






With our commitment to quality, we're confident in meeting your requirements and excited for our partnership to grow.



**PT Garuda Yamato Steel**

Jl. Perjuangan No. 8 Sukadanau,  
Cikarang Barat Bekasi 17530  
West Java, Indonesia

-  [garudayamatosteel.com](http://garudayamatosteel.com)
-  [garudayamatosteel](https://www.instagram.com/garudayamatosteel)
-  [garudayamatosteel](https://www.linkedin.com/company/garudayamatosteel)
-  [garudayamatosteel](https://www.tiktok.com/@garudayamatosteel)
-  [gyssteel](https://twitter.com/gyssteel)



# PRODUCT CATALOGUE



**“STRENGTH OF EXCELLENCE”**





**1 Million  
Tons  
Production  
Capacity**

PT Garuda Yamato Steel (GYS) is a joint venture established in 2024, formed through collaboration with strategic investors Yamato Kogyo Co., Ltd., Siam Yamato Steel Co., Ltd., PT Hanwa Indonesia, and PT Gunung Raja Paksi Tbk. With a modern factory in Cikarang, Bekasi, West Java, Indonesia, PT Garuda Yamato Steel specializes in producing high-quality structural steel products.

With a focus on excellence, PT Garuda Yamato Steel is dedicated to delivering top-tier steel to meet the needs of both domestic and export markets. The collaboration among its founding companies ensures that PT Garuda Yamato Steel is well-equipped to produce superior products that meet market demands.

### **OUR VISION**

To become a leading company in the long steel category, equipped with international standards and top-notch expertise, while simultaneously contributing to the advancement of the domestic steel industry.

### **OUR MISSION**

To deliver unparalleled customer satisfaction through product innovation, productivity, and exceptional quality in both our products and services. We are committed to upholding environmental and corporate social responsibility, essential pillars for ensuring long-term corporate sustainability.



#### **PT Garuda Yamato Steel**

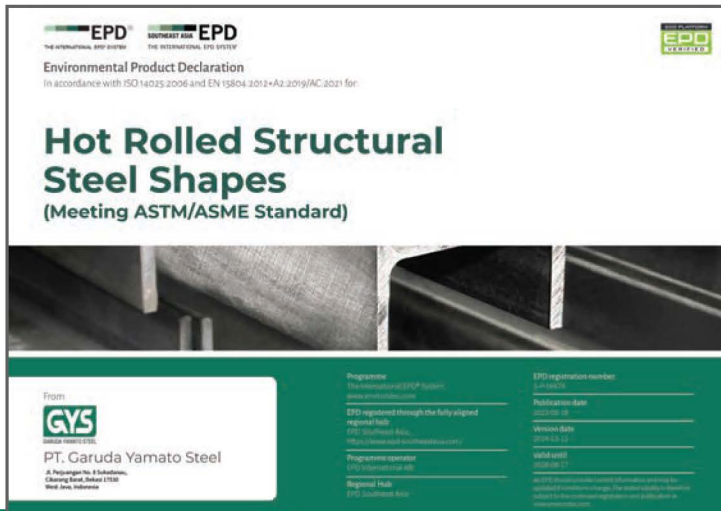
Jl Perjuangan No.8, Sukadanau, Cikarang Barat,  
Bekasi 17530, West Java, INDONESIA  
[www.garudayamatosteel.com](http://www.garudayamatosteel.com)

# CERTIFICATION

## SNI Indonesian National Standards



## EPD Environmental Product Declaration



## GREEN Product

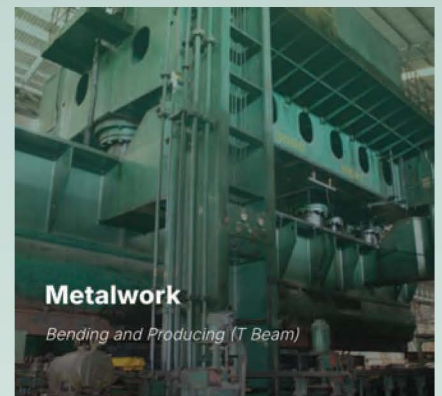
Remark: currently the certificate is still under **GRP**, the change to **GYS** is still in process.



# STEEL SERVICE CENTER

Spanning over 40,500 square meters, the Steel Service Center (SSC) offers top-notch steel fabrication services utilizing state-of-the-art computerized machinery. These include CNC Saws, CNC Drilling, Cutting, Punching, Bending Machines, as well as Galvanizing and Shot Blasting equipment. With renowned GYS products and skilled engineers from SSC, customers can now procure cut-to-length, cut-to-shape, or custom steel fabrications that meet international quality standards.

## Processing



### Available Product

- H-Beam
- IWF
- Channels
- Angles

### Raw Material

**Metal Type:**  
Steel or StruSteel or Structural Steel

- Shapes:**
- H-Beam
  - IWF
  - Channels
  - Angles

## CUSTOMER SATISFACTION IS OUR PRIORITY



Providing Extensive Service With Expertise And Professionalism



Advanced Technology



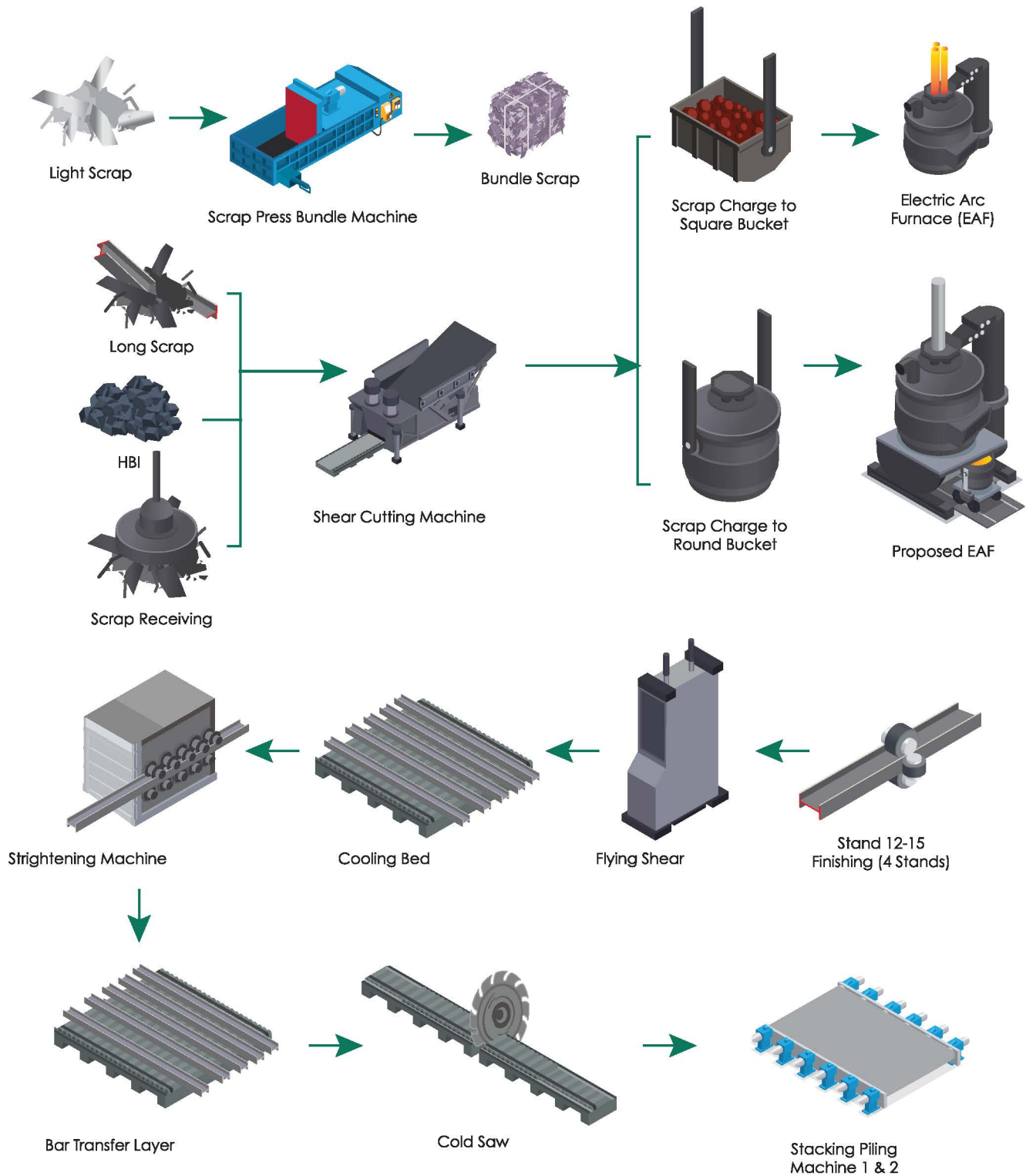
After-Sales Service

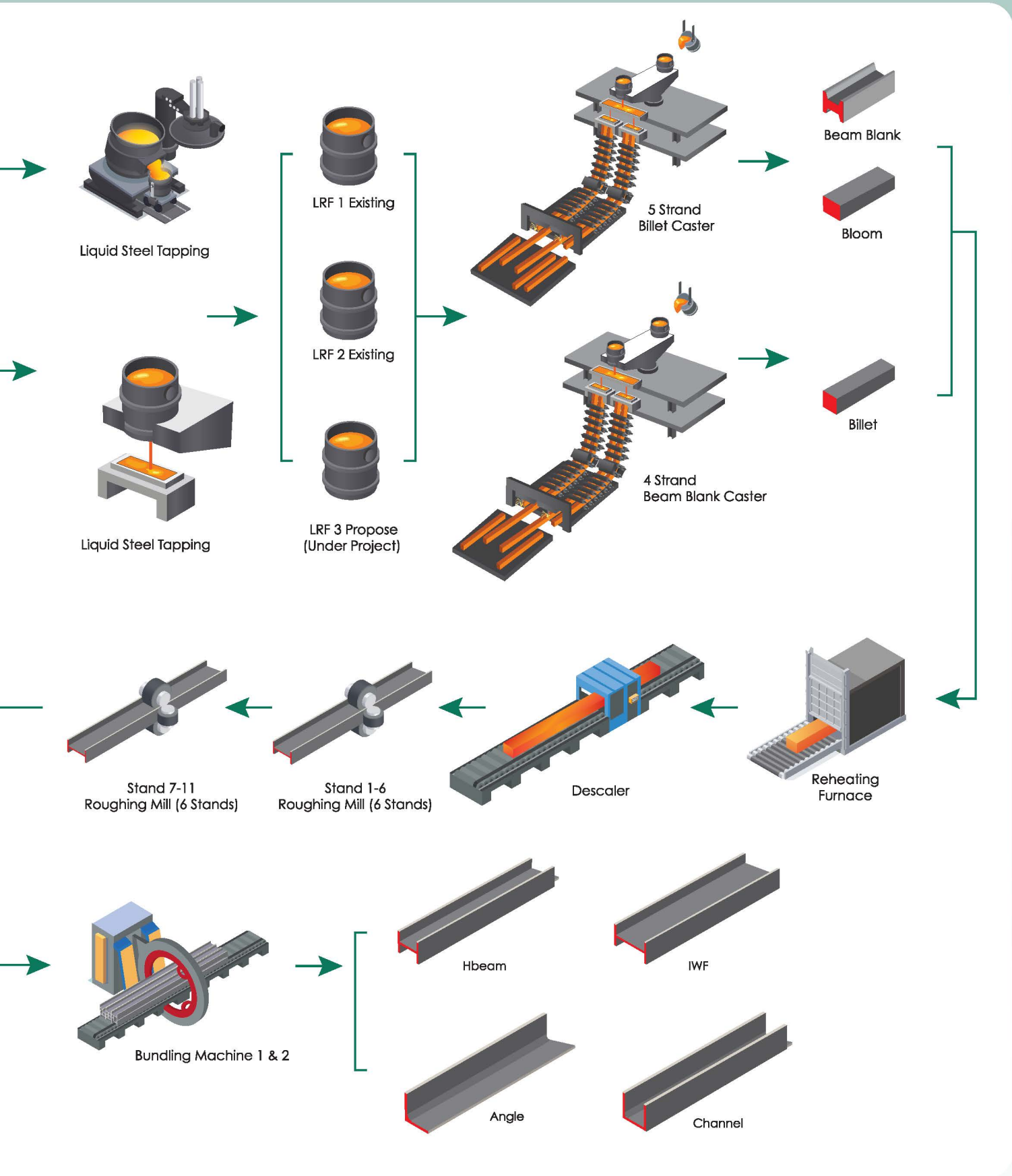


Completed Satisfaction Guarantee



# PROCESS PRODUCTION







# PRODUCT SPECIFICATIONS

## CHEMICAL COMPOSITIONS

Unit: %

Section Type Profile	SNI Number	SPPT SNI Number	Symbol of Grade	C	Mn	P	S
H-IBeam	SNI 2610 : 2011	34/W/RE/B/I/2023	BjP 34 / SS 330	-	-	≤ 0.050	≤ 0.050
WF - Beam	SNI 07-7178-2006	33/W/RE/B/I/2023	BjP 41 / SS 400				
Channel	SNI 07-0052-2006	130/W/Pro/B/VIII/2023	BjP 50 / SS 490				
Angle	SNI 07-2054-2006	-	BjP 55 / SS 540	< 0.30	< 1.60	< 0.040	< 0.040
Alloy elements other than those specified in this table may be added as necessary.							

## MECHANICAL PROPERTIES

Symbol of Grade	Yield point or proof strength N/mm <sup>2</sup>				Tensile Strength N/mm <sup>2</sup>	Elongation			Bendability		
	Thickness <sup>a)</sup> mm					Thickness <sup>a)</sup> mm	Test piece	%	Bending Angel	Inner Radius	Test piece e)
	≤ 16	> 16 ≤ 40	> 40 ≤ 100	≥ 100							
BjP 34 / SS 330	≥ 205	≥ 195	≥ 175	≥ 165	330 to 430	≤ 5 in thickness of steel plates and sheets, steel strip in coil and flats	No. 5	≥ 26	180 <sup>o</sup>	0.5 x thickness	No. 1
						> 5 ≤ 16 in thickness of steel plates and sheets, steel strip in coil and flats	No. 1A	≥ 21			
						> 5 ≤ 50 in thickness of steel plates and sheets, steel strip in coil and flats	No. 1A	≥ 26			
						> 40 in thickness of steel plates and sheets, and flats	No. 4	≥ 28 <sup>b)</sup>			
						≤ 25 in diameter, side of distance across flats of steel bars	No. 2	≥ 25			
						> 25 in diameter, side of distance across flats of steel bars	No. 14A	≥ 28			No. 2
BjP 41 / SS 400	≥ 245	≥ 235	≥ 215	≥ 205	400 to 510	≤ 5 in thickness of steel plates and sheets, steel strip in coil, flats and sections	No. 5	≥ 21	180 <sup>o</sup>	1.5 x thickness	No. 1
						> 5 ≤ 16 in thickness of steel plates and sheets, steel strip in coil, flats and sections	No. 1A	≥ 17			
						> 16 ≤ 50 in thickness of steel plates and sheets, steel strip in coil, flats and sections	No. 1A	≥ 21			
						> 40 in thickness of steel plates and sheets, flats and sections	No. 4	≥ 23 <sup>b)</sup>			
						≤ 25 in diameter, side of distance across flats of steel bars	No. 2	≥ 20			
						> 25 in diameter, side of distance across flats of steel bars	No. 14A	≥ 22			

## MECHANICAL PROPERTIES

Symbol of Grade	Yield point or proof strength N/mm <sup>2</sup>				Tensile Strength N/mm <sup>2</sup>	Elongation			Bendability		
	Thickness <sup>a)</sup> mm					Thickness <sup>a)</sup> mm	Test piece	%	Bending Angel	Inner Radius	Test piece e)
	≤ 16	> 16 ≤ 40	> 40 ≤ 100	≥ 100							
BjP 50 / SS 490	≥ 285	≥ 275	≥ 255	≥ 245	490 to 610	≤ 5 in thickness of steel plates and sheets, steel strip in coil, flats and sections	No. 5	≥ 19	180°	2.0 x thickness	No. 1
						> 5 ≤ 16 in thickness of steel plates and sheets, steel strip in coil, flats and sections	No. 1A	≥ 15			
						> 16 ≤ 50 in thickness of steel plates and sheets, steel strip in coil, flats and sections	No. 1A	≥ 19			
						> 40 in thickness of steel plates and sheets, flats and sections	No. 4	≥ 21 <sup>b)</sup>			
						≤ 25 in diameter, side of distance across flats of steel bars	No. 2	≥ 18	180°	2.0 x diameter, side of distance across flats	No. 2
						> 25 in diameter, side of distance across flats of steel bars	No. 14A	≥ 20			
BjP 55 / SS 540	≥ 400	≥ 390	-	-	≥ 540	≤ 5 in thickness of steel plates and sheets, steel strip in coil, flats and sections	No. 5	≥ 16	180°	2.0 x thickness	No. 1
						> 5 ≤ 16 in thickness of steel plates and sheets, steel strip in coil, flats and sections	No. 1A	≥ 13			
						> 16 ≤ 40 in thickness of steel plates and sheets, steel strip in coil, flats and sections	No. 1A	≥ 17			
						≤ 25 in diameter, side of distance across flats of steel bars	No. 2	≥ 13	180°	2.0 x diameter, side of distance across flats	No. 2
						> 25 ≤ 40 in diameter, side of distance across flats of steel bars	No. 14A	≥ 16			

NOTE: 1 N/mm<sup>2</sup> = 1 Mpa

- Notes
- a) For sections, the thickness of steel product shall be that of the locations of test pieces. The thickness of steel products shall be that of diameter for round bars, that of side for square bars, and that of distance across flats for hexagon bars.
  - b) For the elongation of No. 4 test piece of steel plate of thickness over 90 mm, subtract 1 from the elongation values of this table for each increment of 25.0 mm or its fraction in thickness. However, the subtraction shall not exceed 3.
  - c) For bend test of steel products of thickness 5 mm or under, NO. 3 test piece may be used.

# PRODUCT SPECIFICATIONS

## SN-SERIES CHEMICAL COMPOSITION

Unit: %

Symbol of Grade	C	Si	Mn	P	S
SN400A	0.24 Max	-	-	0.050 Max	0.050 Max
SN400B	0.20 Max	0.35 Max	0.60 to 1.50	0.030 Max	0.015 Max
SN400C	0.20 Max	0.35 Max	0.60 to 1.50	0.050 Max	0.050 Max
SN490B	0.18 Max	0.55 Max	1.65 Max	0.030 Max	0.015 Max
SN490C	0.18 Max	0.55 Max	1.65 Max	0.020 Max	0.008 Max

Note :

- Thickness Range is 6 mm up to and include 50 mm.
- Alloy elements without limit values (Indicated with '-') in this table or those not listed in this table may be added as necessary

## SSN-SERIES MECHANICAL COMPOSITION

Symbol of Grade	Yield Point or proof stress		Tensile Strength N/mm <sup>2</sup>	Yield Ratio %	Elongation			
	Thickness a) mm	N/mm <sup>2</sup>			Thickness a) mm	Test Piece	%	
SN400A	6 or over up to and incl.40	235 min	400 to 510	-	6 or over up to incl.16	No.1A	17 min	
					Over 16 up to and incl.40	No.1A	21 min	
	Over 40 up tp and incl.100	215 min			Over 40 up to and incl.50	No.1A No.4	21 min 23 min	
					Over 50 up to and incl.100	No.4	23 min	
SN400B	6 or over up to and excl.12	235 min	400 to 510	-	6 or over up to incl.16	No.1A	18 min	
	12 or over up to and incl.16	235 to 355 b)			80 max c)	Over 16 up to and incl.40	No.1A	22 min
	Over 16 up tp and incl.40	235 to 355			80 max	Over 40 up to and incl.50	No.1A No.4	22 min 24 min
						Over 50 up to and incl.100	No.4	24 min
SN400C	16	235 to 355 b)	400 to 510	-	6 or over up to incl.16	No.1A	18 min	
	Over 16 up tp and incl.40	235 to 355			80 max	Over 16 up to and incl.40	No.1A	22 min
						Over 40 up to and incl.50	No.1A No.4	22 min 24 min
	Over 40 up tp and incl.100	215 to 335				Over 50 up to and incl.100	No.4	24 min
6 or over up to and excl.12			325 min	490 to 610		-	6 or over up to incl.16	No.1A
12 or over up to and incl.16	325 to 445 b)	80 max c)	Over 16 up to and incl.40		No.1A		21 min	
Over 16 up tp and incl.40	325 to 445	80 max	Over 40 up to and incl.50		No.1A No.4		21 min 23 min	
			Over 50 up to and incl.100		No.4		23 min	
SN490C	16		325 to 445 b)	490 to 610	-	6 or over up to incl.16	No.1A	17 min
	Over 16 up tp and incl.40		325 to 445			80 max	Over 16 up to and incl.40	No.1A
		Over 40 up to and incl.50					No.1A No.4	21 min 23 min
	Over 40 up tp and incl.100	295 to 415	Over 50 up to and incl.100				No.4	23 min

NOTE 1 N/mm<sup>2</sup> = 1 MPa

Note a) For sections, the thickness of steel products shall be follows.

- 1) For H sections and CT sections, the dimensions t<sub>2</sub> in table 14 shall be applied
- 2) For Angles, Bulb Flats and T sections, the dimension t or t<sub>2</sub> in Table 13 shall be applied
- 3) For I sections and channels, the dimension t<sub>1</sub> in Table 13 shall be applied

Note b) For H sections and CT sections, when t<sub>1</sub> given in Table 14 is 9 mm or less, the upper limit of the yield points of proof stress shall not be applied

Note c) For H sections and CT sections, when t<sub>1</sub> given in Table 14 is 9 mm or less, the upper limit of the yield ratio shall be 85%.

# PRODUCT SPECIFICATIONS

## SN-SERIES CARBON EQUIVALENT (CE)

Symbol of Grade	Thickness (mm)	Carbon equivalent (%)
SN400B, SN400C	100 Max	0.36 Max
SN490B SN490C	40 Max	0.44 Max
	Over 40 up to and incl.100	0.46 Max

## SN-SERIES WELD CRACK SENSIVITY COMPOSITION(PCM)

Symbol of Grade	Thickness (mm)	Weld-Crack sensivity composition (%)
SN400B, SN400C	100 Max	-
SN490B, SN490C	100 Max	0.35 Max

## SN-SERIES CHARPY ABSORBED ENERGY (IMPACT TEST)

Symbol of Grade	Test Temperature a) °C	Charpy absorbed Energy J	Test Piece and direction sampling b)
SN400B	0	27 min	V-Notch test piece in rolling direction
SN400C			
SN490B			
SN490C			

- Steel products of thickness over 12 mm.
- Note a) The test temperature lower than those specified in this table may be used upon agreement between the purchaser and supplier.
- Note b) When the test is performed in the direction perpendicular to the rolling direction upon agreement between the purchaser and supplier, the test performed in the rolling direction may be omitted upon approval by the purchaser.



## H-BEAM

H-Beam steel is vital for strong, durable, and versatile construction ensuring safety and sustainability



Also known as H-shaped steel or universal beam, is a long, rectangular piece of metal with a uniform cross-section along its length. It is called an "H-beam" because it is shaped like a capital letter H. The H-beam has wider flanges than an I-beam, which means it is stronger and more rigid. It is commonly used in construction, as it can support a lot of weight and span large distances. The H-beam's design allows it to carry loads evenly, making it an efficient and cost-effective choice for many construction projects.

### Available Size :

100×100mm to  
400×400mm

### Available Length :

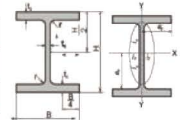
Standard Length: 6mtr & 12mtr.  
Cutting service is upon request

### Available Grade :

SNI Bj PHC 400,  
JIS G3101 SS400,  
ASTM A36

STANDARD SECTIONAL DIMENSIONS					SECTION AREA	UNIT WEIGHT	Informative Reference						REMARKS
Nominal Dimensional	H x B	t1	t2	r			Ax	GEOMETRICAL MOMENT OF INERTIA		RADIUS OF GYRATION OF AREA		MODULUS OF SECTION	
mm	mm x mm	mm	mm	m	cm <sup>2</sup>	Kg/m	Ix	Iy	ix	iy	Zy	Zy	
							cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>	
100 x 100	100 x 100	6	8	8	21,59	16,9	378	134	4,18	2,49	75,6	26,7	
125 x 125	125 x 125	6,5	9	8	30,00	23,6	839	293	5,29	3,13	134	46,9	
150 x 150	150 x 150	7	10	8	39,65	31,1	1620	563	6,4	3,77	216	75,1	
175 x 175	175 x 175	7,5	11	13	51,43	40,4	2900	984	7,5	4,37	331	112	
* 200 x 200	200 x 200	8	12	13	63,53	49,9	4720	1600	8,62	5,02	472	160	
	200 x 204	12	12	13	71,53	56,2	4980	1700	8,35	4,88	498	167	
* 250 x 250	250 x 250	9	14	13	91,43	71,8	10700	3650	10,8	6,32	860	292	
	250 x 255	14	14	13	103,9	81,6	11400	3880	10,5	6,11	912	304	
* 300 x 300	284 x 302	12	12	13	106,3	83,4	16600	5510	12,5	7,2	1130	365	
	300 x 300	10	15	13	118,5	93	20200	6750	13,1	7,55	1350	450	
* 350 x 350	300 x 305	15	15	13	133,4	105	21300	7100	12,6	7,3	1420	466	
	344 x 348	10	16	13	144	113	32800	11200	15,1	8,84	1910	646	
* 400 x 400	350 x 350	12	19	13	171,9	135	39800	13600	15,2	8,89	2280	776	
	388 x 402	15	15	22	178,5	140	49000	16300	16,6	9,55	2520	809	
	394 x 398	11	18	22	186,8	147	56100	18900	17,3	10,1	2850	951	
	400 x 400	13	21	22	218,7	172	66600	22400	17,5	10,1	3330	1120	
	400 x 408	21	21	22	250,7	197	70900	23800	16,8	9,75	3540	1170	
*	414 x 405	18	28	22	295,4	232	92800	31000	17,7	10,2	4480	1530	
*	428 x 407	20	35	22	360,7	283	119000	39400	18,2	10,4	5570	1930	

Description :  
H = Height Web  
B = Width Flange  
t1 = Thickness Web  
t2 = Thickness Flange



\* Please contact us in advance for this item

# WIDE FLANGE (WF)



The term “WF-beam” is usually used to refer to a beam that has a relatively narrow flange width and is used in light-duty construction

A wide flange (WF) or WF-Beam is a type of structural steel beam that is characterized by its shape, which looks like a capital letter “I.” The wide flange beam has wider flanges than a standard I-beam, which helps to distribute weight more evenly across a structure. Wide flange beams are commonly used in construction, civil engineering, and many other fields for their strength and versatility.

**Available Size :**

100×50mm to  
900×300mm

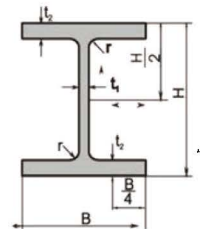
**Available Length :**

Standard Length: 6mtr & 12mtr.  
Cutting service is upon request

**Available Grade :**

SNI Bj P41,  
JIS G3101 SS400,  
ASTM A36

STANDARD SECTIONAL DIMENSIONS					SECTIONAL AREA	UNIT WEIGHT	Informative Reference						REMARKS
Nominal Dimension	H x B	t1	t2	r			GEOMETRICAL MOMENT INERTIA		RADIUS OF GYRATION OF		MODULUS OF SECTION		
mm	mm x mm	mm	mm	m	cm <sup>2</sup>	Kg/m	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>	
* 100 x 50	100 x 50	5	7	8	11.85	9.3	187	14.8	3.98	1.12	37.5	5.91	Description : H = Height Web B = Width Flange t1 = Thickness Web t2 = Thickness Flange
* 125 x 60	125 x 60	6	8	8	16.69	13.1	409	29.1	4.95	1.32	66.5	9.71	
* 150 x 75	150 x 75	5	7	8	17.85	14	666	49.5	6.11	1.66	88.8	13.2	
* 150 x 100	148 x 100	6	9	8	26.35	20.7	1000	150	6.17	2.37	135	30.1	
* 175 x 90	175 x 90	5	8	8	22.90	18.0	1210	98	7.26	2.06	138	21.7	
* 200 x 100	198 x 99	4.5	7	8	22.69	17.8	1540	113	8.25	2.24	156	22.9	
* 200 x 150	200 x 100	5.5	8	8	26.67	20.9	1810	134	8.23	2.24	181	26.7	
* 200 x 150	194 x 150	6	9	8	38.11	29.9	2630	507	8.3	3.65	271	67.6	
* 250 x 125	248 x 124	5	8	8	31.99	25.1	3450	255	10.4	2.82	278	41.1	
* 250 x 125	250 x 125	6	9	8	36.97	29.0	3960	294	10.4	2.82	317	47	
* 250 x 175	244 x 175	7	11	13	55.49	43.6	6040	984	10.4	4.21	495	112	
* 300 x 150	298 x 149	5.5	8	13	40.80	32.0	6320	442	12.4	3.29	424	59.3	
* 300 x 150	300 x 150	6.5	9	13	46.78	36.70	7210	508	12.4	3.29	481	67.7	
* 300 x 200	294 x 200	8	12	13	71.05	55.8	11100	1600	12.5	4.75	756	160	
* 350 x 175	346 x 174	6	9	13	52.45	41.2	11100	791	14.5	3.88	638	91	
* 350 x 175	350 x 175	7	11	13	62.91	49.4	13500	984	14.6	3.96	771	112	
* 350 x 250	340 x 250	9	14	13	99.53	78.1	21200	3650	14.6	6.05	1250	292	
* 400 x 200	396 x 199	7	11	13	71.41	56.1	19800	1450	16.6	4.5	999	145	
* 400 x 200	400 x 200	8	13	13	83.37	65.4	23500	1740	16.8	4.56	1170	174	
* 400 x 300	390 x 300	10	16	13	133.20	105.0	37900	7200	16.9	7.35	1940	480	
* 450 x 200	450 x 200	9	14	13	95.43	74.9	32900	1870	18.6	4.43	1460	187	
* 450 x 300	440 x 300	11	18	13	153.90	121.0	54700	8110	18.9	7.26	2490	540	
* 500 x 200	500 x 200	10	16	13	112.3	88.2	46800	2140	20.4	4.36	1870	214	
* 500 x 300	488 x 300	11	18	13	159.20	125.0	68900	8110	20.8	7.14	2820	540	
* 600 x 200	600 x 200	11	17	13	131.7	103	75600	2270	24.0	4.16	2520	227	
* 600 x 300	588 x 300	12	20	13	187.2	147	114000	9010	24.7	6.94	3890	601	
* 700 x 300	700 x 300	13	24	18	231.50	182.0	197000	10800	29.2	6.83	5,640	721	
* 800 x 300	800 x 300	14	26	18	263.50	207.0	286000	11700	33.0	6.67	7,160	781	
* 900 x 300	900 x 300	16	28	18	305.80	240.0	404000	12600	36.4	6.43	8,990	842	



\* Please contact us in advance for this item



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# PRODUCT

# ANGLE

Equal angle steel is a versatile material that is easy to work with and can be cut, welded, or bolted into place as needed.



Equal angle steel is a type of steel angle with equal length sides. It is a piece of structural steel that is bent at a 90-degree angle and used to form a right angle. Equal angle steel is commonly used in construction and engineering to support loads and provide structural stability. It is available in a variety of sizes and grades and can be customized to meet specific project requirements.

### Available Size :

100×100mm to  
250×250mm

### Available Length :

Standard Length: 6mtr & 12mtr  
Cutting service is upon request

### Available Grade :

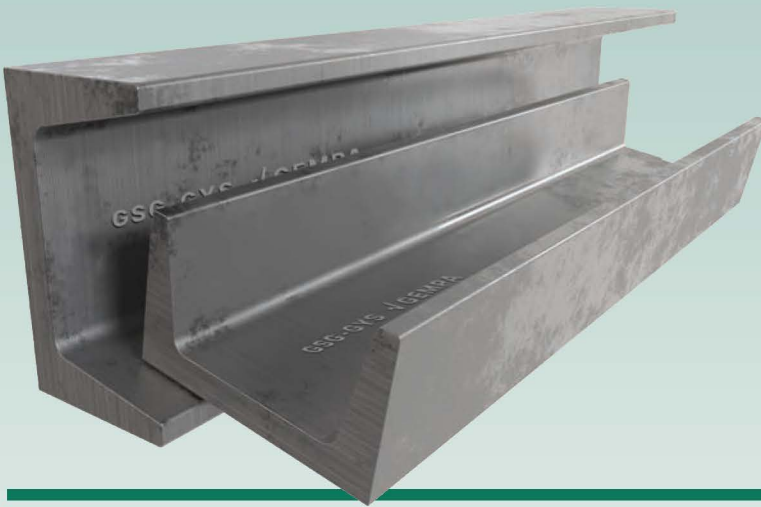
SNI Bj P41, Bj P55,  
JIS G3101 SS400, SS540  
ASTM A36

Nominal Size	Weight	Standard Sectional Dimension				Sectional Area	Moment of Inertia				Radius of Gyration				Elastic Section Modulus		Distance of center of gravity		REMARK
		HxB	t	r1	r2		Ix	Iy	Iu	Iv	Ix	Iy	Iu	Iv	Zx	Zy	Cx	Cy	
mm	kg/m	mm	mm	mm	mm	cm <sup>2</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>	cm	cm	
100 x 100	10.7	100 x 100	7	10	5.0	13.62	129	129	205	53.2	3.08	3.08	3.88	1.98	17.7	17.7	2.71	2.71	Description : Leg Length Leg Thickness Radius Corner Radius Leg Length
	14.9	100 x 100	10	10	7.0	19.00	175	175	278	72.0	3.04	3.04	3.83	1.95	24.4	24.4	2.82	2.82	
	17.8	100 x 100	12	12	4.8	22.70	207	207	328	85.7	3.02	3.02	3.80	1.94	29.1	29.1	2.90	2.90	
	19.1	100 x 100	13	10	7.0	24.31	220	220	248	91.1	3.00	3.00	3.78	1.94	31.1	31.1	2.94	2.94	
120 x 120	14.7	120 x 120	8	12	5.0	18.76	258	258	410	106	3.71	3.71	4.67	2.38	29.5	29.5	3.24	3.24	
130 x 130	17.9	130 x 130	9	12	6.0	22.74	366	366	583	150	4.01	4.01	5.06	2.57	38.7	38.7	3.53	3.53	
	23.4	130 x 130	12	12	8.5	29.76	467	467	743	192	3.96	3.96	5.00	2.54	49.9	49.9	3.64	3.64	
	28.8	130 x 130	15	12	8.5	36.75	568	568	902	234	3.93	3.93	4.95	2.53	61.5	61.5	3.76	3.76	
150 x 150	27.3	150 x 150	12	14	7.0	34.77	740	740	1,180	304	4.61	4.61	5.82	2.96	68.1	68.1	4.14	4.14	
	33.6	150 x 150	15	14	10.0	42.74	888	888	1,410	365	4.56	4.56	5.75	2.92	82.6	82.6	4.24	4.24	
	41.9	150 x 150	19	14	10.0	53.38	1,090	1,090	1,730	451	4.52	4.52	5.69	2.91	103.0	103.0	4.40	4.40	
175 x 175	31.8	175 x 175	12	15	11.0	40.52	1,170	1,170	1,860	480	5.38	5.38	6.78	3.44	91.8	91.8	4.73	4.73	
	39.4	175 x 175	15	15	11.0	50.21	1,440	1,440	2,290	589	5.35	5.35	6.75	3.42	114.0	114.0	4.85	4.85	
200 x 200	45.3	200 x 200	15	17	12.0	57.75	2,180	2,180	3,470	891	6.14	6.14	7.75	3.93	150.0	150.0	5.46	5.46	
	59.7	200 x 200	20	17	12.0	76.00	2,820	2,820	4,490	1,160	6.09	6.09	7.68	3.90	197.0	197.0	5.67	5.67	
	73.6	200 x 200	25	17	12.0	93.75	3,420	3,420	5,420	1,410	6.04	6.04	7.61	3.88	242.0	242.0	5.86	5.86	
250 x 250	93.7	250 x 250	25	24	12.0	119.40	6,950	6,950	11,000	2,860	7.63	7.63	9.62	4.90	388.0	388.0	7.10	7.10	
	128.0	250 x 250	35	24	18.0	162.60	9,110	9,110	14,400	3,790	7.49	7.49	9.42	4.83	519.0	519.0	7.45	7.45	

\* Please contact us in advance for this item

# PRODUCT

## U-CHANNEL



U-Channel steel has a few advantages over other types of structural steel, including its high strength-to-weight ratio, versatility, and ease of use.

U-Channel steel is a type of structural steel that consists of a long, slender strip of steel with a cross-section in the shape of a "C". Channel steel is often used in construction and civil engineering to create a structural support system for buildings and other structures. It is also used in the manufacturing of heavy equipment and machinery.

### Available Size :

100×50mm to  
380×100mm

### Available Length :

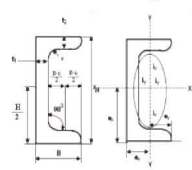
Standard Length: 6mtr & 12mtr  
Cutting service is upon request

### Available Grade :

SNI Bj P41,  
JIS G3101 SS400,  
ASTM A36

STANDARD SECTIONAL DIMENSIONS						Additional Information								REMARKS		
Nominal Dimensional	H x B	t1	t2	r1	r2	SECTION AREA	UNIT WEIGHT	POSITION WEIGHT POINT		GEOMETRICAL MOMENT OF INERTIA		RADIUS OF GYRATION OF AREA			MODULUS OF SECTION	
								Cx	Cy	Ix	Iy	ix	iy		Zx	Zy
mm x mm	mm	mm	mm	mm	mm	cm <sup>2</sup>	Kg/m	cm	cm	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>	
* U 100	100 x 50	5,0	7,5	8	4,0	11,92	9,36	0	1,54	188	28,0	3,97	1,48	37,6	7,52	
* U 125	125 x 65	6	8	8	4	17,11	13,4	0	1,90	424	61,8	4,98	1,90	67,8	13,4	
* U 150	150 x 75	6,5	10	10	5	23,71	18,6	0	2,28	881	117	6,03	2,22	115	22,4	
* U 150	150 x 75	9	12,5	15	7,5	30,59	24,0	0	2,31	1.050	147	5,86	2,19	140	28,3	
* U 180	180 x 75	7	10,5	11	5,5	21,40	21,4	0	2,13	1.380	131	7,12	2,19	153	24,3	
* U 200	200 x 80	7,5	11	12	6	31,33	24,6	0	2,21	1.950	168	7,88	2,32	195	29,1	
* U 200	200 x 90	8	13,5	14	7	38,65	30,3	0	2,74	2.490	277	8,02	2,68	248	44,2	
* U 250	250 x 90	9	13	14	7	44,07	34,6	0	2,40	4.180	294	9,74	2,58	334	44,5	
* U 250	250 x 90	11	14,5	17	8,5	51,17	40,2	0	2,40	4.680	329	9,58	2,54	374	49,9	
* U 300	300 x 90	9	13	14	7	48,57	38,1	0	2,22	6.440	309	11,50	2,52	429	45	
* U 300	300 x 90	10	15,5	19	9,5	55,74	43,8	0	2,34	7.410	360	11,50	2,54	494	54,1	
* U 300	300 x 90	12	16	19	9,5	61,90	48,6	0	2,28	7.870	379	11,30	2,48	525	56,4	
* U 380	380 x 100	10,5	16	18	9	69,39	54,5	0	2,41	14.500	535	14,50	2,78	763	70,5	
* U 380	380 x 100	13	16,5	18	9	78,96	62,0	0	2,33	15.600	565	14,10	2,67	823	73,6	
* U 380	380 x 100	13	20	24	12	85,71	67,3	0	2,54	17.600	655	14,30	2,76	926	87,8	

Description :  
H = Width Web  
B = Height Flange  
t1 = Thickness Web  
t2 = Thickness Flange



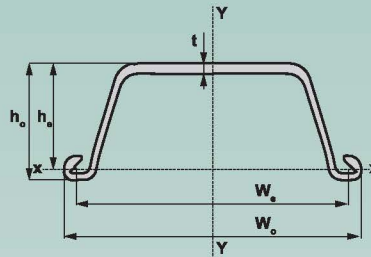
\* Please contact us in advance for this item



# PRODUCT

## STEEL SHEET PILE

Sheet piles are, as the name suggests, narrow sheets of material, usually designed with an angular profile and with interlocking edges.



(Grade SY295 or SY390)

Section	Weight		Dimension					Sectional Area	Moment of Inertia		Elastic Section Modulus	
	per pile kg/m	per wall width kg/m <sup>2</sup>	W mm	W mm	h mm	h mm	t mm	per pile cm <sup>2</sup>	per pile cm <sup>4</sup>	per wall width cm <sup>4</sup> /m	per pile cm <sup>3</sup>	per wall width cm <sup>3</sup> /m
* SP-II	48	120	400	437,5	100	122,5	10,5	61,18	1.240,0	8.740	152,0	874,0
* SP-III A	58,4	146	400	437,5	150	170	13,1	74,4	2.790,0	22.800	250,0	1.520,0
* SP-III A	60	150	400	439	125	149	13	76,42	2.220,0	16.800	223,0	1.340,0
* SP-IV	76,1	190	400	443	170	193,5	15,5	96,99	4.670,0	38.600	362,0	2.270,0

\*: please contact us in advance for this item

Type of Product	Classification		Mechanical Properties					
			Yield Point N/mm <sup>2</sup> (min.)	Tensile Strength N/mm <sup>2</sup>	Yield Ratio %	Elongation % (min.)	Impact	
		Thickness			(max.)	Thickness	Thickness t > 12mm.	
	JISA 5528 : 2012	SY295	295	450 min.	-	18	-	-
		SY390	390	490 min.	-	16	-	-

Type of Product	Classification		Chemical Com				
			C	Si	Mn	P	S
		max.			max.	max.	
	JIS A5528 : 2012	SY295	-	-	-	0,04	0,04
		SY390	-	-	-	0,04	0,04

### TOLERANCE

JIS A 5528 : 2012

Unit : mm.

JIS A 5528 : 2012		
HOT ROLLED STEEL SHEET PILE "U" SHAPE		
Dimension	Tolerance	
Height	+ 4%	
Width (W.)	+ 10%	
	-5	
Thickness	t < 10	+ 1.0
	10 ≤ t ≤ 16	+ 1.2
	t ≥ 16	+ 1.5
Length (L)	+ Not Specified	
	0	
Deflection	L ≤ 10 m.	Full Length (M) x 0.12% max.
	L > 10 m.	Full Length - 10 m. x 0.10% + 12mm. max.
Camber	L ≤ 10 m.	Full Length (M) x 0.25% max.
	L > 10 m.	Full Length - 10 m. x 0.20% + 25mm. max.
Difference in Vertically Cut Sections		Within 4% of Width

# DIMENSIONAL TOLERANCE

## SHAPE & DIMENSIONAL TOLERANCE ANGLE, U-CANNEL, H-BEAM & WIDE FLANGE

Unit: mm

Division and dimension		Tolerance	Remarks	
Leg length (A or B)	Under 50	$\pm 1.5$		
	50 or over to and excl. 100	$\pm 2.0$		
	100 or over to and excl. 200	$\pm 3.0$		
	200 or over	$\pm 4.0$		
Depth (H)	Under 100	$\pm 1.5$		
	100 or over to and excl. 200	$\pm 2.0$		
	200 or over to and excl. 400	$\pm 3.0$		
	400 or over	$\pm 4.0$		
Thickness (t, t1, t2)	For leg length A (B for T section) or under 130 in	Under 6.3		$\pm 0.6$
		6.3 or over to and excl. 10		$\pm 0.7$
		10 or over to and excl. 16	$\pm 0.8$	
		16 or over	$\pm 1.0$	
	For leg length A (B for T section) or under 130 in depth	Under 6.3	$\pm 0.7$	
		6.3 or over to and excl. 10	$\pm 0.8$	
		10 or over to and excl. 16	$\pm 1.0$	
		16 or over to and excl. 25	$\pm 1.2$	
Length	7 m or under	$\pm 400$		
	Over 7 m	Add 5 mm to the plus side tolerance given in the above column for every 1m increase in length or its fraction		
Out of square (T)	I section	2.0 % or under of width B		
	Sections excluding I and T sections	2.5 % or under of width B		
Bend	I and T sections	0.20 % or under of length	To be applied to bend such as sweep and camber	
	Sections excluding I and T sections	0.30 % or under of length		
Eccentricity (S)	300 or under in width B	T section	$\pm 3.0$	$S = \frac{b_1 - b_2}{2}$

Remarks: The purchaser may designate that the out of square shall be 2% or under of the leg length for equal leg angles 200 mm or more in leg length

### Weight Tolerance

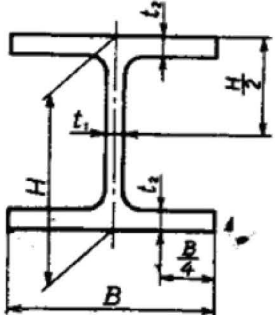
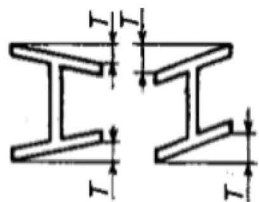

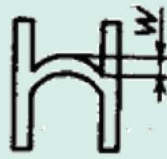
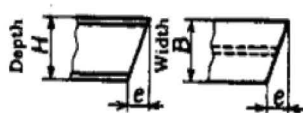
Thickness	Tolerance	Remarks
Under 10 mm	$\pm 5 \%$	(1) Thicker nominal values shall be applied
10 mm or over	$\pm 4 \%$	(2) To be applied to one lot of the same size (1 t or over).  When the number of piece corresponding to 1 t does not amount to 10, it shall be applied to each lot of 10 or more pieces

### Product Nominal Length

6.0	6.5	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
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# DIMENSIONAL TOLERANCE

Unit: mm

Division and dimension		Tolerance	Remarks	
Width (B)	Under 100 in nominal width	$\pm 2.0$		
	100 or over to and excl. 200 in nominal width	$\pm 2.5$		
	200 or over in nominal width	$\pm 3.0$		
Depth (H)	Under 400 in nominal width	$\pm 2.0$		
	400 or over to and excl. 600 in nominal depth	$\pm 3.0$		
	600 or over in nominal depth	$\pm 4.0$		
Thickness	Flange ( $t_2$ )	Under 16		$\pm 1.0$
		16 or over to and excl. 25		$\pm 1.5$
		25 or over to and excl. 40		$\pm 1.7$
		40 or over		$\pm 2.0$
	Web ( $t_1$ )	Under 16	$\pm 0.7$	
		16 or over to and excl. 25	$\pm 1.0$	
		25 or over to and excl. 40	$\pm 1.5$	
		40 or over	$\pm 2.0$	
Length	7 m or under	$+ 400$		
	Over 7 m	Add 5 mm to the plus side tolerance given in the above column for every 1m increase in length or its fraction		
Out of square (T)	300 or under in nominal depth	1.0 % or under of width B, provided that 1.5 mm is the minimum		
	Over 300 in nominal depth	1.2 % or under of width B, provided that 1.5 mm is the minimum		
Bend	300 or under in nominal depth	0.15% or under of length	To be applied to bend such as sweep and camber	
	Over 300 in nominal depth	0.10% or under of length		
Eccentricity (S)	300 or under in nominal depth and 200 or under in nominal width	$\pm 2.5$	$S = \frac{b_1 - b_2}{2}$ 	
	Over 300 in nominal depth or over 200 in nominal width	$\pm 3.5$		
Concavity of web (W)	Under 400 in nominal depth	2.0		
	400 or over to and excl. 600 in nominal depth	2.5		
	600 or over in nominal depth	3.0		
Sectional squareness (e)		1.6% or under of width B or of depth H, provided that 3.0 mm is the minimum.		

## H-BEAM Use as construction work pillar, beam and truss structure



## WIDE FLANGE (WF) Use as steel structure and solar panel ground mounted



## ANGLE Use as tower structure



## U-CHANNEL Use as a part of stair and purlin



## Steel Driving Sustainability

### Through Circular Innovation

On the journey towards sustainability, steel stands out as a champion of circularity, effortlessly transitioning from one form to another: from products to scrap and back again.



### Reduce

Through advanced techniques like electric arc furnaces, steel production reduces carbon emissions, paving the way for a cleaner tomorrow.



### Reuse

With its durable strength, steel finds new purposes through reuse projects worldwide, where steel components are intelligently repurposed.



### Remanufacture

Steel's versatility shines in industries like automotive, where components are perfectly remanufactured, reducing waste and conserving resources.



### Recycle

Steel's recycling capability knows no bounds, leading global recycling efforts and saving energy.



Steel's adaptability allows it to seamlessly transition from products to scrap and back again, continuing the cycle of sustainability.



# Steel Melting Shop (SMS)





**Beam Plant (BP)**





# Light Section Mill (LSM)

Fix 3000L 71

MOVABLE