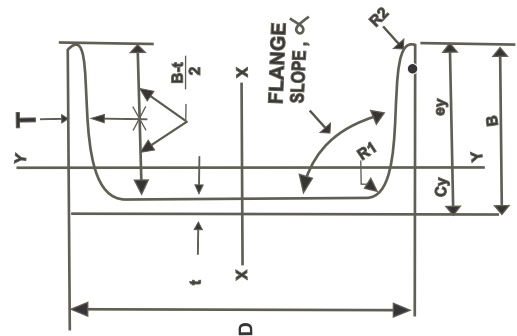


## CHANNEL SECTION

### CHANNEL...

#### The assurance of trust

Channels Are The Most Widely Used Structural Steel In any Construction Activity.  
Channels Form the Basis Every Structural Development.



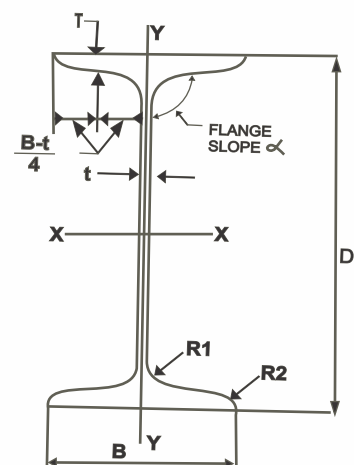
Designation	Mass	Dimension (mm)						
	(kg/m)	D	B	t	T	$\alpha$ , deg	R1	R2
JC 100	5.8	100	45	3.0	5.1	91.5	6.0	2.0
JC 125	7.9	125	50	3.0	6.6	91.5	6.0	2.4
JC150	9.9	150	55	3.6	6.9	91.5	7.0	2.4
LC 75	5.7	75	40	3.7	6.0	91.5	6.0	2.0
LC100	7.9	100	50	4.0	6.4	91.5	6.0	2.0
LC125	10.7	125	65	4.4	6.6	91.5	7.0	2.4
LC150	14.4	150	75	4.8	7.8	91.5	8.0	2.4
MC 75	7.14	75	40	4.8	7.5	96.0	8.5	2.4
MC 100	9.56	100	50	5.0	7.7	96.0	9.0	2.4
MC 125	13.1	125	65	5.3	8.2	96.0	9.5	2.4
MC150	16.8	150	75	5.7	9.0	96.0	10.0	2.4

## BEAM SECTIONS

### BEAMS...

#### The Advantage Dependability

Beams form an essential part of every high end establishment. It is the primary structure used in various set ups. Kamdhenu Beams are perfectly elongated and they undergo various strength determination tests.



DESIGNATION	Mass (kg/m)	Dimensions (mm)						
		D	B	t	T	α, deg Max.	R1	R2
JB 150	7.1	150	50	3.0	4.6	91.5	5.0	1.5
LB 75	6.1	75	50	3.7	5.0	91.5	6.5	2.0
LB 100	8.0	100	50	4.0	6.4	91.5	7.0	3.0
LB 125	11.9	125	75	4.4	6.5	91.5	8.0	3.0
LB 150	14.2	150	80	4.8	6.8	91.5	9.5	3.0
MB 100	8.9	100	50	4.7	7.0	98.0	9.0	4.5
MB 125	13.3	125	70	5.0	8.0	98.0	9.0	4.5
MB 150	15.0	150	75	5.0	8.0	98.0	9.0	4.5

## FLAT SECTION

Kamdhenu also offers best quality of flat product ranges from 10 mm to 150 mm width & thickness from 3 mm to 25 mm.

## FLAT

WIDTH	MASS, kg/m FOR VARYING (mm) THICKNESS									
(mm)	3	4	5	6	8	10	12	15	20	25
10	0.236	0.314	0.393	0.471	-	-	-	-	-	-
16	0.377	0.502	0.628	0.754	1.000	1.100	1.510	-	-	-
20	0.471	0.628	0.785	0.942	1.260	1.570	1.880	2.300	-	-
25	0.589	0.785	0.981	1.180	1.570	1.960	2.360	2.940	-	-
30	0.707	0.942	1.180	1.410	1.880	2.360	2.830	3.530	4.710	-
35	0.824	1.100	1.370	1.650	2.200	2.750	3.300	4.120	5.500	-
40	0.942	1.260	1.570	1.880	2.510	3.140	3.770	4.710	6.280	7.850
45	1.060	1.410	1.770	2.120	2.830	3.530	4.240	5.300	7.070	8.830
50	1.180	1.570	1.960	2.360	3.140	3.930	4.710	5.890	7.850	9.810
60	1.410	1.880	2.360	2.830	3.770	4.710	5.650	7.070	9.420	11.800
65	-	2.040	2.550	3.060	4.080	5.100	6.120	7.650	10.200	12.800
70	-	2.200	2.750	3.300	4.400	5.500	6.590	8.240	11.000	13.700
75	-	2.360	2.940	3.530	4.710	5.890	7.070	8.830	11.800	14.700
80	-	2.510	3.140	3.770	5.020	6.280	7.540	9.420	12.600	15.700
90	-	-	3.530	4.240	5.650	7.070	8.480	10.600	14.100	17.700
100	-	-	3.930	4.710	6.280	7.850	9.420	11.800	15.700	19.600
120	-	-	-	5.650	7.540	9.420	11.300	14.100	18.800	23.600
130	-	-	-	6.120	8.160	10.200	12.200	15.300	20.400	25.600
140	-	-	-	6.590	8.790	11.000	13.200	16.500	22.000	27.500
150	-	-	-	7.070	9.420	11.800	14.100	17.700	23.600	29.400





## KAMDHENU STEEL TUBES & PIPES

Kamdheni Limited is manufactured conforming to IS:4923 and IS:1161 standards for Square, Rectangular and Circular Hollow Sections respectively. Kamdhenu can be manufactured up to a maximum size of 91.5X91.5 mm for square sections, 122X61 mm for rectangular sections and 100 mm NB for circular sections. The thickness can vary from 2 mm to 5.4 mm.

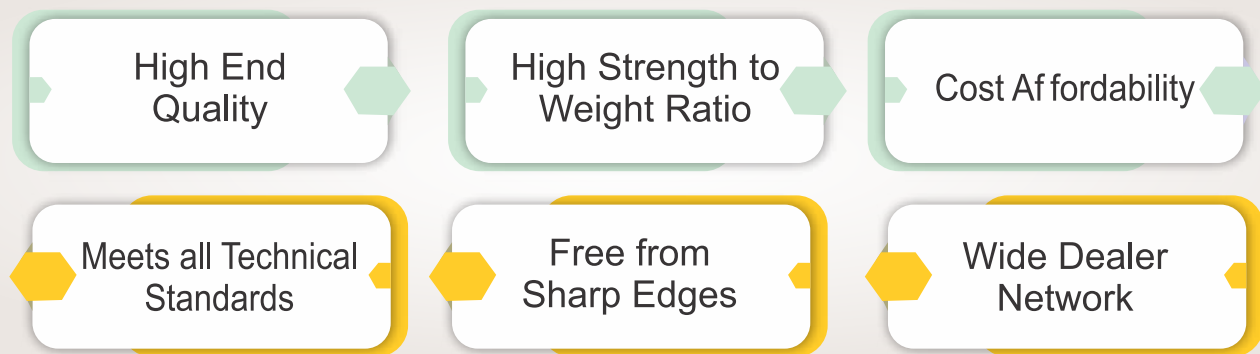


**Raw Material** - Sulphur content : 0.05% max, phosphorus content : 0.05% max, carbon equivalent percentage well within specified weldability limits with matching physical properties.

## STEEL TUBES & PIPES

Section Type	Grade	Mechanical Properties				Dimensional Tolerance					
		YST	UTS	% of Elongation		Outside dimension	Thickness	Squareness	Corner radius	Weight	
		MPa	MPa	< 25.4 mm	> 25.4 mm					Individual Lengths	On lot of 10 MT
RHS/SHS IS : 4923	YST 210	210	330	12	20	+/-1% with a minimum of +/-0.50 mm	+/-10%	90 deg. +/-2 deg.	3t max	10% -8%	+/-7.5%
	YST 240	240	410	10	15						
	YST 310	310	450	8	10						
CHS IS : 1161	YST 210	210	330	12	20	OD upto and incl 48.3+0.4/-0.8mm. Over 48.3 mm +/-1.0%	+ no limit -10%	NA	NA	L +10%, -8%	L +/-5%
	YST 240	240	410	12	17					M & H +/-10%	M & H +/-7.5%
	YST 310	310	450	12	14						





### Trusted Name For Assured Quality

Offering superior quality backed with trusted name of Kamdhenu Limited, our Circular, Square and Rectangular Hollow Sections are preferred structural steel products across the country among bulk as well as retail consumers.

### Many Advantages For Many Applications

**Kamdhenu Circular Hollow Section (CHS) & Square Hollow Section (SHS)** leverage very efficient multiple-axis loading as they have uniform geometry along two or more cross-sectional axes, and thus uniform strength characteristics. This makes them good choices for columns. They also have excellent resistance to torsion.

**Kamdhenu Hollow Structural Section (HSS)** can also be used as beams, having superior resistance to lateral torsional buckling.

**Kamdhenu Hollow Structural Sections**, especially Rectangular Hollow Section (RHS), are commonly used in welded steel frames ideal to lend support to loading in multiple directions. The flat square surfaces of RHS ease construction, and they are also preferred for architectural aesthetics in exposed structures.

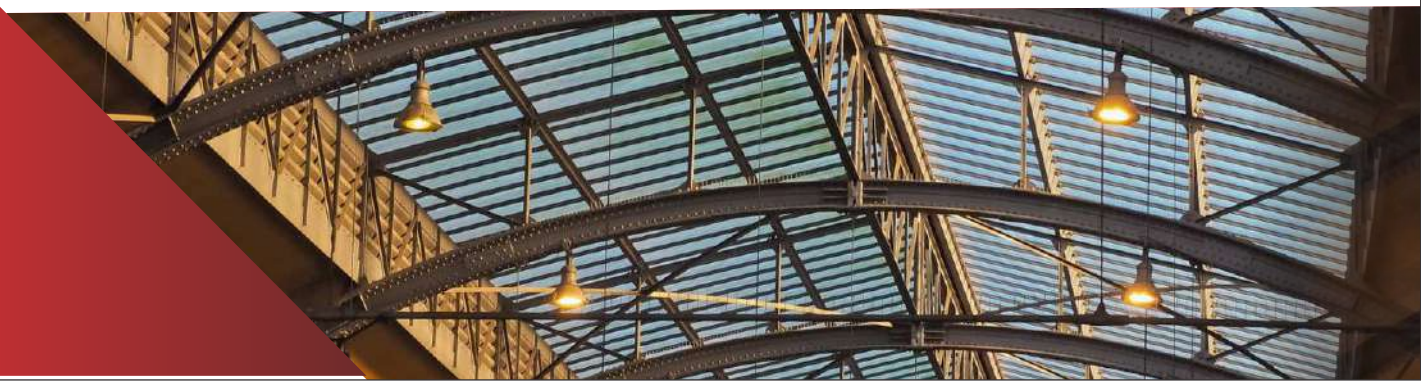
**Kamdhenu Hollow Structural Sections** are also ideal to be filling with concrete to make "Lally column" with improved fire rating, as well as robustness.

### Wide-range of Product Variants

Designated by their nominal bore and classified as 'Light', 'Medium' and 'Heavy' depending on the wall thickness Kamdhenu under its range of Circular Hollow Sections as well as Square & Rectangular Hollow Sections offers over 60 product variants suitable to varied requirement of its consumers.

These Variants include;

- 9 Bore Variants of CHS ranging from 15 mm to 100 mm having wall thickness in all the three classification of Light (L), Medium (M) as well as Heavy (H)
- 8 size Variants of SHS ranging from 25 mm to 92 mm in all the three classification of Light (L), Medium (M) as well as Heavy (H)
- 6 size Variants of RHS in all the three classification of Light (L), Medium (M) as well as Heavy (H)





# DIMENSIONS & PROPERTIES OF CIRCULAR HOLLOW SECTION

AS PER SPECIFICATION IS:1161 - 2004

NB (mm)	D (mm)	T (mm)	WEIGHT (Kg/m)	X-AREA (cm <sup>2</sup> )	OUTER SURFACE AREA/METER (cm <sup>2</sup> /m)	I <sub>x</sub> (cm <sup>4</sup> /m)	R <sub>x</sub> (cm)	Z <sub>x</sub> (cm <sup>3</sup> )
15	21.3	2	0.952	1.21	669	0.57	0.69	0.54
	21.3	2.6	1.2	1.53	669	0.68	0.67	0.64
	21.3	3.2	1.43	1.82	699	0.77	0.65	0.72
20	26.9	2.3	1.4	1.78	845	1.36	0.87	1.01
	26.9	2.6	1.56	1.98	845	1.48	0.86	1.1
	26.9	3.2	1.87	2.38	845	1.7	0.85	1.27
25	33.7	2	1.56	1.99	1059	2.51	1.12	1.49
	33.7	2.6	1.99	2.54	1059	3.09	1.1	1.84
	33.7	3.2	2.41	3.07	1059	3.6	1.08	2.14
	33.7	4	2.93	3.73	1059	4.19	1.06	2.49
32	42.4	2	1.99	2.54	1332	5.19	1.43	2.45
	42.4	2.6	2.55	3.25	1332	6.46	1.41	3.05
	42.4	3.2	3.09	3.94	1332	7.62	1.39	3.59
	42.4	4	3.79	4.83	1332	8.99	1.36	4.24
40	48.3	2	2.28	2.91	1517	7.81	1.64	3.23
	48.3	2.9	3.25	4.14	1517	10.7	1.61	4.43
	48.3	3.2	3.56	4.53	1517	11.59	1.6	4.48
	48.3	4	4.37	5.57	1517	13.77	1.57	5.7
50	60.3	2	2.88	3.66	1894	15.58	2.06	5.17
	60.3	2.9	4.11	5.23	1894	21.59	2.03	7.16
	60.3	3.6	5.03	6.41	1894	25.87	2.01	8.58
	60.3	4.5	6.19	7.89	1894	30.9	1.98	10.25
65	76.1	2	3.65	4.66	2391	31.98	2.62	8.4
	76.1	2.9	5.24	6.67	2391	44.74	2.59	11.76
	76.1	3.6	6.44	8.2	2391	54.01	2.57	14.19
	76.1	4.5	7.95	10.12	2391	65.12	2.54	17.11
80	88.9	2.6	5.53	7.05	2793	65.68	3.05	14.78
	88.9	3.2	6.76	8.62	2793	79.21	3.03	17.82
	88.9	4	8.38	10.67	2793	96.34	3	21.67
	88.9	4.8	9.96	12.68	2793	112.49	2.98	25.31
100	114.3	2.6	7.16	9.12	3591	142.37	3.95	24.91
	114.3	3.6	9.83	12.52	3591	191.98	3.92	33.59
	114.3	4.5	12.19	15.52	3591	234.32	3.89	41.00
	114.3	5.4	14.50	18.47	3591	274.54	3.85	48.04

## TOLERANCE

### A) OUT SIDE DIAMETER :-

1. UPTO & INCLUDING 48.3 MM  
= +0.4 MM/ -0.8 MM
2. OVER 48.3 MM = ±1.0 %

### B) THICKNESS (FOR ALL SIZES) :-

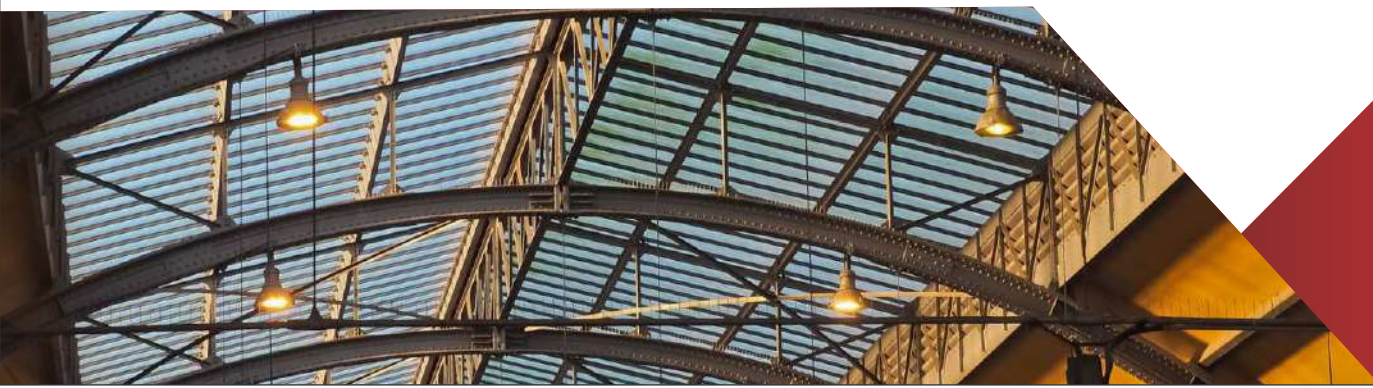
1. WELDED TUBES : ±10%

### C) WEIGHT :-

1. SINGLE TUBE : ±10 %
2. 10 TONNE LOTS : ±7.5%

## TENSILE PROPERTIES :-

S.NO.	GRADE	Y.S (Min.) MPa	T.S (Min.) MPa	ELONGATION %
1)	Yst 210	210	330	20
2)	YSt 240	240	410	17
3)	YSt310	310	450	14
4)	Yst355	355	490	10



# DIMENSIONS & PROPERTIES OF SQUARE HOLLOW SECTION

AS PER IS:4923 - 97

SHS (DXB) (mm)	T (mm)	WEIGHT (kg/m)	AREA (cm <sup>2</sup> )	I <sub>x</sub> (cm <sup>4</sup> )	R <sub>x</sub> (cm)	Z <sub>x</sub> (cm <sup>3</sup> )	I <sub>y</sub> (cm <sup>4</sup> )	R <sub>y</sub> (cm)	Z <sub>y</sub> (cm <sup>3</sup> )
25X25	2	1.36	1.74	1.48	0.92	1.19	1.48	0.92	1.19
25X25	2.6	1.69	2.16	1.72	0.89	1.38	1.72	0.89	1.38
25X25	3.2	1.98	2.53	1.89	0.86	1.51	1.89	0.86	1.51
32X32	2	1.8	2.3	3.36	1.21	2.1	3.36	1.21	2.1
32X32	2.6	2.26	2.88	4.02	1.18	2.51	4.02	1.18	2.51
32X32	3.2	2.69	3.42	4.54	1.15	2.84	4.54	1.15	2.84
38X38	2.6	2.75	3.51	7.14	1.43	3.76	7.14	1.43	3.76
38X38	3.2	3.29	4.19	8.18	1.4	4.3	8.18	1.4	4.3
38X38	4	3.95	5.03	9.26	1.36	4.87	9.26	1.36	4.87
40X40	2	2.31	2.94	6.94	1.54	3.47	6.94	1.54	3.47
40X40	2.6	2.92	3.72	8.45	1.51	4.22	8.45	1.51	4.22
40X40	3.2	3.49	4.45	9.72	1.48	4.86	9.72	1.48	4.86
40X40	3.6	3.85	4.91	10.45	1.46	5.22	10.45	1.46	5.22
40X40	4	4.2	5.35	11.07	1.44	5.54	11.07	1.44	5.54
49.5X49.5	2.6	3.69	4.7	16.91	1.9	6.83	16.91	1.9	6.83
49.5X49.5	2.9	4.07	5.19	18.37	1.88	7.42	18.37	1.88	7.42
49.5X49.5	3.6	4.93	6.28	21.42	1.85	8.66	21.42	1.85	8.66
49.5X49.5	4.5	5.95	7.58	24.64	1.8	9.96	24.64	1.8	9.96
60X60	2	3.56	4.54	25.14	2.35	8.38	25.14	2.35	8.38
60X60	2.6	4.55	5.8	31.33	2.33	10.44	31.33	2.33	10.44
60X60	3.2	5.5	7.01	36.94	2.3	12.31	36.94	2.3	12.31
60X60	4	6.71	8.55	43.55	2.26	14.52	43.55	2.26	14.52
60X60	4.8	7.85	10	49.21	2.22	16.4	49.21	2.22	16.4
72X72	2.6	5.53	7.04	55.82	2.82	15.51	55.82	2.82	15.51
72X72	3.2	6.71	8.54	66.32	2.79	18.42	66.32	2.79	18.42
72X72	4	8.22	10.47	79.03	2.75	21.95	79.03	2.75	21.95
72X72	4.8	9.66	12.31	90.31	2.71	25.09	90.31	2.71	25.09
91.5X91.5	2.6	7.12	9.07	118.32	3.61	25.86	118.32	3.61	25.86
91.5X91.5	3.6	9.67	12.32	156.48	3.56	34.20	156.48	3.56	34.20
91.5X91.5	4.5	11.88	15.14	187.56	3.52	41.00	187.56	3.52	41.00

## MECHANICAL PROPERTIES :-

S.NO.	GRADE	Y.S (Min.) MPa	T.S (Min.) MPa	ELONGATION %	OUTSIDE DIMENSION	THICKNESS	SQUARENESS	CORNER RADIUS	DIMENSIONAL TOLERANCE	WEIGHT	
									INDIVIDUAL LENGTH		LOT OF 10 MT
1)	Yst 210	210	330	20	+/- 1% WITH A MIN. OF +/- 0.50%	+/- 10%	90 Degree +/- 2 Degree	3t Max.	10% - 8%		+/-7.5%
2)	YSt 240	240	410	15							
3)	Yst310	310	450	10							



# DIMENSIONS & PROPERTIES OF RECTANGULAR HOLLOW SECTION

AS PER IS:4923-97

RHS (DXB) (mm)	T (mm)	WEIGHT (kg/m)	AREA (cm <sup>2</sup> )	I <sub>x-x</sub> (cm <sup>4</sup> )	I <sub>y-y</sub> (cm <sup>4</sup> )	R <sub>x-x</sub> (cm)	R <sub>y-y</sub> (cm)	Z <sub>x-x</sub> (cm <sup>3</sup> )	Z <sub>y-y</sub> (cm <sup>3</sup> )
50X25	2	2.15	2.74	8.38	2.81	1.75	1.01	3.35	2.25
50X25	2.6	2.71	3.46	10.16	3.36	1.71	0.99	4.06	2.69
50X25	3.2	3.24	4.13	11.63	3.8	1.68	0.96	4.65	3.04
60X40	2.6	3.73	4.76	22.76	12.09	2.19	1.59	7.59	6.05
60X40	2.9	4.12	5.25	24.74	13.11	2.17	1.58	8.25	6.56
60X40	3.6	4.98	6.35	28.9	15.23	2.13	1.55	9.63	7.62
66X33	2.6	3.69	4.7	25.15	8.43	2.31	1.34	7.62	5.11
66X33	2.9	4.07	5.19	27.33	9.12	2.29	1.33	8.28	5.53
66X33	3.6	4.93	6.28	31.87	10.52	2.25	1.29	9.66	6.37
80X40	2.6	4.55	5.8	46.58	15.74	2.84	1.65	11.65	7.87
80X40	2.9	5.03	6.41	50.87	17.11	2.82	1.63	12.72	8.56
80X40	3.2	5.5	7.01	54.94	18.41	2.8	1.62	13.74	9.21
80X40	4	6.71	8.55	64.79	21.49	2.75	1.59	16.2	10.74
96X48	2.6	5.53	7.04	82.95	28.19	3.43	2	17.28	11.74
96X48	3.2	6.71	8.54	98.61	33.28	3.4	1.97	20.54	13.87
96X48	4	8.22	10.47	117.54	39.32	3.35	1.94	24.49	16.38
122X61	3.6	9.67	12.32	232.61	78.83	4.34	2.35	38.13	25.84
122X61	4.5	11.88	15.14	278.94	93.78	4.29	2.49	45.73	30.75
122X61	5.4	14.01	17.85	320.83	107.03	4.24	2.45	52.60	35.09

## MECHANICAL PROPERTIES :-

Section Type	GRADE		Mechanical Properties			OUTSIDE DIMENSION	DIMENSIONAL TOLERANCE				
		YST	UTS	% ELONGATION			THICKNESS	SQUARENESS	CORNER RADIUS	WEIGHT	
		Mpa	Mpa	<25.4mm	>25.4mm					INDIVIDUAL LENGTHS	LOT OF 10 MT
*RHS/SHS IS:4923	YST 355	355	490	8	10	+/- 1% WITH A MIN. OF +/- 0.50 mm	+/- 10%	90 Degree +/- 2 Degree	3t Max.	10% -8%	+/-7.5%

# DIMENSIONS & PROPERTIES OF RECTANGULAR HOLLOW SECTION

AS PER IS:4923-97

RHS (DXB) (mm)	T (mm)	WEIGHT (kg/m)	AREA (cm <sup>2</sup> )	I <sub>x-x</sub> (cm <sup>4</sup> )	I <sub>y-y</sub> (cm <sup>4</sup> )	R <sub>x-x</sub> (cm)	R <sub>y-y</sub> (cm)	Z <sub>x-x</sub> (cm <sup>3</sup> )	Z <sub>y-y</sub> (cm <sup>3</sup> )
50X25	2	2.15	2.74	8.38	2.81	1.75	1.01	3.35	2.25
50X25	2.6	2.71	3.46	10.16	3.36	1.71	0.99	4.06	2.69
50X25	3.2	3.24	4.13	11.63	3.8	1.68	0.96	4.65	3.04
60X40	2.6	3.73	4.76	22.76	12.09	2.19	1.59	7.59	6.05
60X40	2.9	4.12	5.25	24.74	13.11	2.17	1.58	8.25	6.56
60X40	3.6	4.98	6.35	28.9	15.23	2.13	1.55	9.63	7.62
66X33	2.6	3.69	4.7	25.15	8.43	2.31	1.34	7.62	5.11
66X33	2.9	4.07	5.19	27.33	9.12	2.29	1.33	8.28	5.53
66X33	3.6	4.93	6.28	31.87	10.52	2.25	1.29	9.66	6.37
80X40	2.6	4.55	5.8	46.58	15.74	2.84	1.65	11.65	7.87
80X40	2.9	5.03	6.41	50.87	17.11	2.82	1.63	12.72	8.56
80X40	3.2	5.5	7.01	54.94	18.41	2.8	1.62	13.74	9.21
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96X48	3.2	6.71	8.54	98.61	33.28	3.4	1.97	20.54	13.87
96X48	4	8.22	10.47	117.54	39.32	3.35	1.94	24.49	16.38
122X61	3.6	9.67	12.32	232.61	78.83	4.34	2.35	38.13	25.84
122X61	4.5	11.88	15.14	278.94	93.78	4.29	2.49	45.73	30.75
122X61	5.4	14.01	17.85	320.83	107.03	4.24	2.45	52.60	35.09

## MECHANICAL PROPERTIES :-

Section Type	GRADE	Mechanical Properties				OUTSIDE DIMENSION	DIMENSIONAL TOLERANCE				
		YST	UTS	% ELONGATION			THICKNESS	SQUARENESS	CORNER RADIUS	WEIGHT	
				Mpa	Mpa					<25.4mm	>25.4mm
*RHS/SHS IS:4923	YST 355	355	490	8	10	+/- 1% WITH A MIN. OF +/- 0.50 mm	+/- 10%	90 Degree +/- 2 Degree	3t Max.	10% -8%	+/-7.5%