VARDAN

ENTERPRISE

"ONE-STOP SOLUTIONS FOR
BUILDING MATERIAL AND STEEL STRUCTURE"

WELCOME

WE'RE GLAD YOU'RE HERE!

STEEL STRUCTURE BROCHURE

About Us

More About VARDAN ENTERPRISE

At **VARDAN ENTERPRISE**, we bring you a wide range of products from various sectors, Such as government, civil construction, energy, metal, or agricultural industry, we have meticulously selected trusted manufacturers to provide you with quality products.

Our commitment to quality and reliability ensures that you receive superior products that meet your construction needs. Explore our catalog and make the right choice for your next project.

JOIN US

Our Mission

Committed to Exceeding Expectations

At Vardan Enterprise, in collaboration with our associate groups, we are driven by an unwavering determination to fulfill our commitments to the highest standards. This dedication has made our products and services highly demand by individual as well as construction companies. We take immense pride in the invaluable expertise and extensive experience we have accumulated in this field over time.

Our Vision

Bringing Quality and Accessibility to All

We are dedicated to making our exceptional products and services available in every corner of the nation. Through our widespread reach, we aim to empower individuals and communities.

Join us on our journey to make a commendable difference.
Together, we can build a brighter future for all.

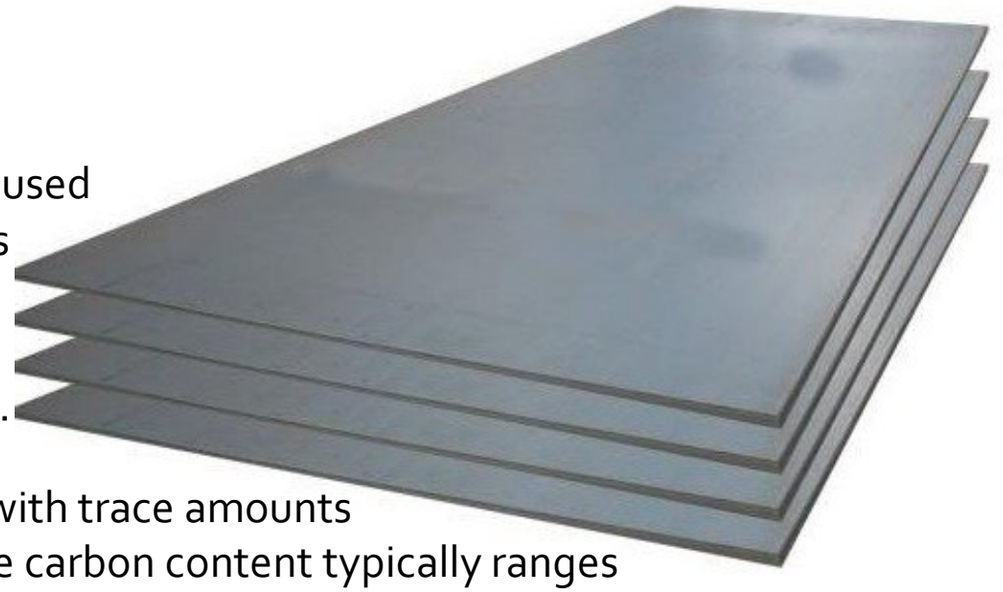
STEEL STRUCTURE

Structural steel is a category of steel used for making construction materials in a variety of shapes. They are designed, fabricated, and erected using engineering principles and specialized techniques. Steel structures offer advantages such as high strength, durability, flexibility, and speed of construction. In modern construction, steel structures is used for almost every type of structure including heavy industrial building, high-rise building, equipment support system, infrastructure, bridge, tower, airport terminal, heavy industrial plant, pipe rack, etc.

We Supply Following Steel Structure:

1. **MS Plate:** MS Plate, also known as Mild Steel Plate, is a versatile and widely used construction material. It is a type of carbon steel plate that contains a low amount of carbon, making it relatively ductile and easy to work with. MS Plates are commonly used in various industries such as construction, automotive, shipbuilding, and manufacturing.
2. **MS Angle**: MS Angle, also known as Mild Steel Angle, is a structural steel shape with two legs of equal length that are joined at a 90-degree angle. It is commonly used in construction projects to provide support and stability. MS Angles are available in various sizes and thicknesses.
3. **MS Flat Bar**: MS Flat Bar is a long, flat piece of mild steel with rectangular cross-sections. It is widely used in the construction industry for making frames, brackets, and other structural components. MS Flat Bars come in different widths, thicknesses, and lengths.
4. **MS Round Bar**: MS Round Bar, also known as Mild Steel Round Bar, is a cylindrical-shaped solid steel bar. It is commonly used in construction, manufacturing, and fabrication applications. MS Round Bars are available in various diameters and lengths.
5. **MS Square Bar**: MS Square Bar is a square-shaped solid steel bar made from mild steel. It is often used for making shafts, supports, and other structural components. MS Square Bars come in different sizes and lengths.
6. **MS Channel**: MS Channel, also known as Mild Steel Channel, is a "C"-shaped structural steel section with a wide range of applications. It is commonly used in the construction of frames, supports, and bracing elements. MS Channels are available in different sizes and thicknesses.
7. **I & H Beam**: Beam, also known as Universal Beam, is a long steel beam with an I or H-shaped cross-section. It is widely used in construction projects for providing structural support and load-bearing capabilities. I & H-Beams come in various sizes and lengths.
8. **MS Round & Square Pipe**: MS Pipe, also known as Mild Steel Pipe, is a hollow cylindrical tube made from mild steel. It is commonly used for conveying fluids, gases, and other substances in various industries. MS Pipes come in different sizes, thicknesses, and lengths.
9. **GI Round & Square pipe:** GI Pipe, also known as Galvanized Iron pipe, is a coated pipe that has a layer of zinc to prevent corrosion. It is commonly used in plumbing, water supply, and construction for its durability and resistance to rust. Regular maintenance is necessary to ensure its longevity.

MS PLATE



MS Plate, also known as Mild Steel Plate, is a versatile and widely used construction material. It is a type of carbon steel plate that contains a low amount of carbon, making it relatively ductile and easy to work with. MS Plates are commonly used in various industries such as construction, automotive, shipbuilding, and manufacturing.

- Composition: MS Plate is primarily composed of iron and carbon, with trace amounts of other elements such as manganese, sulfur, and phosphorus. The carbon content typically ranges from 0.05% to 0.25%.
- Strength and Durability: MS Plates have good strength and durability, making them suitable for structural applications. They exhibit moderate tensile strength and are resistant to deformation under load.
- Thickness and Sizes: MS Plates are available in a wide range of thicknesses, typically ranging from 1.5 mm to 200 mm or more. They are also available in various sizes, with standard dimensions commonly used in construction projects.
- Weldability: MS Plates are known for their excellent weldability, allowing for easy fabrication and joining. They can be welded using various welding techniques, including arc welding, MIG welding, and TIG welding.
- Surface Finish: MS Plates typically have a rough, mill-scale surface finish, which provides good grip for paint or other coatings. However, the surface can be further treated through processes like shot blasting or grinding to achieve a smoother finish.
- Standards and Grades: MS Plates are manufactured according to various national and international standards, such as ASTM (American Society for Testing and Materials), BS (British Standards), and IS (Indian Standards). They are available in different grades, indicating their mechanical properties and chemical composition.
- Corrosion Resistance: While MS Plates are prone to corrosion, they can be protected through proper surface treatments, such as painting, galvanizing, or applying protective coatings, to enhance their resistance to rust and corrosion.

- **It is important to consult specific technical data and consult with professionals or suppliers for precise information regarding the specifications, tolerances, and other characteristics of MS Plates, as they can vary based on regional standards and individual requirements.**

STANDARD MS PLATE SIZE CHART

MS Sheet/Plate			
Size			Weight
Thickness	Width	Length	Kg/Mtr
1.6mm	1250mm	2500mm	40 kg
2mm	1250mm	2500mm	50 kg
2.2mm	1250mm	2500mm	55 kg
2.3mm	1250mm	2500mm	58 kg
2.5mm	1250mm	2500mm	63 kg
2.8mm	1250mm	2500mm	70 kg
2.9mm	1205mm	2500mm	73 kg
3mm	1250mm	2500mm	75 kg
3.15 mm	1250mm	2500mm	79 kg
3.5mm	1250mm	2500mm	88 kg
4mm	1250mm	2500mm	100 kg
5mm	1250mm	6300mm	315 kg
5mm	1500mm	6300mm	378 kg
6mm	1250mm	6300mm	378 kg
6mm	1500mm	6300mm	454 kg
8mm	1250mm	6300mm	504 kg
8mm	1500mm	6300mm	605 kg
10mm	1250mm	6300mm	630 kg
10mm	1500mm	6300mm	756 kg
12mm	1250mm	6300mm	756 kg
12mm	1500mm	6300mm	907 kg
16mm	1500mm	6300mm	1210 kg
16mm	2000mm	6300mm	1612 kg
18mm	2000mm	6300mm	1815 kg
20mm	1500mm	6300mm	1512 kg
20mm	2000mm	6300mm	2016 kg
22mm	2000mm	6300mm	2217 kg
25mm	1500mm	6300mm	1890 kg
25mm	2000mm	6300mm	2520 kg
32mm	1500mm	6300mm	2419 kg
32mm	2000mm	6300mm	3225 kg
40mm	1500mm	6300mm	3025 kg
40mm	2000mm	6300mm	4032 kg
50mm	1500mm	6300mm	3780 kg
50mm	2000mm	6300mm	5040 kg
The data given above is indicative. Actual weights may vary.			

MS ANGEL

MS Angle, also known as Mild Steel Angle or Mild Steel L Angle, is a structural steel product commonly used in construction and engineering applications. It is a right-angled metal bar with equal or unequal length sides and a cross-section in the shape of an "L."

- **Material Composition:** MS Angle is primarily made of mild steel, which is a low carbon steel with a relatively low amount of carbon content. The composition typically includes iron (Fe), carbon (C), manganese (Mn), sulfur (S), phosphorus (P), and traces of other elements.
- **Manufacturing Process:** MS Angles are produced through a process called hot rolling. In this process, a steel billet is heated to a high temperature and passed through a series of rolling stands to shape it into the desired angle profile. The hot rolling process ensures that the steel attains the required strength and structural integrity.
- **Cross-Sectional Shape:** The cross-section of an MS Angle is generally in the shape of an "L" with two perpendicular sides, known as the legs or flanges. The legs can have equal or unequal lengths, depending on the specific application requirements.
- **Standard Sizes:** MS Angle is available in various standard sizes, which are typically specified by the length of the legs and the thickness of the metal. Common sizes range from 20 mm x 20 mm with a thickness of 3 mm to 200 mm x 200 mm with a thickness of 20 mm.
- **Strength and Load-Bearing Capacity:** MS Angle is known for its high strength and load-bearing capacity. The structural design and dimensions of the angle determine its ability to withstand different types of loads, such as axial compression, tension, and bending.
- **Applications:** MS Angle finds wide applications in the construction industry, including building frames, bridges, transmission towers, support structures, and manufacturing equipment. It is also used in fabrication projects, machinery, and general structural applications.
- **Surface Finish:** MS Angle usually has a mill finish, which means it has a dark grey appearance due to the hot rolling process. However, it can be further processed or coated for aesthetic or corrosion-resistant purposes, such as painting, galvanizing, or powder coating.
- **Standards and Specifications:** MS Angle is manufactured according to various national and international standards, such as Indian Standards (IS), American Society for Testing and Materials (ASTM), and British Standards (BS). These standards define the mechanical properties, dimensions, and tolerances for MS Angle.

- **It's important to consult relevant standards and consider engineering calculations when using MS Angle in structural applications to ensure proper selection and safe usage based on the specific requirements of your project.**

STANDARD EQUAL ANGLE SIZE CHART

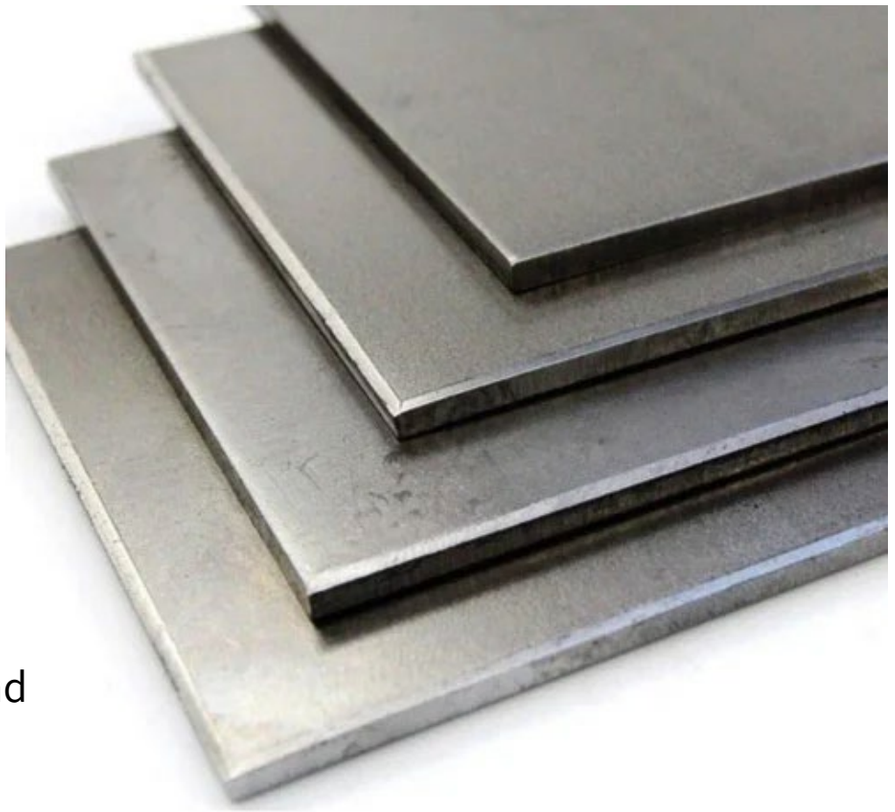
Description	Standard Length (Mtr)	Weight per Metre (kg/m)
ANGLE 20 X 20 X 3.0mm	6	0.98
ANGLE 25 X 25 X 3.0mm	7.5	1.12
ANGLE 25 X 25 X 5.0mm	7.5	1.65
ANGLE 25 X 25 X 6.0mm	7.5	2.08
ANGLE 30 X 30 X 2.5mm	6	1.06
ANGLE 30 X 30 X 3.0mm	7.5	1.35
ANGLE 30 X 30 X 5.0mm	7.5	2.01
ANGLE 30 X 30 X 6.0mm	7.5	2.56
ANGLE 40 X 40 X 2.5mm	6	1.43
ANGLE 40 X 40 X 3.0mm	7.5	1.83
ANGLE 40 X 40 X 4.0mm	6	2.2
ANGLE 40 X 40 X 5.0mm	9	2.73
ANGLE 40 X 40 X 6.0mm	9	3.5
ANGLE 45 X 45 X 3.0mm	9	2.06
ANGLE 45 X 45 X 5.0mm	9	3.1
ANGLE 45 X 45 X 6.0mm	9	3.97
ANGLE 50 X 50 X 2.5mm	9	1.81
ANGLE 50 X 50 X 3.0mm	7.5	2.31
ANGLE 50 X 50 X 4.0mm	9	2.79
ANGLE 50 X 50 X 5.0mm	9	3.48
ANGLE 50 X 50 X 6.0mm	9	4.46
ANGLE 50 X 50 X 8.0mm	9	5.68
ANGLE 55 X 55 X 5.0mm	9	3.84
ANGLE 55 X 55 X 6.0mm	9	4.93

Description	Standard Length (Mtr)	Weight per Metre (kg/m)
ANGLE 65 X 50 X 5.0mm	9	4.02
ANGLE 65 X 50 X 6.0mm	9	5.16
ANGLE 65 X 50 X 8.0mm	9	6.59
ANGLE 65 X 65 X 4.0mm	9	3.69
ANGLE 65 x 65 x 5.0mm	9	4.56
ANGLE 65 X 65 X 6.0mm	9	5.87
ANGLE 65 X 65 X 8.0mm	9	7.51
ANGLE 65 X 65 X 10.0mm	9	9.02
ANGLE 75 X 50 X 5.0mm	9	4.4
ANGLE 75 X 50 X 6.0mm	9	5.66
ANGLE 75 X 50 X 8.0mm	9	7.23
ANGLE 75 X 75 X 4.0mm	9	4.29
ANGLE 75 X 75 X 5.0mm	9	5.27
ANGLE 75 X 75 X 6.0mm	9	6.81
ANGLE 75 X 75 X 8.0mm	9	8.73
ANGLE 75 X 75 X 10.0mm	9	10.5
ANGLE 90 X 90 X 6.0mm	9	8.22
ANGLE 90 X 90 X 8.0mm	9	10.6
ANGLE 90 X 90 X 10.0mm	9	12.7
ANGLE 100 X 75 X 6.0mm	9	7.98
ANGLE 100 X 75 X 8.0mm	9	10.3
ANGLE 100 X 75 X 10.0mm	9	12.4
ANGLE 100 X 100 X 10.0mm	9	14.2
ANGLE 100 X 100 X 12.0mm	9	17.7
ANGLE 100 X 100 X 4.0mm	9	5.78
ANGLE 100 X 100 X 6.0mm	9	9.16
ANGLE 100 X 100 X 8.0mm	9	11.8

STANDARD UNEQUAL ANGLE SIZE CHART

Description	Standard Length (Mtr)	Weight per Metre (kg/m)
ANGLE 125 X 75 X 6.0mm	9	9.16
ANGLE 125 X 75 X 8.0mm	9	11.8
ANGLE 125 X 75 X 10.0mm	9	14.2
ANGLE 125 X 75 X 12.0mm	9	17.7
ANGLE 125 X 125 X 8.0mm	9	14.9
ANGLE 125 X 125 X 10.0mm	9	18
ANGLE 125 X 125 X 12.0mm	9	22.5
ANGLE 125 X 125 X 16.0mm	9	29.1
ANGLE 150 X 90 X 8.0mm	9	14.3
ANGLE 150 X 90 X 12.0mm	9	21.6
ANGLE 150 X 90 X 16.0mm	9	27.9
ANGLE 150 X 100 X 10.0mm	9	18
ANGLE 150 X 100 X 12.0mm	9	22.5
ANGLE 150 X 150 X 10.0mm	9	21.9
ANGLE 150 X 150 X 12.0mm	9	27.3
ANGLE 150 X 150 X 16.0mm	9	35.4
ANGLE 150 X 150 X 19.0mm	9	42.1
ANGLE 150 X 90 X 10.0mm	9	17.3
ANGLE 200 x 200 x 13.0mm	9	40
ANGLE 200 X 200 X 16.0mm	9	48.7
ANGLE 200 X 200 X 20.0mm	9	60.1
ANGLE 200 X 200 X 26.0mm	9	76.8

MS FLAT BAR



MS Flat Bar, also known as mild steel flat bar, is a versatile and commonly used metal product in various industries. It is a flat-shaped steel bar with a rectangular cross-section and smooth edges. Here are some professional details about MS flat bars:

- **Composition:** MS flat bars are primarily made of mild steel, which is a low-carbon steel with a small percentage of carbon (generally less than 0.25%). Other alloying elements like manganese and silicon may be present depending on specific requirements.
- **Manufacturing:** MS flat bars are typically produced through hot rolling or cold drawing. In hot rolling, the steel is heated and passed through rollers to achieve the desired shape. Cold drawing involves shaping the steel without heating it.
- **Dimensions:** MS flat bars come in various standard dimensions, including thickness, width, and length. The thickness ranges from millimeters to inches, while the width typically varies from 10 to 300 millimeters. The length is usually 6 meters but can be customized.
- **Applications:** MS flat bars have diverse applications, including construction, manufacturing, automotive, fabrication, and general engineering. They are used for structural support, machinery components, chassis parts, and more.
- **Advantages:** MS flat bars offer cost-effectiveness, versatility, strength, and durability. They are relatively inexpensive, easy to work with, and readily available in different sizes.

- **It's important to note that specific details and properties of MS flat bars may vary based on regional standards, manufacturing processes, and supplier specifications.**

STANDARD MS FLAT BAR SIZE CHART

Size in (MM)	Weight (Kgs/Feet)	Weight (Kgs/Mtr)
12*3	0.086	0.282
12*5	0.143	0.47
20*3	0.143	0.47
18*4	0.18	0.585
20*5	0.241	0.79
20*6	0.287	0.942
25*3	0.183	0.6
25*5	0.305	1
25*6	0.365	1.197
25*8	0.47	1.55
25*10	0.609	1.998
25*12	0.731	2.398
32*3	0.243	0.798
32*5	0.395	1.296
32*6	0.457	1.499
32*8	0.671	2.202
32*10	0.854	2.802
32*12	1.005	3.297
32*16	1.342	4.403
40*3	0.274	0.899
40*5	0.487	1.598
40*32	2.897	9.505
50*3	0.365	1.197
50*5	0.609	1.998
50*6	0.739	2.398
50*6	0.994	3.097
50*10	1.188	3.898
50*12	1.432	4.698
50*16	1.92	6.3
50*20	2.377	7.799
50*25	2.986	9.797

Size in (MM)	Weight (Kgs/Feet)	Weight (Kgs/Mtr)
65*6	0.945	3.1
65*8	1.26	4.133
65*10	1.575	5.166
65*12	1.859	6.099
65*16	2.5	8.2
65*20	3.109	10.2
65*25	3.902	12.8
100*6	1.432	4.698
100*8	1.92	6.3
100*10	2.377	7.798
100*12	2.864	9.397
100*16	3.84	12.599
100*20	4.785	15.7
100*25	5.973	19.599
125*6	1.8	5.9
125*8	2.4	7.9
125*10	2.986	9.797
125*12	3.596	11.798
125*16	4.8	15.75
125*20	5.973	19.597
125*25	7.5	24.6
150*6	2.2	7.218
150*8	2.85	9.4
150*10	3.596	11.798
150*12	4.297	14.098
150*16	5.729	18.797
150*20	7.192	23.597
150*25	8.991	29.499
200*10	4.789	15.699
200*12	5.943	18.839
250*8	4.789	13.7
250*10	5.943	19.625
250*12	7.179	23.549
300*10	7.179	23.55
300*12	8.616	28.259

MS ROUND BAR

MS Round Bar is a commonly used steel product in various industries. It is a cylindrical metal bar with a circular cross-section and is manufactured from mild steel, which is a low-carbon steel alloy. Here are some short and professional details about MS round bar:

- **Material:** MS round bar is made from mild steel, which typically contains a carbon content of less than 0.25%. This makes it relatively soft and malleable, suitable for various applications.
- **Size and Dimensions:** MS round bars are available in a range of sizes and dimensions to meet specific requirements. Common diameters include 6mm, 8mm, 10mm, 12mm, and so on, with varying lengths.
- **Strength and Durability:** While not as strong as high-carbon or alloy steels, MS round bars offer sufficient strength and durability for many applications. They can withstand moderate loads and provide structural stability.
- **Versatility:** MS round bars are versatile and find application in various industries such as construction, manufacturing, automotive, and general engineering. They are used in the production of machinery parts, shafts, fasteners, fittings, and support structures.
- **Machinability:** MS round bars have good machinability, meaning they can be easily cut, drilled, turned, and shaped using standard machining techniques. This makes them convenient to work with during fabrication processes.
- **Weldability:** Mild steel round bars exhibit good weldability, allowing them to be joined or welded to other metal components using common welding methods like arc welding, MIG welding, or TIG welding.
- **Corrosion Resistance:** MS round bars are susceptible to corrosion and rust when exposed to moisture or harsh environments. Proper surface treatment, such as painting, galvanizing, or applying protective coatings, can enhance their resistance to corrosion.
- **Cost-Effective:** MS round bars are cost-effective compared to high-carbon or alloy steels, making them a popular choice for applications where high strength is not a primary requirement.

- **It's important to note that the specific details and properties of MS round bars may vary depending on the manufacturing standards, grade, and specifications of the particular product.**

STANDARD MS ROUND BAR SIZE CHART

Size (in mm)	Weight (Kg/m)	Weight (Kg/feet)
5.5 MS Round Bar	0.186	0.056
6 MS Round Bar	0.222	0.067
7 MS Round Bar	0.302	0.092
8 MS Round Bar	0.394	0.12
10 MS Round Bar	0.616	0.187
12 MS Round Bar	0.89	0.271
14 MS Round Bar	1.208	0.368
16 MS Round Bar	1.581	0.482
18 MS Round Bar	2	0.609
20 MS Round Bar	2.471	0.753
22 MS Round Bar	2.981	0.908
25 MS Round Bar	3.85	1.173
28 MS Round Bar	4.832	1.472
30 MS Round Bar	5.547	1.691
32 MS Round Bar	6.312	1.923
33.5 MS Round Bar	6.921	2.109
35 MS Round Bar	7.551	2.301
36 MS Round Bar	7.992	2.435
38 MS Round Bar	8.901	2.713
40 MS Round Bar	9.85	3.002

Size (in mm)	Weight (Kg/m)	Weight (Kg/feet)
42 MS Round Bar	10.873	3.314
45 MS Round Bar	12.482	3.804
46.5 MS Round Bar	13.328	4.062
48 MS Round Bar	14.202	4.328
50 MS Round Bar	15.41	4.696
52 MS Round Bar	16.668	5.08
53 MS Round Bar	17.32	5.279
56 MS Round Bar	19.34	5.895
60 MS Round Bar	22.191	6.705
63 MS Round Bar	24.471	7.548
65 MS Round Bar	26.043	7.937
67 MS Round Bar	27.682	8.436
71 MS Round Bar	31.074	9.471
75 MS Round Bar	34.673	10.568
77.5 MS Round Bar	37.024	11.283
80 MS Round Bar	39.45	12.039
85 MS Round Bar	44.536	13.574
90 MS Round Bar	49.93	15.218
95 MS Round Bar	55.632	16.956
100 MS Round Bar	61.642	18.788
105 MS Round Bar	67.96	20.714
110 MS Round Bar	74.586	22.734

Rolling Tolerances of MS Round Bar			
Depth	**Tolerance**	**Width of flange**	**Tolerance**
Up to 200 mm	± 2.5 mm	Up to 100 mm	± 2 mm
> 200 to 400 mm	± 3.0 mm		

Tolerance on weight per meter shall be ± 2.5% or alternatively +4, -1% of the standard weight per meter. The permissible limits for camber and sweep shall be 0.2% of the length.

MS SQUARE BAR

MS Square Bar, also known as Mild Steel Square Bar, is a type of steel product that has a square cross-section. It is widely used in various industries due to its versatility, strength, and affordability. Here are some short and professional details about MS Square Bar:

- **Material Composition:** MS Square Bars are primarily made of mild steel, which is a low-carbon steel with a relatively low amount of carbon content. The exact composition may vary depending on the manufacturing standards and specifications.
- **Shape and Dimensions:** MS Square Bars are characterized by their square shape, with equal sides and right angles. The dimensions of MS Square Bars typically range from 6mm to 50mm, although larger sizes may also be available based on specific requirements.
- **Strength and Durability:** MS Square Bars exhibit excellent strength and durability, making them suitable for various structural and construction applications. They have good tensile strength and can withstand heavy loads and stress.
- **Machinability and Weldability:** MS Square Bars possess good machinability, allowing them to be easily shaped, drilled, and cut into desired lengths or sizes. They also exhibit high weldability, enabling efficient joining with other steel components using welding techniques.
- **Standards and Specifications:** MS Square Bars are manufactured in accordance with industry standards and specifications such as ASTM A36, JIS G3101, and IS 2062. These standards define the chemical composition, mechanical properties, and dimensional tolerances for MS Square Bars.
- **Corrosion Resistance:** While MS Square Bars are generally susceptible to corrosion, they can be protected through various methods such as painting, coating, or galvanizing. Applying suitable corrosion protection measures helps enhance their longevity and performance in corrosive environments.

- **Remember, the specific details of MS Square Bars may vary based on regional standards, manufacturing processes, and individual supplier specifications. It is always advisable to consult with experts or refer to relevant technical documentation for precise information pertaining to your specific application or project.**

STANDARD MS SQUARE BAR SIZE CHART

Size (in mm)	Weight	
	(Kg/m)	(Kg/feet)
5 MS Square Bar	0.196	0.059
5.5 MS Square Bar	0.237	0.072
6 MS Square Bar	0.282	0.085
8 MS Square Bar	0.502	0.153
10 MS Square Bar	0.784	0.238
12 MS Square Bar	1.13	0.344
16 MS Square Bar	2.009	0.612
18 MS Square Bar	2.543	0.775
20 MS Square Bar	3.139	0.956
22 MS Square Bar	3.798	1.157
25 MS Square Bar	4.905	1.195
27 MS Square Bar	5.721	1.743
28 MS Square Bar	6.153	1.875
30 MS Square Bar	7.063	2.152
31 MS Square Bar	7.542	2.298
32 MS Square Bar	8.036	2.449
33.5 MS Square Bar	8.807	2.684
35 MS Square Bar	9.614	2.93
36 MS Square Bar	10.172	3.1
38 MS Square Bar	11.333	3.454

Size (in mm)	Weight	
	(Kg/m)	(Kg/feet)
40 MS Square Bar	12.557	3.827
42 MS Square Bar	13.844	4.219
45 MS Square Bar	15.893	4.844
47 MS Square Bar	17.337	5.284
50 MS Square Bar	19.621	5.98
52 MS Square Bar	21.222	6.468
53 MS Square Bar	22.046	6.719
56 MS Square Bar	24.613	7.502
60 MS Square Bar	28.254	8.612
63 MS Square Bar	31.15	9.494
65 MS Square Bar	33.159	10.106
67 MS Square Bar	35.231	10.738
71 MS Square Bar	39.564	12.059
75 MS Square Bar	44.147	13.456
90 MS Square Bar	63.572	19.376
100 MS Square Bar	78.484	23.922
110 MS Square Bar	94.965	28.945
125 MS Square Bar	122.632	37.378
140 MS Square Bar	153.829	46.887
160 MS Square Bar	200.919	61.24
180 MS Square Bar	254.288	77.507
200 MS Square Bar	313.936	95.687

Rolling Tolerances of MS Square Bar				
Size	Tolerance	Out of Squareness	Weight	Length
up to 25 mm	± 0.5 mm	± 75 % of total tolerance Specified on the size.	Size 10 to 16 mm ± 5 % 16 mm and above ± 3 %	For fixed length : ± 100 mm
25 mm to 35 mm	± 0.6 mm			
35 mm to 50 mm	± 0.8 mm			
50 mm to 80 mm	± 1 mm			
80 mm to 100 mm	± 1.3 mm			
100 mm and above	± 1.6 % of side width			

MS CHANNEL

MS Channel, also known as mild steel channel or simply steel channel, is a structural component widely used in construction and engineering applications. It is characterized by its "C" shape, with two flat sides (known as flanges) connected by a perpendicular web.

- **Material:** MS steel channels are typically made from mild steel, which is a low-carbon steel with good strength and ductility properties. This makes it suitable for various load-bearing applications.
- **Shape and Dimensions:** MS steel channels have a standard "C" shape, with equal or unequal flanges and a perpendicular web. The dimensions of a channel are typically specified by its height (H), flange width (B), web thickness (t), and flange thickness (T).
- **Strength and Durability:** MS steel channels offer excellent strength and durability, making them suitable for structural applications where high load-bearing capacity is required. The material's strength can be further enhanced through various fabrication processes and treatments.
- **Versatility:** MS steel channels find extensive use in construction, industrial, and manufacturing sectors. They are commonly used in the fabrication of frames, supports, bracing, and structural components for buildings, bridges, towers, and machinery.
- **Standardization:** MS steel channels are manufactured according to various international standards, such as ASTM (American Society for Testing and Materials), EN (European Norms), and JIS (Japanese Industrial Standards). These standards ensure consistent quality and dimensional accuracy.
- **Finishes:** MS steel channels are available in different finishes to suit specific applications. Common finishes include black (uncoated), galvanized (coated with a protective zinc layer), and painted.
- **Installation:** MS steel channels can be easily welded, bolted, or riveted to other structural elements. They can be cut to size and modified as per the project requirements.

- **It is important to consult structural engineers or refer to relevant codes and standards when selecting and using MS steel channels to ensure their suitability for specific applications and compliance with safety regulations.**

STANDARD MS CHANNEL SIZE CHART

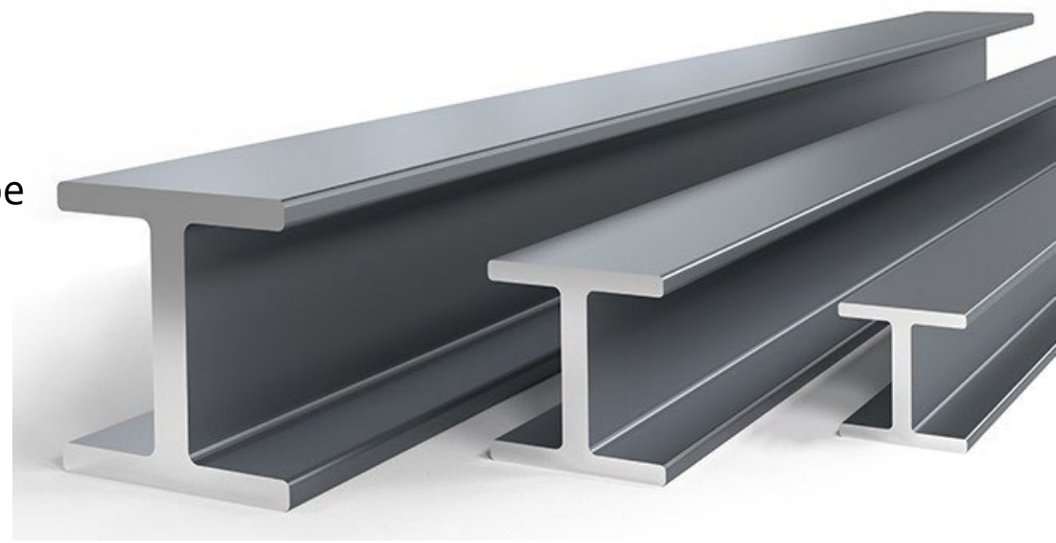
Size (MM)	Weight	
	(Kg/m)	(Kg/feet)
MS Channel 75 x 40	6.8	2.073
MS Channel 100 x 50	9.2	2.804
MS Channel 75 x 40 (light)	5	1.524
MS Channel 100 x 50 (light)	8	2.438
MS Channel 75 x 40 (super light)	4	1.219
MS Channel 100 x 50 (super light)	6	1.828
MS Channel 125 x 65	12.8	3.901
MS Channel 150 x 75	16.4	4.5
MS Channel 150 x 76	17.7	5.394
MS Channel 175 x 75	19.2	5.852
MS Channel 200 x 75	22.2	6.766
MS Channel 200 x 76	24.3	7.406
MS Channel 225 x 80	24	7.315
MS Channel 225 x 90	26	7.925
MS Channel 250 x 82	34.2	10.424
MS Channel 300 x 90	35.9	10.942
MS Channel 400 x 100	49.5	15.087

Rolling Tolerances of MS Channels			
Depth	Tolerance	Width of flange	Tolerance
Up to 200 mm	± 2.5 mm	Up to 100 mm	± 2 mm
> 200 to 400 mm	± 3.0 mm		

Tolerance on weight per meter shall be ± 2.5% or alternatively +4, -1% of the standard weight per meter. The permissible limits for camber and sweep shall be 0.2% of the length.

I - BEAM

I-Beam, also known as I-sections or universal beams, are a type of structural steel beam commonly used in construction and engineering projects. They are named for their distinctive "I" shape, which consists of a horizontal top flange, a vertical web, and a horizontal bottom flange. The I-beam's design provides excellent strength and load-bearing capabilities.



- **Strength and Load Capacity:** I-beams are renowned for their high strength-to-weight ratio, making them ideal for supporting heavy loads and resisting bending or twisting forces.
- **Versatility:** I-beams can be used in a variety of applications, such as supporting structural frameworks, bridges, columns, and beams in buildings, and even as rails for overhead cranes.
- **Efficient Material Usage:** The I-beam's shape allows for efficient distribution of materials, minimizing weight without compromising structural integrity.
- **Wide Range of Sizes:** I-beams come in various sizes, allowing engineers and architects to select the appropriate beam dimensions based on the specific requirements of the project.
- **Standardized Dimensions:** I-beams adhere to standardized dimensions and specifications, ensuring compatibility and ease of use in construction projects.
- **Weldability and Connectability:** I-beams can be easily welded or bolted together to create longer beams or integrated into larger structures.
- **Cost-Effective:** I-beams offer a cost-effective solution due to their efficient design, availability, and ease of installation.
- **Common Materials:** I-beams are typically made from structural steel, which provides excellent strength and durability.

    - **Overall, I-beams are widely utilized in the construction industry due to their versatility, strength, and efficiency. They play a crucial role in creating structurally sound and resilient buildings and infrastructure projects.**

STANDARD I-BEAM SIZE CHART

No.	Specification	Theory Weight kg/m
10	100×68×4.5	11.26
12	120×74×5.0	13.99
14	140×80×5.5	16.9
16	160×88×6.0	20.51
18	180×94×6.5	24.14
20a	200×100×7.0	27.92
20b	200×102×9.0	31.1
22a	220×112×7.5	33.07
22b	220×112×9.5	36.42
24a	240×116×8.0	37.4
24b	250×116×8.0	41.2
25a	250×118×10	38.11
25b	270×122×8.5	42.03
27a	270×122×8.5	42.08
27b	270×124×10.5	17.1
28a	280×122×8.5	43.49
28b	280×124×10	47.89
30a	300×126×9.0	48.08
30b	300×128×11	52.7
30c	300×130×13	57.5

No.	Specification	Theory Weight kg/m
32a	320×130×9.5	52.72
32b	320×132×9.5	57.74
32c	320×134×13.5	62.77
36a	360×136×10	59
36b	360×138×12	65.6
36c	360×140×14	71.2
40a	400×142×10.5	67.59
40b	400×144×12.5	73.88
40c	400×146×14.5	80.16
45a	450×150×11.5	80.42
45b	450×152×13.5	87.49
45c	450×150×15.5	94.55
50a	500×158×12	93.68
50b	500×160×14	101.5
50c	500×162×16	109.35
56a	560×166×12.5	106.32
56b	560×168×14.5	115.11
56c	560×170×16.5	123.9
63a	630×176×13	121.41
63b	630×178×15	131.3

IPE Beams:

Specification	Theory weight kg/m
80×50×4.5×5.5	7.52
80×46×3.2×4.6	4.85
100×55×3.8×5.0	6.72
120×64×4.4×5.5	8.33
140×73×3.8×5.2	10.05
140×73×4.7×6.9	12.9

Specification	Theory weight kg/m
160×82×5.0×7.4	15.8
180×91×5.3×8.0	18.8
200×100×5.6×8.5	22.4
220×110×5.9×9.0	26.2
240×120×6.2×9.5	30.7
270×135×6.6×10	36.1

H - BEAM

H-Beam, also known as wide flange beam, is a structural beam that features an "H" shape when viewed in cross-section. It is widely used in the construction industry for various applications due to its excellent load-bearing capacity and structural integrity.

- **Design:** H-beams are designed with a wider flange and a narrower web, which gives them a distinctive H-shaped profile. This design provides excellent strength-to-weight ratio, making H-beams suitable for carrying heavy loads over long spans.
- **Material:** H-beams are commonly made from structural steel, such as carbon steel or alloy steel. The choice of material depends on the specific requirements of the application, considering factors like load capacity, durability, and cost-effectiveness.
- **Applications:** H-beams find extensive use in various construction projects, including commercial buildings, bridges, platforms, mezzanines, and industrial structures. They are also employed in the manufacturing of machinery and equipment, such as cranes, trailers, and supports for heavy equipment.
- **Load-bearing capacity:** H-beams are designed to carry heavy vertical loads and resist bending moments. The wider flange helps distribute the load evenly across a larger area, reducing stress concentration and increasing the beam's load-bearing capacity.
- **Size and dimensions:** H-beams come in a range of sizes and dimensions, which are specified by standardized codes and classifications. The dimensions typically include the height of the beam (h), the width of the flange (b), the thickness of the web (t), and the weight per unit length (kg/m). These dimensions determine the beam's load-carrying capacity and suitability for different applications.
- **Standards:** H-beams are manufactured in accordance with industry standards and specifications set by organizations such as the American Society for Testing and Materials (ASTM), European Norm (EN), and Japanese Industrial Standards (JIS). These standards ensure the quality, dimensional accuracy, and performance of H-beams in different geographical regions.
    - **Overall, H-beams are widely utilized in the construction industry due to their versatility, strength, and efficiency. They play a crucial role in creating structurally sound and resilient buildings and infrastructure projects.**

STANDARD H-BEAM SIZE CHART

Sizes	Weight
100*50*5*7	9.54
100*100*6*8	17.2
125*60*6*8	13.3
125*125*6.5*9	23.8
148*100*6*9	21.4
150*75*5*7	14.3
150*150*7*10	31.9
175*90*5*8	18.2
175*175*7.5*11	40.3
194*150*6*9	31.2
198*99*4.5*7	18.5
200*100*5.5*8	21.7
200*200*8*12	50.5
200*204*12*12	72.28
244*175*7*11	44.1
244*252*11*11	64.4
248*124*5*8	25.8
250*125*6*9	29.7
250*250*9*14	72.4
250*255*14*14	82.2
294*200*8*12	57.3
300*150*6.5*9	37.3
294*302*12*12	85
300*300*10*15	94.5
300*305*15*15	106

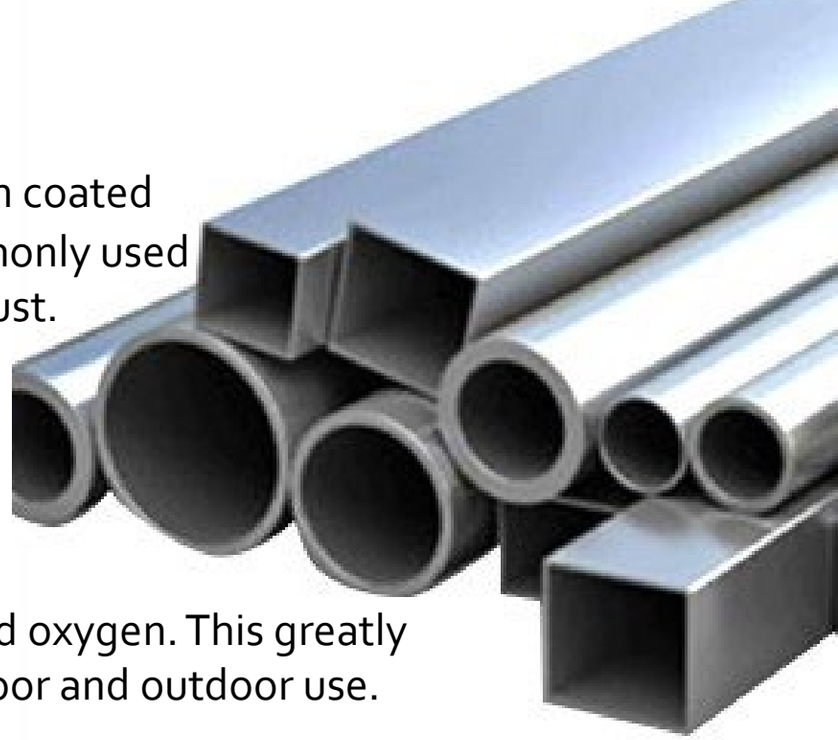
Sizes	Weight
338*351*13*13	106
340*250*9*14	79.7
344*354*16*16	131
346*174*6*9	41.8
350*175*7*11	50
344*348*10*16	115
350*350*12*19	137
388*402*15*15	141
390*300*10*16	107
394*398*11*18	147
400*150*8*13	55.8
396*199*7*11	56.7
400*200*8*13	66
400*400*13*21	172
400*408*21*21	197
414*405*18*28	233
440*300*11*18	124
446*199*7*11	66.7
450*200*9*14	76.5
482*300*11*15	115
488*300*11*18	129
496*199*9*14	79.5
500*200*10*16	89.6
582*300*12*17	137
588*300*12*20	151
596*199*10*15	95.1
600*200*11*17	106
700*300*13*24	185

MS ROUND & SQUARE PIPES

MS Pipe, short for Mild Steel Pipe, is a type of steel pipe that is made from low carbon steel. It is widely used in various industries and applications due to its durability, versatility, and affordability.

- **Material:** MS Pipes are made from mild steel, which is a low carbon steel containing a small percentage of carbon. This makes it less brittle and more malleable compared to other types of steel pipes.
- **Size Range:** MS Pipes are available in a wide range of sizes, including various diameters and thicknesses. The size range typically varies from ½ inch to 24 inches in diameter and the thickness can range from 1.5 mm to 12 mm.
- **Types:** MS Pipes come in different types based on their end connections and usage. Common types include seamless pipes, ERW (Electric Resistance Welded) pipes, and welded pipes.
- **Applications:** MS Pipes find extensive use in several industries and sectors. They are commonly used for water supply systems, plumbing, structural support in construction projects, oil and gas transportation, agricultural applications, and industrial machinery.
- **Strength and Durability:** Despite being called "mild" steel, MS Pipes exhibit good strength and durability. They can withstand high pressure, making them suitable for various applications that require fluid or gas transportation.
- **Corrosion Resistance:** While MS Pipes are prone to corrosion over time, they can be protected by applying coatings such as paint or galvanization. Galvanized MS Pipes have a layer of zinc coating that provides better resistance against corrosion.
- **Standards and Specifications:** MS Pipes are manufactured according to various national and international standards, such as ASTM (American Society for Testing and Materials), IS (Indian Standards), and BS (British Standards). These standards ensure the quality and consistency of the pipes.
- **Joining Methods:** MS Pipes can be joined using different methods, including welding, threading, and flanges. The choice of joining method depends on the specific application and requirements.
    - **It's important to note that these details provide a general overview of MS Pipes, and specific requirements may vary depending on the project or application. Consulting with a qualified professional or referring to relevant standards is advisable for accurate and detailed information.**

GI ROUND & SQUARE PIPES



GI Pipe, short for Galvanized Iron pipe, is a type of steel pipe that has been coated with a layer of zinc to prevent corrosion and increase its longevity. It is commonly used in various industries and applications due to its durability and resistance to rust.

- **Composition:** GI pipes are primarily made of mild steel, which is an alloy of iron and carbon. The zinc coating is applied to the outer surface of the pipe through a process called galvanization.
- **Corrosion Resistance:** The zinc coating on GI pipes acts as a protective barrier, preventing the underlying steel from being exposed to moisture and oxygen. This greatly enhances the pipe's resistance to corrosion, making it suitable for both indoor and outdoor use.
- **Strength and Durability:** GI pipes possess excellent strength and durability due to the inherent properties of steel. They can withstand high pressure and are commonly used for water supply, irrigation, plumbing, and structural applications.
- **Sizes and Dimensions:** GI pipes are available in various sizes, ranging from small diameters for plumbing applications to larger diameters for structural purposes. Common sizes include 1/2 inch, 3/4 inch, 1 inch, 2 inches, and beyond.
- **Joining Methods:** GI pipes can be joined using different methods, such as threaded connections, welding, or couplings. Threaded connections are commonly used for smaller pipe sizes, while welding is preferred for larger diameters.
- **Application Areas:** GI pipes find extensive use in water supply systems, plumbing installations, gas pipelines, fire sprinkler systems, and industrial structures. They are also used in the construction of scaffolding and fencing due to their strength and versatility.
- **Maintenance:** GI pipes require minimal maintenance due to their corrosion-resistant coating. However, regular inspection and preventive measures should be undertaken to ensure their long-term performance.
- **Standards and Specifications:** GI pipes conform to various national and international standards, such as ASTM (American Society for Testing and Materials), BS (British Standards), and IS (Indian Standards). These standards define the manufacturing process, dimensions, and quality requirements for GI pipes.
    - **It's important to note that these details provide a general overview of MS Pipes, and specific requirements may vary depending on the project or application. Consulting with a qualified professional or referring to relevant standards is advisable for accurate and detailed information.**

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