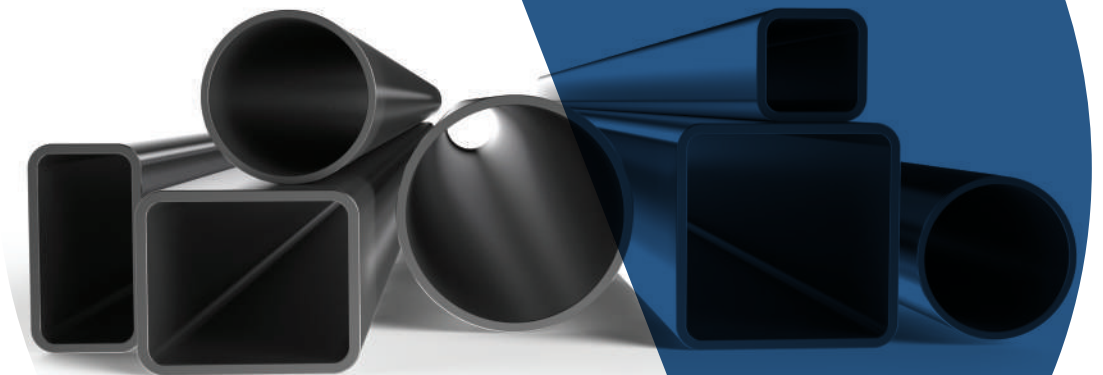




STEEL PIPES, TUBES & SECTIONS



STEEL PIPES, TUBES & SECTIONS

CONTACT US

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Administrative Office

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MKK Metal Sections Pvt Ltd,
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Manufacturing Unit 1:

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Plot No. M1, SIPCOT
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Ranipet - 632405, TN, India

Manufacturing Unit 2:

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Plot No. S 99 to S 108, SIPCOT,
Phase III, Mukundrayapuram,
Ranipet - 632405, TN, India

MKK Metal Sections Pvt. Ltd.



About US

MKK Metal Sections Pvt. Ltd., was setup in 2008 by Late Mr. Mahesh Khandelwal for production of high quality ERW Pipes and Tubes. With his strategic planning, meticulous financial management, focus and vast industry experience spanning over three decades, MKK has since only flourished.

With an annual production capacity of 2,50,000 MT and a product range spanning over a thousand varieties of Circular, Square, Rectangular and Octagonal MS Black Pipe & Hollow Sections, Galvanized tubes and structures, Solar Module Mounting Structures, Shutters, Purlins, Color Coated Roofing Sheets, and various other cold roll formed sections, MKK is the largest steel product manufacturer in South India. In keeping up with the times and having a consistent eye for growth, we now also specialize in Warehouse Racking Systems.

Moving ahead, MKK has set up a new state-of-the-art integrated plant which will specialize in Hot Dip Galvanizing of pipes and Structures. It can galvanize structures which are upto 8.5 meter in length and will increase our capacity by 60000 tons per annum. Our focus is to continually improve customer satisfaction by providing all services in-house.

MKK has always measured its growth in line with the value addition it has been able to provide its customers with. This value addition has been possible because of its fully integrated, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 awarded manufacturing facility. R&D initiatives are constantly on at our workshops to enable us to lead the market with our value-added products that meet the evolving needs of a wider range of evolving automobile, construction, lifting and excavation and such industries.

Today, METPRO is synonymous with commitment, innovation backed with a never-say-no attitude, trust and without a doubt, quality.

Being the trusted suppliers of L&T, Ashok Leyland, Siemens Gamesa, Mahindra Susten, TATA Power Solar, Bharat Heavy Electricals Ltd., Adani Group and such, our quality speaks for itself. From Airports, Railway Stations, Malls, Metros, Solar Plants, Industrial and Residential Complexes, MKK has silently been a part of the country's biggest infrastructure projects.

Founder's Legacy

‘Work so hard, that luck has no option but to favour you’

-Shri. Maheshji Khandelwal

Born on December 22nd 1952, in the heart of the country, Gwalior, Late Shri. Mahesh Khandelwal stepped into the Iron & Steel Industry with his own trading firm in 1981, in Chennai.

From then on, his vision led him to become a major player in the pipe and tube industry. By the early 2000's, he had his heart set on building a steel plant that could constantly add value to the industry, he made sure all mills were built with avant grand technology and his workers were always well taken care of. His efforts along with his keen business sense propelled the company to grow five fold. At the Ranipet factory in Tamil Nadu, one can see the plans he created for the steel company he had dreamt of and pursued for years.

But above all, he was known for his philanthropy and dream to educate India. Through various organisations he supported education for the under-privileged, built schools to promote girls education in remote villages and also contributed in making sheds for gaushalas.

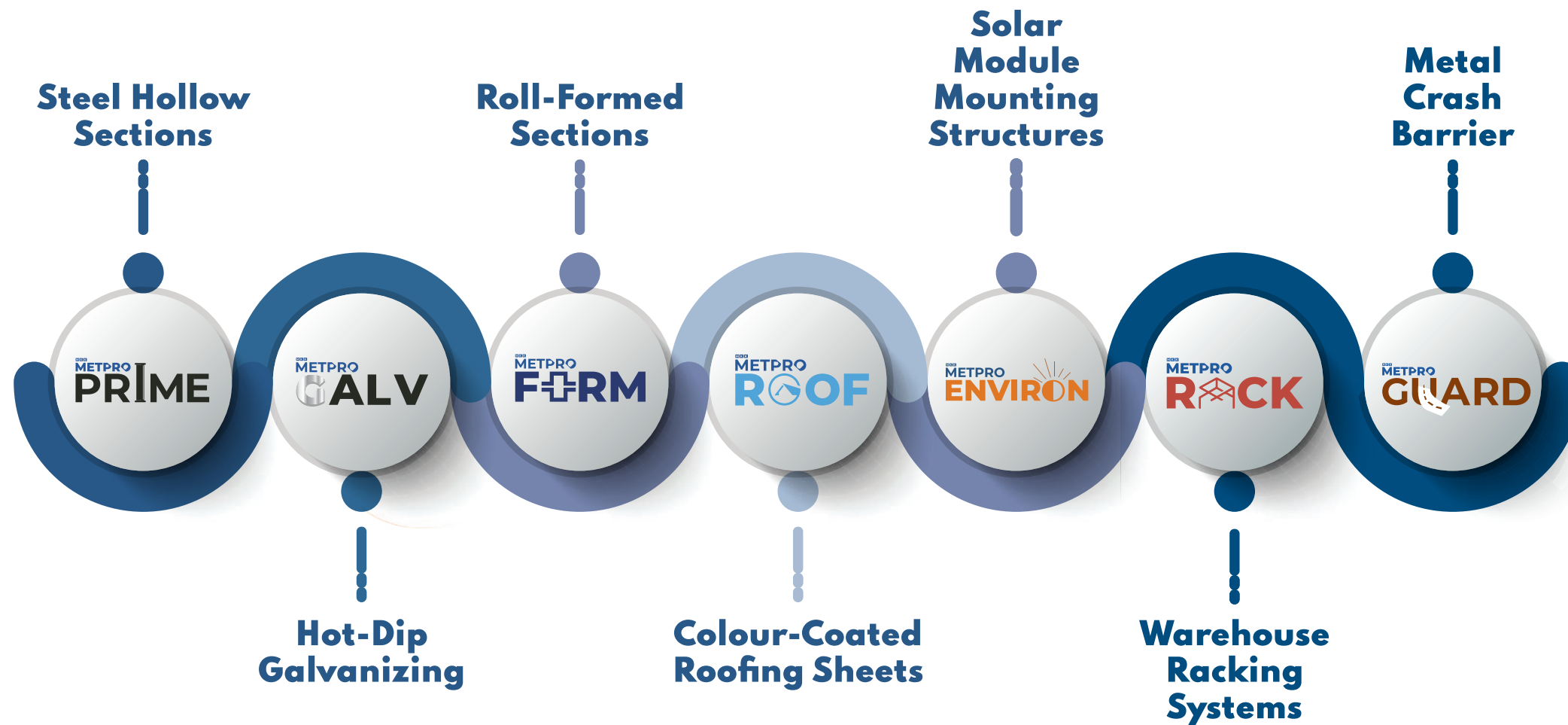
Maheshji was consumed with the passion to play a critical role in India's Make-In-India campaign and make the country's presence stronger on the global front. He laid the foundation of a galvanising plant, planned for bigger mills for ERW pipes, top of the line roll forming and a very strong infrastructural base for exports. Sadly, not all of these were materialised while he lived, but the seeds he laid, the work he did and the force of will he displayed, only push us harder in taking his inestimable legacy forward.



**Our founder recognized
for our green initiative by
the Union Finance Minister
Mr. P Chidambaram**



A versatile business group with strong foundation



Milestones

- 2008** Commissioning of 5 tube mills at SIPCOT, Ranipet, Tamil Nadu, India - capacity: 1,00,000 MTPA
- 2010** Acquired new identity with registered brand name - METPRO.
- 2010** Received ISO 9001:2000 certification
- 2015** Keeping up changing times, started production of Solar Mounting Structures Fixed and rotary.
- 2018** Three wider width mills commissioned - Capacity ramped up to 1,50,000 MTPA. Pioneer in R&D, developed the octagonal pipe.
- 2019** First in South India to manufacture tube sizes of CHS upto 406.4 mm OD, SHS 300mm x 300mm and RHS 400mm x 200mm.
- 2020** Constant R&D enabled production of Warehouse Racking Systems, Cantilevers and Crash Barriers for highways.
- 2021** Expanding horizons, Commissioned a new Hot Dip Galvanized Plant for galvanizing tubes and structures.
- 2023** Received ISO 14001:2015, ISO 45001:2018 certification along with CE certification.
- 2024** Commissioning of a new DFT mill with a capacity of 2,00,000 MTPA

Mission

To continuously strive, excel and guarantee value addition in terms of quality, customization and service of our products while being sustainable and environmentally conscious.

Vision

To play a pivotal role in building a strong infrastructural backbone for India while continuously building a community of strongly knit partners both within and outside the company.

State-of-the-art manufacturing facility

2 Manufacturing Units | 32 Production Lines | 2,50,000 MT Annual Capacity

15+
Years

1100+
Products

500+
Workforce

800+
Customers





METPRO PRIME

METPRO PRIME is known for its wide range of circular, square and rectangular hollow sections. MKK specialized in high tensile, high grade ERW pipes and tubes using only the best of raw materials. Customization in terms of length, beveled end or fin cut along with hydro testing is provided on request. MKK has been the trusted partner for providing tubes of grades matching from YST-170, YST-210, YST-240, YST-310, YST-355, YST-400, YST-450 and to YST- 530 are used for heavy machinery and industrial purposes.

OUR CAPACITY
2,50,000 MT
in 9 lines

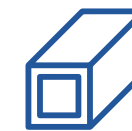
Our Product Range

Wall Thickness (mm): 0.7 - 12 | Length (m): 4 - 18



12.7 OD
457 OD

Round Pipes (mm)



15 x 15
350 x 350

Square Pipes (mm)



26 x 13
400 x 300

Rectangular Pipes (mm)

**Focussed on
engineering excellence.**



Applications of ERW Pipes

The products conform to the following national & international specifications.



Gas Pipelines

Steel Tubes for uses in Natural Gas, LPG, Domestic Gas lines (City Gas Distribution) and other Non - Toxic Gases. IS :1239



Water Pipelines

Plumbing, Sewerage Systems, STP, WTP, Fire, Plant Piping, Industrial Water lines
IS:1239, IS:3589, ASTM A 53, EN 10255, IS:4270



Highways and Warehouses

IS:4923, EN 10219, ASTM A500
IS:1161



Steel Tube for Idlers & Belt Conveyors

IS:9295

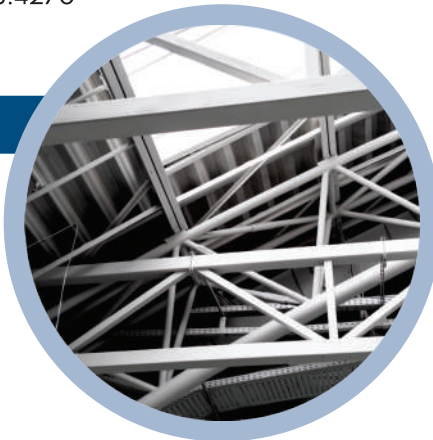
Fire Fighting system

ASTM A 53, IS:3589, IS:1239



Construction Industries

Scaffolding & Structural Purposes, Electrical Poles, Telecom Towers IS:1161, IS:4923, EN 10219 , ASTM A 500, EN 10255



Steel Tubes for Mechanical and General Engineering Purposes

Energy Projects, Sugar Industries, Automobile, AeroSpace Industries, Defence etc. IS:3601, ASTM A513

Testimony to our Capacity

"Certificate of Recognition" from Govt. of India

Management System Certificate:

1. ISO 9001:2015
2. ISO 14001:2015
3. ISO 45001:2018

Product and Marking Certificate:

1. EN 10219-1:2006-Construction Product Regulation 305/2011
2. EN 10255:2004+A1:2007-Construction Product Regulation 305/2011
3. SLS 829:2009-GI Pipes
4. AFP-3206 (Activfire) for ASTM A135/A53
5. AFP-2977 (Activfire) for AS1074
6. BIS Licenses (IS 1239 (part-1), IS 3589, IS 4270, IS 1161, IS 4923, IS 3601, IS 9295



Conforming to the highest standards
Delivering high quality

EQUIVALENT STANDARDS OF TUBES WITH APPLICATIONS

	STANDARD END USE	INDIAN	BRITISH/ EUROPEAN	AMERICAN	JAPANESE	GERMAN	AUSTRALIAN
1	Water, Gas, Steam	IS-1239	BS-1387	ASTM A-53	-	DIN-2439, 2440 & 2441	AS 1074
2	Water, Sewage	IS-3589	EN-10255	-	-	-	-
3	Structural, Scaffolding	IS-1161	"BS-1139, 6323 EN-39 EN-10219"	ASTM A-500	JIS G 3444	-	AS 1163
4	Idlers, Belt Conveyers	IS-9295	BS-6323	ASTM A-513	-	-	-
5	Water Wells, Casing	IS-4270	BS-879	-	-	-	-
6	Sectional Tubes (Sq. & Rect.)	IS-4923	-	ASTM A-500	JIS G 3466	DIN-239	AS 1163
7	Furniture Tube	IS-7138	-	-	JIS G 3445	-	-
8	Oil Pipes / Pressure	IS\ISO-3183	EN-10217	API5L	JIS G 3452	DIN-17177	-
9	Mechanical Application	IS-3601	BS-6323	-	JIS G 3445	DIN-2393	-
10	Hydro Carbon & Process Industries	IS-6286	-	-	-	-	-
11	Boiler & APH Tubes	-	BS: 3059, 6323	-	-	-	-

Introducing DFT

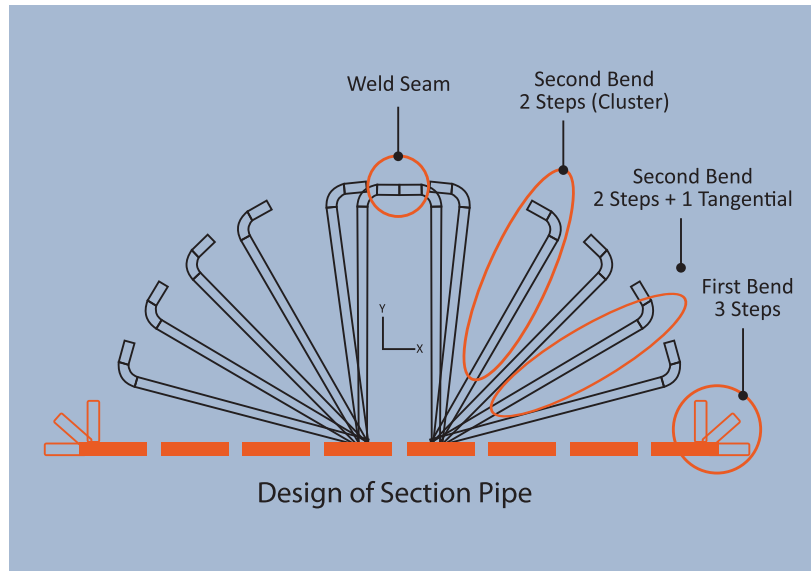
Direct Forming Technology (DFT) Tube Mill
Revolutionizing Tube Production

Welcome to the future of tube manufacturing with our Direct Forming Technology (DFT) Tube Mill. In an era where efficiency, precision, and flexibility are paramount, our DFT Tube Mill stands at the forefront of innovation, reshaping the landscape of tube production.

What sets our DFT Tube Mill apart is its revolutionary approach to tube forming. Unlike traditional methods that involve multiple steps of bending, welding, and sizing, our DFT Tube Mill employs a direct forming process that eliminates intermediate steps, resulting in seamless, high-quality tubes in a single pass.

Key Features of our DFT Tube Mill:

- 1. Single-Pass Efficiency:** With DFT, tube forming is accomplished in a single pass, minimizing handling and reducing production time significantly.
- 2. Precise Control:** Advanced automation and control systems ensure precise dimensional accuracy and consistency across every tube produced, meeting even the most stringent quality standards.
- 3. Versatility:** Our DFT Tube Mill accommodates a wide range of materials, thicknesses, and diameters, offering unparalleled versatility to meet diverse customer needs.
- 4. Cost-Effectiveness:** By eliminating the need for multiple forming and welding steps, our DFT Tube Mill reduces labor costs, energy consumption, and material waste, resulting in substantial cost savings for our customers.
- 5. Seamless Integration:** Designed for seamless integration into existing production lines, our DFT Tube Mill enables manufacturers to upgrade their capabilities without disrupting ongoing operations.
- 6. High-Speed Performance:** Equipped with cutting-edge technology and high-speed components, our DFT Tube Mill delivers superior throughput and productivity, maximizing output without compromising quality.
- 7. Quality Assurance:** Rigorous quality control measures and real-time monitoring systems ensure that every tube produced meets or exceeds customer expectations, guaranteeing satisfaction and reliability.



Information on Specification, Grades & Sizes Covered in DFT

Specification	Grades	Sizes covered in SHS	Sizes covered in RHS
IS:4923	YST 210,240	100 x 100 x 2.5 to 12.7 mm	100 x 150 x 2.5 to 12.7 mm
ASTM A500	310,355	120 x 120 x 2.5 to 12.7 mm	100 x 200 x 3 to 12.7 mm
EN 10219	A 500-Gr B C & D	135 x 135 x 2.5 to 12.7 mm	100 x 250 x 3 to 12.7 mm
	S235, S275, S355	150 x 150 x 3 to 12.7 mm	100 x 300 x 3 to 12.7 mm
	G40.20-13/	160 x 160 x 3 to 12.7 mm	120 x 200 x 3 to 12.7 mm
	G40.21-13	180 x 180 x 3 to 12.7 mm	120 x 240 x 3 to 12.7 mm
		190 x 190 x 3 to 12.7 mm	150 x 200 x 3 to 12.7 mm
		200 x 200 x 4 to 12.7 mm	150 x 250 x 4 to 12.7 mm
		220 x 220 x 4 to 12.7 mm	150 x 300 x 4 to 12.7 mm
		250 x 250 x 4 to 12.7 mm	200 x 300 x 4 to 12.7 mm
		280 x 280 x 4 to 12.7 mm	200 x 400 x 4 to 12.7 mm
		300 x 300 x 4 to 12.7 mm	300 x 400 x 4 to 12.7 mm
		350 x 350 x 4 to 12.7 mm	

Note: Sizes other than mentioned in the table can also be customized.

In conclusion, our Direct Forming Technology (DFT) Tube Mill represents a paradigm shift in tube manufacturing, offering unmatched efficiency, precision, and versatility. Embrace the future of tube production with our DFT Tube Mill and experience the transformative power of innovation in your operations. Join the ranks of industry leaders who have embraced DFT technology and stay ahead of the competition with seamless, high-quality tubes produced with unmatched speed and efficiency.

Circular Hollow Sections (CHS) An Introduction

The most versatile product, our Circular steel hollow sections are made by ERW process using high quality steel HR coils. Having the widest range of sizes ranging from 12.7OD to 406.4OD with thickness up to 12mm, MKK continually works on developing unique sizes for special applications.

Yield Strength



170 MPa to 800 MPa

Certified by BIS ISI mark



IS 1161, IS 3589, IS 3601, IS 4270, IS 9295, IS 1239-1

In-house Quality Checks



On-line Eddy-Current & Off-line chemical (spectrometer) & mechanical properties checks, Hydro-Testing, UT, RT(On Demand)

Applications:

- ✓ Airport Terminals, Aero-bridges and Metro Stations
- ✓ Industrial and Commercial Shed structures
- ✓ Lifting and Excavation Industries
- ✓ Bus Bodies and Automobile Industries
- ✓ Transmission Line Towers
- ✓ Highway Cantilever Structures



Circular Hollow Sections (CHS)

TECHNICAL DATA FOR STEEL TUBES FOR STRUCTURAL PURPOSES,
CONFORMING TO IS:1161 - 2014 EQUIVALENT TO BS:1775 - 64

NOMINAL BORE & SERIES		OUTSIDE DIAMETER			WALL THICKNESS		NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	in	Max	Mean	Min	mm	swg	kg/mtr	mts/t	kgs/20'	pcs/mt
15	1/2"	21.7	21.3	20.5	2.0	14	0.95	1053	5.8	173
15	1/2"	21.7	21.3	20.5	2.6	12	1.20	833	7.3	137
15	1/2"	21.7	21.3	20.5	3.2	10	1.43	699	8.7	115
20	3/4"	27.3	26.9	26.1	2.3	13	1.40	714	8.5	117
20	3/4"	27.3	26.9	26.1	2.6	12	1.56	641	9.5	105
20	3/4"	27.3	26.9	26.1	3.2	10	1.87	535	11.4	88
25	1"	34.1	33.7	32.9	2.6	12	1.99	503	12.1	82
25	1"	34.1	33.7	32.9	3.2	10	2.41	415	14.7	68
25	1"	34.1	33.7	32.9	4.0	8	2.93	341	17.9	56
32	1.1/4"	42.8	42.4	41.6	2.6	12	2.55	392	15.5	64
32	1.1/4"	42.8	42.4	41.6	3.2	10	3.09	324	18.8	53
32	1.1/4"	42.8	42.4	41.6	4.0	8	3.79	264	23.1	43
40	1.1/2"	48.7	48.3	47.5	2.9	11	3.25	308	19.8	50
40	1.1/2"	48.7	48.3	47.5	3.2	10	3.56	281	21.7	46
40	1.1/2"	48.7	48.3	47.5	4.0	8	4.37	229	26.6	38
50	2"	60.9	60.3	59.7	2.9	11	4.11	243	25.1	40
50	2"	60.9	60.3	59.7	3.6	9	5.03	199	30.7	33
50	2"	60.9	60.3	59.7	4.5	7	6.19	162	37.7	27
65	2.1/2"	76.8	76.1	75.3	2.9	11	5.24	191	31.9	31
65	2.1/2"	76.8	76.1	75.3	3.6	9	6.44	155	39.3	25
65	2.1/2"	76.8	76.1	75.3	4.5	7	7.95	126	48.5	21
80	3"	89.8	88.9	88.0	3.2	10	6.76	148	41.2	24
80	3"	89.8	88.9	88.0	4.0	8	8.38	119	51.1	20
80	3"	89.8	88.9	88.0	4.8	6	9.96	100	60.7	16
90	3.1/2"	102.6	101.6	100.6	3.6	9	8.70	115	53.0	19
90	3.1/2"	102.6	101.6	100.6	4.0	8	9.63	104	58.7	17
90	3.1/2"	102.6	101.6	100.6	4.8	6	11.46	87	69.9	14
100	4"	115.4	114.3	113.2	3.6	9	9.83	102	59.9	17
100	4"	115.4	114.3	113.2	4.5	7	12.19	82	74.3	13
100	4"	115.4	114.3	113.2	5.4	5	14.50	69	88.4	11
110	4.1/4"	128.3	127.0	125.7	4.5	7	13.59	74	82.8	12
110	4.1/4"	128.3	127.0	125.7	4.8	6	14.47	69	88.2	11
110	4.1/4"	128.3	127.0	125.7	5.4	5	16.19	62	98.7	10
125	5"	141.1	139.7	138.5	4.5	7	15.00	67	91.4	11
125	5"	141.1	139.7	138.5	4.8	6	15.97	63	97.4	10
125	5"	141.1	139.7	138.5	5.4	5	17.89	56	109.1	9
135	5.1/4"	153.9	152.4	150.9	4.5	7	16.41	61	100.0	10
135	5.1/4"	153.9	152.4	150.9	4.8	6	17.47	57	106.5	9
135	5.1/4"	153.9	152.4	150.9	5.4	5	19.58	51	119.4	8

Tolerance

Thickness (All Sizes) : ± 10% Mass (Per Load of 10T minimum) : ± 10%
 Mass (Single Tube) : ± 10% Length (m) : 4 - 12

Circular Hollow Sections (CHS)

TECHNICAL DATA FOR STEEL TUBES FOR STRUCTURAL PURPOSES,
CONFORMING TO IS:1161 - 2014 EQUIVALENT TO BS:1775 - 64

NOMINAL BORE & SERIES		OUTSIDE DIAMETER			WALL THICKNESS		NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	in	Max	Mean	Min	mm	swg	kg/mtr	mts/t	kgs/20'	pcs/mt
150	6"	166.8	165.1	163.4	4.5	7	17.82	56	108.6	9
150	6"	166.8	165.1	163.4	4.8	6	18.98	53	115.7	9
150	6"	166.8	165.1	163.4	5.4	5	21.27	47	129.7	8
150	6"	166.8	165.1	163.4	5.9	4	23.20	43	141.4	7
150	6"	166.8	165.1	163.4	6.3	3	24.67	41	150.4	7
150	6"	166.8	165.1	163.4	8.0	0	30.99	32	188.9	5
150	6"	170.0	168.3	166.6	4.5	7	18.18	55	110.8	9
150	6"	170.0	168.3	166.6	4.8	6	19.35	52	118.0	8
150	6"	170.0	168.3	166.6	5.4	5	21.69	46	132.2	8
150	6"	170.0	168.3	166.6	6.3	3	25.17	40	153.4	7
150	6"	170.0	168.3	166.6	8.0	0	31.63	32	192.8	5
150	6"	170.0	168.3	166.6	10.0	0	39.04	26	238.0	4
175	7"	195.6	193.7	191.8	4.8	6	22.36	45	136.3	7
175	7"	195.6	193.7	191.8	5.4	5	25.08	40	152.9	7
175	7"	195.6	193.7	191.8	5.9	4	27.33	37	166.6	6
175	7"	195.6	193.7	191.8	6.3	3	29.12	34	177.5	6
175	7"	195.6	193.7	191.8	8.0	0	36.64	27	223.4	4
175	7"	195.6	193.7	191.8	10.0	0	45.30	22	276.1	4
200	8"	221.3	219.1	216.9	4.8	6	25.37	39	154.7	6
200	8"	221.3	219.1	216.9	5.6	5	29.49	34	179.8	6
200	8"	221.3	219.1	216.9	5.9	4	31.02	32	189.1	5
200	8"	221.3	219.1	216.9	6.3	3	33.06	30	201.5	5
200	8"	221.3	219.1	216.9	8.0	0	41.65	24	253.9	4
200	8"	221.3	219.1	216.9	10.0	0	51.57	19	314.4	3
225	9"	246.9	244.5	242.1	5.9	4	34.72	29	211.7	5
225	9"	246.9	244.5	242.1	6.3	3	37.01	27	225.6	4
225	9"	246.9	244.5	242.1	8.0	0	46.66	21	284.4	4
225	9"	246.9	244.5	242.1	10.0	0	57.83	17	352.5	3
250	10"	275.7	273.0	270.3	5.9	4	38.86	26	236.9	4
250	10"	275.7	273.0	270.3	6.3	3	41.44	24	252.6	4
250	10"	275.7	273.0	270.3	8.0	0	52.28	19	318.7	3
250	10"	275.7	273.0	270.3	10.0	0	64.86	15	395.4	3
300	12"	327.1	323.9	320.7	6.3	3	49.34	20	300.8	3
300	12"	327.1	323.9	320.7	8.0	0	62.32	16	379.9	3
300	12"	327.1	323.9	320.7	10.0	0	77.41	13	471.9	2
300	12"	327.1	323.9	320.7	12.0	0	92.30	11	562.7	2
350	14"	359.2	355.6	352.0	8.0	0	68.58	15	418.1	2
350	14"	359.2	355.6	352.0	10.0	0	85.23	12	519.6	2
350	14"	359.2	355.6	352.0	12.0	0	101.68	10	619.8	2

Tolerance

Thickness (All Sizes) : ± 10% Mass (Per Load of 10T minimum) : ± 7.5%
 Mass (Single Tube) : ± 10% Length (m) : 4 - 7

Circular Hollow Sections (CHS)

TECHNICAL DATA FOR STEEL PIPES FOR WATER AND SEWAGE, CONFORMING TO IS:3589 - 2001								
OUTSIDE DIAMETER			WALL THICKNESS		NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	swg	kg/mtr	mts/t	kgs/20'	pcs/mt
169.56	168.3	167.03	2.6	12	10.60	94	64.62	15
			3.2	10	12.00	83	73.15	14
			4.0	8	16.20	62	98.76	10
			4.5	7	18.20	55	110.95	9
220.74	219.1	217.45	2.6	12	13.90	72	84.73	12
			3.6	9	19.10	52	116.43	9
			4.5	7	23.80	42	145.08	7
			6.3	3	33.10	30	201.78	5
275.04	273.0	270.95	3.6	9	23.90	42	145.69	7
			4.0	8	26.50	38	161.54	6
			5.0	6	33.00	30	201.17	5
			6.3	3	41.10	24	250.55	4
326.32	323.9	321.47	4.0	8	31.80	31	193.85	5
			4.5	7	35.40	28	215.80	5
			5.6	5	44.00	23	268.22	4
			7.1	2	55.50	18	338.33	3
358.26	355.6	352.93	4.0	8	34.70	29	211.53	5
			5.0	6	43.20	23	263.35	4
			5.6	5	48.30	21	294.44	3
			8.0	0	68.60	15	418.19	2
409.44	406.4	403.35	4.0	8	39.70	25	242.01	4
			5.0	6	49.50	20	301.75	3
			6.3	3	62.20	16	379.17	3
			8.8	0	86.30	12	526.08	2
460.42	457.0	453.57	4.0	8	44.70	22	272.49	4
			5.0	6	55.70	8	339.55	3
			6.3	3	70.00	14	426.72	2
			10.0	0	110.00	9	670.56	1
Manufacturing Tolerance shall be permitted on Thickness +/- 10 percent								
Hydrostatic Test Pressure is 5 Mpa								
We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.								

Circular Hollow Sections (CHS)

TECHNICAL DATA FOR STEEL TUBES USED FOR WATER WELLS (CASING PIPES), CONFORMING TO IS:4270 - 2001									
NOMINAL BORE	OUTSIDE DIAMETER			WALL THICKNESS		NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	Max	Mean	Min	mm	swg	kg/mtr	mts/t	kgs/20'	pcs/mt
100	113.2	114.3	115.4	5.00	6	13.48	74	82.17	12
125	139.9	141.3	142.7	5.00	6	16.80	60	102.41	10
150	166.6	168.3	170.0	5.00	6	20.13	50	122.71	8
175	191.8	193.7	195.6	5.40	5	25.10	40	153.01	7
200	216.9	219.1	221.3	5.40	5	28.46	35	173.49	6
225	242.1	244.5	246.9	6.00	4	35.29	28	215.13	5
250	270.4	273.1	275.8	7.10	2	46.57	21	283.89	4
300	320.7	323.9	327.1	7.10	2	55.47	18	338.15	3
350	352.0	355.6	359.2	8.00	0	68.57	15	418.00	2
350	352.0	355.6	359.2	10.00	0	85.22	12	519.50	2
350	352.0	355.6	359.2	12.00	0	101.67	10	619.78	2
400	402.3	406.4	410.5	8.00	0	78.60	13	479.15	2
400	402.3	406.4	410.5	10.00	0	97.75	10	595.88	2
400	402.3	406.4	410.5	12.00	0	116.71	9	711.46	2
450	452.4	457.0	461.6	10.00	0	110.28	9	672.27	1
450	452.4	457.0	461.6	12.00	0	131.74	8	803.09	1
Manufacturing Tolerance shall be permitted on Thickness +15% / -12.5%									
Tolerance shall be permitted on Mass +10% / -8%									
Hydrostatic test pressure is 7MPa									
The Plain end pipes shall be supplied with both ends bevelled or both ends square cut or one end bevelled and one square cut as required by the purchaser.									
We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.									

Circular Hollow Sections (CHS)

TECHNICAL DATA FOR STEEL TUBES FOR IDLERS FOR BELT CONVEYORS, CONFORMING TO IS:9295 - 1983

OUTSIDE DIAMETER			WALL THICKNESS		NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	swg	kg/mtr	mts/t	kgs/20'	pcs/mt
64.01	63.5	62.99	3.65	9	5.39	186	32.86	30
			4.50	7	6.55	153	39.93	25
			4.50	7	7.95	126	48.46	21
76.71	76.1	75.49	3.65	9	6.52	153	39.75	25
			4.50	7	7.95	126	48.46	21
			5.00	6	8.77	114	53.46	19
89.61	88.9	88.19	4.05	8	8.47	118	51.63	19
			4.85	6	10.05	100	61.26	16
			6.30	3	12.83	78	78.21	13
102.41	101.6	100.79	4.05	8	9.74	103	59.38	17
			4.85	6	11.57	86	70.53	14
			6.30	3	14.81	68	90.28	11
115.21	114.3	113.39	4.50	7	12.19	82	74.31	13
			5.40	5	14.50	69	88.39	11
			6.30	3	16.78	60	102.29	10
128.02	127.0	125.98	4.50	7	13.60	74	82.91	12
			4.85	6	14.61	68	89.06	11
			5.40	5	16.10	62	98.15	10
134.06	133.0	131.94	4.50	7	14.30	70	87.17	11
			4.85	6	15.33	65	93.45	11
			5.40	5	16.99	59	103.57	10
140.82	139.7	138.58	4.50	7	15.00	67	91.44	11
			4.85	6	16.13	62	98.33	10
			5.40	5	17.89	56	109.06	9
153.62	152.4	151.18	4.50	7	16.40	61	99.97	10
			4.85	6	17.65	57	107.59	9
			5.40	5	19.58	51	119.36	8
160.27	159.0	157.73	4.50	7	17.10	58	104.24	10
			4.85	6	18.44	54	112.41	9
			5.40	5	20.46	49	124.72	8
166.42	165.1	163.78	4.50	7	17.80	56	108.51	9
			4.85	6	19.17	52	116.86	9
			5.40	5	21.27	47	129.66	8
169.65	168.3	166.95	4.50	7	18.20	55	110.95	9
			4.85	6	19.55	51	119.18	8
			5.40	5	21.69	46	132.22	8
195.25	193.7	192.15	4.50	7	23.30	43	142.04	7
			5.40	5	25.10	40	153.01	7
			6.30	3	29.12	34	177.52	6
220.85	219.1	217.35	7.10	2	32.67	31	199.16	5
			5.40	5	28.50	35	173.74	6
			6.30	3	33.06	30	201.53	5
			7.10	2	37.12	27	226.28	4



Tolerance

Thickness (All Sizes) : ± 10%

Ovality Below 168.3 mm is 0.5 mm

Ovality including 168.3 mm and above is 1.0 mm

We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.

Circular Hollow Sections (CHS)

NON- ALLOY STEEL TUBES SUITABLE FOR WELDING AND THREADING CONFIRMING TO EN 10255, TYPE L1

SPECIFIED OUTSIDE DIAMETER	DESIGNATION OF THREAD	OUTSIDE DIAMETER		WALL Thickness	NOMINAL MASS OF STEEL TUBES							
		Max.	Min		Plain End				Threaded & Socketed			
		mm	-	mm	mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt	kg/mtr	mts/t
21.3	1/2	21.7	21.0	2.3	1.08	926	6.58	152	1.09	917	6.64	150
26.9	3/4	27.1	26.4	2.3	1.39	719	8.47	118	1.40	714	8.53	117
33.7	1	34.0	33.2	2.9	2.20	455	13.41	75	2.22	450	13.53	74
42.4	1 1/4	42.7	41.9	2.9	2.82	355	17.19	58	2.85	351	17.37	58
48.3	1 1/2	48.6	47.8	2.9	3.24	309	19.75	51	3.28	305	19.99	50
60.3	2	60.7	59.6	3.2	4.49	223	27.37	37	4.56	219	27.80	36
76.1	2 1/2	76.3	75.2	3.2	5.73	175	34.93	29	5.85	171	35.66	28
88.9	3	89.4	87.9	3.6	7.55	132	46.02	22	7.72	130	47.06	21
114.3	4	114.9	113.0	4.0	10.80	93	65.84	15	11.10	90	67.67	15

NON- ALLOY STEEL TUBES SUITABLE FOR WELDING AND THREADING CONFIRMING TO EN 10255, TYPE L2

SPECIFIED OUTSIDE DIAMETER	DESIGNATION OF THREAD	OUTSIDE DIAMETER		WALL Thickness	NOMINAL MASS OF STEEL TUBES							
		Max.	Min		Plain End				Threaded & Socketed			
		mm	-	mm	mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt	kg/mtr	mts/t
21.3	1/2	21.4	21.0	2.0	0.95	1056	5.77	173	0.96	1046	5.83	172
26.9	3/4	26.9	26.4	2.3	1.38	725	8.41	119	1.39	719	8.47	118
33.7	1	33.8	33.2	2.6	1.98	505	12.07	83	2.00	500	12.19	82
42.4	1 1/4	42.5	41.9	2.6	2.54	394	15.48	65	2.57	389	15.67	64
48.3	1 1/2	48.4	47.8	2.9	3.23	310	19.69	51	3.27	306	19.93	50
60.3	2	60.2	59.6	2.9	4.08	245	24.87	40	4.15	241	25.30	40
76.1	2 1/2	76.0	75.2	3.2	5.71	175	34.81	29	5.83	172	35.54	28
88.9	3	88.7	87.9	3.2	6.72	149	40.97	24	6.89	145	42.00	24
114.3	4	113.9	113.0	3.6	9.75	103	59.44	17	10.00	100	60.96	16

Manufacturing Tolerance

THICKNESS	- 8% with the plus tolerance limited by the mass tolerance
RANDOM LENGTH	4 to 16 Mtrs (10 % of sections supplied may be below the minimum for the ordered range but not shorter than 75 % of the minimum range length).
MASS	+10% / -8% on Individual Tubes
LEAK TEST	Hydrostatic Test at a minimum of 50 bar for atleast 5 seconds or an Electro magnetic test

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.

Circular Hollow Sections (CHS)

TECHNICAL DATA FOR COLD FORMED WELDED CIRCULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS, CONFIRMING TO EN 10219

OUTSIDE DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20'	pcs/mtr
21.8	21.3	20.8	2	0.95	1053	5.79	173
			2.5	1.16	862	7.07	141
			3	1.35	741	8.23	122
27.4	26.9	26.4	2	1.23	813	7.50	133
			2.5	1.5	667	9.14	109
			3	1.77	565	10.79	93
34.2	33.7	33.2	2	1.56	641	9.51	105
			2.5	1.92	521	11.70	85
			3	2.27	441	13.84	72
42.9	42.4	41.9	2	1.99	503	12.13	82
			2.5	2.46	407	15.00	67
			3	2.91	344	17.74	56
			4	3.79	264	23.10	43
48.8	48.3	47.8	2	2.28	439	13.90	72
			2.5	2.82	355	17.19	58
			3	3.35	299	20.42	49
			4	4.37	229	26.64	38
			5	5.34	187	32.55	31
60.9	60.3	59.7	2	2.88	347	17.56	57
			2.5	3.56	281	21.70	46
			3	4.24	236	25.85	39
			4	5.55	180	33.83	30
			5	6.82	147	41.57	24
76.9	76.1	75.3	2	3.65	274	22.25	45
			2.5	4.54	220	27.68	36
			3	5.41	185	32.98	30
			4	7.11	141	43.34	23
			5	8.77	114	53.46	19
			6	10.4	96	63.40	16
			6.3	10.8	93	65.84	15
89.8	88.9	88.0	2	4.29	233	26.15	38
			2.5	5.33	188	32.49	31
			3	6.36	157	38.77	26

TECHNICAL DATA FOR COLD FORMED WELDED CIRCULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS, CONFIRMING TO EN 10219

OUTSIDE DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20'	pcs/mtr
			4	8.38	119	51.08	20
			5	10.3	97	62.79	16
			6	12.3	81	74.98	13
			6.3	12.8	78	78.03	13
102.6	101.6	100.6	2	4.91	204	29.93	33
			2.5	6.11	164	37.25	27
			3	7.29	137	44.44	23
			4	9.63	104	58.70	17
			5	11.9	84	72.54	14
			6	14.1	71	85.95	12
			6.3	14.8	68	90.22	11
115.4	114.3	113.2	2.5	6.89	145	42.00	24
			3	8.23	122	50.17	20
			4	10.9	92	66.45	15
			5	13.5	74	82.30	12
			6	16	63	97.54	10
			6.3	16.8	60	102.41	10
			8	21	48	128.02	8
141.1	139.7	138.3	3	10.1	99	61.57	16
			4	13.4	75	81.69	12
			5	16.6	60	101.19	10
			6	19.8	51	120.70	8
			6.3	20.7	48	126.19	8
			8.0	26	38	158.50	6
			10	32	31	195.07	5
170.0	168.3	166.6	3	12.2	82	74.37	13
			4	16.2	62	98.76	10
			5	20.1	50	122.53	8
			6	24	42	146.30	7
			6.3	25.2	40	153.62	7
			8	31.6	32	192.63	5
			10	39	26	237.74	4
179.6	177.8	176.0	4	17.1	58	104.24	10

Circular Hollow Sections (CHS)

TECHNICAL DATA FOR COLD FORMED WELDED CIRCULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS, CONFIRMING TO EN 10219

OUTSIDE DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20'	pcs/mtr
			5	21.3	47	129.84	8
			6	25.4	39	154.84	6
			6.3	26.6	38	162.15	6
			8.0	33.5	30	204.22	5
			10	41.4	24	252.37	4
			12	49.1	20	299.31	3
			12.5	51	20	310.90	3
195.6	193.7	191.8	4	18.7	53	114.00	9
			5	23.3	43	142.04	7
			6.0	27.8	36	169.47	6
			6.3	29.1	34	177.39	6
			8	36.6	27	223.11	4
			10	45.3	22	276.15	4
			12	53.8	19	327.96	3
			12.5	55.9	18	340.77	3
221.3	219.1	216.9	4	21.2	47	129.24	8
			5.0	26.4	38	160.93	6
			6	31.5	32	192.02	5
			6.3	33.1	30	201.78	5
			8	41.6	24	253.59	4
			10	51.6	19	314.55	3
			12	61.3	16	373.68	3
			12.5	63.7	16	388.32	3
246.9	244.5	242.1	5	29.5	34	179.83	6
			6	35.3	28	215.19	5
			6.3	37	27	225.55	4
			8	46.7	21	284.68	4
			10	57.8	17	352.35	3
			12	68.8	15	419.40	2
			12.5	71.5	14	435.86	2
275.7	273	270.3	5	33	30	201.17	5
			6	39.5	25	240.79	4
			6.3	41.4	24	252.37	4

TECHNICAL DATA FOR COLD FORMED WELDED CIRCULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS, CONFIRMING TO EN 10219

OUTSIDE DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20'	pcs/mtr
			8	52.3	19	318.82	3
			10	64.9	15	395.63	3
			12	77.2	13	470.61	2
			12.5	80.3	12	489.51	2
327.1	323.9	320.7	5	39.3	25	239.57	4
			6	47	21	286.51	3
			6.3	49.3	20	300.53	3
			8	62.3	16	379.78	3
			10	77.4	13	471.83	2
			12	92.3	11	562.66	2
			12.5	96	10	585.22	2
359.2	355.6	352.0	5	43.2	23	263.35	4
			6	51.7	19	315.16	3
			6.3	54.3	18	331.01	3
			8	68.6	15	418.19	2
			10	85.2	12	519.38	2
			12	102	10	621.79	2
			12.5	106	9	646.18	2
410.5	406.4	402.3	6	59.2	17	360.88	3
			6.3	62.2	16	379.17	3
			8	78.6	13	479.15	2
			10	97.8	10	596.19	2
			12	117	9	713.23	1
			12.5	121	8	737.62	1
461.6	457	452.4	6	66.7	15	406.60	2
			6.3	70	14	426.72	2
			8	88.6	11	540.11	2
			10.0	110	9	670.56	1
			12	132	8	804.67	1
			12.5	137	7	835.15	1

Following Manufacturing Tolerance shall be permitted

Thickness	Mass	Length Random length / Unless Otherwise Specified	Straightness
For D ≤ 406.4 mm: T ≤ 5 mm ± 10 % T > 5 mm ± 0.5 mm For D > 406.4 mm: ± 10 %	± 6 % on individual delivered lengths	"4-16 Mtrs (10 % of sections supplied may be below the min. for the ordered range but not shorter than 75 % of the min. range length).	0.20 % of total length and 3 mm over any 1 m length

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarring (internal weld fin removal) as per customer requirement.

Following Manufacturing Tolerance shall be permitted

Thickness	Mass	Length Random length / Unless Otherwise Specified	Straightness
For D ≤ 406.4 mm: T ≤ 5 mm ± 10 % T > 5 mm ± 0.5 mm For D > 406.4 mm: ± 10 %	± 6 % on individual delivered lengths	"4-16 Mtrs (10 % of sections supplied may be below the min. for the ordered range but not shorter than 75 % of the min. range length).	0.20 % of total length and 3 mm over any 1 m length

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarring (internal weld fin removal) as per customer requirement.

Circular Hollow Sections (CHS)

Pipes Conforming to ASTM A795/ASTM A135

This specification covers Black and Zinc-Coated (Hot-Dipped Galvanized) welded steel pipe in use for fire protection systems. Dimensions, Weights, and Test Pressure For Light-Weight Fire Protection Pipe-Schedule 10

NPS DESIGNATOR	OUTSIDE DIAMETER mm	DIAMETER TOLERANCE		STANDARD THICKNESS		SCHEDULE	WEIGHT		TEST PRESSURE	
		min	max	mm	inch		mm	lb/ft	(psi)	kPa
¾	26.7	26.3	27.1	2.11	0.083	10	1.28	0.86	700	4800
1	33.4	33	33.8	2.77	0.109	10	2.09	1.41	700	4800
1¼	42.2	41.8	42.6	2.77	0.109	10	2.69	1.81	1000	6900
1½	48.3	47.9	48.7	2.77	0.109	10	3.11	2.09	1000	6900
2	60.3	59.7	60.9	2.77	0.109	10	3.93	2.64	1000	6900
2½	73	72.27	73.73	3.05	0.12	10	5.26	3.53	1000	6900
3	88.9	88.01	89.79	3.05	0.12	10	6.46	4.34	1000	6900
3½	101.6	100.58	102.62	3.05	0.12	10	7.41	4.98	1200	8300
4	114.3	113.16	115.44	3.05	0.12	10	8.37	5.62	1200	8300
5	141.3	139.89	142.71	3.4	0.134	10	11.58	7.78	1200	8300
6	168.3	166.62	169.98	3.4	0.134	10	13.85	9.3	1000	6900
8	219.1	216.91	221.29	4.78	0.188	10	25.26	16.96	800	5500
10	273	270.27	275.73	4.78	0.188	10	31.62	21.23	700	4800

Chemical Composition (Maximum)

Grade	C%	Manganese	Mn%	P%	S%
A	0.25	0.95	0.50	0.035	0.035
B	0.3	1.2	1.2	0.035	0.035

Mechanical Properties

	Grade A	Grade B
YieldStrength	205 Mpa (Min)	240 Mpa (Min)
TensileStrength	330 Mpa (Min)	415 Mpa (Min)

Technical Details

Characteristics	Tolerances & Technical details
Outside Diameter	NPS 1½ [DN 40] and under ± 0.016 inch [0.41 mm] & NPS 2 [DN 50] and over ± 1% of OD
Thickness	-12.5% of specific wall thickness.
Weight	For each tube ± 5% of standard weight.
Heat Treatment	The weld seam of pipe in Grade B shall be heat treated after welding to a minimum of 1000°F [540°C] so that no untempered martensite remains.
Flattening Test	Keep the weld at 0° or 90° from the line of direction of force and flatten upto 66% of OD, No cracks or breaks are allowed on the weld. Further flatten upto 33% of OD, No cracks or breaks are allowed in the material and during third step, Evidence of laminated or unsound material or of incomplete weld that is revealed during the entire flattening test shall be cause for rejection. Each length of pipe shall be tested by hydrostatic test without leakage through the pipe wall.
Hydro Test	Each length of pipe size 2NPS (50DN) and larger shall be tested by Eddy-Current Test.
Nondestructive Test	Average of two specimens 460 gm/ mtr² & Individual specimen not less than 400 gm/ mtr².
Mass of Zinc Coating	Black & Galvanized coating as per Customer requirement.
Surface Protection	Pipe shall be finished with Square cut (plain End), Beval End (30° -0/+5°), Roll Groove & Threading.
Threading	All threads shall be in accordance with the gaging practice and tolerances of ASME B1.20.1
Marking (Stenciling)	METPRO, Specification designation, Grade, Outside diameter, Thickness, Process of manufacturing & Heat No." on pipe and anything specific as per customer requirement.

Circular Hollow Sections (CHS)

PIPES CONFORMING TO ASTM A - 53 GR A & B											
NPS DESIGNATOR	DN DESIGNATOR	OUTSIDE DIAMETER		SCHEDULE NO.	THICKNESS		MASS OF PLAIN END PIPE		HYDROSTATIC TEST PRESSURE		PIECES/BUNDLE
		inch	mm		mm	inch	mm	lb/ft.	Kg/mtr.	Grade A-Mpa	
½	15	0.840	21.3	40	0.109	2.77	0.850	1.27	4.8	4.8	120
¾	20	1.050	26.7	40	0.113	2.87	1.130	1.69	4.8	4.8	84
1	25	1.315	33.4	40	0.133	3.38	1.680	2.50	4.8	4.8	60
1¼	32	1.660	42.2	40	0.140	3.56	2.270	3.39	8.3	9.0	42
1½	40	1.900	48.3	40	0.145	3.68	2.720	4.05	8.3	9.0	36
2	50	2.375	60.3	40	0.154	3.91	3.660	5.44	15.9	17.2	26
2½	65	2.874	73.0	40	0.203	5.16	5.800	8.63	17.2	17.2	18
3	80	3.500	88.9	40	0.216	5.49	7.580	11.29	15.3	17.2	14
4	100	4.500	114.3	40	0.237	6.02	10.800	16.07	13.1	15.2	10
5	125	5.563	141.3	40	0.258	6.55	14.630	21.77	11.5	13.4	7
6	150	6.625	168.3	40	0.280	7.11	18.990	28.26	10.5	12.3	7
8	200	8.625	219.1	20	0.250	6.35	22.380	33.31	7.2	8.4	-
8	200	8.625	219.1	40	0.322	8.18	28.580	42.55	9.2	10.8	-
10	250	10.750	273.1	20	0.250	6.35	28.060	41.75	5.8	6.8	-
10	250	10.750	273.1	40	0.365	9.27	40.520	60.29	8.4	9.9	-
12	300	12.750	323.9	20	0.250	6.35	33.410	49.71	4.9	5.7	-
12	300	12.750	323.9	30	0.330	8.38	43.810	65.18	6.4	7.5	-
12	300	12.750	323.9	STD	0.375	9.52	49.610	73.78	7.3	8.5	-
12	300	12.750	323.9	40	0.406	10.31	53.570	79.70	7.9	9.2	-
14	350	14.000	355.6	10	0.250	6.35	36.750	54.69	4.4	5.2	-
14	350	14.000	355.6	30	0.375	9.52	54.620	81.25	6.6	7.7	-
14	350	14.000	355.6	40	0.438	11.13	63.500	94.55	7.8	9.0	-
16	400	16.000	406.4	10	0.250	6.35	42.090	62.64	3.9	4.5	-
16	400	16.000	406.4	30	0.375	9.52	62.640	93.17	5.8	6.8	-
16	400	16.000	406.4	40	0.500	12.70	82.850	123.30	7.7	9.0	-

Tolerance

Outside Diameter	Pipe size upto & including DN 40 : ± 0.4 mm of OD Pipe size DN 50 or larger : ± 1% of OD
Thickness	-12.5% (max) / + not specified
Weight	+ / - 10%

Mechanical Properties

	Grade A	Grade B
YieldStrength	205 Mpa (Min)	240 Mpa (Min)
TensileStrength	330 Mpa (Min)	415 Mpa (Min)
Elongation	As per ASTM A-53	As per ASTM A-53

Chemical Composition (Maximum%)

Grade	Carbon	Manganese	Phosphorus	Sulphur	Copper	Nickel	Chromium	Molybdenum	Vanadium
GradeA	0.25	0.95	0.05	0.045	0.4	0.4	0.4	0.15	0.08
GradeB	0.3	1.2	0.05	0.045	0.4	0.4	0.4	0.15	0.08

Galvanizing

As per ASTM A-53 with test method ASTM A90 / A90M	
Min. of any surface of specimen	0.400 Kg/Mtr² (55 microns approx)
Average of one specimens	0.490 Kg/Mtr² (70 microns approx)
Average of two specimens	0.550 Kg/Mtr² (79 microns approx)

Testing

Online NDT	For pipes NPS 2 (DN 50) or larger Weld seam of each pipe shall be tested by eddy current
Bend Test	For pipe upto & including DN 50 Bending Angle 90° Bending Radius 12 times to the OD of tube (no cracks in the body & weld)
Flattening (0° & 90°)	For pipes over DN 50 1. Flatten upto 2/3 of OD for ductility of weld 2. Flatten upto 1/3 of OD for ductility of weld 3. Full flattening for testing of lamination or unsound material

Marking/Stenciling

Online stenciling as per the standard & client requirements.

Comprehensive Size Range for CHS

SIZE/ THK	1.6	2.0	2.2	2.6	2.9	3.2	3.6	4.0	4.5	4.8	5.0	5.4	6.0	8.0	10.0	12.0
12.7 OD																
15.8OD																
19.05OD																
21.3OD																
25.4OD																
26.9OD																
31.75OD																
33.7OD																
38.1OD																
40OD																
42.4OD																
45OD																
48.3OD																
50.8OD																
53OD																
60.3OD																
63.5OD																
76.1OD																
88.9OD																
101.6OD																
112.5OD																
114.3OD																
127OD																
133OD																
139.7OD																
152.4OD																
159OD																
165.1OD																
168.3OD																
174OD																
193.7OD																
219.1OD																
244.5OD																
273OD																
323.9OD																
355OD																
406OD																
457OD																

Technical Data of Pipes

Pipes Conforming to ASTM A500

(Cold-formed welded carbon steel round, square & rectangular shape structural tubing for welded, riveted, or bolted construction of bridges and buildings, and for general structural purposes)

RECTANGLE HOLLOW SECTIONS		SQUARE HOLLOW SECTIONS		CIRCULAR HOLLOW SECTIONS		CIRCULAR HOLLOW SECTIONS	
Nominal Size	Thickness Range	Nominal Size	Thickness Range	Nominal Size	Thickness Range	Nominal Size	Thickness Range
30x20	1.2mm - 2.5 mm	20x20	1mm - 2.5mm	21.3	1 mm - 2.5 mm	48.3	1.2 mm - 4.5 mm
40x20	1.2 mm - 2.9 mm	25x25	1.2 mm - 3.0 mm	22.2	1 mm - 2.5 mm	50.8	1.2 mm - 4.5 mm
40x25	1.2 mm - 3.0 mm	30x30	1.2mm - 3.5mm	25.4	1 mm - 3.5 mm	60.3	1.6 mm - 5.0 mm
40x30	1.2mm - 2.5 mm	31.75x31.75	1.2mm - 3.5mm	26.9	1 mm - 3.5 mm	63.5	1.6 mm - 5.0 mm
50x25	1.2mm - 3.2 mm	40x40	1.2mm - 3.5mm	28.6	1 mm - 3.5 mm	69.9	1.8 mm - 5.0 mm
50x30	1.2mm - 3.5mm	50x50	1.6mm - 4.0 mm	31.8	1 mm - 3.5 mm	73.0	1.8 mm - 5.0 mm
60x30	1.6mm - 3.5mm	60x60	1.6mm - 4.0 mm	33.7	1.2 mm - 4.0 mm	76.1	1.8 mm - 5.0 mm
50x40	1.6mm - 3.5mm	70x70	2.0mm - 3.8mm	38.1	1.2 mm - 4.0 mm	88.9	1.8 mm - 5.0 mm
60x40	1.6mm - 4.0 mm	80x80	2.3mm - 4.0mm	40.0	1.2 mm - 4.0 mm	101.6	2.0 mm - 5.0 mm
75x25	1.6mm - 2.5 mm	90x90	2.3mm - 5.0mm	42.4	1.2 mm - 4.0 mm	114.3	2.3 mm - 5.0 mm
80x40	1.6mm - 4.0 mm	101.6x101.6	2.5mm - 3.0mm	44.5	1.2 mm - 4.0 mm		
80x50	1.8mm - 4.0 mm						
90x50	2.0mm - 3.8mm						
96x48	2.0mm - 3.8mm						
100x50	2.0mm - 3.8mm						
120x60	2.3mm - 5.0mm						

Chemical Composition (Maximum)

ELEMENTS	GRADE A & B		GRADE C	
	HEAT ANALYSIS	PRODUCT ANALYSIS	HEAT ANALYSIS	GRADE A & B
Carbon(Maximum)	0.26	0.3	0.23	0.27
Manganese(Maximum)	1.35	1.4	1.35	1.4
Phosphorus(Maximum)	0.035	0.045	0.035	0.045
Sulfur(Maximum)	0.035	0.045	0.035	0.045
Copper(Minimum)	0.2	0.18	0.2	0.18

For each reduction of 0.01 percentage point below the specified maximum for carbon, an increase of 0.06 percentage point above the specified maximum for manganese is permitted, upto a maximum of 1.50% by heat analysis and 1.60% by product analysis.

Mechanical Properties

ELEMENTS	ROUND STRUCTURAL TUBING			ROUND STRUCTURAL TUBING		
	GRADE A	GRADE B	GRADE C	GRADE A	GRADE B	GRADE C
Tensile Strength (MPa) min.	310	400	425	310	400	425
Yield Strength (MPa) min.	230	290	315	270	315	345
% Elongation in (50 mm) min.	25	25	21	25	23	21

Technical Details

Characteristics Tolerances & Technical details

Outside Diameter (OD)	For Round Pipes, OD 1.90 Inch (48.3mm) and smaller (OD) ± 0.50 % & OD 2.00 Inch (50.8mm) and larger ± 0.75% For Square & Rectangular Section 2½ Inch [65mm] or under ± 0.020 Inch (0.50mm) Over 2½ to 3½ [65 mm to 90 mm] ± 0.025 Inch (0.60mm) Over 3½ to 5½ [90 mm to 140 mm] ± 0.030 Inch (0.80 mm) Over 5½ [140 mm] ± 1.0 % of OD	Twist	For Square & Rectangular Section 1½Inch [40mm] and under= 0.050 Inch [1.3mm] Over 1½ to 2½ Inch [40 mm to 65 mm]= 0.062 Inch [1.6mm] Over 2½ to 4 Inch [65 mm to 100 mm] = 0.075 Inch [1.9mm] Over 4 to 6 Inch [100 mm to 150 mm] = 0.087 Inch [2.2mm] Over 6 to 8 Inch [150 mm to 200 mm] = 0.100 Inch [2.5mm] Over 8 Inch [200mm] = 0.112 Inch [2.8mm]
Thickness	±10% of specific wall thickness.	Flattening Test	Keep the weld at 90° and flatten upto 66% of OD, No cracks or breaks are allowed on the weld. Further flatten upto 50% of OD, No cracks or breaks are allowed in the material and during third step full flatten for soundness or lamination.
Length	Pipe shall be furnished in single random length, double random length or in uniform length as per the customer requirement.	Surface Protection	Black & Galvanized coating as per customer requirements
Straightness	2 mm/mtr	Marking (Stencilling)	METPRO, Specification designation and Grade on pipe and anything specific as per customer requirement.
Squareness (Square & rectangular)	90° ± 2° max.		
Radius	3 times of thickness maximum		



Square Hollow Sections (SHS)

An Introduction

METPRO square hollow sections ranging from 15x15 to 350x350 and thickness ranging from 1.6mm to 12mm are extensively used in welded steel frames that experience load from multiple directions. The strength is spread uniformly across the pipes, making them a more suitable choice for columns. Superior quality, sturdiness, and ease of bending, punching and drilling makes us the perfect choice for every construction.

Yield Strength



210 MPa
to 800 MPa

Certified by BIS ISI mark



4923

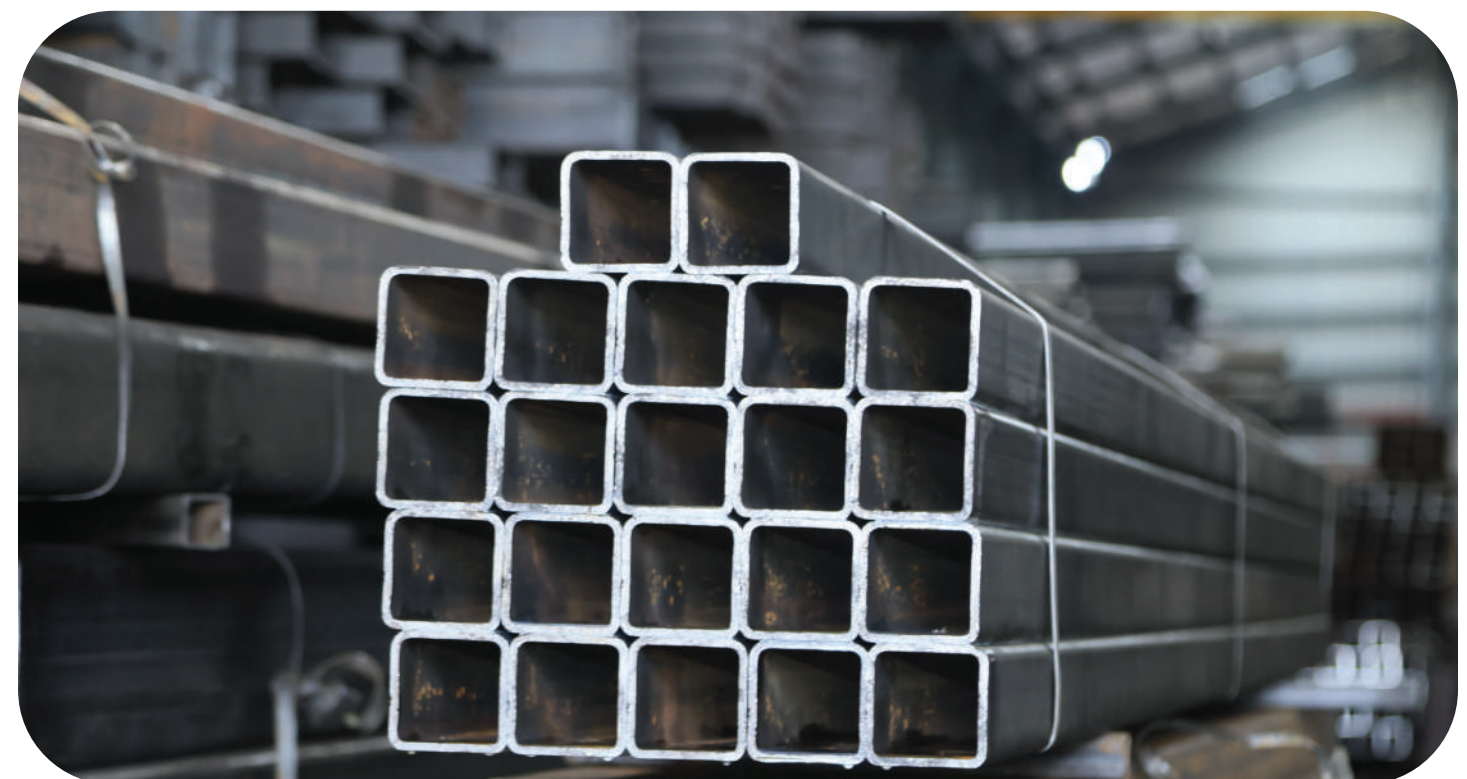
In-house Quality Checks



On-line Eddy-Current &
Off-line chemical &
mechanical properties checks,
Hydro-Testing, UT, RT(On Demand)

Applications:

- ✓ Airport Terminals, Aero-bridges and Metro Stations
- ✓ Cranes and Towers
- ✓ Material Storage Racks
- ✓ Bus Bodies and Automobile Industries
- ✓ Transmission Line Towers
- ✓ Pre fabricated houses



Square Hollow Sections (SHS)

TECHNICAL DATA FOR HOLLOW STEEL SECTIONS FOR STRUCTURAL USE CONFORMING TO IS: 4923 -2017, DIMENSIONS AND PROPERTIES OF SQUARE HOLLOW SECTIONS (SHS)

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(D) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
12.0	12.0	1.8	12.0	12.0	1.8	0.51	1961	3.1	322
12.0	12.0	2.0	12.0	12.0	2.0	0.54	1852	3.3	304
15.0	15.0	1.8	15.0	15.0	1.8	0.68	1471	4.1	241
15.0	15.0	2.0	15.0	15.0	2.0	0.73	1370	4.5	225
19.0	19.0	1.8	19.0	19.0	1.8	0.90	1111	5.5	182
19.0	19.0	2.0	19.0	19.0	2.0	0.98	1020	6.0	167
20.0	20.0	2.3	20.0	20.0	2.3	1.17	855	7.1	140
20.0	20.0	2.6	20.0	20.0	2.6	1.28	781	7.8	128
25.0	25.0	2.0	25.0	25.0	2.0	1.36	735	8.3	121
25.0	25.0	2.6	25.0	25.0	2.6	1.69	592	10.3	97
25.0	25.0	3.2	25.0	25.0	3.2	1.98	505	12.1	83
30.0	30.0	2.0	30.0	30.0	2.0	1.68	595	10.2	98
30.0	30.0	2.6	30.0	30.0	2.6	2.1	476	12.8	78
32.0	32.0	2.6	32.0	32.0	2.6	2.26	442	13.8	73
32.0	32.0	3.2	32.0	32.0	3.2	2.69	372	16.4	61
32.0	32.0	4.0	32.0	32.0	4.0	3.19	313	19.4	51
38.0	38.0	2.0	38.0	38.0	2.0	2.18	459	13.3	75
38.0	38.0	2.6	38.0	38.0	2.6	2.75	364	16.8	60
38.0	38.0	3.2	38.0	38.0	3.2	3.29	304	20.1	50
38.0	38.0	4.0	38.0	38.0	4.0	3.95	253	24.1	42
40.0	40.0	2.0	40.0	40.0	2.0	2.31	433	14.1	71
40.0	40.0	2.6	40.0	40.0	2.6	2.92	342	17.8	56
40.0	40.0	3.2	40.0	40.0	3.2	3.49	287	21.3	47
40.0	40.0	4.0	40.0	40.0	4.0	4.20	238	25.6	39
45.0	45.0	2.6	45.0	45.0	2.6	3.32	301	20.2	49
45.0	45.0	3.2	45.0	45.0	3.2	3.99	251	24.3	41
45.0	45.0	4.0	45.0	45.0	4.0	4.82	207	29.4	34
45.0	45.0	4.5	45.0	45.0	4.5	5.31	188	32.4	31
49.5	49.5	2.6	49.5	49.5	2.6	3.69	271	22.5	44
49.5	49.5	3.2	49.5	49.5	3.2	4.45	225	27.1	37
49.5	49.5	4.0	49.5	49.5	4.0	5.39	186	32.9	30
60.0	60.0	2.9	60.0	60.0	2.9	5.02	199	30.6	33
60.0	60.0	3.6	60.0	60.0	3.6	6.11	164	37.2	27
60.0	60.0	4.5	60.0	60.0	4.5	7.42	135	45.2	22
72.0	72.0	3.2	72.0	72.0	3.2	6.71	149	40.9	24
72.0	72.0	4.0	72.0	72.0	4.0	8.22	122	50.1	20
72.0	72.0	4.8	72.0	72.0	4.8	9.66	104	58.9	17
72.0	72.0	6.0	72.0	72.0	6.0	11.70	85	71.3	14
80.0	80.0	2.9	80.0	80.0	2.9	6.85	146	41.8	24
80.0	80.0	4.0	80.0	80.0	4.0	9.22	108	56.2	18
80.0	80.0	6.0	80.0	80.0	6.0	13.27	75	80.9	12
80.0	80.0	8.0	80.0	80.0	8.0	16.79	60	102.4	10
91.5	91.5	3.6	91.5	91.5	3.6	9.67	103	58.9	17
91.5	91.5	4.5	91.5	91.5	4.5	11.88	84	72.4	14
91.5	91.5	5.4	91.5	91.5	5.4	14.01	71	85.4	12
100.0	100.0	4.0	100.0	100.0	4.0	11.73	85	71.5	14
100.0	100.0	5.0	100.0	100.0	5.0	14.41	69	87.8	11
100.0	100.0	6.0	100.0	100.0	6.0	16.98	59	103.5	10
100.0	100.0	8.0	100.0	100.0	8.0	21.81	46	133.0	8
113.5	113.5	4.5	113.5	113.5	4.5	14.99	67	91.4	11
113.5	113.5	5.4	113.5	113.5	5.4	17.74	56	108.1	9
113.5	113.5	6.0	113.5	113.5	6.0	19.53	51	119.1	8

Square Hollow Sections (SHS)

TECHNICAL DATA FOR HOLLOW STEEL SECTIONS FOR STRUCTURAL USE CONFORMING TO IS: 4923 -2017, DIMENSIONS AND PROPERTIES OF SQUARE HOLLOW SECTIONS (SHS)

DESIGNATION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(D) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
120.0	120.0	4.5	120.0	120.0	4.5	15.91	63	97.0	10
120.0	120.0	5.0	120.0	120.0	5.0	17.54	57	106.9	9
120.0	120.0	6.0	120.0	120.0	6.0	20.74	48	126.4	8
125.0	125.0	4.5	125.0	125.0	4.5	16.62	60	101.3	10
125.0	125.0	5.0	125.0	125.0	5.0	18.33	55	111.7	9
125.0	125.0	6.0	125.0	125.0	6.0	21.69	46	132.2	8
132.0	132.0	4.8	132.0	132.0	4.8	18.71	53	114.1	9
132.0	132.0	5.4	132.0	132.0	5.4	20.88	48	127.3	8
132.0	132.0	6.0	132.0	132.0	6.0	23.01	43	140.3	7
150.0	150.0	5.0	150.0	150.0	5.0	22.26	45	135.7	7
150.0	150.0	6.0	150.0	150.0	6.0	26.40	38	160.9	6
150.0	150.0	8.0	150.0	150.0	8.0	34.38	29	209.6	5
150.0	150.0	10.0	150.0	150.0	10.0	41.93	24	255.6	4
180.0	180.0	4.0	180.0	180.0	4.0	21.90	46	133.5	7
180.0	180.0	6.0	180.0	180.0	6.0	32.05	31	195.4	5
180.0	180.0	8.0	180.0	180.0	8.0	42.50	24	259.1	4
200.0	200.0	5.0	200.0	200.0	5.0	30.11	33	183.6	5
200.0	200.0	6.0	200.0	200.0	6.0	35.82	28	218.4	5
200.0	200.0	7.0	200.0	200.0	7.0	41.43	24	252.6	4
200.0	200.0	8.0	200.0	200.0	8.0	46.93	21	286.1	3
200.0	200.0	10.0	200.0	200.0	10.0	52.55	19	320.3	3
200.0	200.0	12.0	200.0	200.0	12.0	68.81	15	419.5	2
220.0	220.0	6.0	220.0	220.0	6.0	39.50	25	240.8	4
220.0	220.0	7.0	220.0	220.0	7.0	45.91	22	279.9	4
220.0	220.0	8.0	220.0	220.0	8.0	52.28	19	318.7	3
220.0	220.0	10.0	220.0	220.0	10.0	63.91	16	389.6	3
220.0	220.0	12.0	220.0	220.0	12.0	77.24	13	470.9	2
250.0	250.0	6.0	250.0	250.0	6.0	45.24	22	275.8	4
250.0	250.0	8.0	250.0	250.0	8.0	59.49	17	362.7	3
250.0	250.0	10.0	250.0	250.0	10.0	73.33	14	447.0	2
250.0	250.0	12.0	250.0	250.0	12.0	87.59	11	533.9	2
300.0	300.0	6.0	300.0	300.0	6.0	54.66	18	333.2	3
300.0	300.0	8.0	300.0	300.0	8.0	72.06	14	439.3	2
300.0	300.0	10.0	300.0	300.0	10.0	89.04	11	542.8	2
300.0	300.0	12.0	300.0	300.0	12.7	105.61	9	643.8	2
350.0	350.0	8.0	350.0	350.0	8.0	84.62	12	515.8	2
350.0	350.0	10.0	350.0	350.0	10.0	104.74	10	638.5	2
350.0	350.0	12.0	350.0	350.0	12.0	124.45	8	758.6	1

Tolerance

Thickness (All Sizes)	: ± 7.5%	Weight	
Outside dimensions of sides	: ± 1% of length of the side to be measured with a minimum of ± 0.5 mm	Individual Length	: ± 10% / 8%
		On lots of 10 T	: ± 7%
External Corner Radius	: 3 T, max where T is the thickness of section	Squareness of Corner	: 90 Degree ± 2 %

Square Hollow Sections (SHS)

TECHNICAL DATA FOR COLD FORMED WELDED SQUARE HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219

DESIGNATION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL HOLLOW PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
20.0	20.0	2.0	20.0	20.0	2.0	1.05	952	6.4	156
25.0	25.0	2.0	25.0	25.0	2.0	1.36	735	8.3	121
25.0	25.0	2.5	25.0	25.0	2.5	1.64	610	10.0	100
25.0	25.0	3.0	25.0	25.0	3.0	1.89	529	11.5	87
30.0	30.0	2.0	30.0	30.0	2.0	1.68	595	10.2	98
30.0	30.0	2.5	30.0	30.0	2.5	2.03	493	12.4	81
30.0	30.0	3.0	30.0	30.0	3.0	2.36	424	14.4	70
40.0	40.0	2.0	40.0	40.0	2.0	2.31	433	14.1	71
40.0	40.0	2.5	40.0	40.0	2.5	2.82	355	17.2	58
40.0	40.0	3.0	40.0	40.0	3.0	3.30	303	20.1	50
40.0	40.0	4.0	40.0	40.0	4.0	4.20	238	25.6	39
50.0	50.0	2.0	50.0	50.0	2.0	2.93	341	17.9	56
50.0	50.0	2.5	50.0	50.0	2.5	3.60	278	21.9	46
50.0	50.0	3.0	50.0	50.0	3.0	4.25	235	25.9	39
50.0	50.0	4.0	50.0	50.0	4.0	5.45	183	33.2	30
50.0	50.0	5.0	50.0	50.0	5.0	6.56	152	40.0	25
60.0	60.0	2.0	60.0	60.0	2.0	3.56	281	21.7	46
60.0	60.0	2.5	60.0	60.0	2.5	4.39	228	26.8	37
60.0	60.0	3.0	60.0	60.0	3.0	5.19	193	31.6	32
60.0	60.0	4.0	60.0	60.0	4.0	6.71	149	40.9	24
60.0	60.0	5.0	60.0	60.0	5.0	8.13	123	49.6	20
60.0	60.0	6.0	60.0	60.0	6.0	9.45	106	57.6	17
60.0	60.0	6.3	60.0	60.0	6.3	9.55	105	58.2	17
70.0	70.0	2.5	70.0	70.0	2.5	5.17	193	31.5	32
70.0	70.0	3.0	70.0	70.0	3.0	6.13	163	37.4	27
70.0	70.0	4.0	70.0	70.0	4.0	7.97	125	48.6	21
70.0	70.0	5.0	70.0	70.0	5.0	9.70	103	59.1	17
70.0	70.0	6.0	70.0	70.0	6.0	11.30	88	68.9	15
70.0	70.0	6.3	70.0	70.0	6.3	11.50	87	70.1	14
80.0	80.0	3.0	80.0	80.0	3.0	7.07	141	43.1	23
80.0	80.0	4.0	80.0	80.0	4.0	9.22	108	56.2	18
80.0	80.0	5.0	80.0	80.0	5.0	11.30	88	68.9	15
80.0	80.0	6.0	80.0	80.0	6.0	13.20	76	80.5	12
80.0	80.0	6.3	80.0	80.0	6.3	13.50	74	82.3	12
80.0	80.0	8.0	80.0	80.0	8.0	16.40	61	100.0	10
90.0	90.0	3.0	90.0	90.0	3.0	8.01	125	48.8	20
90.0	90.0	4.0	90.0	90.0	4.0	10.50	95	64.0	16
90.0	90.0	5.0	90.0	90.0	5.0	12.80	78	78.0	13

Following Manufacturing Tolerance shall be permitted

Outside dimensions of sides	H, B < 100 : ± 1 % with a min of 0.5mm 100 ≤ H, B ≤ 200 : ± 0.8% H, B > 200 : ± 0.6%	External corner profile	T ≤ 6 mm: 1.6T to 2.4T 6 < T ≤ 10mm: 2.0T to 3.0T 10 < T mm: 2.4 T to 3.6T
Thickness	T ≤ 5 mm: ± 10 % T > 5 mm: ± 0.5 mm	Squareness of sides	90 Degree ± 1 Degree
Concavity/Convexity	Max. 0.8% with a minimum of 0.5mm	Straightness	0,15 % of total length and 3 mm over any 1 mtr Length
Twist	2.0mm plus 0.5mm / mtrs length	Weight	± 6 % on individual delivered lengths
Length (Random length / Unless Otherwise Specified)	4-16 Mtrs (10 % of sections supplied may be below the min. for the ordered range but not shorter than 75 % of the min. range length).		

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.

Square Hollow Sections (SHS)

TECHNICAL DATA FOR COLD FORMED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219

DESIGNATION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL HOLLOW PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
90.0	90.0	6.0	90.0	90.0	6.0	15.10	66	92.0	11
90.0	90.0	6.3	90.0	90.0	6.3	15.50	65	94.5	11
90.0	90.0	8.0	90.0	90.0	8.0	18.90	53	115.2	9
100.0	100.0	3.0	100.0	100.0	3.0	8.96	112	54.6	18
100.0	100.0	4.0	100.0	100.0	4.0	11.70	85	71.3	14
100.0	100.0	5.0	100.0	100.0	5.0	14.40	69	87.8	11
100.0	100.0	6.0	100.0	100.0	6.0	17.00	59	103.6	10
100.0	100.0	6.3	100.0	100.0	6.3	17.50	57	106.7	9
100.0	100.0	8.0	100.0	100.0	8.0	21.40	47	130.5	8
100.0	100.0	10.0	100.0	100.0	10.0	25.60	39	156.1	6
100.0	100.0	12.0	100.0	100.0	12.0	28.30	35	172.5	6
100.0	100.0	12.5	100.0	100.0	12.5	29.10	34	177.4	6
120.0	120.0	3.0	120.0	120.0	3.0	10.80	93	65.8	15
120.0	120.0	4.0	120.0	120.0	4.0	14.20	70	86.6	12
120.0	120.0	5.0	120.0	120.0	5.0	17.50	57	106.7	9
120.0	120.0	6.0	120.0	120.0	6.0	20.70	48	126.2	8
120.0	120.0	6.3	120.0	120.0	6.3	21.40	47	130.5	8
120.0	120.0	8.0	120.0	120.0	8.0	26.40	38	160.9	6
120.0	120.0	10.0	120.0	120.0	10.0	31.80	31	193.9	5
120.0	120.0	12.0	120.0	120.0	12.0	35.80	28	218.2	5
120.0	120.0	12.5	120.0	120.0	12.5	36.90	27	224.9	4
140.0	140.0	4.0	140.0	140.0	4.0	16.80	60	102.4	10
140.0	140.0	5.0	140.0	140.0	5.0	20.70	48	126.2	8
140.0	140.0	6.0	140.0	140.0	6.0	24.50	41	149.4	7
140.0	140.0	6.3	140.0	140.0	6.3	25.40	39	154.8	6
140.0	140.0	8.0	140.0	140.0	8.0	31.40	32	191.4	5
140.0	140.0	10.0	140.0	140.0	10.0	38.10	26	232.3	4
140.0	140.0	12.0	140.0	140.0	12.0	43.40	23	264.6	4
140.0	140.0	12.5	140.0	140.0	12.5	44.80	22	273.1	4
150.0	150.0	4.0	150.0	150.0	4.0	18.00	56	109.7	9
150.0	150.0	5.0	150.0	150.0	5.0	22.30	45	135.9	7
150.0	150.0	6.0	150.0	150.0	6.0	26.40	38	160.9	6
150.0	150.0	6.3	150.0	150.0	6.3	27.40	36	167.0	6
150.0	150.0	8.0	150.0	150.0	8.0	33.90	29	206.7	5
150.0	150.0	10.0	150.0	150.0	10.0	41.30	24	251.8	4
150.0	150.0	12.0	150.0	150.0	12.0	47.10	21	287.1	3
150.0	150.0	12.5	150.0	150.0	12.5	48.70	21	296.9	3
160.0	160.0	4.0	160.0	160.0	4.0	19.30	52	117.7	8

Following Manufacturing Tolerance shall be permitted

Outside dimensions of sides	H, B < 100 : ± 1 % with a min of 0.5mm 100 ≤ H, B ≤ 200 : ± 0.8% H, B > 200 : ± 0.6%	External corner profile	T ≤ 6 mm: 1.6T to 2.4T 6 < T ≤ 10mm: 2.0T to 3.0T 10 < T mm: 2.4 T to 3.6T
Thickness	T ≤ 5 mm: ± 10 % T > 5 mm: ± 0.5 mm	Squareness of sides	90 Degree ± 1 Degree
Concavity/Convexity	Max. 0.8% with a minimum of 0.5mm	Straightness	0,15 % of total length and 3 mm over any 1 mtr Length
Twist	2.0mm plus 0.5mm / mtrs length	Weight	± 6 % on individual delivered lengths
Length (Random length / Unless Otherwise Specified)	4-16 Mtrs (10 % of sections supplied may be below the min. for the ordered range but not shorter than 75 % of the min. range length).		

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.

Square Hollow Sections (SHS)

TECHNICAL DATA FOR COLD FORMED WELDED SQUARE HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS, CONFIRMING TO EN 10219

DESIGNATION		DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL HOLLOW PLAIN END				
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
160.0	160.0	5.0	160.0	160.0	5.0	23.80	42	145.1	7
160.0	160.0	6.0	160.0	160.0	6.0	28.30	35	172.5	6
160.0	160.0	6.3	160.0	160.0	6.3	29.30	34	178.6	6
160.0	160.0	8.0	160.0	160.0	8.0	36.50	27	222.5	4
160.0	160.0	10.0	160.0	160.0	10.0	44.40	23	270.7	4
160.0	160.0	12.0	160.0	160.0	12.0	50.90	20	310.3	3
160.0	160.0	12.5	160.0	160.0	12.5	52.60	19	320.6	3
180.0	180.0	4.0	180.0	180.0	4.0	21.80	46	132.9	8
180.0	180.0	5.0	180.0	180.0	5.0	27.00	37	164.6	6
180.0	180.0	6.0	180.0	180.0	6.0	32.10	31	195.7	5
180.0	180.0	6.3	180.0	180.0	6.3	33.30	30	203.0	5
180.0	180.0	8.0	180.0	180.0	8.0	41.50	24	253.0	4
180.0	180.0	10.0	180.0	180.0	10.0	50.70	20	309.1	3
180.0	180.0	12.0	180.0	180.0	12.0	58.50	17	356.6	3
180.0	180.0	12.5	180.0	180.0	12.5	60.50	17	368.8	3
200.0	200.0	4.0	200.0	200.0	4.0	24.30	41	148.1	7
200.0	200.0	5.0	200.0	200.0	5.0	30.10	33	183.5	5
200.0	200.0	6.0	200.0	200.0	6.0	35.60	28	217.0	5
200.0	200.0	6.3	200.0	200.0	6.3	37.20	27	226.8	4
200.0	200.0	8.0	200.0	200.0	8.0	46.50	22	283.5	4
200.0	200.0	10.0	200.0	200.0	10.0	57.00	18	347.5	3
200.0	200.0	12.0	200.0	200.0	12.0	66.00	15	402.3	2
200.0	200.0	12.5	200.0	200.0	12.5	68.30	15	416.4	2
220.0	220.0	5.0	220.0	220.0	5.0	33.20	30	202.4	5
220.0	220.0	6.0	220.0	220.0	6.0	39.60	25	241.4	4
220.0	220.0	6.3	220.0	220.0	6.3	41.20	24	251.2	4
220.0	220.0	8.0	220.0	220.0	8.0	51.50	19	313.9	3
220.0	220.0	10.0	220.0	220.0	10.0	63.20	16	385.3	3
220.0	220.0	12.0	220.0	220.0	12.0	73.50	14	448.1	2
220.0	220.0	12.5	220.0	220.0	12.5	76.20	13	464.5	2
250.0	250.0	5.0	250.0	250.0	5.0	38.00	26	231.6	4
250.0	250.0	6.0	250.0	250.0	6.0	45.20	22	275.5	4
250.0	250.0	6.3	250.0	250.0	6.3	47.10	21	287.1	3
250.0	250.0	8.0	250.0	250.0	8.0	59.10	17	360.3	3
250.0	250.0	10.0	250.0	250.0	10.0	72.70	14	443.2	2
250.0	250.0	12.0	250.0	250.0	12.0	84.80	12	516.9	2
250.0	250.0	12.5	250.0	250.0	12.5	88.00	11	536.4	2
260.0	260.0	6.0	260.0	260.0	6.0	47.10	21	287.1	3

Following Manufacturing Tolerance shall be permitted

Outside dimensions of sides	H, B < 100 : ± 1 % with a min of 0.5mm 100 ≤ H, B ≤ 200 : ± 0.8% H, B > 200 : ± 0.6%	External corner profile	T ≤ 6 mm: 1.6T to 2.4T 6 < T ≤ 10mm: 2.0T to 3.0T 10 < T mm: 2.4 T to 3.6T
Thickness	T ≤ 5 mm: ± 10 % T > 5 mm: ± 0.5 mm	Squareness of sides	90 Degree ± 1 Degree
Concavity/Convexity	Max. 0.8% with a minimum of 0.5mm	Straightness	0,15 % of total length and 3 mm over any 1 mtr Length
Twist	2.0mm plus 0.5mm / mtrs length	Weight	± 6 % on individual delivered lengths
Length (Random length / Unless Otherwise Specified)	4-16 Mtrs (10 % of sections supplied may be below the min. for the ordered range but not shorter than 75 % of the min. range length).		

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.

Square Hollow Sections (SHS)

TECHNICAL DATA FOR COLD FORMED WELDED SQUARE HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS, CONFIRMING TO EN 10219

DESIGNATION		DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL HOLLOW PLAIN END				
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
260.0	260.0	6.3	260.0	260.0	6.3	49.10	20	299.3	3
260.0	260.0	8.0	260.0	260.0	8.0	61.60	16	375.5	3
260.0	260.0	10.0	260.0	260.0	10.0	75.80	13	462.1	2
280.0	280.0	12.0	280.0	280.0	12.0	88.60	11	540.1	2
260.0	260.0	12.5	260.0	260.0	12.5	91.90	11	560.2	2
300.0	300.0	6.0	300.0	300.0	6.0	54.70	18	333.5	3
300.0	300.0	6.3	300.0	300.0	6.3	57.00	18	347.5	3
300.0	300.0	8.0	300.0	300.0	8.0	71.60	14	436.5	2
300.0	300.0	10.0	300.0	300.0	10.0	88.40	11	538.9	2
300.0	300.0	12.0	300.0	300.0	12.0	104.00	10	634.0	2
300.0	300.0	12.5	300.0	300.0	12.5	108.00	9	658.4	2
350.0	350.0	8.0	350.0	350.0	8.0	84.20	12	513.3	2
350.0	350.0	10.0	350.0	350.0	10.0	104.00	10	634.0	2
350.0	350.0	12.0	350.0	350.0	12.0	123.00	8	749.8	1
350.0	350.0	12.5	350.0	350.0	12.5	127.00	8	774.2	1

Following Manufacturing Tolerance shall be permitted

Outside dimensions of sides	H, B < 100 : ± 1 % with a min of 0.5mm 100 ≤ H, B ≤ 200 : ± 0.8% H, B > 200 : ± 0.6%	External corner profile	T ≤ 6 mm: 1.6T to 2.4T 6 < T ≤ 10mm: 2.0T to 3.0T 10 < T mm: 2.4 T to 3.6T
Thickness	T ≤ 5 mm: ± 10 % T > 5 mm: ± 0.5 mm	Squareness of sides	90 Degree ± 1 Degree
Concavity/Convexity	Max. 0.8% with a minimum of 0.5mm	Straightness	0,15 % of total length and 3 mm over any 1 mtr Length
Twist	2.0mm plus 0.5mm / mtrs length	Weight	± 6 % on individual delivered lengths
Length (Random length / Unless Otherwise Specified)	4-16 Mtrs (10 % of sections supplied may be below the min. for the ordered range but not shorter than 75 % of the min. range length).		

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.



Square Hollow Sections (SHS)

SIZE/THK	1.8	2.0	2.3	2.6	2.9	3.2	3.6	4.0	4.5	4.8	5.0	5.4	6.0	7.0	8.0	10.0	12.0
12x12																	
15x15																	
19x19																	
20x20																	
25x25																	
30x30																	
32x32																	
38x38																	
40x40																	
45x45																	
49.5x49.5																	
60x60																	
72x72																	
80x80																	
91.5x91.5																	
100x100																	
113.5x113.5																	
120x120																	
125x125																	
132x132																	
150x150																	
180x180																	
200x200																	
220x220																	
250x250																	
300x300																	
350x350																	

Rectangle Hollow Sections (RHS)

An Introduction

METPRO rectangular hollow steel sections that range from 26x13 to 400x300 with thickness upto 12mm, give a futuristic edge to construct structures of any design and elevation. Superior quality, sturdiness, and ease of bending, punching and drilling makes us the perfect choice for every construction

Yield Strength



210 MPa to 800 MPa

Certified by BIS ISI mark



4923

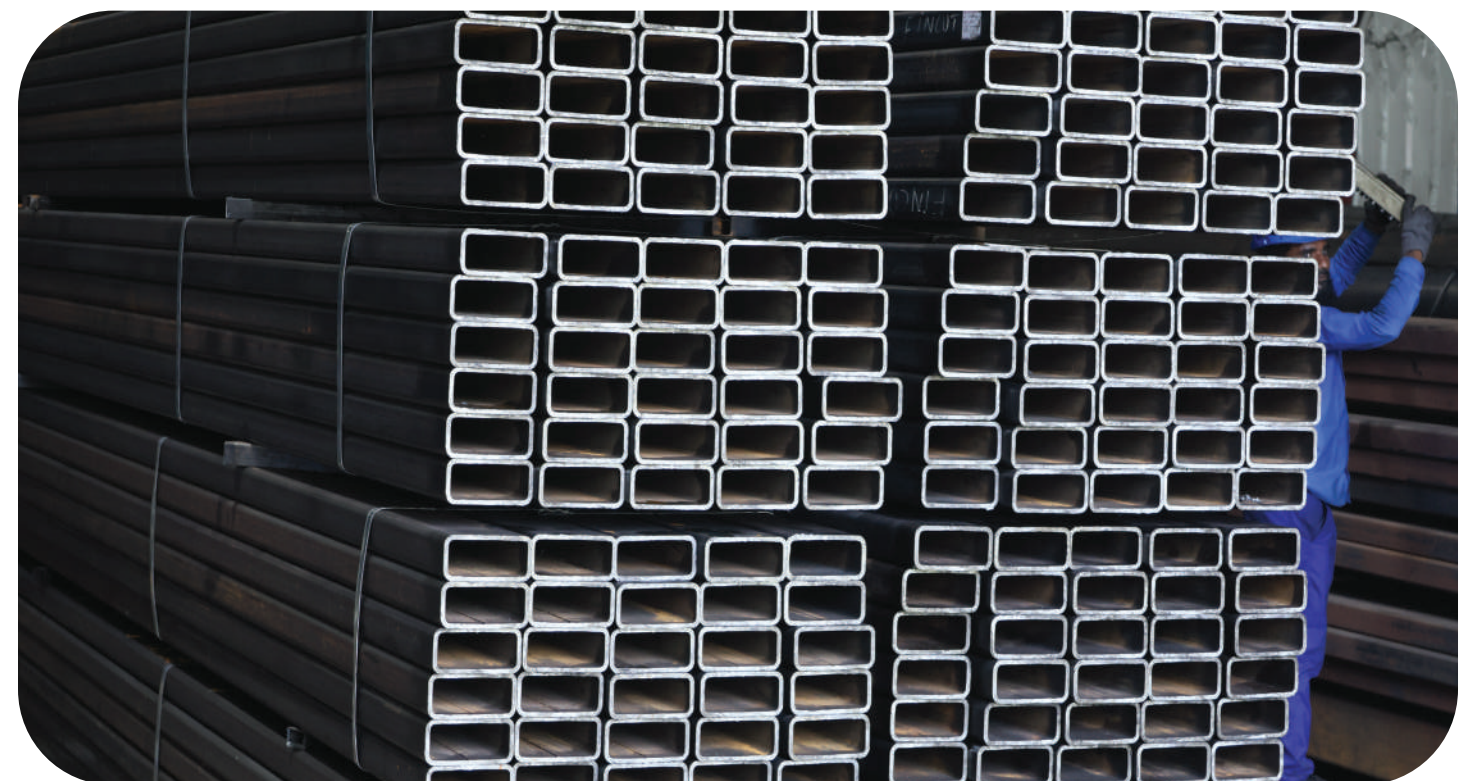
In-house Quality Checks



On-line Eddy-Current & Off-line chemical & mechanical properties checks, Hydro-Testing, UT, RT(On Demand)

Applications:

- ✓ Airport Terminals, Aero-bridges and Metro Stations
- ✓ Bus Bodies and Automobile Industries
- ✓ Cranes and Towers
- ✓ Transmission Line Towers
- ✓ Material Storage Racks
- ✓ Pre fabricated houses



Rectangle Hollow Sections (RHS)

TECHNICAL DATA FOR HOLLOW STEEL SECTIONS FOR STRUCTURAL USE CONFORMING TO IS: 4923 - 2017, DIMENSIONS AND PROPERTIES OF RECTANGULAR HOLLOW SECTIONS (RHS)

DESIGNATION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(D) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
40.0	20.0	2.9	40.0	20.0	2.9	2.51	398	15.3	65
40.0	20.0	3.2	40.0	20.0	3.2	2.74	365	16.7	60
50.0	25.0	2.9	50.0	25.0	2.9	2.98	336	18.2	55
50.0	25.0	3.2	50.0	25.0	3.2	3.24	309	19.8	51
60.0	40.0	2.9	60.0	40.0	2.9	4.12	243	25.1	40
66.0	33.0	2.6	66.0	33.0	2.6	3.69	271	22.5	44
66.0	33.0	2.9	66.0	33.0	2.9	4.07	246	24.8	40
66.0	33.0	3.6	66.0	33.0	3.6	4.93	203	30.1	33
66.0	33.0	4.5	66.0	33.0	4.5	5.95	168	36.3	28
75.0	25.0	2.6	75.0	25.0	2.6	3.73	268	22.7	44
75.0	50.0	2.9	75.0	50.0	2.9	5.25	190	32.0	31
75.0	50.0	3.2	75.0	50.0	3.2	5.75	174	35.1	29
75.0	50.0	4.0	75.0	50.0	4.0	7.02	142	42.8	23
80.0	40.0	2.9	80.0	40.0	2.9	5.03	199	30.7	33
80.0	40.0	3.2	80.0	40.0	3.2	5.50	182	33.5	30
80.0	40.0	4.0	80.0	40.0	4.0	6.71	149	40.9	24
96.0	48.0	3.2	96.0	48.0	3.2	6.71	149	40.9	24
96.0	48.0	4.0	96.0	48.0	4.0	8.22	122	50.1	20
96.0	48.0	4.8	96.0	48.0	4.8	9.66	104	58.9	17
100.0	50.0	3.2	100.0	50.0	3.2	7.01	143	42.7	23
100.0	50.0	4.0	100.0	50.0	4.0	8.59	116	52.4	19
110.0	55.0	2.5	110.0	55.0	2.5	6.15	163	37.5	27
122.0	61.0	3.6	122.0	61.0	3.6	9.67	103	58.9	17
122.0	61.0	4.5	122.0	61.0	4.5	11.88	84	72.4	14
122.0	61.0	5.4	122.0	61.0	5.4	14.01	71	85.4	12
130.0	50.0	3.0	130.0	50.0	3.0	8.01	125	48.8	20
140.0	60.0	2.5	140.0	60.0	2.5	7.53	133	45.9	22
140.0	60.0	4.0	140.0	60.0	4.0	11.73	85	71.5	14
140.0	60.0	5.0	140.0	60.0	5.0	14.41	69	87.8	11
145.0	82.0	4.8	145.0	82.0	4.8	15.92	63	97.0	10
145.0	82.0	5.4	145.0	82.0	5.4	17.74	56	108.1	9
150.0	60.0	3.0	150.0	60.0	3.0	9.43	106	57.5	17
150.0	75.0	3.0	150.0	75.0	3.0	10.13	99	61.8	16
150.0	75.0	4.5	150.0	75.0	4.5	14.85	67	90.5	11
150.0	75.0	6.0	150.0	75.0	6.0	19.33	52	117.8	8
150.0	100.0	5.0	150.0	100.0	5.0	18.33	55	111.7	9
150.0	100.0	8.0	150.0	100.0	8.0	28.10	36	171.3	6
150.0	100.0	10.0	150.0	100.0	10.0	34.09	29	207.8	5
172.0	92.0	4.8	172.0	92.0	4.8	18.71	53	114.1	9

Tolerance

Thickness (All Sizes)	: ± 7.5%	Weight	
Outside dimensions of sides	: ± 1% of length of the side to be measured with a minimum of ± 0.5 mm	Individual Length	: ± 10% / 8%
		On lots of 10 T	: ± 7%
External Corner Radius	: 3 T, max where T is the thickness of section	Squareness of Corner	: 90 Degree ± 2 %

Rectangle Hollow Sections (RHS)

TECHNICAL DATA FOR HOLLOW STEEL SECTIONS FOR STRUCTURAL USE CONFORMING TO IS: 4923 - 2017, DIMENSIONS AND PROPERTIES OF RECTANGULAR HOLLOW SECTIONS (RHS)

DESIGNATION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(D) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
172.0	92.0	5.4	172.0	92.0	5.4	20.88	48	127.3	8
200.0	100.0	4.0	200.0	100.0	4.0	18.01	56	109.8	9
200.0	100.0	5.0	200.0	100.0	5.0	22.26	45	135.7	7
200.0	100.0	6.0	200.0	100.0	6.0	26.40	38	160.9	6
200.0	100.0	8.0	200.0	100.0	8.0	34.38	29	209.6	5
240.0	120.0	4.0	240.0	120.0	4.0	32.05	31	195.4	5
240.0	120.0	5.0	240.0	120.0	5.0	41.91	24	255.5	4
240.0	120.0	6.0	240.0	120.0	6.0	32.05	31	195.4	5
240.0	120.0	8.0	240.0	120.0	8.0	41.91	24	255.5	4
300.0	100.0	5.4	300.0	100.0	5.4	30.45	33	185.6	5
300.0	100.0	6.4	300.0	100.0	6.4	35.28	28	215.1	5
300.0	150.0	6.0	300.0	150.0	6.0	40.53	25	247.1	4
300.0	150.0	8.0	300.0	150.0	8.0	53.22	19	324.4	3
300.0	150.0	10.0	300.0	150.0	10.0	65.49	15	399.2	3
300.0	200.0	6.0	300.0	200.0	6.0	45.24	22	275.8	4
300.0	200.0	8.0	300.0	200.0	8.0	59.49	17	362.7	3
300.0	200.0	10.0	300.0	200.0	10.0	73.34	14	447.1	2
350.0	250.0	6.0	350.0	250.0	6.0	54.66	18	333.2	3
350.0	250.0	8.0	350.0	250.0	8.0	72.06	14	439.3	2
350.0	250.0	10.0	350.0	250.0	10.0	89.04	11	542.8	2
350.0	250.0	12.0	350.0	250.0	12.0	105.61	9	643.8	2
400.0	200.0	8.0	400.0	200.0	8.0	72.06	14	439.3	2
400.0	200.0	10.0	400.0	200.0	10.0	89.04	11	542.8	2
400.0	200.0	12.0	400.0	200.0	12.0	105.61	9	643.8	2
400.0	300.0	8.0	400.0	300.0	8.0	84.62	12	515.8	2
400.0	300.0	10.0	400.0	300.0	10.0	104.74	10	638.5	2
400.0	300.0	12.0	400.0	300.0	12.0	124.45	8	758.6	1

Tolerance

Thickness (All Sizes)	: ± 7.5%	Weight	
Outside dimensions of sides	: ± 1% of length of the side to be measured with a minimum of ± 0.5 mm	Individual Length	: ± 10% / 8%
		On lots of 10 T	: ± 7%
External Corner Radius	: 3 T, max where T is the thickness of section	Squareness of Corner	: 90 Degree ± 2 %



Rectangle Hollow Sections (RHS)

TECHNICAL DATA FOR COLD FORMED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219

DESIGNATION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL HOLLOW PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
40.0	20.0	2.0	40.0	20.0	2.0	1.68	595.2	10.2	97.6
40.0	20.0	2.0	40.0	20.0	2.0	1.68	595.2	10.2	97.6
40.0	20.0	2.5	40.0	20.0	2.5	2.03	492.6	12.4	80.8
40.0	20.0	3.0	40.0	20.0	3.0	2.36	423.7	14.4	69.5
50.0	30.0	2.0	50.0	30.0	2.0	2.31	432.9	14.1	71.0
50.0	30.0	2.5	50.0	30.0	2.5	2.82	354.6	17.2	58.2
50.0	30.0	3.0	50.0	30.0	3.0	3.30	303.0	20.1	49.7
50.0	30.0	4.0	50.0	30.0	4.0	4.20	238.1	25.6	39.1
60.0	40.0	2.0	60.0	40.0	2.0	2.93	341.3	17.9	56.0
60.0	40.0	2.5	60.0	40.0	2.5	3.60	277.8	21.9	45.6
60.0	40.0	3.0	60.0	40.0	3.0	4.25	235.3	25.9	38.6
60.0	40.0	4.0	60.0	40.0	4.0	5.45	183.5	33.2	30.1
60.0	40.0	5.0	60.0	40.0	5.0	6.56	152.4	40.0	25.0
70.0	50.0	2.0	70.0	50.0	2.0	3.56	280.9	21.7	46.1
70.0	50.0	2.5	70.0	50.0	2.5	4.39	227.8	26.8	37.4
70.0	50.0	3.0	70.0	50.0	3.0	5.19	192.7	31.6	31.6
70.0	50.0	4.0	70.0	50.0	4.0	6.71	149.0	40.9	24.4
70.0	50.0	5.0	70.0	50.0	5.0	8.13	123.0	49.6	20.2
80.0	40.0	2.0	80.0	40.0	2.0	3.56	280.9	21.7	46.1
80.0	40.0	2.5	80.0	40.0	2.5	4.39	227.8	26.8	37.4
80.0	40.0	3.0	80.0	40.0	3.0	5.19	192.7	31.6	31.6
80.0	40.0	4.0	80.0	40.0	4.0	6.71	149.0	40.9	24.4
80.0	40.0	5.0	80.0	40.0	5.0	8.13	123.0	49.6	20.2
80.0	60.0	2.0	80.0	60.0	2.0	4.19	238.7	25.5	39.2
80.0	60.0	2.5	80.0	60.0	2.5	5.17	193.4	31.5	31.7
80.0	60.0	3.0	80.0	60.0	3.0	6.13	163.1	37.4	26.8
80.0	60.0	4.0	80.0	60.0	4.0	7.97	125.5	48.6	20.6
80.0	60.0	5.0	80.0	60.0	5.0	9.70	103.1	59.1	16.9
90.0	50.0	2.0	90.0	50.0	2.0	4.19	238.7	25.5	39.2
90.0	50.0	2.5	90.0	50.0	2.5	5.17	193.4	31.5	31.7
90.0	50.0	5.0	90.0	50.0	5.0	6.13	163.1	37.4	26.8
90.0	50.0	4.0	90.0	50.0	4.0	7.97	125.5	48.6	20.6
90.0	50.0	5.0	90.0	50.0	5.0	9.70	103.1	59.1	16.9
100.0	40.0	2.5	100.0	40.0	2.5	5.17	193.4	31.5	31.7
100.0	40.0	3.0	100.0	40.0	3.0	6.13	163.1	37.4	26.8
100.0	40.0	4.0	100.0	40.0	4.0	7.97	125.5	48.6	20.6
100.0	40.0	5.0	100.0	40.0	5.0	9.70	103.1	59.1	16.9
100.0	50.0	2.5	100.0	50.0	2.5	5.56	179.9	33.9	29.5

Following Manufacturing Tolerance shall be permitted

Outside dimensions of sides	H, B < 100 : ± 1 % with a min of 0.5mm 100 ≤ H, B ≤ 200 : ± 0.8% H, B > 200 : ± 0.6%	External corner profile	T ≤ 6 mm: 1.6T to 2.4T 6 < T ≤ 10mm: 2.0T to 3.0T 10 < T mm: 2.4 T to 3.6T
Thickness	T ≤ 5 mm: ± 10 % T > 5 mm: ± 0.5 mm	Squareness of sides	90 Degree ± 1 Degree
Concavity/Convexity	Max. 0.8% with a minimum of 0.5mm	Straightness	0,15 % of total length and 3 mm over any 1 mtr Length
Twist	2.0mm plus 0.5mm / mtrs length	Weight	± 6 % on individual delivered lengths
Length (Random length / Unless Otherwise Specified)	4-16 Mtrs (10 % of sections supplied may be below the min. for the ordered range but not shorter than 75 % of the min. range length).		

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.

Rectangle Hollow Sections (RHS)

TECHNICAL DATA FOR COLD FORMED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219

DESIGNATION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL HOLLOW PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
100.0	50.0	3.0	100.0	50.0	3.0	6.60	151.5	40.2	24.9
100.0	50.0	4.0	100.0	50.0	4.0	8.59	116.4	52.4	19.1
100.0	50.0	5.0	100.0	50.0	5.0	10.50	95.2	64.0	15.6
100.0	50.0	6.0	100.0	50.0	6.0	12.30	81.3	75.0	13.3
100.0	50.0	6.3	100.0	50.0	6.3	12.50	80.0	76.2	13.1
100.0	60.0	2.5	100.0	60.0	2.5	5.96	167.8	36.3	27.5
100.0	60.0	3.0	100.0	60.0	3.0	7.07	141.4	43.1	23.2
100.0	60.0	4.0	100.0	60.0	4.0	9.22	108.5	56.2	17.8
100.0	60.0	5.0	100.0	60.0	5.0	11.30	88.5	68.9	14.5
100.0	60.0	6.0	100.0	60.0	6.0	13.20	75.8	80.5	12.4
100.0	60.0	6.3	100.0	60.0	6.3	13.50	74.1	82.3	12.2
100.0	80.0	2.5	100.0	80.0	2.5	6.74	148.4	41.1	24.3
100.0	80.0	3.0	100.0	80.0	3.0	8.01	124.8	48.8	20.5
100.0	80.0	4.0	100.0	80.0	4.0	10.50	95.2	64.0	15.6
100.0	80.0	5.0	100.0	80.0	5.0	12.80	78.1	78.0	12.8
100.0	80.0	6.0	100.0	80.0	6.0	15.10	66.2	92.0	10.9
100.0	80.0	6.3	100.0	80.0	6.3	15.50	64.5	94.5	10.6
120.0	60.0	2.5	120.0	60.0	2.5	6.74	148.4	41.1	24.3
120.0	60.0	3.0	120.0	60.0	3.0	8.01	124.8	48.8	20.5
120.0	60.0	4.0	120.0	60.0	4.0	10.50	95.2	64.0	15.6
120.0	60.0	5.0	120.0	60.0	5.0	12.80	78.1	78.0	12.8
120.0	60.0	6.0	120.0	60.0	6.0	15.10	66.2	92.0	10.9
120.0	60.0	6.3	120.0	60.0	6.3	15.50	64.5	94.5	10.6
120.0	60.0	8.0	120.0	60.0	8.0	18.90	52.9	115.2	8.7
120.0	80.0	3.0	120.0	80.0	3.0	8.96	111.6	54.6	18.3
120.0	80.0	4.0	120.0	80.0	4.0	11.70	85.5	71.3	14.0
120.0	80.0	5.0	120.0	80.0	5.0	14.40	69.4	87.8	11.4
120.0	80.0	6.0	120.0	80.0	6.0	17.00	58.8	103.6	9.6
120.0	80.0	6.3	120.0	80.0	6.3	17.50	57.1	106.7	9.4
120.0	80.0	8.0	120.0	80.0	8.0	21.40	46.7	130.5	7.7
140.0	80.0	4.0	140.0	80.0	4.0	13.00	76.9	79.2	12.6
140.0	80.0	5.0	140.0	80.0	5.0	16.00	62.5	97.5	10.3
140.0	80.0	6.0	140.0	80.0	6.0	18.90	52.9	115.2	8.7
140.0	80.0	6.3	140.0	80.0	6.3	19.40	51.5	118.3	8.5
140.0	80.0	8.0	140.0	80.0	8.0	23.90	41.8	145.7	6.9
150.0	100.0	4.0	150.0	100.0	4.0	14.90	67.1	90.8	11.0
150.0	100.0	5.0	150.0	100.0	5.0	18.30	54.6	111.6	9.0
150.0	100.0	6.0	150.0	100.0	6.0	21.70	46.1	132.3	7.6

Following Manufacturing Tolerance shall be permitted

Outside dimensions of sides	H, B < 100 : ± 1 % with a min of 0.5mm 100 ≤ H, B ≤ 200 : ± 0.8% H, B > 200 : ± 0.6%	External corner profile	T ≤ 6 mm: 1.6T to 2.4T 6 < T ≤ 10mm: 2.0T to 3.0T 10 < T mm: 2.4 T to 3.6T
Thickness	T ≤ 5 mm: ± 10 % T > 5 mm: ± 0.5 mm	Squareness of sides	90 Degree ± 1 Degree
Concavity/Convexity	Max. 0.8% with a minimum of 0.5mm	Straightness	0,15 % of total length and 3 mm over any 1 mtr Length
Twist	2.0mm plus 0.5mm / mtrs length	Weight	± 6 % on individual delivered lengths
Length (Random length / Unless Otherwise Specified)	4-16 Mtrs (10 % of sections supplied may be below the min. for the ordered range but not shorter than 75 % of the min. range length).		

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.

Rectangle Hollow Sections (RHS)

TECHNICAL DATA FOR COLD FORMED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219

DESIGNATION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL HOLLOW PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
150.0	100.0	6.3	150.0	100.0	6.3	22.40	44.6	136.6	7.3
150.0	100.0	8.0	150.0	100.0	8.0	27.70	36.1	168.9	5.9
150.0	100.0	10.0	150.0	100.0	10.0	33.40	29.9	203.6	4.9
150.0	100.0	12.0	150.0	100.0	12.0	37.70	26.5	229.8	4.4
150.0	100.0	12.5	150.0	100.0	12.5	38.90	25.7	237.1	4.2
160.0	80.0	4.0	160.0	80.0	4.0	14.20	70.4	86.6	11.6
160.0	80.0	5.0	160.0	80.0	5.0	17.50	57.1	106.7	9.4
160.0	80.0	6.0	160.0	80.0	6.0	20.70	48.3	126.2	7.9
160.0	80.0	6.3	160.0	80.0	6.3	21.40	46.7	130.5	7.7
160.0	80.0	8.0	160.0	80.0	8.0	26.40	37.9	160.9	6.2
160.0	80.0	10.0	160.0	80.0	10.0	31.80	31.4	193.9	5.2
160.0	80.0	12.0	160.0	80.0	12.0	35.80	27.9	218.2	4.6
160.0	80.0	12.5	160.0	80.0	12.5	36.90	27.1	224.9	4.4
180.0	100.0	4.0	180.0	100.0	4.0	16.80	59.5	102.4	9.8
180.0	100.0	5.0	180.0	100.0	5.0	20.70	48.3	126.2	7.9
180.0	100.0	6.0	180.0	100.0	6.0	24.50	40.8	149.4	6.7
180.0	100.0	6.3	180.0	100.0	6.3	25.40	39.4	154.8	6.5
180.0	100.0	8.0	180.0	100.0	8.0	31.40	31.8	191.4	5.2
180.0	100.0	10.0	180.0	100.0	10.0	38.10	26.2	232.3	4.3
180.0	100.0	12.0	180.0	100.0	12.0	43.40	23.0	264.6	3.8
180.0	100.0	12.5	180.0	100.0	12.5	44.80	22.3	273.1	3.7
200.0	100.0	4.0	200.0	100.0	4.0	18.00	55.6	109.7	9.1
200.0	100.0	5.0	200.0	100.0	5.0	22.30	44.8	135.9	7.4
200.0	100.0	6.0	200.0	100.0	6.0	26.40	37.9	160.9	6.2
200.0	100.0	6.3	200.0	100.0	6.3	27.40	36.5	167.0	6.0
200.0	100.0	8.0	200.0	100.0	8.0	33.90	29.5	206.7	4.8
200.0	100.0	10.0	200.0	100.0	10.0	41.30	24.2	251.8	4.0
200.0	100.0	12.0	200.0	100.0	12.0	47.10	21.2	287.1	3.5
200.0	100.0	12.5	200.0	100.0	12.5	48.70	20.5	296.9	3.4
200.0	120.0	4.0	200.0	120.0	4.0	19.30	51.8	117.7	8.5
200.0	120.0	5.0	200.0	120.0	5.0	23.80	42.0	145.1	6.9
200.0	120.0	6.0	200.0	120.0	6.0	28.30	35.3	172.5	5.8
200.0	120.0	6.3	200.0	120.0	6.3	29.30	34.1	178.6	5.6
200.0	120.0	8.0	200.0	120.0	8.0	36.50	27.4	222.5	4.5
200.0	120.0	10.0	200.0	120.0	10.0	44.40	22.5	270.7	3.7
200.0	120.0	12.0	200.0	120.0	12.0	50.90	19.6	310.3	3.2
200.0	120.0	12.5	200.0	120.0	12.5	52.60	19.0	320.6	3.1
250.0	150.0	5.0	250.0	150.0	5.0	30.10	33.2	183.5	5.4

Following Manufacturing Tolerance shall be permitted

Outside dimensions of sides	H, B < 100 : ± 1 % with a min of 0.5mm 100 ≤ H, B ≤ 200 : ± 0.8% H, B > 200 : ± 0.6%	External corner profile	T ≤ 6 mm: 1.6T to 2.4T 6 < T ≤ 10mm: 2.0T to 3.0T 10 < T mm: 2.4 T to 3.6T
Thickness	T ≤ 5 mm: ± 10 % T > 5 mm: ± 0.5 mm	Squareness of sides	90 Degree ± 1 Degree
Concavity/Convexity	Max. 0.8% with a minimum of 0.5mm	Straightness	0,15 % of total length and 3 mm over any 1 mtr Length
Twist	2.0mm plus 0.5mm / mtrs length	Weight	± 6 % on individual delivered lengths
Length (Random length / Unless Otherwise Specified)	4-16 Mtrs (10 % of sections supplied may be below the min. for the ordered range but not shorter than 75 % of the min. range length).		

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.

Rectangle Hollow Sections (RHS)

TECHNICAL DATA FOR COLD FORMED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219

DESIGNATION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL HOLLOW PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
250.0	150.0	6.0	250.0	150.0	6.0	35.80	27.9	218.2	4.6
250.0	150.0	6.3	250.0	150.0	6.3	37.20	26.9	226.8	4.4
250.0	150.0	8.0	250.0	150.0	8.0	46.50	21.5	283.5	3.5
250.0	150.0	10.0	250.0	150.0	10.0	57.00	17.5	347.5	2.9
250.0	150.0	12.0	250.0	150.0	12.0	66.00	15.2	402.3	2.5
250.0	150.0	12.5	250.0	150.0	12.5	68.30	14.6	416.4	2.4
260.0	180.0	5.0	260.0	180.0	5.0	33.20	30.1	202.4	4.9
260.0	180.0	6.3	260.0	180.0	6.3	41.20	24.3	251.2	4.0
260.0	180.0	8.0	260.0	180.0	8.0	51.50	19.4	313.9	3.2
260.0	180.0	10.0	260.0	180.0	10.0	63.20	15.8	385.3	2.6
260.0	180.0	12.0	260.0	180.0	12.0	73.50	13.6	448.1	2.2
260.0	180.0	12.5	260.0	180.0	12.5	76.20	13.1	464.5	2.2
300.0	100.0	6.0	300.0	100.0	6.0	35.80	27.9	218.2	4.6
300.0	100.0	6.3	300.0	100.0	6.3	37.20	26.9	226.8	4.4
300.0	100.0	8.0	300.0	100.0	8.0	46.50	21.5	283.5	3.5
300.0	100.0	10.0	300.0	100.0	10.0	57.00	17.5	347.5	2.9
300.0	100.0	12.0	300.0	100.0	12.0	66.00	15.2	402.3	2.5
300.0	100.0	12.5	300.0	100.0	12.5	68.30	14.6	416.4	2.4
300.0	150.0	6.0	300.0	150.0	6.0	40.50	24.7	246.9	4.1
300.0	150.0	6.3	300.0	150.0	6.3	42.20	23.7	257.3	3.9
300.0	150.0	8.0	300.0	150.0	8.0	52.80	18.9	321.9	3.1
300.0	150.0	10.0	300.0	150.0	10.0	64.80	15.4	395.0	2.5
300.0	150.0	12.0	300.0	150.0	12.0	75.40	13.3	459.6	2.2
300.0	150.0	12.5	300.0	150.0	12.5	78.10	12.8	476.1	2.1
300.0	200.0	6.0	300.0	200.0	6.0	45.20	22.1	275.5	3.6
300.0	200.0	6.3	300.0	200.0	6.3	47.10	21.2	287.1	3.5
300.0	200.0	8.0	300.0	200.0	8.0	59.10	16.9	360.3	2.8
300.0	200.0	10.0	300.0	200.0	10.0	72.70	13.8	443.2	2.3
300.0	200.0	12.0	300.0	200.0	12.0	84.80	11.8	516.9	1.9
300.0	200.0	12.5	300.0	200.0	12.5	88.00	11.4	536.4	1.9
350.0	250.0	6.0	350.0	250.0	6.0	54.70	18.3	333.5	3.0
350.0	250.0	6.3	350.0	250.0	6.3	57.00	17.5	347.5	2.9
350.0	250.0	8.0	350.0	250.0	8.0	71.60	14.0	436.5	2.3
350.0	250.0	10.0	350.0	250.0	10.0	88.40	11.3	538.9	1.9
350.0	250.0	12.0	350.0	250.0	12.0	104.00	9.6	634.0	1.6
350.0	250.0	12.5	350.0	250.0	12.5	108.00	9.3	658.4	1.5
400.0	200.0	8.0	400.0	200.0	8.0	71.60	14.0	436.5	2.3
400.0	200.0	12.5	400.0	200.0	12.5	108.00	9.3	658.4	1.5
400.0	300.0	8.0	400.0	300.0	8.0	84.20	11.9	513.3	2.0
400.0	300.0	10.0	400.0	300.0	10.0	104.00	9.6	634.0	2.0
400.0	300.0	12.0	400.0	300.0	12.0	123.00	8.1	749.8	1.0
400.0	300.0	12.5	400.0	300.0	12.5	127.00	7.9	774.2	1.0

Following Manufacturing Tolerance shall be permitted

Outside dimensions of sides	H, B < 100 : ± 1 % with a min of 0.5mm 100 ≤ H, B ≤ 200 : ± 0.8% H, B > 200 : ± 0.6%	External corner profile	T ≤ 6 mm: 1.6T to 2.4T 6 < T ≤ 10mm: 2.0T to 3.0T 10 < T mm: 2.4 T to 3.6T
Thickness	T ≤ 5 mm: ± 10 % T > 5 mm: ± 0.5 mm	Squareness of sides	90 Degree ± 1 Degree
Concavity/Convexity	Max. 0.8% with a minimum of 0.5mm	Straightness	0,15 % of total length and 3 mm over any 1 mtr Length
Twist	2.0mm plus 0.5mm / mtrs length	Weight	± 6 % on individual delivered lengths
Length (Random length / Unless Otherwise Specified)	4-16 Mtrs (10 % of sections supplied may be below the min. for the ordered range but not shorter than 75 % of the min. range length).		

Note :
1) Length other than those given in the above table may be supplied as per customer requirements.
2) We are equipped with inner weld scarfing (internal weld fin removal) as per customer requirement.

Rectangle Hollow Sections (RHS)

SIZE/THK	2.5	2.6	2.9	3.2	3.6	4.0	4.5	4.8	5.0	5.4	6.0	8.0	10.0	12.0
40x20														
50x25														
60x40														
66x33														
75x25														
75x50														
80x40														
96x48														
100x50														
110x55														
122x61														
130x50														
140x60														
145x82														
150x75														
150x100														
172x92														
200x100														
200x120														
200x150														
240x120														
250x100														
250x150														
300x100														
300x150														
300x200														
350x250														
400x200														
400x300														





Value addition is a part of MKK's mission since the start. Moving a step ahead, MKK has set up a new 9mtr semi-automatic galvanization plant in Ranipet, Tamilnadu. Galvanization is the process of applying a protective zinc coating to steel or iron in order to prevent premature rust or corrosion. The corrosion of zinc is very slow which gives it an extended life while it protects the base metal which results in a low cost long-term.

Coating Thickness



65 µm - 150 µm



Certified by BIS ISI mark



1239, 1161, 3601



In-house Quality Checks



Uniformity test, stripping test, adhesion test, coating thickness, surface thickness

We have an in-house Galvanising Plant

MKK offers GI Round Sections in sizes ranging from 15mmNB to 450mmNB and thickness and length as required by the customer. We also specialize in galvanizing of solar mounting structures, solar pump structures and such which are also manufactured in-house, making MKK a one stop solution for industrial structural needs.

Our products are -



Environmentally Sustainable



Abrasion Resistant

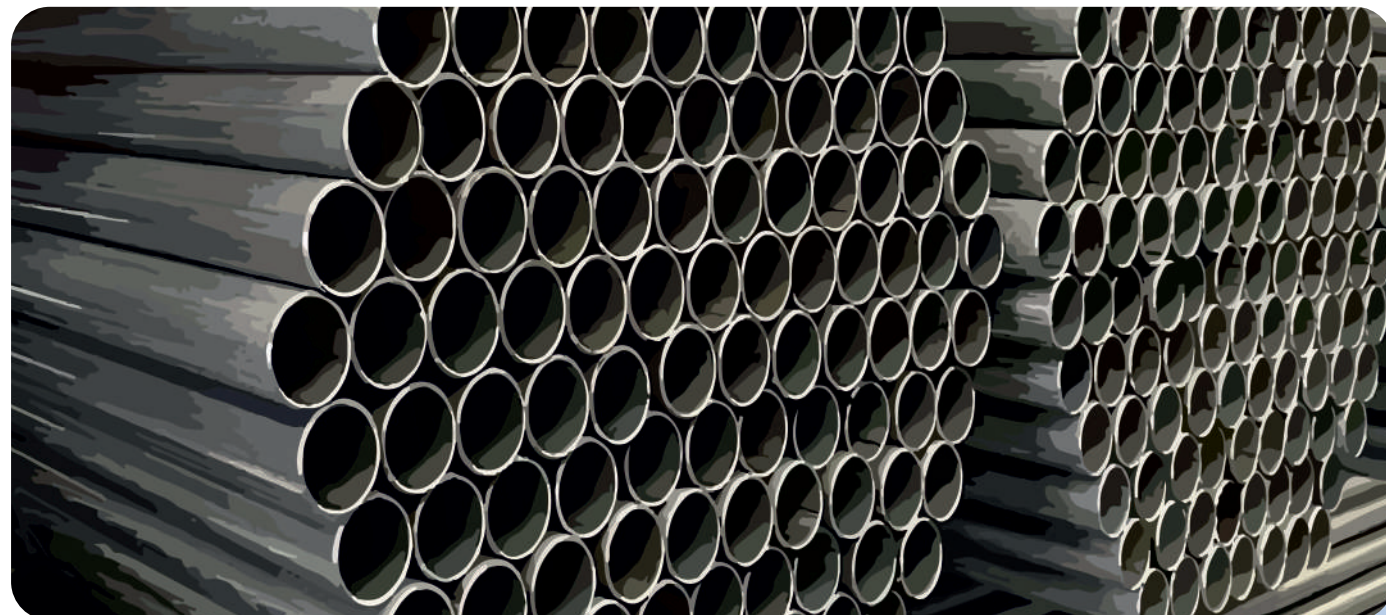


Maintenance-Free Life of 15 Years



Applications

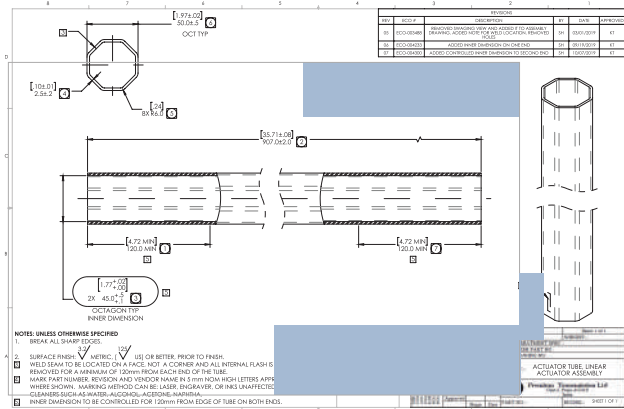
- ✓ Household Structural Application in Coastal Regions
- ✓ Structural applications (Solar power plant & wind mills)
- ✓ Plumbing and Agricultural (Water & irrigation transport)
- ✓ Greenhouse Structures
- ✓ Transmission Line Towers



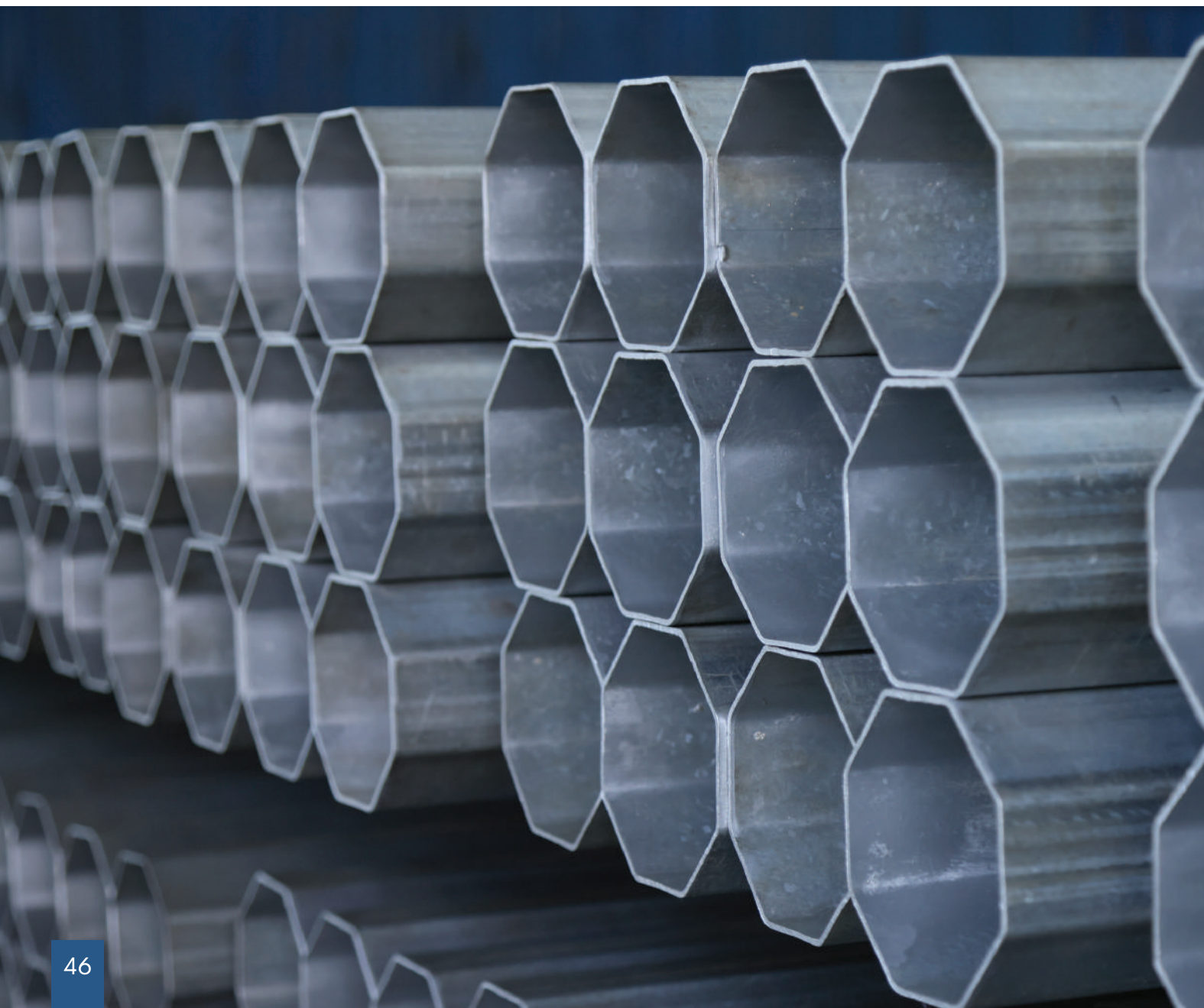
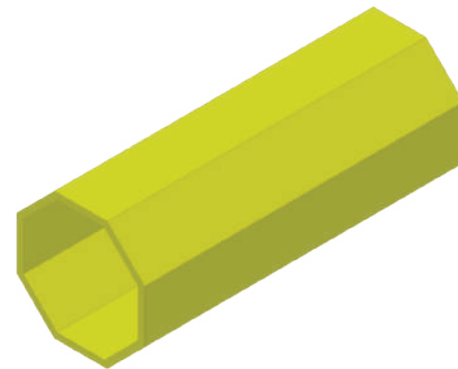
From receiving complex designs, to challenging specifications - MKK has been able to deliver what the world needs.

For a leading company in the US, MKK has provided structures of YST 550 MPa, UTS 620 Mpa, Elongation 14% and zinc coating 275 GSM

Step 1: Design Conceptualization



Step 2: 3D Drawing



Galvanising Structures

TECHNICAL DATA FOR STEEL TUBES FOR USES IN WATER, GAS, AIR & STEAM, CONFORMING TO IS:1239 (PART 1) 2004 EQUIVALENT TO BS: 1387 - 1985

NOMINAL BORE & CLASS		OUTSIDE DIAMETER			WALL THICKNESS		BLACK TUBE				GALVANIZED TUBE				SOCKET	
mm/in	Class	Max	Mean	Min	mm	swg	Plain End		Screwed & Socketed		Plain End		Screwed & Socketed		Min OD	Min Length
							kg/mtr	mts/t	kgs/20'	pcs/mt	kg/mtr	mts/t	kgs/20'	pcs/mt	mm	swg
15 (1/2")	L	21.4	21.2	21.0	2.0	14	0.95	1056	0.96	1046	1.00	1001	1.01	992	27.0	37.0
	M	21.8	21.4	21.0	2.6	12	1.21	826	1.22	820	1.26	791	1.27	785	27.0	37.0
	H	21.8	21.4	21.0	3.2	10	1.44	694	1.45	690	1.49	669	1.50	665	27.0	37.0
20 (3/4")	L	26.9	26.7	26.4	2.3	13	1.38	725	1.39	719	1.44	694	1.45	689	32.5	39.0
	M	27.3	26.9	26.5	2.6	12	1.56	641	1.57	637	1.62	617	1.63	613	32.5	39.0
	H	27.3	26.9	26.5	3.2	10	1.87	535	1.88	532	1.92	520	1.93	517	32.5	39.0
25 (1")	L	33.8	33.5	33.2	2.6	12	1.98	505	2.00	500	2.06	485	2.08	480	39.5	46.0
	M	34.2	33.8	33.3	3.2	10	2.41	415	2.43	412	2.50	401	2.52	398	39.5	46.0
	H	34.2	33.8	33.3	4.0	8	2.93	341	2.95	339	3.03	330	3.05	328	39.5	46.0
32 (1.1/4")	L	42.5	42.2	41.9	2.6	12	2.54	394	2.57	389	2.64	379	2.67	374	49.0	51.0
	M	42.9	42.5	42.0	3.2	10	3.10	323	3.13	319	3.21	312	3.24	309	49.0	51.0
	H	42.9	42.5	42.0	4.0	8	3.79	264	3.82	262	3.89	257	3.92	255	49.0	51.0
40 (1.1/2")	L	48.4	48.1	47.8	2.9	11	3.23	310	3.27	306	3.36	298	3.40	294	56.0	51.0
	M	48.8	48.4	47.9	3.2	10	3.56	281	3.60	278	3.68	272	3.72	269	56.0	51.0
	H	48.8	48.4	47.9	4.0	8	4.37	229	4.41	227	4.49	223	4.53	221	56.0	51.0
50 (2")	2"	60.2	59.9	59.6	2.9	11	4.08	245	4.15	241	4.23	237	4.30	233	68.0	60.0
	2"	60.8	60.3	59.7	3.6	9	5.03	199	5.10	196	5.17	194	5.24	191	68.0	60.0
	2"	60.8	60.3	59.7	4.5	7	6.19	162	6.26	160	6.35	158	6.42	156	68.0	60.0
65 (2.1/2")	L	76.0	75.6	75.2	3.2	10	5.71	175	5.83	172	5.90	170	6.02	166	84.0	69.0
	M	76.6	76.0	75.3	3.6	9	6.42	156	6.54	153	6.62	151	6.74	148	84.0	69.0
	H	76.6	76.0	75.3	4.5	7	7.93	126	8.05	124	8.10	124	8.22	122	84.0	69.0
80 (93")	L	88.7	88.3	87.9	3.2	10	6.72	149	6.89	145	6.95	144	7.12	140	98.0	75.0
	M	89.5	88.8	88.0	4.0	8	8.36	120	8.53	117	8.59	116	8.76	114	98.0	75.0
	H	89.5	88.8	88.0	4.8	6	9.90	101	10.40	96	10.11	99	10.61	94	98.0	75.0
100 (4")	L	113.9	113.5	113.0	3.6	9	9.75	103	10.00	100	10.28	97	10.59	94	124.0	87.0
	M	115.0	114.1	113.1	4.5	7	12.20	82	12.50	80	12.76	78	13.26	75	124.0	87.0
	H	115.0	114.1	113.1	5.4	5	14.50	69	14.80	68	15.25	66	15.55	64	124.0	87.0
125 (5")	M	140.8	139.7	138.5	4.8	6	15.90	63	16.40	61	16.65	60	17.15	58	151.0	96.0
	H	140.8	139.7	138.5	5.4	5	17.90	56	18.40	54	18.62	54	19.12	52	151.0	96.0
	M	166.5	165.2	163.9	4.8	6	18.90	53	19.50	51	19.70	51	20.30	49	178.0	96.0
150 (6")	H	166.5	165.2	163.9	5.4	5	21.30	47	21.90	46	22.32	45	22.92	44	178.0	96.0

Tolerance

Class	Thickness	Mass (Single Tube)	Mass (per load of 10 T)	Length (unless otherwise specified)	Hydrostatic Test Pressure
L - Light	+ Not Limited - 8%	+ 10% - 8%	+ 7.5% - 5.0%	4 - 7 meters	5 MPa
M - Medium H - Heavy	+ Not Limited - 10%	+10% - 10%	+7.5% - 7.5%	4 - 7 meters	5MPa

Delivering excellence since 2002

- USA
- Canada
- South America
- UK
- Spain
- Germany
- UAE
- Malaysia
- Australia
- Sri Lanka
- Bangladesh



Clients



DNV

CERTIFICATE OF FACTORY PRODUCTION CONTROL

Certificate No: 2024-43-10 Initial certification date: 2022-03-09 Valid: 2027-03-09

This certificate consists of 02 page(s)

This is to certify that the product(s)

Non-alloy Steel tubes suitable for Welding and Threading.

Manufactured by **MKK METAL SECTIONS PRIVATE LIMITED**
Plot No M1 & S99 - S108, SIPCOT Phase III, Mukundarapuram Post, Ranipet Dist-632405, Tamilnadu, India

has on a voluntary basis been assessed with respect to the conformity assessment procedure "Factory Production Control" as described in EN 10255:2004+A1:2007 annex ZA Clause 12.3 of the standard on structural steel, as amended and found to comply

Applications/Limitations
In compliance with the Construction Product Regulation 305/2011, CE marking & provide Declaration of Performance and Attestation procedure AC 3, which is described in the Standard EN 10255:2004+A1:2007 according to the Annex ZA, Initial Type Testing (ITT) Clause 12.2 and meet the requirements and compliance of the same rests under responsibility of the Manufacturer.

This certificate remains valid during a three year period as long as the conditions laid down in the harmonised technical specification in reference to the manufacturing conditions in the factory or the factory production control itself are not modified significantly. The product liability rests with the manufacturer or his representative.

Place and date: **Ahmedabad, 10 January 2024**

For the issuing office: **DNV Business Assurance India Pvt Ltd.**

Manojumar Panchal
Head of Section, Manager - Product Assurance

DNV

CERTIFICATE OF CONFORMITY OF THE FACTORY PRODUCTION CONTROL

Certificate No: 2024-43-10 Initial certification date: 2022-03-09 Valid: 2027-03-09

In compliance with Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 (the Construction products Regulation or CPR), this certificate applies to the construction product(s)

Cold formed welded structural hollow sections of non-alloy & fine grain steels to be used in the structures of or composite metal and concrete structures

placed on the market under the name or trademark of **MKK METAL SECTIONS PRIVATE LIMITED**
Plot No M1 & S99 - S108, SIPCOT Phase III, Mukundarapuram Post, Ranipet Dist-632405, Tamilnadu, India

and produced in the manufacturing plant(s) **MKK METAL SECTIONS PRIVATE LIMITED**
Plot No M1 & S99 - S108, SIPCOT Phase III, Mukundarapuram Post, Ranipet Dist-632405, Tamilnadu, India

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standard(s)

EN 10219-1:2006 under system 2, as applied and that **THE FACTORY PRODUCTION CONTROL IS ASSESSED TO BE IN CONFORMITY WITH THE APPLICABLE REQUIREMENTS**

This certificate will remain valid so long as neither the harmonised standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified factory production control certification body.

For more details see Appendix accompanying this Certificate.

Place and date: **Bombay, 11 January 2024**

For the issuing office: **DNV Business Assurance India Pvt Ltd.**

Manojumar Panchal
Head of Section, Manager - Product Assurance

IAF **JAS-ANZ** **ISO 14001:2015**

Certificate of Compliance
INTEGRATED QUALITY CERTIFICATION PRIVATE LIMITED
hereby certifies that the Environmental Management Systems of **MKK Metal Sections Private Limited**

Head Office: Fagun Mansion, 3rd Floor, No. 74, Ethiraj Salai, Egmore, Chennai - 600 008, Plant: Plot No. M1 & S99 - S108, SIPCOT Phase III, Mukundarapuram Post, Ranipet Dist - 632 405, Tamil Nadu, India.

has been assessed and conforms to the Environmental Management Systems **ISO 14001:2015**

Scope: Manufacture of cold rolled formed metal sections, colour coated corrugated sheets, MS ERW pipes/tubes, RHS, SHS & octagonal hollow sections, hot dip galvanized steel products, MS solar structures, handrails, cable trays and railway coach components.

Subdivision: -21, 22 Current issue date: 03.11.2023
Class: -2110, 2221, 2293 Current expiry date: 02.11.2026
Process(es) not applicable: None 1st Surveillance due: 02.11.2024
Certificate number: -IND/IMS-QEO/JAS-C092/0992 2nd Surveillance due: 02.11.2025
Attachment(s): None

Suma Shankar
Director

IAF **JAS-ANZ** **ISO 45001:2018**

Certificate of Compliance
INTEGRATED QUALITY CERTIFICATION PRIVATE LIMITED
hereby certifies that the Occupational Health and Safety Management Systems of **MKK Metal Sections Private Limited**

Head Office: Fagun Mansion, 3rd Floor, No. 74, Ethiraj Salai, Egmore, Chennai - 600 008, Plant: Plot No. M1 & S99 - S108, SIPCOT Phase III, Mukundarapuram Post, Ranipet Dist - 632 405, Tamil Nadu, India.

has been assessed and conforms to the Occupational Health and Safety Management Systems **ISO 45001:2018**

Scope: Manufacture of cold rolled formed metal sections, colour coated corrugated sheets, MS ERW pipes/tubes, RHS, SHS & octagonal hollow sections, hot dip galvanized steel products, MS solar structures, handrails, cable trays and railway coach components.

Subdivision: -21, 22 Current issue date: 03.11.2023
Class: -2110, 2221, 2293 Current expiry date: 02.11.2026
Process(es) not applicable: None 1st Surveillance due: 02.11.2024
Certificate number: -IND/IMS-QEO/JAS-C092/0644 2nd Surveillance due: 02.11.2025
Attachment(s): None

Suma Shankar
Director

IAF **ISO 9001:2015**

Certificate of Compliance
INTEGRATED QUALITY CERTIFICATION PRIVATE LIMITED
hereby certifies that the Quality Management Systems of **MKK METAL SECTIONS PRIVATE LIMITED**

Reg office: No. 73, New Avadi Road, Kilpauk, Chennai 600 010, Tamil Nadu, India. Plant: Plot No. M1 & S99-S108, SIPCOT Phase III, Mukundarapuram Post, Ranipet Dist 632 405, Tamil Nadu, India.

has been assessed and conforms to the Quality Management Systems **ISO 9001:2015**

Scope: Reg office: Marketing process Plant: Manufacture of cold rolled formed metal sections, colour coated corrugated sheets, MS ERW pipes/tubes, RHS, SHS & octagonal hollow sections, hot dip galvanized steel products, MS solar structures, handrails, cable trays and railway coach products.

Division: -24 Initial issue date: 28.08.2012
Class: -24-21, 34-32 Current issue date: 28.08.2021
Process(es) not applicable: -R-3 Current expiry date: 27.08.2024
Certificate number: -IND/QMS/NAB-C2395/IC3/1860 1st Surveillance due: 27.08.2022
Attachment(s): None 2nd Surveillance due: 27.08.2023

Manojumar Panchal
Director

INDIA ENGINEERS LIMITED

Ref: 49H/PQD/EN/23-24/4258 Date: 15th January, 2024

M/S MKK Metal Sections Private Limited
3rd Floor, Fagun Mansion, 74, Ethiraj Salai, Egmore, Tamil Nadu, Chennai-600008

Subject: Enlistment with EI

Dear Sirs,

We refer to your application on subject matter and are pleased to inform that you have been enlisted with EI for the items as described below:

Item Description	Size	Material / Range	Quantity
Pipe Carbon Steel to Indian Standards	0.5" - 8" - 10"	2.0 - 6.4 mm	01238, ERW
		2.0 - 6.4 mm	03785, ERW

[This enlistment is valid for your works located at Plot No M1 & S99-108, SIPCOT Phase III, Mukundarapuram Post, Ranipet Tamil Nadu - 632405.]

Any change in the product range, location of Works/Job Office, Management/Organization structure etc., shall be intimated to us immediately along with relevant documents for our necessary action. Further, kindly update your contact details on regular basis so that you may keep on receiving EI communications. Also, kindly ensure submission of your Audited Annual Report on yearly basis to enable us update your latest financial data.

Please note that this enlistment is subject to satisfactory execution of orders in delivery and quality of above items when ordered for various projects of EI/our clients. You are expected to adopt strict adherence to highest standard and a very high degree of integrity, commitment & sincerity towards the work undertaken for projects under EI's execution. Being with EI, shall be entitled to initiate actions as specified in EI's procedure for suspension/revocation of business dealings, displayed on EI website.

The validity of this ENLISTMENT is upto 31st January, 2027. You are advised to apply for revalidation "within" 6 months before expiry of the enlistment. Detailed guidelines for revalidation can be seen on our website https://enlist.ei.co.in/enquiry/.

S. Srinivasan
Director

Clean Energy & Climate Action has never been more urgent.

MKK is striving to bring new means for long term sustainability solutions in manufacturing

- On Time
- Cost Effective
- Good Quality
- Reliable
- Sustainable
- Durable

Unmatched quality duly certified

