METPRO

STEEL PIPES, TUBES & SECTIONS

MKK Metal Sections



DRIVEN BY ENGINEERING EXCELLENCE

METPRO PRIME | METPRO GALV | METPRO FORM | METPRO ROOF | METPRO ENVIRON | METPRO RACK | METPRO GUARD

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About Us

MKK Metal Sections, was setup in 2008 by Late Mr. Mahesh Kumar 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 5,00,000 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 & Metal Crash Barriers.

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 9 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. Mahesh Kumar Khandelwal

Born on December 22nd 1952, in the heart of the country, Gwalior, Late Shri. Mahesh Kumar 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-previliged, 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 Former Union Finance Minister Mr. P Chidambaram



Mission

To continuously strive, excel and guarantee value addition in terms of quality, customization and serviceof 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.



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

Received **ISO 9001:2000** certification.

2010

Acquired new identity with registered brand name: **METPRO**

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 octangonal pipe.

2019

First in South India to manufacture tube sizes of **CHS upto 457 mm OD, SHS 350 mm x 350 mm** and **RHS 400 mm x 300 mm.**

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**

2025

Commissioning 4 new high speed Solar Module Mounting Structure mills increasing our production capacity to **1,00,000 MT.**

Being the only pipe and tube manufacturer in southern India to commission tube line with laser cutting technology for sizes upto 24" (610 OD)





25+
Years

1100+
Products

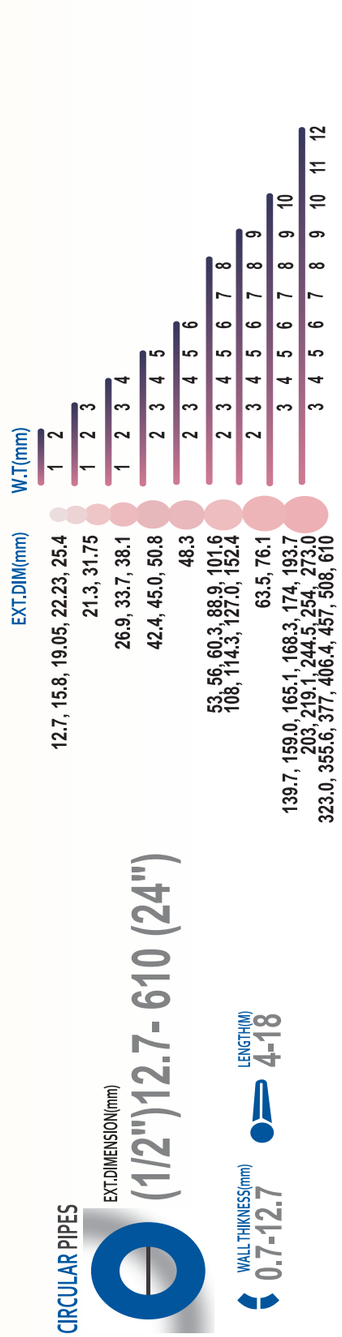
800+
Customers

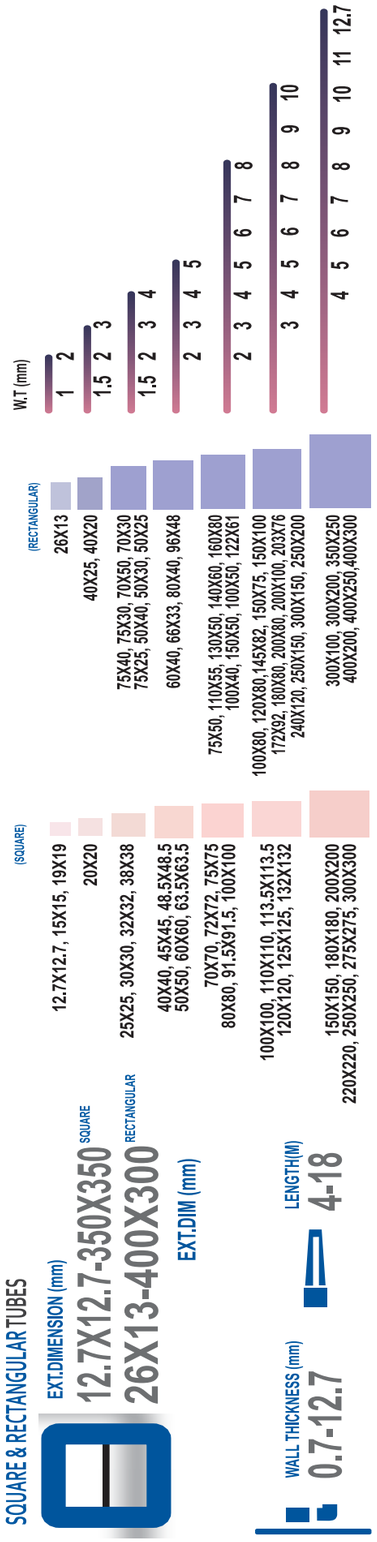
750+
Workforce

State-of-the-art manufacturing facilities.

- 2 Manufacturing Units
- 32 Production Lines
- 5,00,000 MT Annual Capacity







METPRO PRIME

METRO 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, bevelled 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 **YST-530** are used for heavy machinery and industrial purposes.

Our Capacity
5,00,000 MT
in 9 lines

Our Product Range

Wall Thickness (mm): 0.7 - 12.7 | **Length** (m): 4 - 18

12.7 OD
610 OD
Circular Hollow Sections (CHS)

15 x 15 mm
350 x 350 mm
Square Hollow Sections (SHS)

26 x 13 mm
450 x 250 mm
Rectangular Hollow Sections (RHS)



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

Fire Fighting System

ASTM A 53, IS:3589, 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

Construction Industries

Scaffolding & Structural Purposes, Electrical Poles, Telecom Towers
IS:1161, IS:4923, EN 10219, ASTM A 500, EN 10255 EN10210





Highways and Warehouses

IS:4923, EN 10219, ASTM A500, IS:1161 EN10210

Steel Tubes for Mechanical, General Engineering and Decorative Purposes

Energy Projects, Sugar Industries, Automobile, AeroSpace Industries, Defence etc. **IS:3601, ASTM A513 IS 18573**





Steel Tube for Idlers & Belt Conveyors

IS:9295



Testimony to
Our Capacity

"Certificate of Recognition"
from Government of India.

Management System Certificate

ISO 9001:2015

ISO 14001:2015

ISO 45001 :2018

Product and Marking Certificate

1. EN 10219-1 :2006 - Cold formed structural Hollow Sections of non-alloy & fine grain steels (CFCHS - Circular, CFRHS - Square & Rectangular) (Black & Galvanized)
2. EN 10255:2004+A 1 :2007 - Non-Alloy Steel Tubes Suitable for Welding and Threading - Circular Hollow Sections (CHS) - Black and Galvanized
3. EN 10210-1 :2006 - Hot finished structural Hollow Sections of non-alloy & fine grain steels (CFCHS - Circular, CFRHS - Square & Rectangular) (Black & Galvanized)
4. EN 10217-1-Welded Steel Tubes (CHS) for Pressure Purposes
5. Underwriters Laboratories-UL
6. SLS 829:2009 - GI Pipes
7. AFP-3206 (Activfire) for ASTM A 135/A53
8. AFP-2977 (Activfire) for AS1074
9. BIS Licenses IS 1239 (part-1), IS 3589, IS 4270, IS 1161, IS 4923, IS 3601, IS 9295, IS 18573

ACTIVFIRE ACTIVE FIRE PROTECTION – PRODUCT CERTIFICATION

CE

Bureau of Indian Standards

UL Underwriters Laboratories

SLS

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	ASTMA-53	-	DIN-2439, 2440 & 2441	AS 1074
2	Water, Sewage	IS-3589	EN-10255	-	-	-	-
3	Structural, Scaffolding	IS-1161	"BS-11 39, 6323 EN-39 EN-10219"	AST-MA-500	JIS G 3444	-	AS 1163
4	Idlers, Belt Conveyers	IS-9295	BS-6323	ASTMA-513	-	-	-
5	Water Wells, Casing	IS-4270	BS-879	-	-	-	-
6	Sectional Tubes (Sq. & Rect.)	IS-4923/ IS 18573	-	AST-MA-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	AP15L	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.

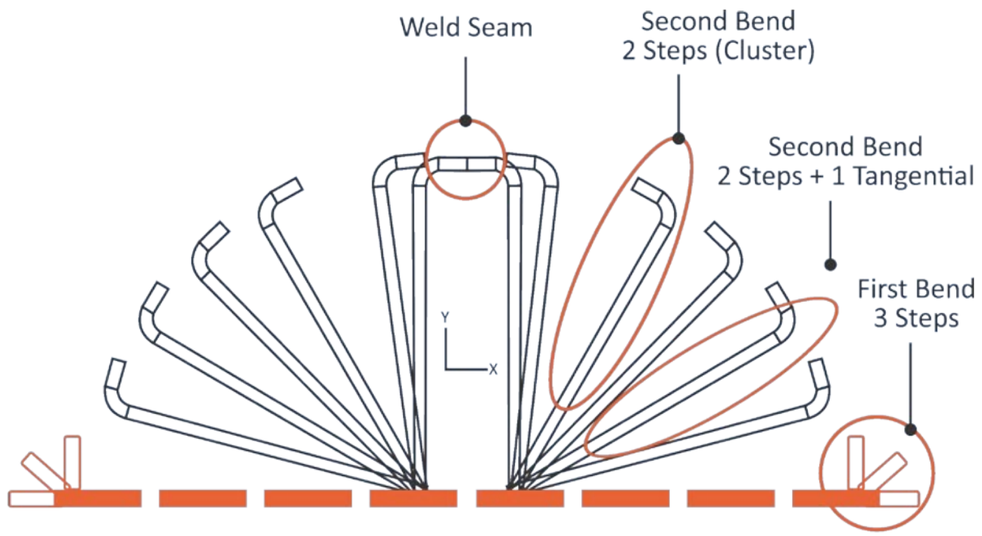
4 **Cost-Effectiveness:**
By eliminating the need for multiple forming and welding steps, our DFT Tube Mill reduces labor costs, energy consumption, and material waste, resulting in substantial cost savings for our customers.

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.

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 seam less, high-quality tubes produced with unmatched speed and efficiency.



Design of Section Pipe

Information on Specification, Grades & Sizes Covered in DFT

Specification	Grades	Sizes covered in SHS	Sizes covered in RHS
IS:4923	YST 210, 240, 310, 355	100 x 100 x 2.5 to 12.7 mm	100 x 150 x 2.5 to 12.7 mm
ASTM A500	A500-Gr A, B & C	120 x 120 x 2.5 to 12.7 mm	100 x 200 x 3 to 12.7 mm
EN 10219/10210	S235, S275, S355	135 x 135 x 2.5 to 12.7 mm	100 x 250 x 3 to 12.7 mm
	G40.20-13	150 x 150 x 3 to 12.7 mm	100 x 300 x 3 to 12.7 mm
	G40.21-13	160 x 160 x 3 to 12.7 mm	120 x 200 x 3 to 12.7 mm
		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	250 x 450 x 4 to 12.7 mm

Information on Specification, Grades & Sizes Covered in DFT

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

Circular Hollow Sections (CHS)

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 **12.7 OD to 610 OD** with thickness up to 12.7mm, 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
- Bus Bodies and Automobile Industries
- Transmission Line Towers
- Industrial and Commercial Shed Structures
- Lifting and Excavation Industries
- Highway Cantilever Structures

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

SPECIFIED OUTSIDE DIAMETER	DESIGNATION OF THREAD	OUTER DIAMETER		WALL Thickness	NOMINAL MASS OF STEEL TUBES PLAIN END							
		Max	Min		Plain End				Threaded & Socketed			
mm	-	mm	mm	mm	kg/mtr	mts/t	Kgs/20′	pcs/mt	kg/ mtr	mts/t	Kgs/20′	pcs/mt
21.3	½	21.7	21.0	2.3	1.08	926	6.58	152	1.09	917	6.64	150
26.9	¾	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 ¼	42.7	41.9	2.9	2.82	355	17.19	58	2.85	351	17.37	58
48.3	1 ½	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 ½	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 L1

SPECIFIED OUTSIDE DIAMETER	DESIGNATION OF THREAD	OUTER DIAMETER		WALL Thickness	NOMINAL MASS OF STEEL TUBES PLAIN END							
		Max	Min		Plain End				Threaded & Socketed			
mm	-	mm	mm	mm	kg/mtr	mts/t	Kgs/20′	pcs/mt	kg/ mtr	mts/t	Kgs/20′	pcs/mt
21.3	½	21.4	21.0	2.0	0.95	1056	5.77	173	0.96	1046	5.83	172
26.9	¾	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 ¼	42.5	41.9	2.6	2.54	394	15.48	65	2.57	389	15.67	64
48.3	1 ½	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 ½	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 tolarance limited by the mass tolarance
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 atleat 5 seconds or an Electro magnetic test

Note:

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

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

OUTER DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20′	pcs/mt
21.8	21.3	20.8	2	0.95	1053	5.79	173
21.8	21.3	20.8	2.5	1.16	862	7.07	141
21.8	21.3	20.8	3	1.35	741	8.23	122
27.4	26.9	26.4	2	1.23	813	7.50	133
27.4	26.9	26.4	2.5	1.5	667	9.14	109
27.4	26.9	26.4	3	1.77	565	10.79	93
34.2	33.7	33.2	2	1.56	641	9.51	105
34.2	33.7	33.2	2.5	1.92	521	11.70	B5
34.2	33.7	33.2	3	2.27	441	13.84	72
42.9	42.4	41.9	2	1.99	503	12.13	82
42.9	42.4	41.9	2.5	2.46	407	15.00	67
42.9	42.4	41.9	3	2.91	344	17.74	56
42.9	42.4	41.9	4	3.79	264	23.10	43
48.8	48.3	47.8	2	2.28	439	13.90	72
48.8	48.3	47.8	2.5	2.82	355	17.19	58
48.8	48.3	47.8	3	3.35	299	20.42	49
48.8	48.3	47.8	4	4,37	229	26.64	38
48.8	48.3	47.8	5	5.34	187	32.55	31
60.9	60.3	59.7	2	2.88	347	17.56	57
60.9	60.3	59.7	2.5	3.56	281	21.70	46
60.9	60.3	59.7	3	4.24	236	25.85	39
60.9	60.3	59.7	4	5,5S	180	33.83	30
60.9	60.3	59.7	5	6.82	147	41,57	24
76.9	76.1	75.3	2	3.65	274	22.25	45
76.9	76.1	75.3	2.5	4.54	220	27.68	36
76.9	76.1	75.3	3	5.41	185	32.98	30
76.9	76.1	75.3	4	7.11	141	43.34	23
76.9	76.1	75.3	5	8.77	114	53.46	19
76.9	76.1	75.3	6	10.4	96	63.40	16
76.9	76.1	75.3	6.3	10.8	93	65.84	15
89.8	88.9	88.0	2	4.29	233	26.15	3B
89.8	88.9	88.0	2.5	5.33	188	32.49	31
89.8	88.9	88.0	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

OUTER DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
89.8	88.9	88.0	4	8.38	119	51.08	20
89.8	88.9	88.0	5	10.3	97	62.79	16
89.8	88.9	88.0	6	12.3	81	74.98	13
89.8	88.9	88.0	6.3	12.8	78	78.03	13
102.6	101.6	100.6	2	4.91	204	29.93	33
102.6	101.6	100.6	2.5	6.11	164	37.25	27
102.6	101.6	100.6	3	7.29	137	44.44	23
102.6	101.6	100.6	4	9.63	104	58.70	17
102.6	101.6	100.6	5	11.9	84	72.54	14
102.6	101.6	100.6	6	14.1	71	85.95	12
102.6	101.6	100.6	6.3	14.8	68	90.22	11
115.4	114.3	113.2	2.5	6.89	145	42.00	24
115.4	114.3	113.2	3	8.23	122	50.17	20
115.4	114.3	113.2	4	10.9	92	66.45	15
115.4	114.3	113.2	5	13.5	74	82.30	12
115.4	114.3	113.2	6	16	63	97.54	10
115.4	114.3	113.2	6.3	16.8	60	102.41	10
115.4	114.3	113.2	8	21	48	128.02	8
141.1	139.7	138.3	3	10.1	99	61.57	16
141.1	139.7	138.3	4	13.4	75	81.69	12
141.1	139.7	138.3	5	16.6	60	101.19	10
141.1	139.7	138.3	6	19.8	51	120.70	8
141.1	139.7	138.3	6.3	20.7	48	126.19	8
141.1	139.7	138.3	80	26	38	158.50	6
141.1	139.7	138.3	10	32	31	195.07	5
170.0	168.3	166.6	3	12.2	82	74.37	13
170.0	168.3	166.6	4	16.2	62	98.76	10
170.0	168.3	166.6	5	20.1	50	122.53	8
170.0	168.3	166.6	6	24	42	146.30	7
170.0	168.3	166.6	6.3	25.2	40	153.62	7
170.0	168.3	166.6	8	31.6	32	192.63	5
170.0	168.3	166.6	10	39	26	237.74	4
179.6	177.8	176.0	4	17.1	58	104.24	10

TECHNICAL DATAFOR COLD FORMED WELDED CIRCULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219

OUTER DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
179.6	177.8	176.0	5	21.3	47	129.84	8
179.6	177.8	176.0	6	25.4	39	154.84	6
179.6	177.8	176.0	6.3	26.6	38	162.15	6
179.6	177.8	176.0	80	33.5	30	204.22	5
179.6	177.8	176.0	10	41.4	24	252.37	4
179.6	177.8	176.0	12	49.1	20	299.31	3
179.6	177.8	176.0	12.5	51	20	310.90	3
195.6	193.7	191.8	4	18.7	53	114.00	9
195.6	193.7	191.8	5	23.3	43	142.04	7
195.6	193.7	191.8	6.0	27.8	36	169.47	6
195.6	193.7	191.8	6.3	29.1	34	177.39	6
195.6	193.7	191.8	8	36.6	27	223.11	4
195.6	193.7	191.8	10	45.3	22	276.15	4
195.6	193.7	191.8	12	53.8	19	327.96	3
195.6	193.7	191.8	12.5	55.9	18	340.77	3
221.3	219.1	216.9	4	21.2	47	129.24	8
221.3	219.1	216.9	S0	26.4	38	160.93	6
221.3	219.1	216.9	6	31.5	32	192.02	5
221.3	219.1	216.9	6.3	33.1	30	201.78	5
221.3	219.1	216.9	8	41.6	24	253.59	4
221.3	219.1	216.9	10	51.6	19	314.55	3
221.3	219.1	216.9	12	61.3	16	373.68	3
221.3	219.1	216.9	12.5	63.7	16	388.32	3
246.9	244.5	242.1	5	29.5	34	179.83	6
246.9	244.5	242.1	6	35.3	28	215.19	5
246.9	244.5	242.1	6.3	37	27	225.55	4
246.9	244.5	242.1	8	46.7	21	284.68	4
246.9	244.5	242.1	10	57.8	17	352.35	3
246.9	244.5	242.1	12	68.8	15	419.40	2
246.9	244.5	242.1	12.5	71.5	14	435.86	2
275.7	273	270.3	5	33	30	201.17	5
275.7	273	270.3	6	39.5	25	240.79	4
275.7	273	270.3	6.3	41.4	24	252.37	4

Circular Hollow Sections (CHS)

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

OUTER DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20′	pcs/mt
275.7	273	270.3	8	52.3	19	318.82	3
275.7	273	270.3	10	64.9	15	395.63	3
275.7	273	270.3	12	77.2	13	470.61	2
275.7	273	270.3	12.5	80.3	12	489.51	2
327.1	323.9	320.7	5	39.3	25	238.57	4
327.1	323.9	320.7	6	47	21	286.51	3
327.1	323.9	320.7	6.3	49.3	20	300.53	3
327.1	323.9	320.7	8	62.3	16	378.78	3
327.1	323.9	320.7	10	77.4	13	471.83	2
327.1	323.9	320.7	12	92.3	11	562.66	2
327.1	323.9	320.7	12.5	96	10	585.22	2
359.2	355.6	352.0	5	43.2	23	263.35	4
359.2	355.6	352.0	6	51.7	19	315.16	3
359.2	355.6	352.0	6.3	54.3	18	331.01	3
359.2	355.6	352.0	8	68.6	15	418.19	2
359.2	355.6	352.0	10	85.2	12	519.38	2
359.2	355.6	352.0	12	102	10	621.79	2
359.2	355.6	352.0	12.5	106	9	646.18	2
410.5	406.4	402.3	6	59.2	17	360.B8	3
410.5	406.4	402.3	6.3	62.2	16	378.17	3
410.5	406.4	402.3	8	78.6	13	478.15	2
410.5	406.4	402.3	10	97.8	10	596.19	2
410.5	406.4	402.3	12	117	9	713.23	1
410.5	406.4	402.3	12.5	121	8	737.62	1
461.6	457.0	452.4	6	66.7	15	406.60	2
461.6	457.0	452.4	6.3	70	14	426.72	2
461.6	457.0	452.4	8	88.6	11	540.11	2
461.6	457.0	452.4	10	110	9	670.56	1
461.6	457.0	452.4	12	132	8	804.67	1
461.6	457.0	452.4	12.5	137	7	835.15	1
511.81	508.0	504.19	6.3	77.9	12	474.87	-
511.81	508.0	504.19	8	98.6	10	601.06	-
511.81	508.0	504.19	10	123	8	749.80	-
511.81	508.0	504.19	12.5	153	7	932.68	-
614.58	610.0	605.43	6.3	93.8	11	571.80	-
614.58	610.0	605.43	8	119	8	725.42	-
614.58	610.0	605.43	10	148	7	902.20	-
614.58	610.0	605.43	12.5	184	5	1,121.66	-

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 > 5mm ± 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:

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



TECHNICAL DATA FOR HOT FINISHED WELDED CIRCULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS CONFIRMING TO EN 10210

OUTER DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
21.5	21.3	21.1	2.3	1.08	925.9	6.58	152
21.5	21.3	21.1	2.6	1.20	833.3	7.32	137
21.5	21.3	21.1	3.2	1.43	699.3	8.72	115
27.2	26.9	26.6	2.3	1.40	714.3	8.53	117
27.2	26.9	26.6	2.6	1.56	641.0	9.51	105
27.2	26.9	26.6	3.2	1.87	534.8	11.40	88
34.0	33.7	33.4	2.6	1.99	502.5	12.13	82
34.0	33.7	33.4	3.2	2.41	414.9	14.69	68
34.0	33.7	33.4	4.0	2.93	341.3	17.86	56
42.8	42.4	42.0	2.6	2.55	392.2	15.54	64
42.8	42.4	42.0	3.2	3.09	323.6	18.84	53
42.8	42.4	42.0	4.0	3.79	263.9	23.10	43
48.8	48.3	47.8	2.6	2.93	341.3	17.86	56
48.8	48.3	47.8	3.2	3.56	280.9	21.70	46
48.8	48.3	47.8	4.0	4.37	228.8	26.64	38
48.8	48.3	47.8	5.0	5.34	187.3	32.55	31
60.9	60.3	59.7	2.6	3.70	270.3	22.56	44
60.9	60.3	59.7	3.2	4.51	221.7	27.49	36
60.9	60.3	59.7	4.0	5.55	180.2	33.83	30
60.9	60.3	59.7	5.0	6.82	146.6	41.57	24
76.9	76.1	75.3	2.6	4.71	212.3	28.71	35
76.9	76.1	75.3	3.2	5.75	173.9	35.05	29
76.9	76.1	75.3	4.0	7.11	140.6	43.34	23
76.9	76.1	75.3	5.0	8.77	114.0	53.46	19
89.8	88.9	88.0	3.2	6.76	147.9	41.21	24
89.8	88.9	88.0	4.0	8.38	119.3	51.08	20
89.8	88.9	88.0	5.0	10.3	97.1	62.79	16
89.8	88.9	88.0	6.3	12.8	78.1	78.03	13
102.6	101.6	100.6	3.2	7.77	128.7	47.37	21
102.6	101.6	100.6	4.0	9.63	103.8	58.70	17
102.6	101.6	100.6	5.0	11.9	84.0	72.54	14
102.6	101.6	100.6	6.3	14.8	67.6	90.22	11
102.6	101.6	100.6	8.0	18.5	54.1	112.78	9
102.6	101.6	100.6	10.0	22.6	44.2	137.77	7
115.4	114.3	113.2	3.2	8.77	114.0	53.46	19
115.4	114.3	113.2	4.0	10.9	91.7	66.45	15
115.4	114.3	113.2	5.0	13.5	74.1	82.30	12
115.4	114.3	113.2	6.3	16.8	59.5	102.41	10
115.4	114.3	113.2	8.0	21.0	47.6	128.02	8
115.4	114.3	113.2	10.0	25.7	38.9	156.67	6
141.1	139.7	138.3	4.0	13.4	74.6	81.69	12
141.1	139.7	138.3	5.0	16.6	60.2	101.19	10

TECHNICAL DATA FOR HOT FINISHED WELDED CIRCULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS CONFIRMING TO EN 10210

OUTER DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
141.1	139.7	138.3	6.3	20.7	48.3	126.19	8
141.1	139.7	138.3	8.0	26.0	38.5	158.50	6
141.1	139.7	138.3	10.0	32.0	31.3	195.07	5
141.1	139.7	138.3	12.5	39.2	25.5	238.96	4
170.0	168.3	166.6	4.0	16.2	61.7	98.76	10
170.0	168.3	166.6	5.0	20.1	49.8	122.53	8
170.0	168.3	166.6	6.3	25.2	39.7	153.62	7
170.0	168.3	166.6	8.0	31.6	31.6	192.63	5
170.0	168.3	166.6	10.0	39.0	25.6	237.74	4
170.0	168.3	166.6	12.5	48.0	20.8	292.61	3
179.6	177.8	176.0	5.0	21.3	46.9	129.84	8
179.6	177.8	176.0	6.3	26.6	37.6	162.15	6
179.6	177.8	176.0	8.0	33.5	29.9	204.22	5
179.6	177.8	176.0	10.0	41.4	24.2	252.37	4
179.6	177.8	176.0	12.5	51.0	19.6	310.90	3
195.6	193.7	191.8	5.0	23.3	42.9	142.04	7
195.6	193.7	191.8	6.3	29.1	34.4	177.39	6
195.6	193.7	191.8	8.0	36.6	27.3	223.11	4
195.6	193.7	191.8	10.0	45.3	22.1	276.15	4
195.6	193.7	191.8	12.5	55.9	17.9	340.77	3
195.6	193.7	191.8	14.2	62.9	15.9	383.44	3
195.6	193.7	191.8	16.0	70.1	14.3	427.33	2
221.3	219.1	216.9	5.0	26.4	37.9	160.93	6
221.3	219.1	216.9	6.3	33.1	30.2	201.78	5
221.3	219.1	216.9	8.0	41.6	24.0	253.59	4
221.3	219.1	216.9	10.0	51.6	19.4	314.55	3
221.3	219.1	216.9	12.5	63.7	15.7	388.32	3
221.3	219.1	216.9	14.2	71.8	13.9	437.69	2
221.3	219.1	216.9	16.0	80.1	12.5	488.29	2
246.9	244.5	242.1	5.0	29.5	33.9	179.83	6
246.9	244.5	242.1	6.3	37.0	27.0	225.55	4
246.9	244.5	242.1	8.0	46.7	21.4	284.68	4
246.9	244.5	242.1	10.0	57.8	17.3	352.35	3
246.9	244.5	242.1	12.5	71.5	14.0	435.86	2
246.9	244.5	242.1	14.2	80.6	12.4	491.34	2
246.9	244.5	242.1	16.0	90.2	11.1	549.86	2
275.7	273.0	270.3	5.0	33.0	30.3	201.17	5
275.7	273.0	270.3	6.3	41.4	24.2	252.37	4
275.7	273.0	270.3	8.0	52.3	19.1	318.82	3
275.7	273.0	270.3	10.0	64.9	15.4	395.63	3
275.7	273.0	270.3	12.5	80.3	12.5	489.51	2
275.7	273.0	270.3	14.2	90.6	11.0	552.30	2

Circular Hollow Sections (CHS)

TECHNICAL DATA FOR HOT FINISHED WELDED CIRCULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS CONFIRMING TO EN 10210

OUTER DIAMETER			WALL THICKNESS	NOMINAL MASS OF STEEL TUBES PLAIN END			
Max	Mean	Min	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
275.7	273.0	270.3	16.0	101.0	9.9	615.70	2
327.1	323.9	320.7	5.0	39.3	25.4	239.57	4
327.1	323.9	320.7	6.3	49.3	20.3	300.53	3
327.1	323.9	320.7	8.0	62.3	16.1	379.78	3
327.1	323.9	320.7	10.0	77.4	12.9	471.83	2
327.1	323.9	320.7	12.5	96.0	10.4	585.22	2
327.1	323.9	320.7	14.2	108.5	9.2	661.42	2
327.1	323.9	320.7	16.0	121.0	8.3	737.62	1
359.2	355.6	352.0	6.3	54.3	18.4	331.01	3
359.2	355.6	352.0	8.0	68.6	14.6	418.19	2
359.2	355.6	352.0	10.0	85.2	11.7	519.38	2
359.2	355.6	352.0	12.5	106.0	9.4	646.18	2
359.2	355.6	352.0	14.2	120.0	8.3	731.52	1
359.2	355.6	352.0	16.0	134.0	7.5	816.86	1
410.5	406.4	402.3	6.3	62.2	16.1	379.17	3
410.5	406.4	402.3	8.0	78.6	12.7	479.15	2
410.5	406.4	402.3	10.0	97.8	10.2	596.19	2
410.5	406.4	402.3	12.5	121.0	8.3	737.62	1
410.5	406.4	402.3	14.2	137.0	7.3	835.15	1
410.5	406.4	402.3	16.0	154.0	6.5	938.78	1
461.6	457.0	452.4	6.3	70.0	14.3	426.72	2
461.6	457.0	452.4	8.0	88.6	11.3	540.11	2
461.6	457.0	452.4	10.0	110.0	9.1	670.56	1
461.6	457.0	452.4	12.5	137.0	7.3	835.15	1
461.6	457.0	452.4	14.2	155.0	6.5	944.88	1
461.6	457.0	452.4	16.0	174.0	5.7	1060.70	1
511.81	508.0	504.19	6.3	77.9	12	474.87	-
511.81	508.0	504.19	8	98.6	10	601.06	-
511.81	508.0	504.19	10	123	8	749.80	-
511.81	508.0	504.19	12.5	153	7	932.68	-
614.58	610.0	605.43	6.3	93.8	11	571.80	-
614.58	610.0	605.43	8	119	8	725.42	-
614.58	610.0	605.43	10	148	7	902.20	-
614.58	610.0	605.43	12.5	184	5	1,121.66	-

Thickness	Mass	Length Random length / Unless Otherwise Specified	Straightness
- 10 % & the positive deviation is limited by the tolerance on mass	± 6 % on individual delivered lengths	"4-16 Mtrs (10 % of sections supplied may be below the minimum for the ordered range but not shorter than 75 % of the minimum range length)"	"0.20 % of total length and 3 mm over any 1 m length"

We are equipped with inner weld scarfing (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	DIAMETER TOLERANCE		STANDARD THICKNESS		SCHEDULE	WEIGHT		TEST PRESSURE	
-	mm	min	max	mm	inch	mm	kg/mtr	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
1 ¼	42.2	41.8	42.6	2.77	0.109	10	2.69	1.81	1000	6900
1 ¼	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
2 ½	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
3 ½	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	3.40	0.134	10	11.58	7.78	1200	8300
6	168.3	166.62	169.98	3.40	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	Min%	P%	S%
1	33.4	33	33.8	2.77	0.109
1 ¼	42.2	41.8	42.6	2.77	0.109

Mechanical Properties

	Grade A	Grade B
Yield Strength	205 Mpa (Min)	240 Mpa (Min)
Tensile Strength	330 Mpa (Min)	415 Mpa (Min)

Technical Details:

Characteristics : Tolerances & Technical details

Outside Diameter : NPS 11/2 [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°() so that no untempered martensite remains.

Flattening Test : Keep the weld at o • or 90° from the line of direction of forceand 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.

Hydro Test : Each length of pipe shall be tested by hydrostatic test without leakage through the pipe wall.

Nondestructive Test : Each length of pipe size 2NPS (S0DN) and larger shall be tested by Eddy-CurrentTest.

Mass of Zinc Coating : Average of two specimens 460 gm/ mtr' & Individual specimen not less than 400 gm/ mtr^2.

Surface Protection : Black & Galvanized coating as per Customer requirement. Pipe shall be finished with Square cut (plain End), Be.,d (ao·~ +5°), Roll Groove & End Threading.

Threading : All threads shall be in accordance with t~aging practice and tolerances of ASME B1.20.1

Marking (Stencilling) : 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	Grade B-Mpa	
½	15	0.840	21.3	40	0.109	2.77	0.85	1.27	4.8	4.8	120
½	15	0.840	21.3	80	0.147	3.73	1.09	1.62	5.9	5.9	120
¾	20	1.050	26.7	40	0.113	2.87	1.13	1.69	4.8	4.8	84
¾	20	1.050	26.7	80	0.154	3.91	1.48	2.2	5.9	5.9	84
1	25	1.315	33.4	40	0.133	3.38	1.68	2.50	4.8	4.8	60
1	25	1.315	33.4	80	0.179	4.55	2.17	3.24	5.9	5.9	60
1 ¼	32	1.660	42.2	40	0.140	3.56	2.27	3.39	8.3	9.0	42
1 ¼	32	1.660	42.2	80	0.191	4.85	3.00	4.47	12.4	13.1	42
1 ½	40	1.900	48.3	40	0.145	3.68	2.72	4.05	8.3	9.0	36
1 ½	40	1.900	48.3	80	0.200	5.08	3.63	5.41	12.4	13.1	36
2	50	2.375	60.3	40	0.154	3.91	3.66	5.44	15.9	17.2	26
2	50	2.375	60.3	80	0.218	5.54	5.03	7.48	17.2	17.2	26
2 ½	65	2.875	73.0	40	0.203	5.16	5.80	8.63	17.2	17.2	18
2 ½	65	2.875	73.0	80	0.276	7.01	7.67	11.41	17.2	17.2	18
3	80	3.500	88.9	40	0.216	5.49	7.58	11.29	15.3	17.2	14
3	80	3.500	88.9	80	0.300	7.62	10.26	15.27	17.2	17.2	14
4	100	4.500	114.3	40	0.237	6.02	10.80	16.07	13.1	15.2	10
4	100	4.500	114.3	80	0.337	8.56	15.00	22.32	18.6	19.3	10
5	125	5.563	141.3	40	0.258	6.55	14.63	21.77	11.5	13.4	7
5	125	5.563	141.3	80	0.375	9.52	20.8	30.94	16.8	19.3	7
6	150	6.625	168.3	40	0.280	7.11	18.99	28.26	10.5	12.3	7
6	150	6.625	168.3	80	0.432	10.97	28.6	42.57	16.2	18.9	7
8	200	8.625	219.1	20	0.250	6.35	22.38	33.31	7.2	8.4	-
8	200	8.625	219.1	80	0.500	12.70	43.43	64.64	14.4	16.8	-
8	200	8.625	219.1	40	0.322	8.18	28.58	42.55	9.2	10.8	-
10	250	10.750	273.1	20	0.250	6.35	28.06	41.75	5.8	6.8	-
10	250	10.750	273.1	40	0.365	9.27	40.52	60.29	8.4	9.9	-
12	300	12.750	323.9	20	0.250	6.35	33.41	49.71	4.9	5.7	-
12	300	12.750	323.9	30	0.330	8.38	43.81	65.18	6.4	7.5	-
12	300	12.750	323.9	STD	0.375	9.52	49.61	73.78	7.3	8.5	-
12	300	12.750	323.9	40	0.406	10.31	53.57	79.70	7.9	9.2	-
14	350	14.000	355.6	10	0.250	6.35	36.75	54.69	4.4	5.2	-
14	350	14.000	355.6	30	0.375	9.52	54.62	81.25	6.6	7.7	-
14	350	14.000	355.6	40	0.438	11.13	63.50	94.55	7.8	9.0	-
16	400	16.000	406.4	10	0.250	6.35	42.09	62.64	3.9	4.5	-
16	400	16.000	406.4	30	0.375	9.52	62.64	93.17	5.8	6.8	-
16	400	16.000	406.4	40	0.500	12.70	82.85	123.30	7.7	9.0	-
18	450	18.000	457.0	10	0.250	6.35	47.44	70.60	5.0	5.8	-
18	450	18.000	457.0	20	0.312	7.92	58.99	87.75	6.2	7.3	-
18	450	18.000	457.0	STD	0.375	9.52	70.65	105.10	7.5	8.8	-
18	450	18.000	457.0	30	0.438	11.13	82.23	123.43	8.8	10.2	-
18	450	18.000	457.0	XS	0.500	12.70	93.54	139.20	10.0	11.7	-
20	500	20.000	508.0	10	0.250	6.35	52.78	78.55	4.5	5.2	-
20	500	20.000	508.0	STD	0.375	9.52	78.67	117.02	6.8	7.9	-
20	500	20.000	508.0	XS	0.500	12.70	104.23	155.12	9.0	10.5	-
24	600	24.000	610.0	10	0.250	6.35	63.47	94.46	3.8	4.4	-
24	600	24.000	610.0	STD	0.375	9.52	94.71	140.88	5.6	6.6	-
24	600	24.000	610.0	XS	0.500	12.70	125.61	186.94	7.5	8.8	-

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} I+ not specified

Weight + / - 10%

Mechanical Properties

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

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 crocks in the body & weld)
Flattening (0° & 90°)	For pipes over DN 50 1. Flatten upto 2/3 o f 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

Chemical Composition (Maximum%)

Grade	Carbon	Manganese	Phosphorus	Sulphur	Copper	Nickel	Chromium	Molybdenum	Vanadium
Grade A	0.25	0.95	0.05	0.045	0.4	0.4	0.4	0.15	0.08
Grade B	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/Mtr^2 (55 microns approx)
Average of one specimens 0.490 Kg/Mtr^2 (70 microns approx)
Asemge of fwo spedmees 0.550 Kg/Mtr^2 (79 microns approx)

Marking/Stenciling

Online stendling 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	12.7
12.7 OD	■	■														
15.8 OD	■	■	■	■	■											
19.05 OD	■	■	■	■	■	■										
21.3 OD	■	■	■	■	■	■	■									
25.4 OD	■	■	■	■	■	■	■									
26.9 OD	■	■	■	■	■	■	■									
31.75 OD	■	■	■	■	■	■	■									
33.7 OD	■	■	■	■	■	■	■	■	■	■						
38.1 OD	■	■	■	■	■	■	■	■	■	■	■	■				
40 OD	■	■	■	■	■	■	■	■	■	■	■	■				
42.4 OD	■	■	■	■	■	■	■	■	■	■	■	■				
45 OD	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
48.3 OD	■	■	■	■	■	■	■	■	■	■	■	■				
50.8 OD		■	■	■	■	■	■	■	■	■	■	■	■	■		
53 OD		■	■	■	■	■	■	■	■	■	■	■	■	■		
60.3 OD		■	■	■	■	■	■	■	■	■	■	■	■			
63.5 OD		■	■	■	■	■	■	■	■	■	■	■	■			
76.1 OD		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
88.9 OD		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
101.6 OD		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
112.5 OD		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
114.3 OD		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
127 OD		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
133 OD		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
139.7 OD			■	■	■	■	■	■	■	■	■	■	■	■	■	■
152.4 OD			■	■	■	■	■	■	■	■	■	■	■	■	■	■
159 OD				■	■	■	■	■	■	■	■	■	■	■	■	■
165.1 OD				■	■	■	■	■	■	■	■	■	■	■	■	■
168.3 OD				■	■	■	■	■	■	■	■	■	■	■	■	■
174 OD								■	■	■	■	■	■	■	■	■
193.7 OD								■	■	■	■	■	■	■	■	■
219.1 OD								■	■	■	■	■	■	■	■	■
244.5 OD								■	■	■	■	■	■	■	■	■
273 OD								■	■	■	■	■	■	■	■	■
323.9 OD								■	■	■	■	■	■	■	■	■
355 OD								■	■	■	■	■	■	■	■	■
406 OD								■	■	■	■	■	■	■	■	■
457 OD								■	■	■	■	■	■	■	■	■
508 OD								■	■	■	■	■	■	■	■	■
610 OD								■	■	■	■	■	■	■	■	■

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)

Rectangular Hollow Sections as per ASTM A 500

Size in Inch	Min Wall in Inch	Max Wall in Inch
1/2" X 1"	0.060"	0.080"
1-½" x 1"	0.060"	0.080"
2" x 1"	0.060"	0.120"
2" x 1-½"	0.080"	0.120"
2" x 2-½"	0.080"	0.130"
3" x 2"	0.100"	0.250"
4" x 2"	0.100"	0.250"
4" x 3"	0.120"	0.375"
5" x 2"	0.120"	0.375"
6" x 2"	0.120"	0.375"
6" x 3"	0.120"	0.375"
6" x 4"	0.120"	0.375"
7" x 3"	0.188"	0.500"
7" x 4"	0.188"	0.500"
8" x 4"	0.188"	0.500"
8" x 6"	0.188"	0.500"
10" x 4"	0.188"	0.500"
10" x 6"	0.188"	0.500"
10" x 8"	0.188"	0.500"
12" x 4"	0.188"	0.500"
12" x 6"	0.188"	0.500"
12" x 8"	0.188"	0.500"
12"x 10"	0.188"	0.500"
14" x 10"	0.188"	0.500"

Square Hollow Sections as per ASTM A 500

Size in Inch	Min Wall in Inch	Max Wall in Inch
1/2" X 1/2"	0.060"	0.080"
¾" X ¾"	0.060"	0.080"
1" X 1"	0.060"	0.120"
1-¼" X 1-¼"	0.060"	0.120"
1-½" X 1-½"	0.060"	0.130"
2" X 2"	0.060"	0.250"
2-½" X 2-½"	0.100"	0.250"
3" X 3"	0.120"	0.315"
3-½" X 3-½"	0.188"	0.315"
4" X 4"	0.188"	0.500"
5" X 5"	0.188"	0.500"
6" X 6"	0.188"	0.500"
8" X 8"	0.188"	0.500"
10" X 10"	0.188"	0.500"
12" X 12"	0.188"	0.500"
14" X 14"	0.188"	0.500"

CIRCULAR HOLLOW SECTIONS

Nominal Size	Thickness Range
21.3	1mm - 2.5mm
22.2	1mm - 2.5mm
25.4	1mm - 3.5mm
26.9	1mm - 3.5mm
28.6	1mm - 3.5mm
31.8	1mm - 3.5mm
33.7	1.2mm - 4.0mm
38.1	1.2mm - 4.0mm
40.0	1.2mm - 4.0mm
42.4	1.2mm - 4.0mm
44.5	1.2mm - 4.0mm

CIRCULAR HOLLOW SECTIONS

Nominal Size	Thickness Range
48.3	1mm - 2.5mm
50.8	1mm - 2.5mm
60.3	1mm - 3.5mm
63.5	1mm - 3.5mm
69.9	1mm - 3.5mm
73.0	1mm - 3.5mm
76.1	1.2mm - 4.0mm
88.9	1.2mm - 4.0mm
101.6	1.2mm - 4.0mm
114.3	1.2mm - 4.0mm

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.

Chemical Composition (Maximum)

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 (60.3mm) 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 to140 mm ± 0.030 Inch (0.80 mm) Over 5½ [140 mm] ± 1.0 % of OD
Thickness	±10% ofspecific wall thickness.
Length	Pipe shall be furnished in single random length, double random length or in uniform length as per the customer requirement.
Straightness	2 mm/mtr
Squareness (Square & rectangular)	90" ±2'max.
Radius	3 times of thickness maximum
Twist	For Square & Rectangular Section 1 ½Inch (40mm] and under= 0.050 Inch (1.3mm] Over 1 ½ to 2½ Inch [40 mm to65 mm]= 0.062 lnch[1.6mm] Over 2½ to 4 Inch (65 mm to 100 mm] =0.075 Inch (1.9mm Over4 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]
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 weld are allowed in the material and during third step full flatten for soundness or lamination.
Surface Protection	Black & galvanized coating as per customer requirements.
Marking (Stencilling)	METPRO, Specification dimension and Grade on pipe and anything specific as per customer requirement.



Square Hollow Sections (SHS)

Introduction

METPRO square hollow sections ranging from **15x15 mm to 350x350 mm** and thickness ranging from 1.6mm to 12.7mm 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
IS 4923, IS 18573

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
- Transmission Line Towers
- Cranes and Towers
- Material Storage Racks
- Pre-fabricated houses

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

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES 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
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

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

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20′	pcs/mt
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	6
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	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
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

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

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
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	35.80	28	218.2	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
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

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

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
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 on Thickness and Mass

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%	Thickness: T ≤ 5mm: ± 10 % T > 5 mm: ± 0.5 mm	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).
External corner profile: T ≤ 6 mm: 1.6T to2.4T 6 < T ≤ 10mm: 2.0T to 3.0T 10 < T mm: 2.4 T to 3.6T	Twist: 2.0mm plus 0.5mm / mtrs length	
	Weight: ± 6 % on individual delivered lengths	Straightness: 0.15 % of total length and 3 mm over any 1 mtr Length
Squareness of sides: 90 Degree ± 1 Degree	Concavity/Convexity: Max. 0.8% with a minimum of 0.5mm	

Note:

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



TECHNICAL DATA FOR HOT FINISHED WELDED SQUARE HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS CONFIRMING TO EN 10210

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
20	20	2.0	20	20	2.0	1.05	952	6.4	156
25	25	2.0	25	25	2.0	1.36	735	8.3	121
25	25	2.5	25	25	2.5	1.64	610	10.0	100
25	25	3.0	25	25	3.0	1.89	529	11.5	87
30	30	2.0	30	30	2.0	1.68	595	10.2	98
30	30	2.5	30	30	2.5	2.03	493	12.4	81
30	30	3.0	30	30	3.0	2.36	424	14.4	70
40	40	2.6	40	40	2.6	3.00	333	18.3	55
40	40	3.2	40	40	3.2	3.61	277	22.0	45
40	40	4.0	40	40	4.0	4.39	228	26.8	37
40	40	5.0	40	40	5.0	5.28	189	32.2	31
50	50	2.6	50	50	2.6	3.81	262	23.2	43
50	50	3.2	50	50	3.2	4.62	216	28.2	36
50	50	4.0	50	50	4.0	5.64	177	34.4	29
50	50	5.0	50	50	5.0	6.85	146	41.8	24
50	50	6.3	50	50	6.3	8.31	120	50.7	20
60	60	2.6	60	60	2.6	4.63	216	28.2	35
60	60	3.2	60	60	3.2	5.62	178	34.3	29
60	60	4.0	60	60	4.0	6.90	145	42.1	24
60	60	5.0	60	60	5.0	8.42	119	51.3	19
60	60	6.3	60	60	6.3	10.3	97	62.8	16
60	60	8.0	60	60	8.0	12.5	80	76.2	13
70	70	3.2	70	70	3.2	6.63	151	40.4	25
70	70	4.0	70	70	4.0	8.15	123	49.7	20
70	70	5.0	70	70	5.0	9.99	100	60.9	16
70	70	6.3	70	70	6.3	12.3	81	75.0	13
70	70	8.0	70	70	8.0	15.0	67	91.4	11
80	80	3.2	80	80	3.2	7.63	131	46.5	21
80	80	4.0	80	80	4.0	9.41	106	57.4	17
80	80	5.0	80	80	5.0	11.6	86	70.7	14
80	80	6.3	80	80	6.3	14.2	70	86.6	12
80	80	8.0	80	80	8.0	17.5	57	106.7	9
90	90	4.0	90	90	4.0	10.7	93	65.2	15
90	90	5.0	90	90	5.0	13.1	76	79.9	13
90	90	6.3	90	90	6.3	16.2	62	98.8	10
90	90	8.0	90	90	8.0	20.1	50	122.5	8
100	100	4.0	100	100	4.0	11.9	84	72.5	14
100	100	5.0	100	100	5.0	14.7	68	89.6	11
100	100	6.3	100	100	6.3	18.2	55	110.9	9
100	100	8.0	100	100	8.0	22.6	44	137.8	7
100	100	10.0	100	100	10.0	27.4	36	167.0	6
120	120	5.0	120	120	5.0	17.8	56	108.5	9
120	120	6.3	120	120	6.3	22.2	45	135.3	7

TECHNICAL DATA FOR HOT FINISHED WELDED SQUARE HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS CONFIRMING TO EN 10210

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
120	120	8.0	120	120	8.0	27.6	36	168.2	6
120	120	10.0	120	120	10.0	33.7	30	205.4	5
120	120	12.5	120	120	12.5	40.9	24	249.3	4
140	140	5.0	140	140	5.0	21.0	48	128.0	8
140	140	6.3	140	140	6.3	26.1	38	159.1	6
140	140	8.0	140	140	8.0	32.6	31	198.7	5
140	140	10.0	140	140	10.0	40.0	25	243.8	4
140	140	12.5	140	140	12.5	48.7	21	296.9	3
150	150	5.0	150	150	5.0	22.6	44	137.8	7
150	150	6.3	150	150	6.3	28.1	36	171.3	6
150	150	8.0	150	150	8.0	35.1	28	214.0	5
150	150	10.0	150	150	10.0	43.1	23	262.7	4
150	150	12.5	150	150	12.5	52.7	19	321.3	3
160	160	5.0	160	160	5.0	24.1	41	146.9	7
160	160	6.3	160	160	6.3	30.1	33	183.5	5
160	160	8.0	160	160	8.0	37.6	27	229.2	4
160	160	10.0	160	160	10.0	46.3	22	282.2	4
160	160	12.5	160	160	12.5	56.6	18	345.0	3
180	180	5.0	180	180	5.0	27.3	37	166.4	6
180	180	6.3	180	180	6.3	34.0	29	207.3	5
180	180	8.0	180	180	8.0	42.7	23	260.3	4
180	180	10.0	180	180	10.0	52.5	19	320.0	3
180	180	12.5	180	180	12.5	64.4	16	392.6	3
180	180	14.2	180	180	14.2	72.2	14	440.1	2
180	180	16.0	180	180	16.0	80.2	12	488.9	2
200	200	5.0	200	200	5.0	30.4	33	185.3	5
200	200	6.3	200	200	6.3	38.0	26	231.6	4
200	200	8.0	200	200	8.0	47.7	21	290.8	3
200	200	10.0	200	200	10.0	58.8	17	358.4	3
200	200	12.5	200	200	12.5	72.3	14	440.7	2
200	200	14.2	200	200	14.2	81.1	12	494.4	2
200	200	16.0	200	200	16.0	90.3	11	550.5	2
220	220	6.3	220	220	6.3	41.9	24	255.4	4
220	220	8.0	220	220	8.0	52.7	19	321.3	3
220	220	10.0	220	220	10.0	65.1	15	396.8	3
220	220	12.5	220	220	12.5	80.1	12	488.3	2
220	220	14.2	220	220	14.2	90.1	11	549.2	2
220	220	16.0	220	220	16.0	100.0	10	609.6	2
250	250	6.3	250	250	6.3	47.9	21	291.8	3
250	250	8.0	250	250	8.0	60.3	17	367.3	3
250	250	10.0	250	250	10.0	74.52	13	454.3	2
250	250	12.5	250	250	12.5	91.9	11	560.2	2
250	250	14.2	250	250	14.2	103.0	10	627.9	2

Square Hollow Sections (SHS)

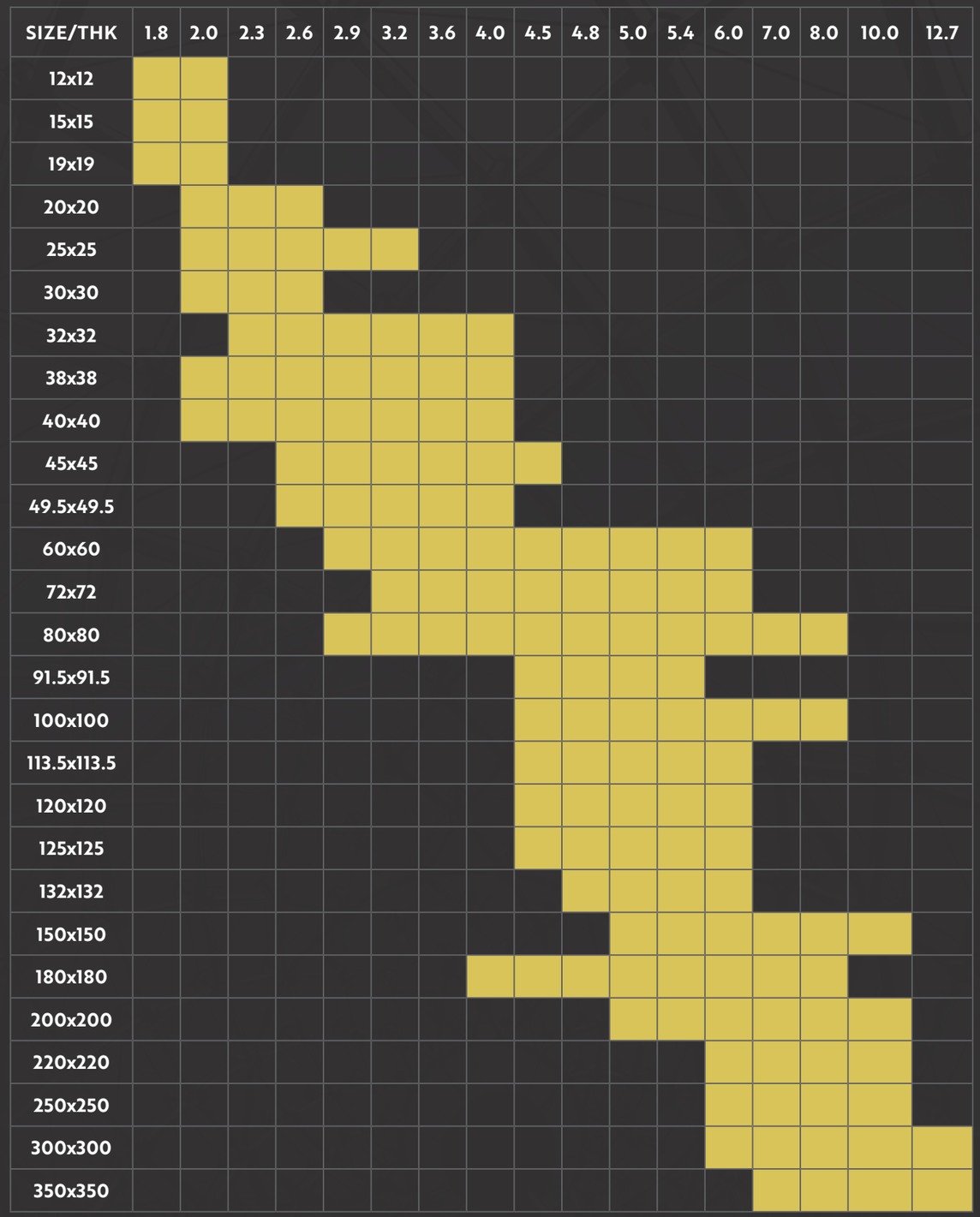
TECHNICAL DATA FOR HOT FINISHED WELDED SQUARE HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS CONFIRMING TO EN 10210

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
250	250	16.0	250	250	16.0	115.0	9	701.0	1
260	260	6.3	260	260	6.3	49.9	20	304.2	3
260	260	8.0	260	260	8.0	62.8	16	382.8	3
260	260	10.0	260	260	10.0	77.7	13	473.7	2
260	260	12.5	260	260	12.5	95.8	10	584.0	2
260	260	14.2	260	260	14.2	108.0	9	658.4	2
260	260	16.0	260	260	16.0	120.0	8	731.5	1
300	300	6.3	300	300	6.3	57.8	17	352.3	3
300	300	8.0	300	300	8.0	72.8	14	443.8	2
300	300	10.0	300	300	10.0	90.2	11	549.9	2
300	300	12.5	300	300	12.5	112.0	9	682.8	1
300	300	14.2	300	300	14.2	126.0	8	768.1	1
300	300	16.0	300	300	16.0	141.0	7	859.5	1
350	350	8.0	350	350	8.0	85.4	12	520.6	2
350	350	10.0	350	350	10.0	106.0	9	646.2	2
350	350	12.5	350	350	12.5	131.0	8	798.6	1
350	350	14.2	350	350	14.2	148.0	7	902.2	1
350	350	16.0	350	350	16.0	166.0	6	1011.9	1

Following Manufacturing Tolerance shall be permitted on Thickness and Mass

Outside dimensions of sides : ± 1 % with a minimum of 0.5mm	Thickness: -10 % & the positive deviation is limited by the tolerance on mass	Length (Random length / Unless Otherwise Specified) 4-16 Mtrs (10 % of sections supplied may be below the minimum for the ordered range but not shorter than 75 % of the minimum range length)
External corner profile: 3T maximum at each corner	Twist: 2.0mm plus 0.5mm / mtrs length	
	Weight: ± 6 % on individual delivered lengths	Straightness: 0.2 % of total length and 3 mm over any 1 mtr length
Squareness of sides: 90 Degree, ± 1 Degree	Concavity/Convexity: 1%	

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





Rectangular Hollow Sections (RHS)

Introduction

METPRO rectangular hollow steel sections that range from **26x13 mm to 400x300 mm** with thickness upto 12.7 mm, 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

IS 4923, IS 18573

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
- Transmission Line Towers
- Cranes and Towers
- Material Storage Racks
- Pre-fabricated houses

Rectangular Hollow Sections (RHS)

TECHNICAL DATA FOR COLD FORMED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219, DIMENSIONS AND PROPERTIES OF RECTANGULAR HOLLOW SECTION (RHS)

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES 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	1.7	595.2	10.2	97.6
40.0	20.0	2.0	40.0	20.0	2.0	1.7	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	2.4	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	3.3	303.0	20.1	49.7
50.0	30.0	4.0	50.0	30.0	4.0	4.2	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	3.6	277.8	21.9	45.6
60.0	40.0	3.0	60.0	40.0	3.0	4.3	235.3	25.9	38.6
60.0	40.0	4.0	60.0	40.0	4.0	5.5	183.5	33.2	30.1
60.0	40.0	5.0	60.0	40.0	5.0	6.6	152.4	40.0	25.0
70.0	50.0	2.0	70.0	50.0	2.0	3.6	280.9	21.7	46.1
70.0	50.0	2.5	70.0	50.0	2.5	4.4	227.8	26.8	37.4
70.0	50.0	3.0	70.0	50.0	3.0	5.2	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	3.6	280.9	21.7	46.1
80.0	40.0	2.5	80.0	40.0	2.5	4.4	227.8	26.8	37.4
80.0	40.0	3.0	80.0	40.0	3.0	5.2	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	4.2	238.7	25.5	39.2
80.0	60.0	2.5	80.0	60.0	2.5	5.2	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	8.0	125.5	48.6	20.6
80.0	60.0	5.0	80.0	60.0	5.0	9.7	103.1	59.1	16.9
90.0	50.0	2.0	90.0	50.0	2.0	4.2	238.7	25.5	39.2
90.0	50.0	2.5	90.0	50.0	2.5	5.2	193.4	31.5	31.7
90.0	50.0	5.0	90.0	50.0	5.0	6.1	163.1	37.4	26.8
90.0	50.0	4.0	90.0	50.0	4.0	8.0	125.5	48.6	20.6
90.0	50.0	5.0	90.0	50.0	5.0	9.7	103.1	59.1	16.9
100.0	40.0	2.5	100.0	40.0	2.5	5.2	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	8.0	125.5	48.6	20.6
100.0	40.0	5.0	100.0	40.0	5.0	9.7	103.1	59.1	16.9
100.0	50.0	2.5	100.0	50.0	2.5	5.6	179.9	33.9	29.5
100.0	50.0	3.0	100.0	50.0	3.0	6.6	151.5	40.2	24.9
100.0	50.0	4.0	100.0	50.0	4.0	8.6	116.4	52.4	19.1
100.0	50.0	5.0	100.0	50.0	5.0	10.5	95.2	64.0	15.6
100.0	50.0	6.0	100.0	50.0	6.0	12.3	81.3	75.0	13.3
100.0	50.0	6.3	100.0	50.0	6.3	12.5	80.0	76.2	13.1

TECHNICAL DATA FOR COLD FORMED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219, DIMENSIONS AND PROPERTIES OF RECTANGULAR HOLLOW SECTION (RHS)

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20'	pcs/mt
100.0	60.0	2.5	100.0	60.0	2.5	6.0	167.8	36.3	27.5
100.0	60.0	3.0	100.0	60.0	3.0	7.1	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	11.3	88.5	68.9	14.5
100.0	60.0	6.0	100.0	60.0	6.0	13.2	75.8	80.5	12.4
100.0	60.0	6.3	100.0	60.0	6.3	13.5	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	10.5	95.2	64.0	15.6
100.0	80.0	5.0	100.0	80.0	5.0	12.8	78.1	78.0	12.8
100.0	80.0	6.0	100.0	80.0	6.0	15.1	66.2	92.0	10.9
100.0	80.0	6.3	100.0	80.0	6.3	15.5	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	10.5	95.2	64.0	15.6
120.0	60.0	5.0	120.0	60.0	5.0	12.8	78.1	78.0	12.8
120.0	60.0	6.0	120.0	60.0	6.0	15.1	66.2	92.0	10.9
120.0	60.0	6.3	120.0	60.0	6.3	15.5	64.5	94.5	10.6
120.0	60.0	8.0	120.0	60.0	8.0	18.9	52.9	115.2	8.7
120.0	80.0	3.0	120.0	80.0	3.0	9.0	111.6	54.6	18.3
120.0	80.0	4.0	120.0	80.0	4.0	11.7	85.5	71.3	14.0
120.0	80.0	5.0	120.0	80.0	5.0	14.4	69.4	87.8	11.4
120.0	80.0	6.0	120.0	80.0	6.0	17.0	58.8	103.6	9.6
120.0	80.0	6.3	120.0	80.0	6.3	17.5	57.1	106.7	9.4
120.0	80.0	8.0	120.0	80.0	8.0	21.4	46.7	130.5	7.7
150.0	100.0	4.0	150.0	100.0	4.0	14.9	67.1	90.8	11.0
150.0	100.0	5.0	150.0	100.0	5.0	18.3	54.6	111.6	9.0
150.0	100.0	6.0	150.0	100.0	6.0	21.7	46.1	132.3	7.6
150.0	100.0	6.3	150.0	100.0	6.3	22.4	44.6	136.6	7.3
150.0	100.0	8.0	150.0	100.0	8.0	27.7	36.1	168.9	5.9
150.0	100.0	10.0	150.0	100.0	10.0	33.4	29.9	203.6	4.9
150.0	100.0	12.0	150.0	100.0	12.0	37.7	26.5	229.8	4.4
150.0	100.0	12.5	150.0	100.0	12.5	38.9	25.7	237.1	4.2
160.0	80.0	4.0	160.0	80.0	4.0	14.2	70.4	86.6	11.6
160.0	80.0	5.0	160.0	80.0	5.0	17.5	57.1	106.7	9.4
160.0	80.0	6.0	160.0	80.0	6.0	20.7	48.3	126.2	7.9
160.0	80.0	6.3	160.0	80.0	6.3	21.4	46.7	130.5	7.7
160.0	80.0	8.0	160.0	80.0	8.0	26.4	37.9	160.9	6.2

TECHNICAL DATA FOR COLD FORMED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219, DIMENSIONS AND PROPERTIES OF RECTANGULAR HOLLOW SECTION (RHS)

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20′	pcs/mt
160.0	80.0	10.0	160.0	80.0	10.0	31.8	31.4	193.9	5.2
160.0	80.0	12.0	160.0	80.0	12.0	35.8	27.9	218.2	4.6
160.0	80.0	12.5	160.0	80.0	12.5	36.9	27.1	224.9	4.4
180.0	100.0	4.0	180.0	100.0	4.0	16.8	59.5	102.4	9.8
180.0	100.0	5.0	180.0	100.0	5.0	20.7	48.3	126.2	7.9
180.0	100.0	6.0	180.0	100.0	6.0	24.5	40.8	149.4	6.7
180.0	100.0	6.3	180.0	100.0	6.3	25.4	39.4	154.8	6.5
180.0	100.0	8.0	180.0	100.0	8.0	31.4	31.8	191.4	5.2
180.0	100.0	10.0	180.0	100.0	10.0	38.1	26.2	232.3	4.3
180.0	100.0	12.0	180.0	100.0	12.0	43.4	23.0	264.6	3.8
180.0	100.0	12.5	180.0	100.0	12.5	44.8	22.3	273.1	3.7
200.0	100.0	4.0	200.0	100.0	4.0	18.0	55.6	109.7	9.1
200.0	100.0	5.0	200.0	100.0	5.0	22.3	44.8	135.9	7.4
200.0	100.0	6.0	200.0	100.0	6.0	26.4	37.9	160.9	6.2
200.0	100.0	6.3	200.0	100.0	6.3	27.4	36.5	167.0	6.0
200.0	100.0	8.0	200.0	100.0	8.0	33.9	29.5	206.7	4.8
200.0	100.0	10.0	200.0	100.0	10.0	41.3	24.2	251.8	4.0
200.0	100.0	12.0	200.0	100.0	12.0	47.1	21.2	287.1	3.5
200.0	100.0	12.5	200.0	100.0	12.5	48.7	20.5	296.9	3.4
200.0	120.0	4.0	200.0	120.0	4.0	19.3	51.8	117.7	8.5
200.0	120.0	5.0	200.0	120.0	5.0	23.8	42.0	145.1	6.9
200.0	120.0	6.0	200.0	120.0	6.0	28.3	35.3	172.5	5.8
200.0	120.0	6.3	200.0	120.0	6.3	29.3	34.1	178.6	5.6
200.0	120.0	8.0	200.0	120.0	8.0	36.5	27.4	222.5	4.5
200.0	120.0	10.0	200.0	120.0	10.0	44.4	22.5	270.7	3.7
200.0	120.0	12.0	200.0	120.0	12.0	50.9	19.6	310.3	3.2
200.0	120.0	12.5	200.0	120.0	12.5	52.6	19.0	320.6	3.1
250.0	150.0	5.0	250.0	150.0	5.0	30.1	33.2	183.5	5.4
250.0	150.0	6.0	250.0	150.0	6.0	35.8	27.9	218.2	4.6
250.0	150.0	6.3	250.0	150.0	6.3	37.2	26.9	226.8	4.4
250.0	150.0	8.0	250.0	150.0	8.0	46.5	21.5	283.5	3.5
250.0	150.0	10.0	250.0	150.0	10.0	57.0	17.5	347.5	2.9
250.0	150.0	12.0	250.0	150.0	12.0	66.0	15.2	402.3	2.5
250.0	150.0	12.5	250.0	150.0	12.5	68.3	14.6	416.4	2.4
260.0	180.0	5.0	260.0	180.0	5.0	33.2	30.1	202.4	4.9
260.0	180.0	6.3	260.0	180.0	6.3	41.2	24.3	251.2	4.0
260.0	180.0	8.0	260.0	180.0	8.0	51.5	19.4	313.9	3.2
260.0	180.0	10.0	260.0	180.0	10.0	63.2	15.8	385.3	2.6
260.0	100.0	12.0	260.0	100.0	12.0	73.5	13.6	448.1	2.2
260.0	180.0	12.5	260.0	180.0	12.5	76.2	13.1	464.5	2.2
300.0	100.0	6.0	300.0	100.0	6.0	35.8	27.9	218.2	4.6
300.0	100.0	6.3	300.0	100.0	6.3	37.2	26.9	226.8	4.4
300.0	100.0	8.0	300.0	100.0	8.0	46.5	21.5	283.5	3.5

TECHNICAL DATA FOR COLD FORMED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS. CONFIRMING TO EN 10219, DIMENSIONS AND PROPERTIES OF RECTANGULAR HOLLOW SECTION (RHS)

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20′	pcs/mt
300.0	100.0	10.0	300.0	100.0	10.0	57.0	17.5	347.5	2.9
300.0	100.0	12.0	300.0	100.0	12.0	66.0	15.2	402.3	2.5
300.0	100.0	12.5	300.0	100.0	12.5	68.3	14.6	416.4	2.4
300.0	150.0	6.0	300.0	150.0	6.0	40.5	24.7	246.9	4.1
300.0	150.0	6.3	300.0	150.0	6.3	42.2	23.7	257.3	3.9
300.0	150.0	8.0	300.0	150.0	8.0	52.8	18.9	321.9	3.1
300.0	150.0	10.0	300.0	150.0	10.0	64.8	15.4	395.0	2.5
300.0	150.0	12.0	300.0	150.0	12.0	75.4	13.3	459.6	2.2
300.0	150.0	12.5	300.0	150.0	12.5	78.1	12.8	476.1	2.1
300.0	200.0	6.0	300.0	200.0	6.0	45.2	22.1	275.5	3.6
300.0	200.0	6.3	300.0	200.0	6.3	47.1	21.2	287.1	3.5
300.0	200.0	8.0	300.0	200.0	8.0	59.1	16.9	360.3	2.8
300.0	200.0	10.0	300.0	200.0	10.0	72.7	13.8	443.2	2.3
300.0	200.0	12.0	300.0	200.0	12.0	84.8	11.8	516.9	1.9
300.0	200.0	12.5	300.0	200.0	12.5	88.0	11.4	536.4	1.9
350.0	250.0	6.0	350.0	250.0	6.0	54.7	18.3	333.5	3.0
350.0	250.0	6.3	350.0	250.0	6.3	57.0	17.5	347.5	2.9
350.0	250.0	8.0	350.0	250.0	8.0	71.6	14.0	436.5	2.3
350.0	250.0	10.0	350.0	250.0	10.0	88.4	11.3	538.9	1.9
350.0	250.0	12.0	350.0	250.0	12.0	104.0	9.6	634.0	1.6
350.0	250.0	12.5	350.0	250.0	12.5	108.0	9.3	658.4	1.5
400.0	200.0	8.0	400.0	200.0	8.0	71.6	14.0	436.5	2.3
400.0	200.0	12.5	400.0	200.0	12.5	108.0	9.3	658.4	1.5
400.0	300.0	8.0	400.0	300.0	8.0	84.2	11.9	513.3	1.9
400.0	300.0	10.0	400.0	300.0	10.0	104.0	9.6	634.0	1.6
400.0	300.0	12.0	400.0	300.0	12.0	123.0	8.1	749.8	1.3
400.0	300.0	12.5	400.0	300.0	12.5	127.0	7.9	774.2	1.3

Following Manufacturing Tolerance shall be permitted on Thickness and Mass

Outside dimensions of sides : H, B < 100 : ± 1 % with a minimum of 0.5mm 100 ≤ H, B ≤ 200 : ± 0.8% H, B > 200 : ± 0.6%	Thickness: T ≤ 5 mm: ± 10 % T > 5 mm: ± 0.5 mm	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).
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	Twist: 2.0mm plus 0.5mm / mtrs length	
	Weight: ± 6 % on individual delivered lengths	Straightness: 0.15 % of total length and 3 mm over any 1 mtr length
Squareness of sides: 90 Degree, ± 1 Degree	Concavity/Convexity: Max. 0.8% with a minimum of 0.5mm	

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

TECHNICAL DATA FOR HOT FINISHED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS CONFIRMING TO EN 10210

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20′	pcs/mt
40	20	2	40	20	2.0	1.68	595.2	10.2	98
40	20	2	40	20	2.0	1.68	595.2	10.2	98
40	20	3	40	20	2.5	2.03	492.6	12.4	81
40	20	3	40	20	3.0	2.36	423.7	14.4	70
50	30	2.6	50	30	2.6	3.00	333.3	18.3	55
50	30	3.2	50	30	3.2	3.61	277.0	22.0	45
50	30	4.0	50	30	4.0	4.39	227.8	26.8	37
50	30	5.0	50	30	5.0	5.28	189.4	32.2	31
60	40	2.6	60	40	2.6	3.81	262.5	23.2	43
60	40	3.2	60	40	3.2	4.62	216.5	28.2	36
60	40	4.0	60	40	4.0	5.64	177.3	34.4	29
60	40	5.0	60	40	5.0	6.85	146.0	41.8	24
60	40	6.3	60	40	6.3	8.31	120.3	50.7	20
80	40	3.2	80	40	3.2	5.62	177.9	34.3	29
80	40	4.0	80	40	4.0	6.90	144.9	42.1	24
80	40	5.0	80	40	5.0	8.42	118.8	51.3	19
80	40	6.3	80	40	6.3	10.3	97.1	62.8	16
80	40	8.0	80	40	8.0	12.5	80.0	76.2	13
90	50	3.2	90	50	3.2	6.63	150.8	40.4	25
90	50	4.0	90	50	4.0	8.15	122.7	49.7	20
90	50	5.0	90	50	5.0	9.99	100.1	60.9	16
90	50	6.3	90	50	6.3	12.3	81.3	75.0	13
90	50	8.0	90	50	8.0	15.0	66.7	91.4	11
100	50	3.2	100	50	3.2	7.13	140.3	43.5	23
100	50	4.0	100	50	4.0	8.78	113.9	53.5	19
100	50	5.0	100	50	5.0	10.8	92.6	65.8	15
100	50	6.3	100	50	6.3	13.3	75.2	81.1	12
100	50	8.0	100	50	8.0	16.3	61.3	99.4	10
100	60	3.2	100	60	3.2	7.63	131.1	46.5	21
100	60	4.0	100	60	4.0	9.41	106.3	57.4	17
100	60	5.0	100	60	5.0	11.6	86.2	70.7	14
100	60	6.3	100	60	6.3	14.2	70.4	86.6	12
100	60	8.0	100	60	8.0	17.5	57.1	106.7	9
120	60	4.0	120	60	4.0	10.7	93.5	65.2	15
120	60	5.0	120	60	5.0	13.1	76.3	79.9	13
120	60	6.3	120	60	6.3	16.2	61.7	98.8	10
120	60	8.0	120	60	8.0	20.1	49.8	122.5	8
120	60	10.0	120	60	10.0	24.3	41.2	148.1	7
120	80	4.0	120	80	4.0	11.9	84.0	72.5	14
120	80	5.0	120	80	5.0	14.7	68.0	89.6	11
120	80	6.3	120	80	6.3	18.2	54.9	110.9	9
120	80	8.0	120	80	8.0	22.6	44.2	137.8	7
120	80	10.0	120	80	10.0	27.4	36.5	167.0	6

TECHNICAL DATA FOR HOT FINISHED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS CONFIRMING TO EN 10210

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20′	pcs/mt
150	100	4.0	150	100	4.0	15.1	66.2	92.0	11
150	100	5.0	150	100	5.0	18.6	53.8	113.4	9
150	100	6.3	150	100	6.3	23.1	43.3	140.8	7
150	100	8.0	150	100	8.0	28.9	34.6	176.2	6
150	100	10.0	150	100	10.0	35.3	28.3	215.2	5
150	100	12.5	150	100	12.5	42.8	23.4	260.9	4
160	80	4.0	160	80	4.0	14.4	69.4	87.8	11
160	80	5.0	160	80	5.0	17.8	56.2	108.5	9
160	80	6.3	160	80	6.3	22.2	45.0	135.3	7
160	80	8.0	160	80	8.0	27.6	36.2	168.2	6
160	80	10.0	160	80	10.0	33.7	29.7	205.4	5
160	80	12.5	160	80	12.5	40.9	24.4	249.3	4
180	100	4.0	180	100	4.0	16.9	59.2	103.0	10
180	100	5.0	180	100	5.0	21.0	47.6	128.0	8
180	100	6.3	180	100	6.3	26.1	38.3	159.1	6
180	100	8.0	180	100	8.0	32.6	30.7	198.7	5
180	100	10.0	180	100	10.0	40.0	25.0	243.8	4
180	100	12.5	180	100	12.5	48.7	20.5	296.9	3
200	100	4.0	200	100	4.0	18.2	54.9	110.9	9
200	100	5.0	200	100	5.0	22.6	44.2	137.8	7
200	100	6.3	200	100	6.3	28.1	35.6	171.3	6
200	100	8.0	200	100	8.0	35.1	28.5	214.0	5
200	100	10.0	200	100	10.0	43.1	23.2	262.7	4
200	100	12.5	200	100	12.5	52.7	19.0	321.3	3
200	100	16.0	200	100	16.0	65.2	15.3	397.5	
200	120	6.3	200	120	6.3	30.1	33.2	183.5	5
200	120	8.0	200	120	8.0	37.6	26.6	229.2	4
200	120	10.0	200	120	10.0	46.3	21.6	282.2	4
200	120	12.5	200	120	12.5	56.6	17.7	345.0	3
250	150	6.3	250	150	6.3	38.0	26.3	231.6	4
250	150	8.0	250	150	8.0	47.7	21.0	290.8	3
250	150	10.0	250	150	10.0	58.8	17.0	358.4	3
250	150	12.5	250	150	12.5	72.3	13.8	440.7	2
250	150	14.2	250	150	14.2	81.1	12.3	494.4	2
250	150	16.0	250	150	16.0	90.3	11.1	550.5	2
260	180	6.3	260	180	6.3	41.9	23.9	255.4	4
260	180	8.0	260	180	8.0	52.7	19.0	321.3	3
260	180	10.0	260	180	10.0	65.1	15.4	396.8	3

Rectangular Hollow Sections (RHS)

TECHNICAL DATA FOR HOT FINISHED WELDED RECTANGULAR HOLLOW SECTION OF NON-ALLOY AND FINE GRAIN STEELS CONFIRMING TO EN 10210

DIMENSION			DEPTH OF SECTION	WIDTH OF SECTION	THICKNESS OF SECTION	NOMINAL MASS OF STEEL TUBES PLAIN END			
mm	mm	mm	(H) mm	(B) mm	mm	kg/mtr	mts/t	kgs/20′	pcs/mt
260	180	12.5	260	180	12.5	80.1	12.5	488.3	2
260	180	14.2	260	180	14.2	90.1	11.1	549.2	2
260	180	16.0	260	180	16.0	100.0	10.0	609.6	2
300	200	6.3	300	200	6.3	47.9	20.9	292.0	3
300	200	8.0	300	200	8.0	60.3	16.6	367.6	3
300	200	10.0	300	200	10.0	74.5	13.4	454.2	2
300	200	12.5	300	200	12.5	91.9	10.9	560.2	2
300	200	14.2	300	200	14.2	103.0	9.7	627.9	2
300	200	16.0	300	200	16.0	115.0	8.7	701.0	1
350	250	6.3	350	250	6.3	57.8	17.3	352.3	3
350	250	8.0	350	250	8.0	72.8	13.7	443.8	2
350	250	10.0	350	250	10.0	90.2	11.1	549.9	2
350	250	12.5	350	250	12.5	112.0	8.9	682.8	1
350	250	14.2	350	250	14.2	126.0	7.9	768.1	1
350	250	16.0	350	250	16.0	141.0	7.1	859.5	1
400	200	8.0	400	200	8.0	72.8	13.7	443.8	2
400	200	10.0	400	200	10.0	90.2	11.1	549.9	2
400	200	12.5	400	200	12.5	112.0	8.9	682.8	1
400	200	14.2	400	200	14.2	126.0	7.9	768.1	1
400	200	16.0	400	200	16.0	141.0	7.1	859.5	1

Following Manufacturing Tolerance shall be permitted on Thickness and Mass

Outside dimensions of sides : ± 1 % with a minimum of 0.5mm	Thickness: - 10 % & the positive deviation is limited by the tolerance on mass	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).
External corner profile: 3T maximum at each corner	Twist: 2.0mm plus 0.5mm / mtrs length	
	Weight: ± 6 % on individual delivered lengths	Straightness: 0,2 % of total length and 3 mm over any 1 mtr length
Squareness of sides: 90 Degree, ± 1 Degree	Concavity/Convexity: 1%	

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

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	12.7
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												■	■	■
450x250												■	■	■



METPRO GALV

Value addition is a part of MKK's vision 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

IS 1239, IS 1161, IS 3601

In-house Quality Checks

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

Applications

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

We have an in-house
Galvanising Plant

MKK offers GI Round Sections in sizes ranging from **15mm NB to 450mm NB** 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

Environmentally Sustainable

Abrasion Resistant

Maintenance-Free Life of 15 Years









METPRO ENVIRON

SOLAR MODULE MOUNTING STRUCTURES

Today, being environmentally conscious and reducing our carbon footprints is the only way to go forward. With our ENVIRON range of products, METPRO is trying to do its part in maintaining a cleaner and greener Earth.

MKK builds module mounting structures that are the backbone of a solar power plant. These support structures raise solar panels at appropriate angles to ensure that they receive maximum solar irradiation.

OUR CAPACITY

1,00,000 MT of structure = **4 GW** of energy

We're changing the world by making solar energy affordable

2 GW+ Solar systems

5.8 million+ Structures for solar modules

40 million+ CO_2 tons offset over 10 years

5.5 billion+ Oil gallons offset over 10 years

3 million+ Homes can be powered

From receiving complex designs, to challenging specifications

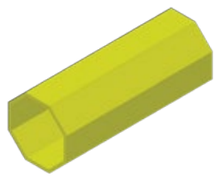
MKK has been able to deliver what the world needs.

TORQUE TUBES

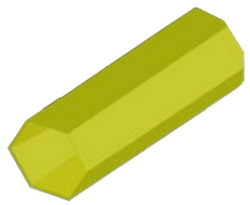
SQUARE



OCTAGONAL



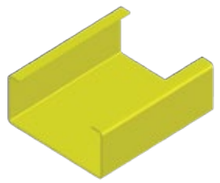
HEXAGONAL



Z SECTIONS



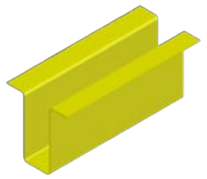
C & U SECTIONS

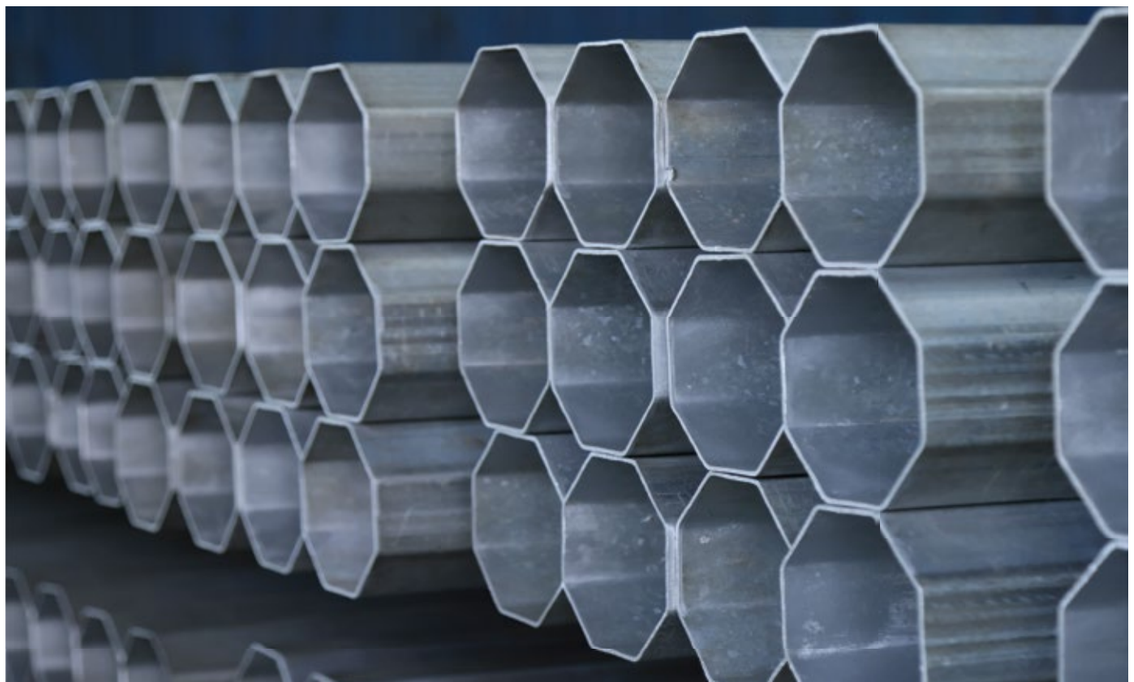


HAT



TOP HAT





Clean Energy & Climate Action has never been more urgent.

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

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



UNMATCHED QUALITY

DULY CERTIFIED



DNV

CERTIFICATE OF CONFORMITY OF THE FACTORY PRODUCTION CONTROL

Certificate No.: 2388-CPR-24-00333 Rev. 0.0 | Initial certification date: 02-08-2024 | Validity end date: 02-08-2027

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)

Hot finished structural hollow sections of non-alloy & fine grain steels
to be use in metal structures or in 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, Mukundarayapuram 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, Mukundarayapuram 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 10210-1:2006
under system 2+ are applied and that

THE FACTORY PRODUCTION CONTROL IS ASSESSED TO BE IN CONFORMITY WITH THE APPLICABLE REQUIREMENTS

This certificate will remain valid as 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: **Barendrecht, 02-08-2024**
For the issuing office: **Notified Body 2388, The Netherlands**
Check Validity
RvA PRODUCTS RvA C 312
Bjorn Spongvoren
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid. DMSP-5-PA-CPR-05-A4 rev 1

NOTIFIED BODY 2388 DNV Business Assurance B.V., Zwolseweg 1, 2994 LB Barendrecht, The Netherlands, TEL: +31 10 2922 689 www.dnv.com

DNV

Certificate No.: 2388-CPR-24-00333Rev. 00
Place and date: Barendrecht, 00-08-2024

Appendix to Certificate

Certificate history:

Revision	Description	Issue Date
0.3	Original Certificate.	2024-08-02

Additional information to the scope of certificate

Harmonised Standard	Steel grade & quality	Shape	Tolerances, Dimensions and technical Properties	Thickness mm	Width mm	Ø mm	Black / Galvanised
EN10210-1:2006	S235JRH,S275J0H,S275J2H, S275NH,S275NLH,S355J0H, S355J2H,S355NH,S355NLH, S355MH,S355MLH, S420NH,S420NLH,S460NH,S460NLH,S460MH,S460MLH	Cold formed circular hollow sections (CHCHS)		2.0-12.7		21.30 - 457	Black & Galvanised
	S235JRH,S275J0H,S275J2H, S275NH,S275NLH,S355J0H, S355J2H,S355NH,S355NLH, S355MH,S355MLH, S420NH,S420NLH,S460NH,S460MH,S460MLH	Cold formed rectangular hollow sections (CFRHS)		2.0-12.7	40 x 25 to 400 x 300		Black & galvanised
	S235JRH,S275J0H,S275J2H, S275NH,S275NLH,S355J0H, S355J2H,S355NH,S355NLH, S355MH,S355MLH, S420NH,S420NLH,S460NH,S460MH,S460MLH	Cold formed square hollow sections (CFSHS)		2.0-12.7	25 x 25 to 300 x 300		Black & galvanised

Declaration of performance and marking of product
When meeting with the terms and conditions, as required, the manufacture shall draw up an EC declaration of product performance and legally affix the CE mark followed by the notified factory production control certification body identification number of DNV (2388).

End of Certificate

Page 2 of 2

DNV

CERTIFICATE OF CONFORMITY OF THE FACTORY PRODUCTION CONTROL

Certificate No.: 2388-CPR-24-00334Rev. 00 | Initial certification date: 11-01-2024 | Validity end date: 11-01-2027

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 use in metal structures or in 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, Mukundarayapuram 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, Mukundarayapuram 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+ are applied and that

THE FACTORY PRODUCTION CONTROL IS ASSESSED TO BE IN CONFORMITY WITH THE APPLICABLE REQUIREMENTS

This certificate will remain valid as 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: **Barendrecht, 11-01-2024**
For the issuing office: **Notified Body 2388, The Netherlands**
Check Validity
RvA PRODUCTS RvA C 312
Bjorn Spongvoren
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid. DMSP-5-PA-CPR-05-A4 rev 1

NOTIFIED BODY 2388 DNV Business Assurance B.V., Zwolseweg 1, 2994 LB Barendrecht, The Netherlands, TEL: +31 10 2922 689 www.dnv.com

DNV

Certificate No.: 2388-CPR-24-00334Rev. 00
Place and date: Barendrecht, 11-01-2024

Appendix to Certificate

Certificate history:

Revision	Description	Issue Date
0.0	Original Certificate.	2024-01-11

Additional information to the scope of certificate

Harmonised Standard	Steel grade & quality	Shape	Tolerances, Dimensions and technical Properties	Thickness mm	Width mm	Ø mm	Black / Galvanised
EN10219-1:2006	S235JRH,S275J0H,S275J2H, S275NH,S275NLH,S355J0H, S355J2H,S355NH,S355NLH, S355MH,S355MLH, S420NH,S420NLH,S460NH,S460MH,S460MLH	Cold formed circular hollow sections (CFCHS)		2.0-12.7		21.30 - 457	Black & galvanised
	S235JRH,S275J0H,S275J2H, S275NH,S275NLH,S355J0H, S355J2H,S355NH,S355NLH, S355MH,S355MLH, S420NH,S420NLH,S460NH,S460MH,S460MLH	Cold formed rectangular hollow sections (CFRHS)		2.0-12.7	40 x 25 to 400 x 300		Black & galvanised
	S235JRH,S275J0H,S275J2H, S275NH,S275NLH,S355J0H, S355J2H,S355NH,S355NLH, S355MH,S355MLH, S420NH,S420NLH,S460NH,S460MH,S460MLH	Cold formed square/rectangular hollow sections (CFSHS)		2.0-12.7	25 x 25 to 300 x 300		Black & galvanised

Declaration of performance and marking of product
When meeting with the terms and conditions, as required, the manufacture shall draw up an EC declaration of product performance and legally affix the CE mark followed by the notified factory production control certification body identification number of DNV (2388).

End of Certificate

Page 2 of 2

DNV

CERTIFICATE OF FACTORY PRODUCTION CONTROL

Certificate No.: C658776 Rev. 0 | Initial certification date: 2024-01-10 | Valid: 2027-01-09

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, Mukundarayapuram 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 AoC 3, which is described in the Standard EN 10255:2004 +A1:2007 according the Annex ZA. Initial Type Testing (ITT) Clause 12.2 shall 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 or 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.**

Manojkumar Panchal
Head of Section, Manager - Product Assurance

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. Except for any liability caused by DNV's gross negligence or wilful misconduct, DNV's maximum cumulative liability arising out of or related to the use of or reliance on this document shall be limited under no circumstances exceed the amount of the fee. Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

DNV BUSINESS ASSURANCE INDIA PVT LTD, 'KOMU' 10 GST Road, Chennai - 600 016, India, TEL:/FAT: +91 44 43983800

Page 1 of 2

DNV

Certificate no.: C658776 Rev. 0
Project no. : PRJN-667566

Certificate history:

Revision	Description	Issue Date
00	Initial Audit	2024-01-10

Products covered by this Certificate:

Product description	Product Type	Category	Applied standard
Non-Alloy Steel Tubes for welding & Threading (Black & Galvanized) Type L1 & L2 Material grade: Steel Name:S195T and Steel Number 1.0026 Size (OD): 21.3 mm to 114.3 mm; for type L1 & L2 Wall Thickness: Specified as per Type L1 & L2 in the standard	Non alloy steel tubes suitable for welding, threading.	Voluntary Scheme	EN 10255:2004 + A1:2007

Sites covered by this Certificate:

Manufacturer	:	**MKK METAL SECTIONS PRIVATE LIMITED** Plot No M1 & S99 - S108, SIPCOT Phase III, Mukundarayapuram Post, Ranipet Dist-632405, Tamilnadu, India

Terms and conditions

The certificate valid is subject to the following terms and conditions:
- Any producer /Manufacturer (see 2001/95/EC for a precise definition) is liable for damage caused by a defect in his product(s), in accordance with directive 85/374/EEC, as amended, concerning liability of defective products.
- The certificate is only valid for the products and/or manufacturing premises listed above.
- The manufacturer shall fulfil the obligations arising out of the quality system as approved and uphold it so that it remains adequate and efficient.
- The assessment scope of this certificate excludes Initial Type Testing and other condition as in the Application / Limitation. The Initial Type Testing (ITT) by notified laboratory as described in the standard shall be met which is under the responsibility of a manufacturer.
- The Manufacturer shall inform the local DNV office of any intended updating of the quality system and DNV will assess the changes and decide if the certificate remains valid.
- Periodical audits will be held, in order to verify that the Manufacturer maintains and applies the quality system. DNV reserves the right to perform unannounced visits.

The following may render this Statement invalid:
- Changes in the quality system affecting production.
- Periodical audits not held within the allowed time window.

END OF CERTIFICATE

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. Except for any liability caused by DNV's gross negligence or wilful misconduct, DNV's maximum cumulative liability arising out of or related to the use of or reliance on this document shall be limited under no circumstances exceed the amount of the fee. Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

DNV BUSINESS ASSURANCE INDIA PVT LTD, 'KOMU' 10 GST Road, Chennai - 600 016, India, TEL:/FAT: +91 44 43983800

Page 2 of 2

Certificate of Compliance

Certificate Number: UL-US-2561456-0

Report Reference: EX29496-20250326

Issue Date: 2025-03-27

Issued to:
MKK METAL SECTIONS PRIVATE LIMITED
Plot No. M1 & S99-S108, Sipcot Phase III, Mukundarayapuram Post, Ranipet, Tamil Nadu, 632405, IN

This certificate confirms that representative samples of:

VIZY - Metallic Sprinkler Pipe

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the Standard(s) indicated on th Certificate.

UL 852, Edition 2, Issue Date 2008-10-01, Revision Date 2023-03-07

Additional Information:
See UL Product iQ® at https://iq.ulprospector.com for additional information.

This Certificate of Compliance indicates that representative samples of the produc described in the certification report have met the requirements for UL certification. does not provide authorization to apply the UL Mark. Only the Authorization Pag that references the Follow-Up Services Procedure for ongoing surveillance provide authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certifie and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

UL Solutions

David Piecuch
UL Mark Certification Program Owner

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a UL Solutions Customer Service Representative at https://form.ul.com/contact-us

Page 1 of 2

CERTIFICATE OF COMPLIANCE

Certificate number: UL-US-2561456-0
Report reference: EX29496-20250326
Date: 2025-03-27

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Schedule Pipe

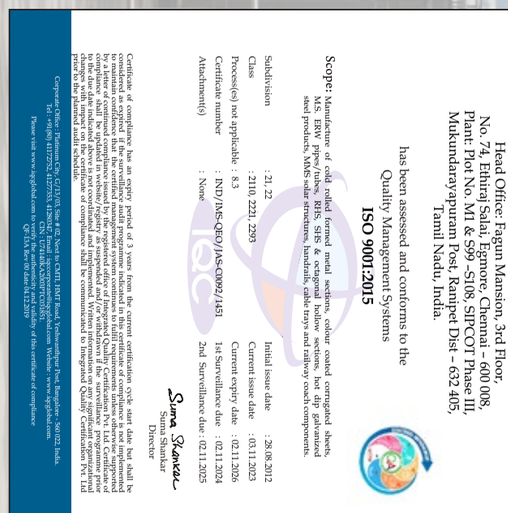
Model(s): Sch 10, class B, Type E - ASTM A795/A795M, Sch 10, class B, Type E - ASTM A135/A135M, Sch 30, class B, Type E - ASTM A795/A795M, Sch 40, class B, Type E - ASTM A795/A795M, Schedule 40, Grade B, Type E - ASTM A53/A53M Black or Galvanized

UL Solutions

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Form:SCID 0184 – ver 1.0

Page 2 of 2



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,
Mukundarayapuram 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, M.S. ERW pipes/tubes, RHS, SHS & octagonal hollow sections, hot dip galvanized steel products, MMS 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-QRO/JAS-C0092/8644	2nd Surveillance due	: 02.11.2025
Attachment(s)	: None		

Suma Shankar
Director

Certificate of compliance has an expiry period of 3 years from the current certification cycle start date but shall be considered as expired if the surveillance audit programme indicated in this certificate of compliance is not implemented to maintain confidence that the certified management system continues to fulfill requirements unless otherwise suspended by a letter of continued compliance issued by the registered office of Integrated Quality Certification Pvt. Ltd. Certificate of compliance shall be updated in website/registry as suspended and/or withdrawn if the surveillance programme prior to the due date indicated above is not conducted and implemented. Written information on any significant organizational changes with impact on the certificate of compliance shall be communicated to Integrated Quality Certification Pvt. Ltd prior to the planned audit schedule.

Corporate Office: Platinum City, G.T.I.I.03, Site # 02, Sect to CMTI, HMT Road, Yeshwanthpur Post, Bangalore - 560 022, India
Tel: +91(80) 41127252, 41127253, 41239347, Email: iacorporate@integrated.net, Website: www.iqgobal.com
CIN: U74140KA2007GTC043854
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QF/13A Rev 00 date:04.12.2019



Certificate of Compliance

INTEGRATED QUALITY CERTIFICATION PRIVATE LIMITED

hereby certifies that the Quality 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,
Mukundarayapuram Post, Ranipet Dist – 632 405,
Tamil Nadu, India.

has been assessed and conforms to the
Quality Management Systems

ISO 9001:2015

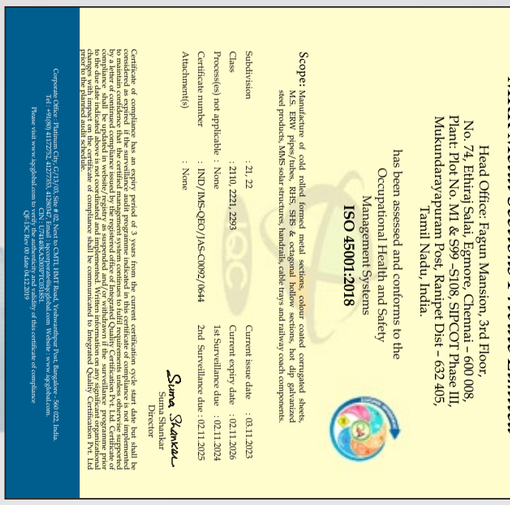
Scope: Manufacture of cold rolled formed metal sections, colour coated corrugated sheets, M.S. ERW pipes/tubes, RHS, SHS & octagonal hollow sections, hot dip galvanized steel products, MMS solar structures, handrails, cable trays and railway coach components.

Subdivision	: 21, 22	Initial issue date	: 28.08.2012
Class	: 2110, 2221, 2293	Current issue date	: 03.11.2023
Process(es) not applicable	: 8.3	Current expiry date	: 02.11.2026
Certificate number	: IND/IMS-QRO/JAS-C0092/1451	1st Surveillance due	: 02.11.2024
Attachment(s)	: None	2nd Surveillance due	: 02.11.2025

Suma Shankar
Director

Certificate of compliance has an expiry period of 3 years from the current certification cycle start date but shall be considered as expired if the surveillance audit programme indicated in this certificate of compliance is not implemented to maintain confidence that the certified management system continues to fulfill requirements unless otherwise suspended by a letter of continued compliance issued by the registered office of Integrated Quality Certification Pvt. Ltd. Certificate of compliance shall be updated in website/registry as suspended and/or withdrawn if the surveillance programme prior to the due date indicated above is not conducted and implemented. Written information on any significant organizational changes with impact on the certificate of compliance shall be communicated to Integrated Quality Certification Pvt. Ltd prior to the planned audit schedule.

Corporate Office: Platinum City, G.T.I.I.03, Site # 02, Sect to CMTI, HMT Road, Yeshwanthpur Post, Bangalore - 560 022, India
Tel: +91(80) 41127252, 41127253, 41239347, Email: iacorporate@integrated.net, Website: www.iqgobal.com
CIN: U74140KA2007GTC043854
Please visit www.iqgobal.com to verify the authenticity and validity of this certificate of compliance
QF/13A Rev 00 date:04.12.2019



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,
Mukundarayapuram 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, M.S. ERW pipes/tubes, RHS, SHS & octagonal hollow sections, hot dip galvanized steel products, MMS 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-QRO/JAS-C0092/8644	2nd Surveillance due	: 02.11.2025
Attachment(s)	: None		

Suma Shankar
Director

Certificate of compliance has an expiry period of 3 years from the current certification cycle start date but shall be considered as expired if the surveillance audit programme indicated in this certificate of compliance is not implemented to maintain confidence that the certified management system continues to fulfill requirements unless otherwise suspended by a letter of continued compliance issued by the registered office of Integrated Quality Certification Pvt. Ltd. Certificate of compliance shall be updated in website/registry as suspended and/or withdrawn if the surveillance programme prior to the due date indicated above is not conducted and implemented. Written information on any significant organizational changes with impact on the certificate of compliance shall be communicated to Integrated Quality Certification Pvt. Ltd prior to the planned audit schedule.

Corporate Office: Platinum City, G.T.I.I.03, Site # 02, Sect to CMTI, HMT Road, Yeshwanthpur Post, Bangalore - 560 022, India
Tel: +91(80) 41127252, 41127253, 41239347, Email: iacorporate@integrated.net, Website: www.iqgobal.com
CIN: U74140KA2007GTC043854
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QF/13B Rev 00 date:04.12.2019



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,
Mukundarayapuram 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, M.S. ERW pipes/tubes, RHS, SHS & octagonal hollow sections, hot dip galvanized steel products, MMS 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-QRO/JAS-C0092/6692	2nd Surveillance due	: 02.11.2025
Attachment(s)	: None		

Suma Shankar
Director

Certificate of compliance has an expiry period of 3 years from the current certification cycle start date but shall be considered as expired if the surveillance audit programme indicated in this certificate of compliance is not implemented to maintain confidence that the certified management system continues to fulfill requirements unless otherwise suspended by a letter of continued compliance issued by the registered office of Integrated Quality Certification Pvt. Ltd. Certificate of compliance shall be updated in website/registry as suspended and/or withdrawn if the surveillance programme prior to the due date indicated above is not conducted and implemented. Written information on any significant organizational changes with impact on the certificate of compliance shall be communicated to Integrated Quality Certification Pvt. Ltd prior to the planned audit schedule.

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sphera

Letter of Conformance of
Carbon Border Adjustment Mechanism (CBAM)
Embedded Greenhouse Gases Emissions

MKK Metal Sections Private Limited

PLOT NO M1 SIPCOT PHASE III MUKUNDARAYAPURAM POST
RANIPET DISTRICT- 632405, TAMIL NADU, INDIA

Carbon Border Adjustment Mechanism (CBAM) Embedded Greenhouse Gases Emissions are assessed by Thinkstep Sustainability Solutions Pvt Limited, a Sphera Company.

Assessment Statement:
Embedded Emission Calculation/Assessment Criteria: Guidance document on "CBAM Implementation for installation operators outside the EU" released on 22nd December 2023 and, Commission Implementing Regulation (EU) 2023/1773.

Organisation Boundary: : MKK Metal Sections Private Limited, Tamil Nadu, India
Assessed emission for the data period: 1st January 2025 – 31st December 2025
CBAM Reporting Period: 1st October 2025 – 31st December 2025
Date: 19th February 2026

The scope of the assessment included the quantification of GHG emissions for the above organisation in accordance with the requirements of Carbon Border Adjustment Mechanism (CBAM), with emission details as below.

Type of aggregated good or precursor	CN Code(s)	Product name [HS Code] (used for communication with reporting declarant, e.g. on invoices)	SEE (direct)	SEE (indirect)	SEE (total)	Unit	Embedded electricity (MWh/t)
Iron or steel products	73069000, 73066192, 73066199, 73063049, 73063077, 73063080	METPRO Black pipes	2.198	0.326	2.524	tCO_2/t	0.477
Iron or steel products	73061900, 73063041, 73063072	METPRO Galvanized steel Pipes/ GI pipes	2.248	0.428	2.676	tCO_2/t	0.617

Thinkstep Sustainability Solutions Pvt Limited, a Sphera Company

Dr. Rajesh Singh
Senior Director- Consulting Services

Sample

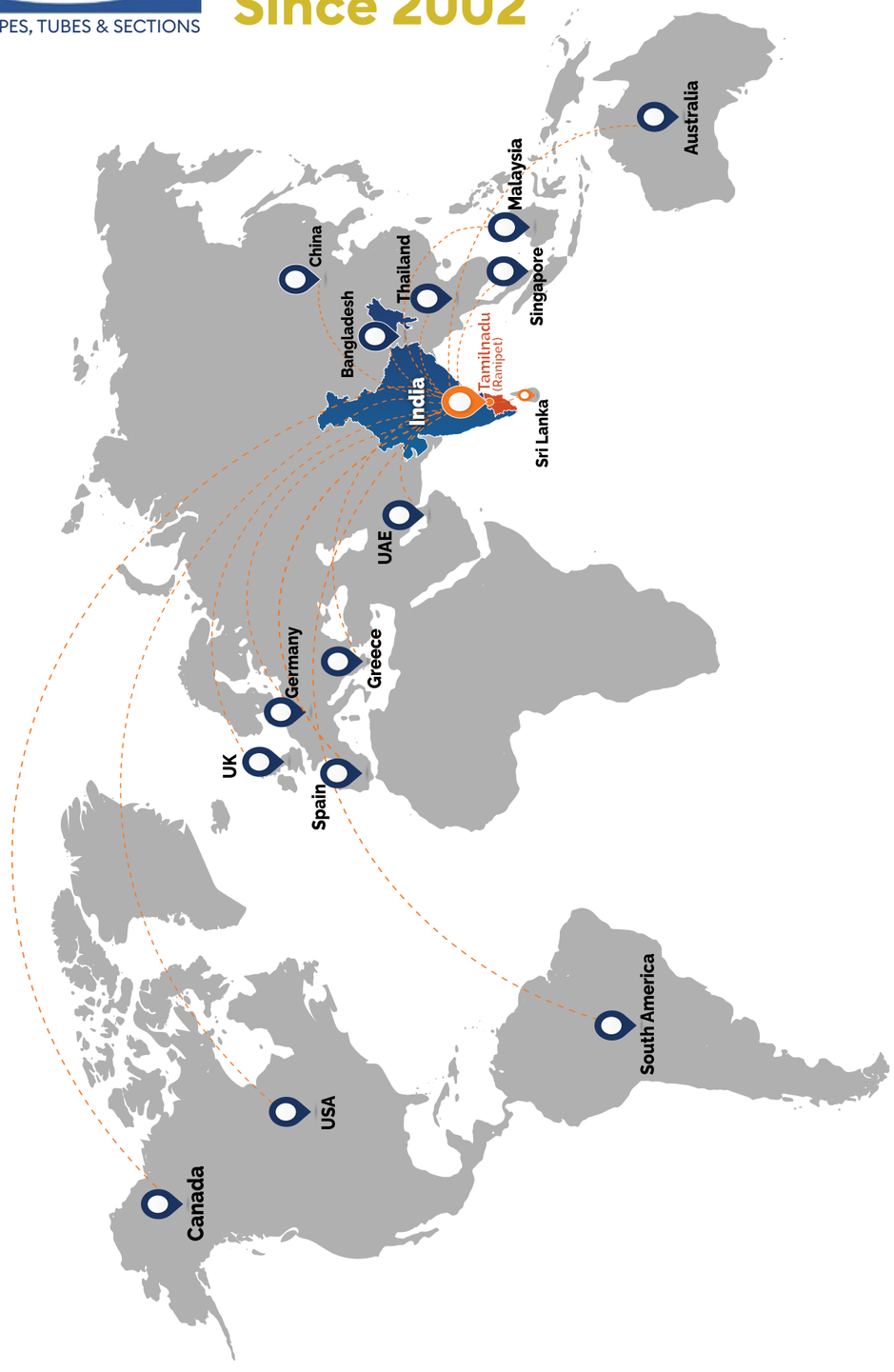
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JOHN DEERE | WIRTGEN GROUP | JSW | KEC KEC INTERNATIONAL LIMITED | LARSEN & TOUBRO | metso

एनटीपीसी NTPC | OBO BETTERMANN | OCL INDIA LIMITED ओसीएल इण्डिया लिमिटेड | RAYS POWER INFRA | ROYAL ENFIELD

SAME | SCHWING Stetter | SIEMENS Gamesa RENEWABLE ENERGY | STERLING & WILSON | susten By Mahindra

TANGEDCO | TATA TATA POWER | TI INDIA | UNIMACTS | WHEELS INDIA LIMITED

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Maharashtra - 400063

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+91 8754464929

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Plot No. S 99 to S 108,
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Corporate Office (USA)

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1 AUER CT, 2ND FLOOR, EAST BRUNSWICK,
NEW JERSEY 08816

Scan Me

MKK Metal Sections

METPRO

STEEL PIPES, TUBES & SECTIONS