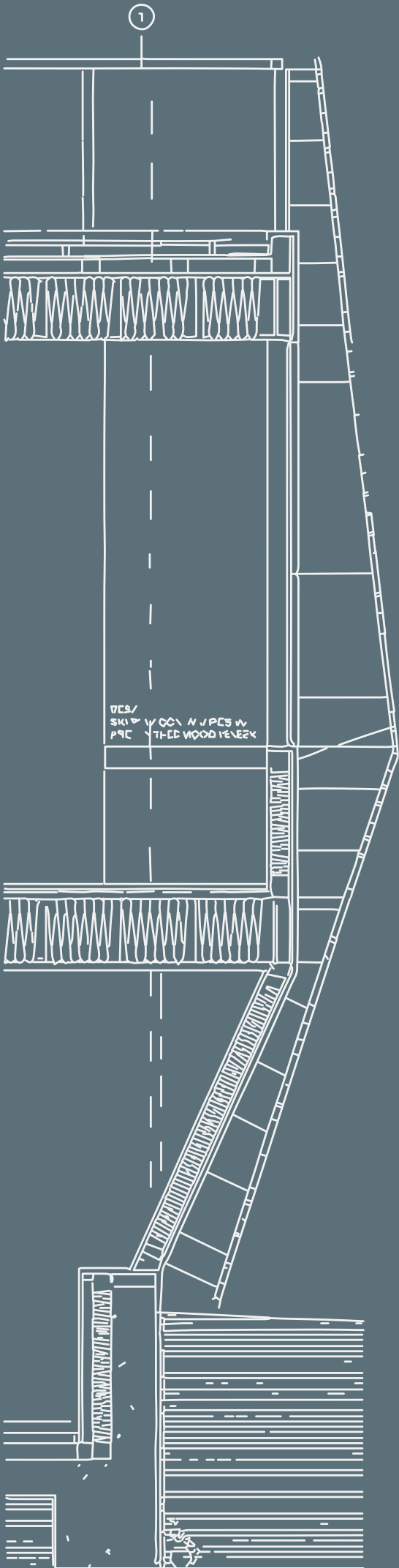
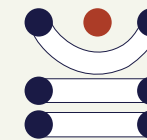


SURINDO JAYA ABADI

Construction Steel
Material Specialist





PT . SURINDO JAYA ABADI

Established in 1996, PT. Surindo Jaya Abadi has grown into a trusted partner in the steel and industrial supply sector, specializing in high-performance pipeline solutions across a wide range of industries.

With decades of experience, we support critical infrastructure and industrial projects—including hydrant systems, palm oil processing, petrochemical plants, wastewater treatment, and chiller systems—by delivering reliable materials that meet stringent technical and operational standards.

Our Philosophy

At PT. Surindo Jaya Abadi, we go beyond conventional supply.

We believe that every project demands more than just materials—it requires certainty, reliability, and trust. That is why we are committed to:

Delivering consistent quality without compromise
Ensuring on-time fulfillment for project continuity
Upholding integrity in every transaction
Building long-term partnerships, not just transactions

Core Products & Solutions

We provide a comprehensive range of industrial steel products, including:

Seamless Pipes
Butt Weld Fittings
Forged Flanges & Fittings
Valves
Steel Plates
UNP (U-Channel Steel)
Angle Steel

All products are sourced and supplied to meet recognized industry standards, ensuring durability, safety, and optimal performance in demanding environments.

BUILD A BETTER FUTURE

About Us

PT. SURINDO JAYA ABADI is a trusted supplier of high-quality steel products, committed to supporting the growth and development of industrial and construction sectors. We specialize in providing a wide range of materials, including H Beam, IWF, Angle Steel, Chequered Plate, and Expanded Plate, ensuring that our clients receive durable and reliable solutions for their projects.

With a strong focus on quality and customer satisfaction, we continuously strive to meet the evolving needs of the market. Our products are carefully selected to meet industry standards, making us a dependable partner for contractors, fabricators, and manufacturers.

As part of our ongoing mission, PT. SURINDO JAYA ABADI is expanding beyond industrial supply to also serve retail customers. We are dedicated to making quality steel products more accessible while maintaining our commitment to excellence.

We believe in building long-term relationships based on trust, integrity, and consistency. Our promise is simple: to deliver the best quality products and services that meet our clients' needs—every time



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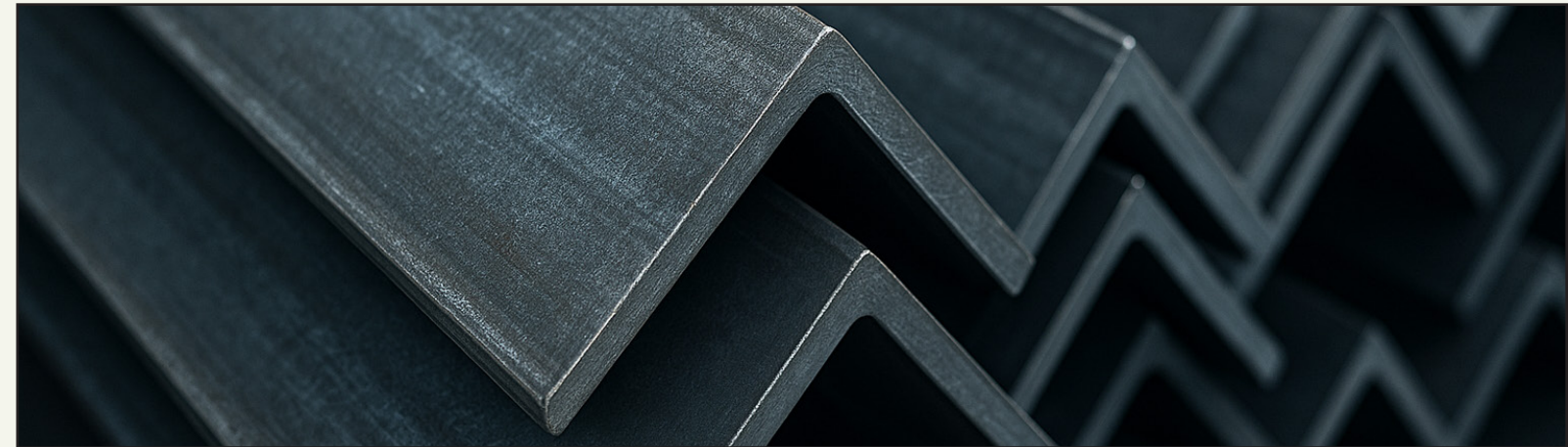
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01

CHAPTER

LONG PRODUCT

Angle Steel



Angle (Hot Rolled)

Angle steel, also known as angle bar, L-section, or L-angle, is a structural steel shape with an L-shaped cross-section composed of two legs that meet at a right angle (usually 90°). It is commonly used in construction, fabrication, and engineering projects because of its versatility, strength, and ease of connection with other materials.

Key Characteristics

- Cross-section: "L" shape with equal or unequal leg lengths.
- Sizes: Typically defined by leg length × leg length × thickness (e.g., 50×50×5 mm or 65×50×6 mm).
- Material: Usually carbon steel, stainless steel, or galvanized steel for corrosion resistance.
- Production methods:
 - o Hot-rolled angle steel
 - o Cold-formed angle steel

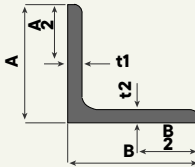
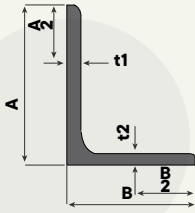
SPECIFICATIONS

Standard JISG3101 SS400
(Mild Steel) & JIS G3101
SS540 (High Strength)

Available Size

40 x 40mm to
250 x 250mm, standard
Length: 6mtr & 12mtr
Thickness : 4mm to 35mm

Dimensional ToleranceMetric Size JIS 3192 / TIS 1227 -194

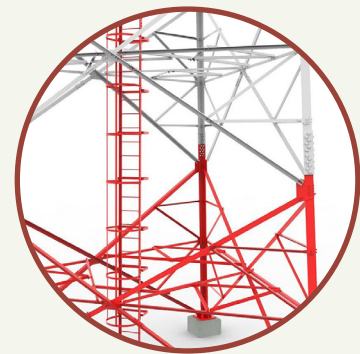
DIVISION AND DIMENSION			TOLERANCE	REMARKS
Leg Length (A or B)	Under 50 in depth		+/- 1.5	
	50 or over to and excl 100		+/- 2.0	
	100 or over to and excl 200		+/- 3.0	
	200 or over		+/- 4.0	
Thickness (t,t1,t2)	For Leg Length A or under 130 in depth	Under 6.3	+/- 0.6	
		6.3 or over to and excl 10	+/- 0.7	
		10 or over to and excl 16	+/- 0.8	
		16 or over	+/- 1.0	
	For Leg Length A or under 130 in depth or over in depth	under 6.3	+/- 0.7	
		6.3 or over to and excl 10	+/- 0.8	
		10 or over to and excl 16	+/- 1.0	
		16 or over to and excl 25	+/- 1.2	
Length	7m or under	+ 40 - 0	Add 5mm to the plus side tolerance given in the above column for every 1m increase in length or its fraction	
	Over 7m			
Out of Square (T)	Sections excluding I - Section and T-Section (for angles)	2.5% or under of width B		
Bend	Sections excluding I - Section and T-Section (for angles)	0.3% or under of length		

Chemical CompositionAccording | JIS G 3101

SYMBOL OF GRADE	CHEMICAL COMPOSITION %				
	C	Si	Mn	P	S
SS400 , 490	-	-	-	0.050 max	0.050 max
SS 540	0.30 max	-	1.60 max	0.040 max	0.040 max

Specification	Grade	Product Thickness (mm)	Mechanical Properties				Bend Test	Impact test (LG)	
			Thickness Range (mm)	Tensile Test (TR)				LG (Avg Temp)	TR (Avg Temp)
				YS min (N/mm2)	UTS (N/mm2)	E min (%)			
JIS G 3101	SS400	2 - 35	>5 <16	245	400 - 510	17 (200mm)	Bending 180Deg 1.5 x t	-	-
			>16 <35	235	400 - 510	21 (200mm)	-	-	
	SS490	6 - 35	>5 <16	285	490 - 610	15 (200mm)	Bending 180Deg 2 x t	-	-
			>16 <35	275	490 - 610	19 (200mm)	-	-	
	SS540	< 35	>5 <16	400	540	13 (200mm)	Bending 180Deg 2 x t	-	-
			>16 <35	390	540	17 (200mm)	-	-	

Angle Steel



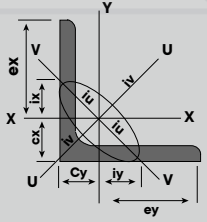
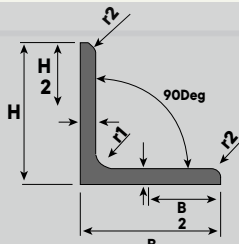
Application

- Building frames and steel structures
- Support braces & reinforcements
- Shelving, racks, and equipment bases
- Towers and bridges
- Machinery components
- Vehicle and trailer frames

Metric Size

STANDARD SECTIONAL DIMENSIONS				SECTION AREA	UNIT WEIGHT			INFORMATIVE REFERENCE							MODULUS OF SECTION
								Center of Gravity	GEOMETRICAL MOMENT OF INERTIA		RADIUS OF GYRATION OF AREA				
H x B	t	r1	r2	A				Cx = Cy	Ix = Iy	Max Iu	Min Iv	Ix = Iy	Max Iu	Min Iv	Zx = Zy
mm x mm	mm	mm	mm	cm2	kg/m	kg/6m	kg/12m	cm	cm4	cm4	cm4	cm	cm	cm	cm3
40 x 40	4	4.5	2	3.080	2.42	14.52	29	1.090	3.530	5.60	1.460	1.230	1.55	0.79	1.210
50 x 50	5	6.5	3	4.802	3.77	22.62	45	1.410	11.100	17.50	4.580	1.520	1.91	0.98	3.080
50 x 50	6	6.5	4.5	5.644	4.43	26.58	53	1.440	12.600	20.00	5.230	1.500	1.88	0.96	3.550
60 x 60	5	6.5	3	5.802	4.55	27.5	55	1.660	19.600	31.20	8.090	1.840	2.32	1.18	4.520
60 x 60	6	6.5	3	6.910	5.42	32.5	65	1.700	22.790	36.16	9.420	1.820	2.29	1.17	5.280
65 x 65	5	8.5	3	6.367	5.00	30	60	1.770	25.300	40.10	10.500	1.990	2.51	1.28	5.350
65 x 65	6	8.5	4	7.527	5.91	35.5	71	1.810	29.400	46.60	12.200	1.980	2.49	1.27	6.260
70 x 70	6	8.5	4	8.127	6.38	38.5	77	1.930	37.100	58.90	15.300	2.140	2.69	1.37	7.330
75 x 75	6	8.5	4	8.727	6.85	41	82	2.060	46.100	73.20	19.000	2.300	2.90	1.48	8.470
80 x 80	6	8.5	4	9.230	7.32	43.9	88	2.180	56.400	89.60	23.200	2.460	3.10	1.58	9.700
90 x 90	7	10	5	12.220	9.59	57.6	115	2.460	93.000	148.00	38.300	2.760	3.48	1.77	14.200
90 x 90	9	10	7	17.000	13.30	80	160	2.570	125.000	199.00	51.700	2.710	3.42	1.74	19.500
100 x 100	7	10	5	13.620	10.70	64	128	2.710	129.000	205.00	53.200	3.080	3.88	1.98	17.700
100 x 100	10	10	7	19.000	14.90	89.5	179	2.820	175.000	278.00	72.000	3.040	3.83	1.95	24.400
120 x 120	8	12	5	18.760	14.70	88	176	3.240	258.000	410.00	106.000	3.710	4.67	2.38	29.500
120 x 120	11	13	6.5	25.370	19.90	119.5	239	3.300	340.000	541.00	140.000	3.660	4.62	2.35	39.360
120 x 120	12	13	6.5	27.540	21.60	130	259	3.400	367.000	583.00	151.000	3.650	4.60	2.35	42.680
130 x 130	9	12	6	22.740	17.90	107.4	215	3.530	366.000	583.00	150.000	4.010	5.06	2.57	38.700
130 x 130	12	12	8.5	29.760	23.40	140.5	281	3.640	467.000	743.00	192.000	3.960	5.00	2.54	49.900
150 x 150	12	14	7	34.770	27.30	164	328	4.140	740.000	1.180.00	304.000	4.610	5.82	2.96	68.100
150 x 150	15	14	10	42.740	33.60	202	403	4.240	888.000	1.410.00	365.000	4.560	5.75	2.92	82.600
150 x 150	19	14	10	53.380	41.90	251.5	503	4.400	1.090.000	1.730.00	451.000	4.520	5.69	2.91	103.000
175 x 175	12	15	11	40.520	31.80	191	382	4.730	1.170.000	1.860.00	480.000	5.380	6.78	3.44	91.800
175 x 175	15	15	11	50.210	39.40	236.5	473	4.850	1.440.000	2.290.00	589.000	5.350	6.75	3.48	114.000
200 x 200	15	17	12	57.750	45.30	272	544	5.460	2.180.000	3.470.00	891.000	6.140	7.75	3.93	150.000
200 x 200	20	17	12	76.000	59.70	358	716	5.670	2.820.000	4.490.00	1.160.000	6.090	7.68	3.90	197.000
200 x 200	25	17	12	93.750	73.60	442	883	5.860	3.420.000	5.420.00	1.410.000	6.040	7.61	3.88	242.000
250 x 250	25	24	12	119.400	93.70	562	1124	7.100	6.950.000	11.000.00	2.860.000	7.630	9.62	4.89	388.000

REMARKS



Technical Properties For
H-Beam & Wide Flange

Dimensional Tolerance

ITEM ,mm (in.)		TOLERANCE	REMARKS
Depth (H)	FLANGE WIDTH, B	+/- 3.0 (0.118)	
	Nominal depths of under 400 (15.748)	+/- 3.0 (0.118)	
	400 to 600 (23.622) excl. 600 and over	+/- 4.0 (0.157) +/- 5.0 (0.197)	
Thickness	Flange t2	Under 16 16 or over to and excl.25 25 or over to and excl.40 40 or over	
	Web t1	Under 16 16 or over to and excl.25 25 or over to and excl.40 40 or over	
Length	7m or under	+/- 4.0 (1.575) - 0	
	Over 7m	40 (1.575) plus 5 (0.197) for each additional meter or fraction thereof	
Out-of-Square (T)	Nominal depths 300 (11.811) or under in nominal depth	Not more than 1.2 percent of flange width B or 2.0 (0.079) at minimum	
	Nominal depths over 300 (11.811) in nominal depth	not more than 1.5 percent of flange width B or 2.0 (0.079) at minimum	
Camber of sweep	Nominal depths 300 (11.811) and under	Not more than 0.20 percent of length	
	Nominal depths over 300 (11.811)	Not more than 0.10 percent of length	
Web off Center (S)	Nominal depths 300 (11.811) and under	+/- 3.0 (0.118)	
	Nominal depths over 300 (11.811)	+/- 4.5 (0.117)	
Ends - out of square (e)		1.6% or under of width B or of depth H, provided that 3.0mm is the minimum	

Chemical Composition

SYMBOL OF GRADE	CHEMICAL COMPOSITION %				
	C	Si	Mn	P	S
SS 400 , 490				0.050 max	0.050 max
SS 540	0.3 max		1.60 max	0.040 max	0.040 max

Coreresponding Specification

TYPE OF MATERIAL	CLASSIFIED BY	TENSILE STRENGTH	SPECIFICATION			
	Tensile strength Class (N/mm2)	Special specification	JIS	ASTM	BS 4360	DIN
Steel Structure	400		G 3101 SS400	A 36	Gr. 43A	ST 33

Mechanical Properties

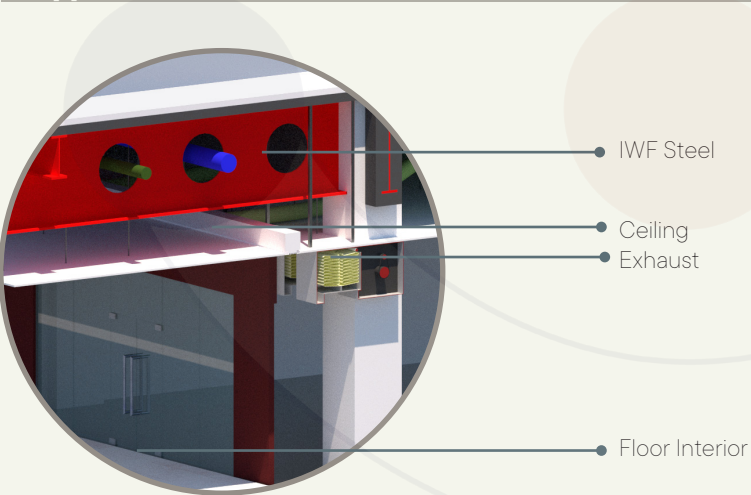
CLASSIFICATION	YIELD POINT N/mm2		TENSILE STRENGTH N/mm2	ELONGATION %		
	Thickness (mm)			Thickness (mm)		
	< 16	> 16		< 5	5 to 16	> 16
Steel Structure	245 min	235 min	400 - 510	21 min	17 min	21 min
JIS G3106 SM 490 YA SM 490 YB	365 min	355 min	490 - 610	19 min	15 min	19 min

IWF - Wide Flange

Description

IWF – Wide Flange Beam (also commonly called H-Beam, W-Beam, or H-Profile) is a type of structural steel profile with a cross-section shaped like the letter H, featuring wide and parallel flanges. It is designed to carry heavy loads efficiently due to its high structural strength and excellent resistance to bending.

Application



STANDARD

JIS G 3101 SS400
(Mild Steel)
ASTM A36

Web Thickness Range

4.5 to 12mm

Flange Thickness Range

7 to 20mm

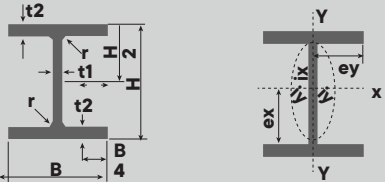
Standard Length

1200cm / 12mtr

Metric Size

STANDARD SECTIONAL DIMENSIONS						SECTION AREA	UNIT WEIGHT	INFORMATIVE REFERENCE					
H x B	H x B	t1	t2	r	Ax			GEOMETRICAL MOMENTOF INERTIA		RADIUS OF GYRATION OF AREA		MODULUS OF SECTION	
mm x mm	mm x mm	mm	mm	m	cm2	kg/m	kg/12m	lx	ly	ix	iy	zy	zx
150 x 75	150 x 75	5	7	10	17.50	14.0	168.0	998	86	7.5	2.00	125	18
200 x 100	198 x 99	4.5	7	11	23.18	18.20	218.4	1.580	114	8.26	2.21	160	23.0
	200 x 100	5.5	8	11	27.16	21.30	255.6	1.840	134	8.24	2.22	184	26.8
200 x 150	194 x 150	6	9	12	38.80	30.60	367.2	2.675	507	8.30	3.60	275.8	67.6
250 x 125	248 x 124	5	8	12	32.68	25.70	308.4	3.540	255	10.4	2.79	285	41.1
	250 x 125	6	9	12	37.66	29.60	355.2	4.050	294	10.4	2.79	324	47.0
300 x 150	298 x 149	5.5	8	13	40.80	32.0	384	6.320	442	12.4	3.29	424	59.3
	300 x 150	6.5	9	13	46.78	36.70	440.47	7.210	508	12.4	3.29	481	67.7
350 x 175	346 x 174	6	9	14	52.68	41.40	469.8	11.100	792	14.5	3.88	641	91.0
	350 x 175	7	11	14	63.14	49.60	595.2	13.600	984	14.7	3.95	775	112
400 x 200	396 x 199	7	11	16	72.16	56.60	679.2	20.000	1450	16.7	4.48	1.010	145
	400 x 200	8	13	16	84.1	66.0	792	23.700	1740	16.8	4.54	1.190	174
450 x 200	450 x 200	9	14	18	96.8	76.0	912	33.500	1870	18.6	4.40	1.490	187
500 x 200	500 x 200	10	16	20	114.2	89.6	1075.2	47.800	2.140	20.5	4.43	1.910	214
600 x 200	600 x 200	11	17	22	134.4	106	1272	77.600	2.280	24.0	4.12	2.590	228
588 x 300	588 x 300	12	20	28	192.5	151	1812	181.000	9.020	24.80	6.85	4.020	601

REMARKS

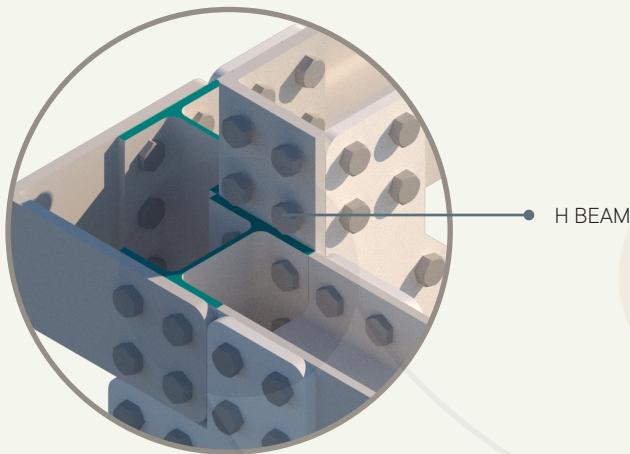


H-BEAM

Description

H-Beam is a widely used structural steel profile with a cross-section shaped like the letter H. features wide flanges and a thick web, giving it excellent strength and load-bearing capability in both bending and compression. Because of its efficiency and high structural performance, H-Beam is commonly used in construction and engineering applications requiring heavy loads and wide spans.

Application



STANDARD

JIS G 3101 SS400
(Mild Steel)
ASTM A36

Web Thickness Range

6 to 12mm

Flange Thickness Range

8 to 19mm

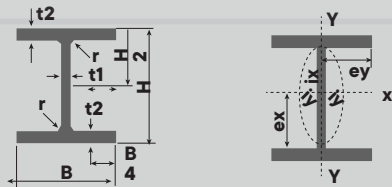
Standard Length

1200cm / 12mtr

Metric Size

STANDARD SECTIONAL DIMENSIONS				SECTION AREA	UNIT WEIGHT		INFORMATIVE REFERENCE					
H x B	t1	t2	r				GEOMETRICAL MOMENTOF INERTIA		RADIUS OF GYRATION OF AREA		MODULUS OF SECTION	
mm x mm	mm	mm	m	cm2	kg/m	kg/12m	lx	ly	ix	iy	zy	zx
100 x 100	6	8	9	21.9	17.2	206	383	134	4.18	2.47	76.6	26.8
125 x 125	6.5	19	10	30.3	23.8	286	847	293	5.29	3.11	135	46.9
150 x 150	7	10	11	40.14	31.50	378	1.640	563	6.39	3.75	219	75.1
175 x 175	7.5	11	12	51.21	40.20	482	2.880	984	7.50	4.38	330	112
200 x 200	8	12	13	63.53	49.90	599	4.720	1.600	8.62	5.02	472	160
250 x 250	9	14	16	92.18	72.40	869	10.800	3.650	10.8	6.29	867	292
300 x 300	10	15	18	119.80	94	1128	20.400	6.750	13.1	7.51	1.360	450
350 x 350	12	19	20	1739	137	1644	40.300	13.600	152	8.84	2.300	776

REMARKS



UNP

Description

UNP Steel, also known as U-Channel, U-Profile, or Channel Beam, is a structural steel section with a U-shaped cross-section consisting of a web and two equal flanges that extend in one direction. UNP is commonly produced by hot rolling and is used for structural reinforcement, framing, and support in building and industrial projects.

Application

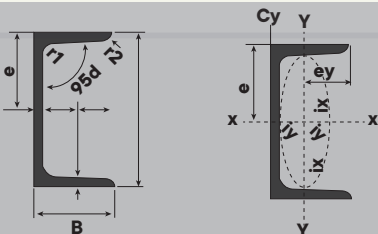


Support Structure

Metric Size

STANDARD SECTIONAL DIMENSION			Section Area A Cm2	Unit Weight Kg/6m	INFORMATIVE REFERENCE						
					Center of Gravity Xo cm	GEOMETRICAL MOMENT OF INERTIA		MODULUS OF SECTION		MODULUS OF GYRATION	
A X B mm x mm	t1 mm	t2 mm				Ix cm4	Iy cm4	Zx cm3	Zy cm3	rx cm	ry cm
50 x 38	5	7	7.12	33.50	-	26.8	10.1	10.7	4.36	1.94	1.19
65 x 42	5.5	7.5	9.05	42.54	-	58.1	15.7	17.9	5.92	2.53	1.32
80 x 45	5	8	11.04	47.76	-	106	21.1	26.7	7.44	3.11	1.41
100 x 50	5	7.5	11.75	56.40	1.55	189	26.9	37.8	7.82	3.98	1.58
120 x 55	7	9	17.04	80.40	-	352	40.4	61.3	13.1	4.64	1.70
125 x 65	6	8	16.94	80.40	1.94	425	65.5	68.0	14.40	4.99	1.96
140 x 60	7	10	20.40	96.00	-	-	-	-	-	-	-
150 x 75	6.5	10	23.45	112.00	2.31	864	122.0	115.0	23.60	6.04	2.27
180 x 75	7	10.5	26.88	132.00	2.15	1380	137.0	150.0	25.50	7.13	2.24
200 x 80	7.5	11	30.95	152.00	2.24	1950	177.0	195.0	30.80	7.89	2.38

REMARK



Standard Material

JIS G 3101 SS400
(Mild Steel)
ASTM A36

Std Dimensional Tolerance

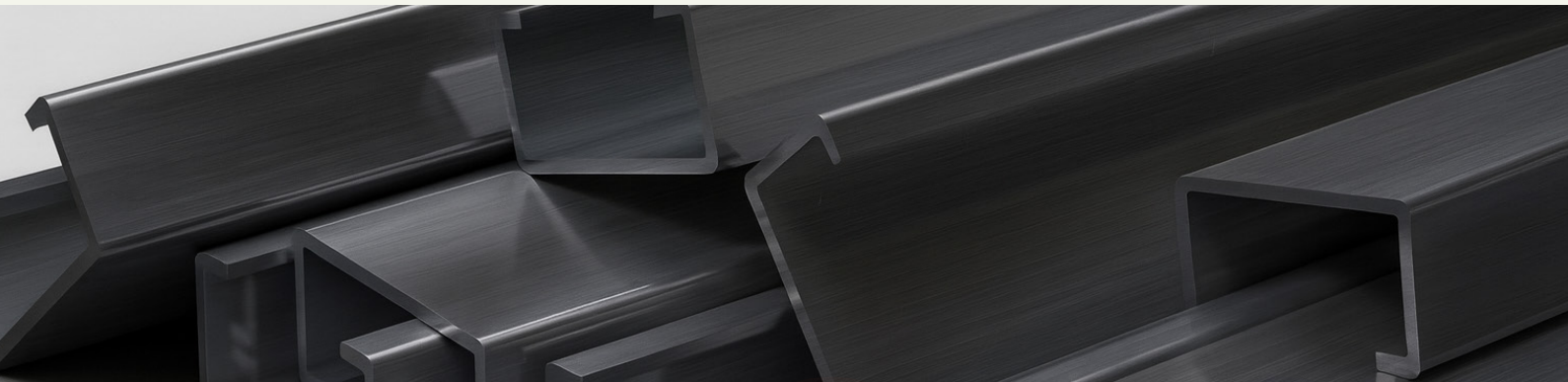
JIS G 3192

Web Thickness Range

5 to 7.5mm

Standard Length

6000cm / 6mtr



Description

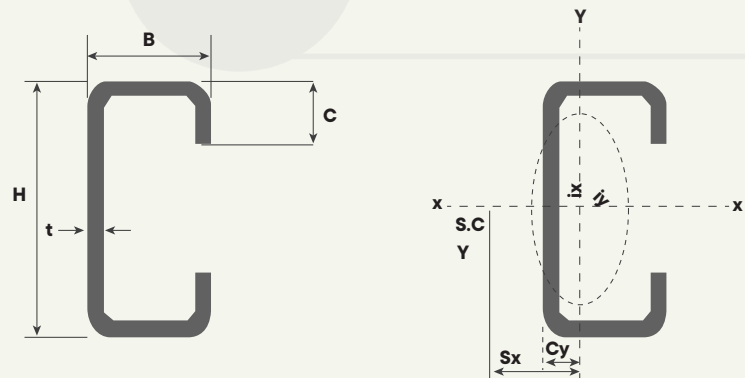
CNP Steel Summary
CNP Steel, also known as Channel Steel, C-Channel, or Cold-Formed C-Section, is a structural steel profile shaped like the letter C, commonly used in construction and fabrication projects where lightweight framing and high strength-to-weight ratios are required. The section consists of a wide web with two flanges facing inward, forming a C-shaped cross-section.

Key Characteristics

- Cross-section shaped like C
- Manufactured by cold forming or rolling
- Available in various sizes defined by height × flange width × thickness
- Lightweight but strong, offering good resistance to bending

Advantages

- Excellent for truss and frame applications
- Easy to cut, weld, drill, and bolt
- Lower weight compared to hot-rolled beams
- Cost-efficient for medium-load structural work



Standard Material

Standard JISG3131 SPHC
SAE 1006 / SAE 1008

Std Dimensional Tolerance

JIS G 3350

Available Size

CNP 100 x 50 x 2.0mm up
to CNP 200 x 75 x 3.2mm

Standard Length

6000cm / 6mtr

Application



ROOF STRUCTURE

JIS G 3131 / ASTM 830

Metric Size

Dimension		Section Area	Unit Weight	INFORMATIVE REFERENCE									
				GEOMETRICAL MOMENT OF INERTIA		MODULUS OF SECTION		MODULUS OF GYRATION		Center of Gravity	Shear Center	Torsion Constant	Warping Constant
H x B x C mm	t mm	A Cm2	Kg/6m	Ix cm4	Iy cm4	Zx cm3	Zy cm3	rx cm	ry cm	Xo cm	Xo cm	J cm4	Cw cm4
C 100 x 50 x 20	2	4.54	21.36	71	17	14.3	5.4	3.97	1.93	1.87	4.48	605	444
	2.3	5.17	24.36	81	19	16.1	6	3.95	1.92	1.86	4.46	912	496
	2.5	5.59	26.34	87	20	17.3	6.5	3.94	1.9	1.86	4.45	1164	528
	2.8	6.2	29.22	95	22	19.1	7.1	3.92	1.89	1.86	4.42	1621	574
	3	6.61	31.14	101	23	20.2	7.4	3.91	1.88	1.86	4.41	1982	603
C 125 x 50 x 20	3.2	7.01	33	106	24	21.3	7.8	3.9	1.87	1.86	4.4	2392	630
	2	5.04	23.7	120	18	19.3	5.5	4.89	1.91	1.69	4.15	672	675
	2.3	5.75	27.06	136	21	21.8	6.2	4.87	1.89	1.69	4.12	1013	755
	2.5	6.21	29.28	147	22	23.5	6.6	4.86	1.88	1.69	4.11	1295	805
	2.8	6.9	32.52	162	24	25.9	7.2	4.84	1.86	1.69	4.08	1804	877
C 150 x 50 x 20	3	7.36	34.68	172	25	27.5	7.6	4.83	1.85	1.69	4.07	2207	922
	3.2	7.81	36.78	181	27	29	8	4.82	1.84	1.68	4.05	2665	965
	2	5.54	26.1	185	19	19.3	5.6	5.79	1.87	1.55	3.86	738	971
	2.3	6.32	29.76	210	22	21.8	6.3	5.77	1.86	1.55	3.84	1115	1088
	2.5	6.84	32.22	226	23	23.5	6.8	5.75	1.85	1.55	3.82	1425	1162
C 150 x 65 x 20	2.8	7.6	35.82	250	26	25.9	7.4	5.73	1.83	1.54	3.8	1987	1267
	3	8.11	38.22	265	27	27.5	7.8	5.72	1.82	1.54	3.78	2432	1334
	3.2	8.61	40.56	280	28	29	8.2	5.71	1.81	1.54	3.77	2938	1398
	2	6.14	28.92	218	36	24.7	8.3	5.96	2.43	2.12	5.19	818	1784
	2.3	7.01	33.00	248	41	28	9.4	5.94	2.42	2.12	5.16	1236	2006
C 200 x 75 x 20	2.5	7.59	35.76	267	44	30.2	10	5.93	2.41	2.12	5.15	1581	2148
	2.8	8.44	39.78	295	48	33.3	11	5.91	2.39	2.12	5.13	2207	2352
	3	9.01	42.42	314	51	35.4	11.6	5.9	2.38	2.11	5.11	2702	2482
	3.2	9.57	45.06	332	54	37.4	12.2	5.89	2.37	2.11	5.09	3265	2608
	2	7.54	35.52	467	56	46.7	10.6	7.87	2.73	2.2	5.49	1005	4571
C 200 x 75 x 20	2.3	8.62	40.62	531	64	53.1	12	7.85	2.72	2.2	5.47	1520	5159
	2.5	9.34	43.98	573	68	57.3	12.9	7.84	2.71	2.2	5.45	1946	5537
	2.8	10.4	49.02	636	75	63.6	14.2	7.82	2.69	2.2	5.42	2719	6085
	3	11.11	52.32	676	80	67.6	15	7.8	2.68	2.19	5.41	3332	6437
	3.2	11.81	55.62	716	84	71.6	15.8	7.79	2.67	2.19	5.39	4030	6779

Technical Specification
Material : JIS G 3131 / ASTM 830, Symbol : SPHC/SAE 1006/SAE 1008
Standard length : 6 meters, Dimension Tolerance : JIS G 3350

Dimension		Section Area	Unit Weight	INFORMATIVE REFERENCE									
				GEOMETRICAL MOMENT OF INERTIA		MODULUS OF SECTION		MODULUS OF GYRATION		Center of Gravity	Shear Center	Torsion Constant	Warping Constant
H x B x C mm	t mm	A Cm2	Kg/6m	Ix cm4	Iy cm4	Zx cm3	Zy cm3	rx cm	ry cm	Xo cm	Xo cm	J cm4	Cw cm4
C 100 x 50 x 20	2	4.437	21.36	71	17	14.3	5.4	3.97	1.93	1.87	4.48	605	444
	2.3	5.172	24.36	81	19	16.1	6	3.95	1.92	1.86	4.46	912	496
	2.8	6.205	29.22	95	22	19.1	7.1	3.92	1.89	1.86	4.42	1621	574
	3.2	7.007	33.00	106	24	21.3	7.8	3.90	1.87	1.86	4.40	2392	630
C 125 x 50 x 20	2.3	5.747	27.06	136	21	21.8	6.2	4.87	1.89	1.69	4.12	1013	755
	3.2	7.807	36.78	181	27	29.0	8.0	4.82	1.84	1.68	4.05	2665	965
C 150 x 50 x 20	2.3	6.32	29.76	210	22	28.0	6.3	5.77	1.86	1.55	3.84	1115	1088
	3.2	8.607	40.56	280	28	37.4	8.2	5.71	1.81	1.54	3.77	2938	1398
C 150 x 65 x 20	2.3	7.01	33.00	248	41	33.0	9.4	5.94	2.42	2.12	5.16	1236	2006
	3.2	9.57	45.06	332	54	44.2	12.2	5.89	2.37	2.11	5.09	3265	2608
C 200 x 75 x 20	3.2	11.81	55.62	716	84	71.6	15.8	7.79	2.67	2.19	5.39	4030	6779

Chemical Composition		Mechanical Properties		Tolerance	
Carbon (C)	: 0.25% max	Tensile Strength	: 176.4 N/mm2 Min	Thickness <2.3mm	: +/- 0.24mm
Phospor (p)	: 0.05% max	Yield Strength	: 333.2 N/mm2 Min:	<3.2mm	: +/- 0.3mm
Sulfur (s)	: 0.05% max	Elongation	: 21% min	High (H) <125mm	: +/- 1.5mm
				<250mm	: +/- 2.0mm

HOLLOW STEEL

Description

Hollow structural Sections (HSS), refers to steel profiles with a hollow cross section. Commonly available in square, rectangular and circular shapes. This design offers a superior strength to weight ratio compared to solid steel making it an efficient and versatile material

Application



ROOF STRUCTURE

Standard Specification

ASTM A500
JIS G 3466
SNI

Available Size

20 X 20mm up to
200 x 200mm
Thickness 4.5mm

STANDARD SECTIONAL DIMENSION		Unit Weight
A X B mm x mm	t1 mm	Kg/6m
20 X 20	2.0	6.92
30 X 30	2.3	12.16
40 X 20	2.3	12.16
40 X 20	3.2	16.76
60 X 30	2.3	19.12
60 X 30	3.2	26.45
60 X 40	3.2	28.91
80 X 40	3.2	36.21
50 X 50	3.2	28.91
100 X 50	3.2	44.28
100 X 100	4.5	84.78
150 X 100	4.5	105.98
150 X 150	4.5	127.17
200 X 200	4.5	169.56

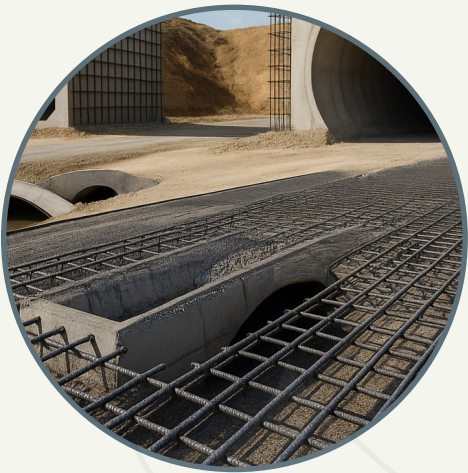
REMARK

ROUND BAR

Description

Hollow structural Sections (HSS), refers to steel profiles with a hollow cross section. Commonly available in square, rectangular and circular shapes. This design offers a superior strength to weight ratio compared to solid steel making it an efficient and versatile material

Application



ROAD STRUCTURE

Standard Specification

ASTM A500
JIS G 3466
SNI

Available Size

6mm up to
57mm

STANDARD SECTIONAL DIMENSION (mm)	Section Area (A) mm2	Unit Weight Kg/12m	Tolerance	Stripe Height (H) mm		transverse slip distance (P) maks mm	Longitudinal Strip Width (T) maks mm
				Min	Max		
6	28	2.66	+/-0.3	0.3	0.6	4.2	4.7
8	50	4.74	+/-0.4	0.4	0.8	5.6	6.3
10	79	7.40	+/-0.4	0.5	1.0	7.0	7.9
13	133	12.50	+/-0.4	0.7	1.3	9.1	10.2
16	201	18.9	+/-0.5	0.8	1.6	11.2	12.6
19	284	26.71	+/-0.5	1.0	1.9	13.3	14.9
22	380	35.80	+/-0.5	1.1	2.2	15.4	17.3
25	491	46.23	+/-0.5	1.3	2.5	17.5	19.7
29	661	62.22	+/-0.6	1.5	2.9	20.3	22.8
32	804	75.75	+/-0.6	1.6	3.2	22.4	25.1
36	1018	95.88	+/-0.8	1.8	3.6	25.2	28.3
40	1257	118.38	+/-0.8	2.0	4.0	28.0	31.4
50	1964	184.95	+/-0.8	2.5	5.0	35.0	39.3
54	2290	215.73	+/-0.8	2.7	5.4	37.8	42.3
57	2552	240.37	+/-0.8	2.9	5.7	39.9	44.6

REMARK

03

CHAPTER

FLAT PRODUCT

Steel Plate



Application	Standard & Specification	Grade
General Structural and Weldable Structural Steel	ASTM	A36, A283, A131, A529, A572, A633, A709
	JIS	SS400, SS490, SS540, SM400, SM490, SM520, SM570
	EN	S235JR/J0/J2, S275JR/J0/J2/N/NL, S355JR/J0/J2/K2/N/NL/M/ML, S420M/ML, S460M/ML
	DIN	ST 37.2, ST 44.2, ST 52.3
	AS/NZS	200, 250, 300, 350, 400, 450
	BS	40, 43, 50, 55
Pressure Vessel Steel	ASTM	A285, A516
	EN	P235GH, P265GH, P275NH/NL1, P295GH, P355GH/N/NH/NL1/M/ML1
Line Pipe Steel	API5L PSL; PSL-2	A , B , X42 , X46 , X52 , X56, X60 , X65 , X70
Offshore Structural Steel	API 2H	42 , 50
	API 2W	50 , 60
	ASTM	A588
Weather Resistant Steel	JIS	SMA400, SMA490
	EN	S235 JOW/J2W, S355 JOW/J2W/K2W
	AS/NZS	WR 250
	ASTM	1042 - 1050
High Carbon Steel	JIS	S 45 - S 50
	AS/NZS	K1042
	EN	C45
	BKI, ABS, LR DNVGL, BV, NK	A, B, D, E, AH/DH/EH 32/36/40
Ship Building Quality		
Gas Cylinders Steel	JIS	SG 255, SG 295
Forming and Drawing Steel	ASTM	A1006, A1008, A1011CS/DS
	JIS	SAPH 400/440, SPHC, SPHD, SPHT-1/2/3

General and Weldable Structural Steel

SPECIFICATION	GRADE	Thick. (mm)	Thick. Range (mm)	MECHANICAL PROPERTIES														GENERAL PURPOSE	
				TENSILE TEST				IMPACT TEST											
				TR															
				YS (N/mm2) Min	TS (N/mm2) Min	Max	200	80	50	5.65S ₀	+20 AVG	0 AVG	-20 AVG	+40 AVG	0 AVG	-20 AVG	+40 AVG		
ASTM A-36 / ASME A-36	-	2-150	< 20	250 A	400	500	20B	-	23B	-	-	-	-	-	-	-	-	-	SPECIFICATION FOR CAR- BON STRUCTURAL STEEL
			>20 <40	250 A	400	500	20B	-	23B	-	-	-	-	-	-	-	-	-	
			>40 <65	250 A	400	500	20B	-	23B	-	-	-	-	-	-	-	-	-	
			>65 <100	250 A	400	500	20B	-	23B	-	-	-	-	-	-	-	-	-	
JISG 3101	SS - 400	2-150	>100	250 A	400	500	20B	-	23B	-	-	-	-	-	-	-	-	-	HOT ROLLED STEEL FOR GENERAL STRUCTURE
			< 5	245.00	400	510	-	-	21	-	-	-	-	-	-	-	-	-	
			>5 <16	245	400	510	17	-	-	-	-	-	-	-	-	-	-	-	
			>16 <40	235	400	510	21	-	-	-	-	-	-	-	-	-	-	-	
AH32	6 - 80		>40 <100	215A	400	510	-	-	23B	-	-	-	-	-	-	-	-	-	Structural Steel for Ships
			>100	205	400	510	-	-	23B	-	-	-	-	-	-	-	-	-	
			>6.4<12.5	315	440	590	19	-	22	-	-	31	-	-	22	-	-	-	
			>12.5<20	315	440	590	19	-	22	-	-	31	-	-	22	-	-	-	
DH32	6 - 80		>20<25	315	440	590	19	-	22	-	-	31	-	-	22	-	-	-	
			>25<35	315	440	590	19	-	22	-	-	31	-	-	22	-	-	-	
			>35<50	315	440	590	19	-	22	-	-	31	-	-	22	-	-	-	
			>50<70	315	440	590	19	-	22	-	-	28	-	-	26	-	-	-	
ASTM A 131		8 - 60	>70<100	315	440	590	19	-	22	-	-	46	-	-	31	-	-	-	
			>6.4<12.5	315	440	590	19	-	22	-	-	31	-	-	22	-	-	-	
			>12.5<20	315	440	590	19	-	22	-	-	31	-	-	22	-	-	-	
			>20<25	315	440	590	19	-	22	-	-	31	-	-	22	-	-	-	
EH32	8 - 60		>25<35	315	440	590	19	-	22	-	-	31	-	-	22	-	-	-	
			>35<50	315	440	590	19	-	22	-	-	31	-	-	22	-	-	-	
			>50<70	315	440	590	19	-	22	-	-	28	-	-	26	-	-	-	
			>70<100	315	440	590	19	-	22	-	-	46	-	-	31	-	-	-	

General and Weldable Structural Steel

SPECIFICATION	GRADE	Thick. (mm)	Thick. Range (mm)	MECHANICAL PROPERTIES														GENERAL PURPOSE
				TENSILE TEST				IMPACT TEST										
				TR														
				YS (N/mm2) Min	TS (N/mm2) Min	Max	200	80	50	5.65S ₀	+20 AVG	0 AVG	-20 AVG	+40 AVG	0 AVG	-20 AVG	+40 AVG	
ASTM A 131	AH36	6-80	>6.4<12.5	355	490	620	19	-	22	-	-	-	34	-	24	-	-	Structural Steel for Ships
			>12.5<20	355	490	620	19	-	22	-	-	34	-	24	-	-		
			>20<25	355	490	620	19	-	22	-	-	34	-	24	-	-		
			>25<35	355	490	620	19	-	22	-	-	34	-	24	-	-		
	DH36	6-80	>35<50	355	490	620	19	-	22	-	-	34	-	24	-	-		
			>50<70	355	490	620	19	-	22	-	-	41	-	27	-	-		
			>70<100	355	490	620	19	-	22	-	-	50	-	34	-	-		
			>6.4<12.5	355	490	620	19	-	22	-	-	34	-	24	-	-		
	EH36	8-60	>12.5<20	355	490	620	19	-	22	-	-	34	-	24	-	-		
			>20<25	355	490	620	19	-	22	-	-	34	-	24	-	-		
			>25<35	355	490	620	19	-	22	-	-	34	-	24	-	-		
			>35<50	355	490	620	19	-	22	-	-	34	-	24	-	-		
			>50<70	355	490	620	19	-	22	-	-	41	-	27	-	-		
			>70<100	355	490	620	19	-	22	-	-	50	-	34	-	-		

PLATE

Steel plate is a flat, rectangular piece of steel that is manufactured in various thicknesses and sizes. It is made from carbon steel, alloy steel, or stainless steel, and is widely used in industries that require high strength, durability, and structural integrity. Steel plates can be cut, welded, bent, or machined to meet specific design needs.

Application



Boiler Vessel



Bridge



Main Structure

Calculated Plate Weight (From Thickness & Size) (Kg)

Width x Length in (mm)	1219 x 2438	1524 x 6096	1829 x 6096
Width x Length in (ft)	4' x 8'	5' x 20'	6' x 20'
Thickness (mm)	48 x 96	60 x 240	72 x 240
2	46.70	-	-
3	70.00	-	-
4	93.32	-	-
6	140	438	525
8	187	583	700
9	210	656	788
10	233	729	875
12	280	875	1050
12.7	296	926	1.112
14	327	1.021	1.225
15	350	1.094	1.313
16	373	1.167	1.400
18	420	1.313	1.575
19	443	1.386	1.663
20	467	1.459	1.750
22	513	1.604	1.926
24	560	1.750	2.101
25	583	1.823	2.188
25.4	593	1.852	2.223
26	607	1.896	2.276
28	653	2.042	2.451
30	700	2.188	2.626
32	747	2.334	2.801
36	840	2.625	3.151
38	887	2.771	3.326
40	933	2.917	3.501

PLATE CHEQUERED

It is a steel plate with raised pattern on its surface typically arranged in a diamond , teardrop or linear rib design. The raised pattern provides slip resistance, making it ideal for flooring and surface where safety and traction are important

Application



Stair Platform



Decoration



Vehicle Component

Calculated Plate Chequered Weight (From Thickness & Size) (Kg)

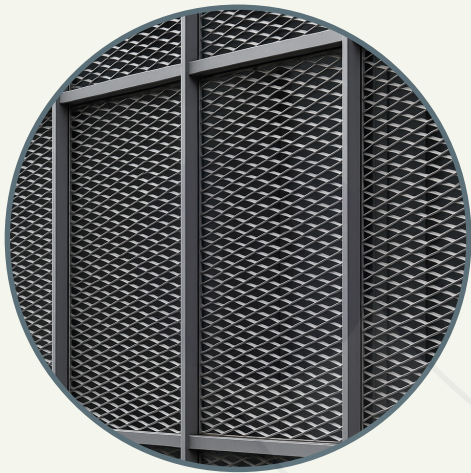
Width x Length in (mm)	1219 x 2438
Width x Length in (ft)	4' x 8'
Thickness (mm)	48 x 96
2.3	59
2.8	70.4
3	75
3.2	79.6
4	98.4
4.2	103
4.5	110
5.7	138
6	145
8	192
9	215
REMARKS	

EXPANDED- METAL

Description

Expanded mesh is one continuous single sheet of mesh produced when a flat metal plate is sheared and stretched but is left intact at the 'knuckles'. It is available in a variety of thicknesses with differing sizes and designs of the apertures.

Application



Facade Exterior

Standard Specification

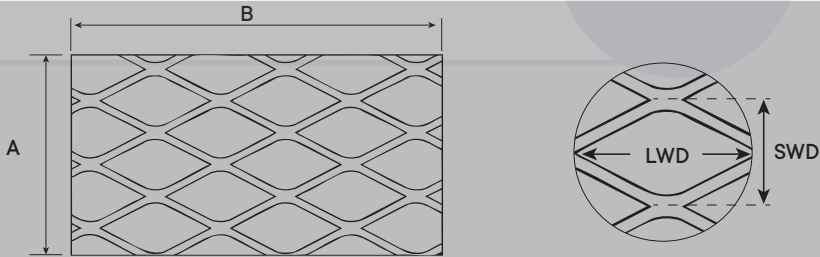
JIS G 3351
JIS G 3131
ASTM 830

Available Size

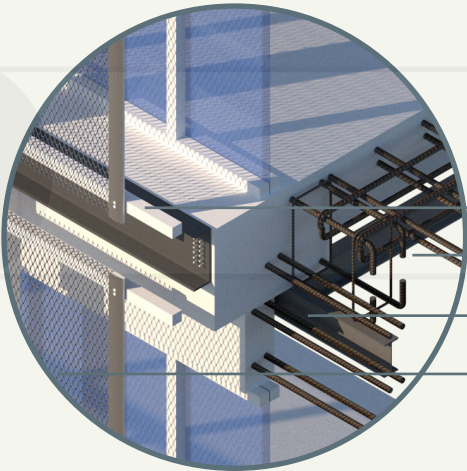
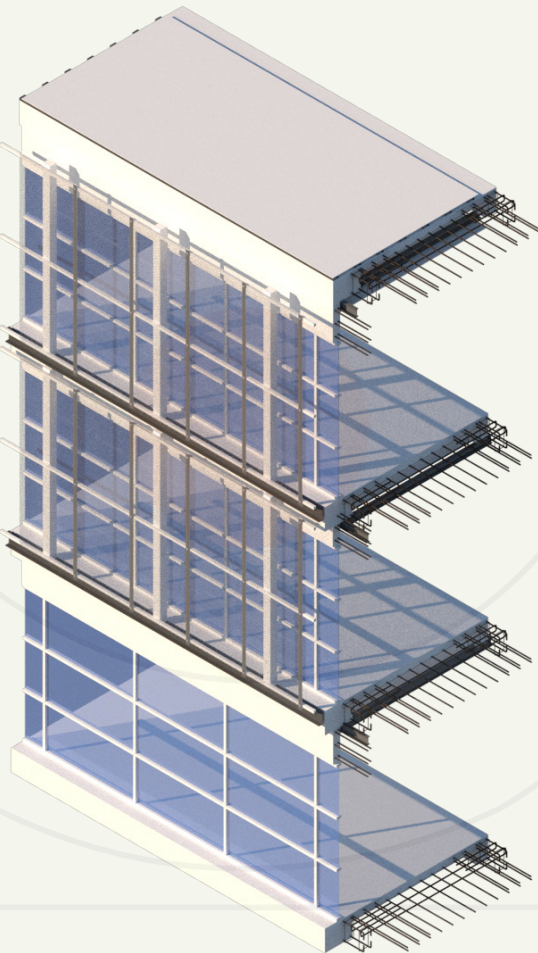
22 X 57mm up to
75 x 200mm
Thickness 4.85mm

TYPE	SWD	LWD	STRAND		Approx	Size
			THICKNESS mm	WIDTH mm	Weight Kg	A X B mtr x mtr
ORNAMESH						
715	11	22	0.7	15	3.5	12 x 2.4
1015	11	22	1	15	6	12 x 2.4
1020	17	38	1	2	4	12 x 2.4
1620	17.5	38	1.6	2	6	12 x 2.4
1628	25	58	1.6	2.8	8	12 x 2.4
2028	25	56	2	2.8	9	12 x 2.4
3035	25	56	3	3.5	17	12 x 2.4
3045	35	76	3	4.5	15	12 x 2.4
3032	25	36	3	3.2	12	12 x 2.4
30080	30	75	3	8	28	12 x 2.4
50075	33	75	5	7.5	50	12 x 2.4
50105	33	75	5	10.5	65	12 x 2.4
50080	44	135	5	8	36	12 x 2.4
50110	46	135	5	11	48	12 x 2.4

REMARKS



3D Isometric EXPANDED APPLIED FACADE



- UNP 80 + DYNABOLT
- Round bar / Besi beton 10mm
- IWF BESI 150
- EXPANDED D1620

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