SSAB Domex Tube 355J2H

General Product Description

SSAB Domex Tube 355J2H is cold formed advanced structural hollow section. It meets or exceeds the requirements of standard EN 10219 and is available in circular, rectangular, square and special shapes. It is typically used in advanced engineering and construction where lower costs and safety are important. It has very clean chemistry and uniform quality. The impact ductility is tested at -40°C and it is suitable for hot-dip galvanizing. Also welding in corner areas is always permitted. SSAB Domex Tube 355J2H is manufactured by cold forming and high frequency welding from clean, high quality environmentally friendly steel by modern and efficient tube lines.

Dimension Range

SSAB Domex Tube 355J2H is available at circular, square and rectangular shapes.

Circular	42.4 - 323.9 mm
Square	40x40 - 300x300 mm
Rectangular	50x30 - 400x200 mm
Wall thickness	2.0 - 12.50 mm
Mill length	6000/12 000 mm

Other shapes, sizes and lengths are available upon request.

Dimensions

Circular

Diameter	2.0mm (kg/m)	2.5mm (kg/m)	3.0mm (kg/m)	4.0mm (kg/m)	5.0mm (kg/m)	6.0mm (kg/m)	8.0mm (kg/m)	10.0mm (kg/m)	12.5mm (kg/m)
42.4 mm	1.99	2.46	2.91	3.79					
48.3 mm	2.28	2.82	3.35	4.37					
60.3 mm	2.88	3.56	4.24	5.55	6.82				
76.1 mm	3.65	4.54	5.41	7.11	8.77				
88.9 mm		5.33	6.36	8.38	10.4	12.3			
101.6 mm		6.11	7.29	9.63	11.9	14.2			
108 mm		6.50	7.77	10.3	12.7	15.1			
114 mm		6.89	8.23	10.9	13.5	16.0			
127 mm		7.68	9.17	12.1	15.0	17.9			
139.7 mm				13.4	16.6	19.8	26.0	32.0	
168.3 mm				16.2	20.1	24.0	31.6	39.0	
193.7 mm				18.7	23.3	27.8	36.6	45.3	55.9
219.1 mm				21.2	26.4	31.5	41.7	51.6	63.7
273 mm				26.5	33.1	39.5	52.3	64.9	80.3
323.9 mm					39.3	47.0	62.3	77.4	96.0

Square

Height x Width	2.0mm (kg/m)	2.5mm (kg/m)	3.0mm (kg/m)	4.0mm (kg/m)	5.0mm (kg/m)	6.0mm (kg/m)	8.0mm (kg/m)	10.0mm (kg/m)	12.5mm (kg/m)
40 x 40 mm	2.31	2.82	3.30	4.20					
50 x 50 mm	2.93	3.60	4.25	5.45	6.56				
60 x 60 mm	3.56	4.39	5.19	6.71	8.13				
70 x 70 mm		5.17	6.13	7.97	9.70				
80 x 80 mm		5.96	7.07	9.22	11.3	13.2			
90 x 90 mm		6.74	8.01	10.5	12.8	15.1			
100 x 100 mm		7.53	8.96	11.7	14.4	17.0	21.4		
120 x 120 mm				14.3	17.6	20.8	26.4	31.8	
140 x 140 mm				16.8	20.7	24.5	31.4	38.1	
150 x 150 mm				18.0	22.3	26.4	34.0	41.3	48.7
160 x 160 mm				19.3	23.8	28.3	36.5	44.4	52.6
180 x 180 mm					27.0	32.1	41.5	50.7	60.5
200 x 200 mm					30.1	35.8	46.5	57.0	68.3
220 x 220 mm						39.6	51.5	63.2	76.2
250 x 250 mm						45.2	59.1	72.7	88.0
300 x 300 mm						54.7	71.6	88.4	108

Rectangular

Height x Width	2.0mm (kg/m)	2.5mm (kg/m)	3.0mm (kg/m)	4.0mm (kg/m)	5.0mm (kg/m)	6.0mm (kg/m)	8.0mm (kg/m)	10.0mm (kg/m)	12.5mm (kg/m)
50 x 30 mm	2.31	2.82	3.30	4.20					
60 x 40 mm	2.93	3.60	4.25	5.45	6.56				
80 x 40 mm	3.56	4.39	5.19	6.71	8.13				
80 x 60 mm		5.17	6.13	7.97	9.70				
100 x 40 mm		5.17	6.13	7.97	9.70				
100 x 50 mm		5.6	6.60	8.59	10.5	12.3			
100 x 60 mm		5.95	7.07	9.22	11.3	13.2			
100 x 80 mm		6.74	8.01	10.5	12.8	15.1			
120 x 60 mm		6.74	8.01	10.5	12.8	15.1			
120 x 80 mm		7.53	8.96	11.7	14.4	17.0	21.4	25.6	
140 x 60 mm				11.7	14.4	17.0			
140 x 80 mm				13.0	16.0	18.9			
150 x 50 mm				11.7	14.4	17.0			
150 x 100 mm				14.9	18.3	21.7	27.7	33.4	
160 x 70 mm				13.6	16.8	19.8	25.2		
160 x 80 mm				14.3	17.6	20.8	26.4	31.8	
180 x 100 mm				16.8	20.7	24.5	31.4	38.1	
200 x 100 mm				18.0	22.3	26.4	34.0	41.3	48.7
200 x 120 mm					23.8	28.3	36.5	44.4	52.6
220 x 120 mm					25.4	30.2	39.0	47.5	
250 x 100 mm					26.2	31.1	40.2	49.1	
250 x 150 mm					30.1	35.8	46.5	57.0	68.3
260 x 180 mm						39.6	51.5	63.2	
300 x 100 mm					30.1	35.8	46.5	57.0	68.3
300 x 150 mm						40.5	52.8	64.8	78.1
300 x 200 mm						45.2	59.1	72.7	88.0
400 x 200 mm						54.7	71.6	88.4	108

Mechanical Properties

Thickness (mm)	[Missing] (min MPa)	[Missing] (MPa)	Elongation A_5 [2] (min %)	Charpy-V **-40°C** 10x10 mm test specimen [1] (J)
2.00 - 2.99	355	510 - 680	20	27
3.00 - 12.50	355	470 - 630	20	27

Mechanical properties meet or **exceed** the requirements of EN 10219.

The mechanical properties for rectangular hollow sections are tested by SSAB on the longer side of the cross section.

[1] Impact testing according to EN ISO 148-1 is performed on thicknesses ≥ 6mm. The specified minimum value corresponds to a full-size specimen.

[2] The hollow sections with D/T < 15 (round) or (B + H)/2T < 12,5 (rectangular and square), the minimum value of elongation is reduced by 2.

Chemical Composition

C (max %)	Si[1)] (max %)	Mn (max %)	P (max %)	S (max %)
0.16	0.25 [1)]	1.60	0.020	0.012

Chemical composition meets or **exceeds** the requirements of EN 10219.

Chemical analyses enables welding in the corner area without restrictions (EN 1993-1-8).

The steel is aluminium-killed.

1) Si content guaranteed at 0.15–0.25 %.

Carbon Equivalent Values

CEV	0.39

CEV value **exceeds** the requirements of EN 10219.

$$CEV = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Cu + Ni}{15}$$

Tolerances

Characteristic	**Circular hollow sections** Tolerances meet or **exceed** the requirements of EN 10219
Outside diameter (D) [1)]	±1%, however a minimum of ±0.5 mm and a maximum of ±10 mm
Out-of-roundness	2%, when D/T ≤ 100
Thickness (T)	When D ≤ 323.9 mm: **-5%**/+10%, with a minimum of ±0.2 mm and maximum ±0.5 mm When 355.6 ≤ D ≤ 406.4 mm[3)]: ±10%, when T ≤ 5 mm / ±0.5 mm, when T > 5 mm When D > 406.4 mm[3)]: ±10%, with a maximum of ±2 mm
Straightness	0.20% of total length and 3 mm over any 1 m length
Mass per unit length	Individual tube: ±6%
Mill length	0/+50 mm, 6000 ≤ L ≤ 18000 mm (standard lengths 6000 & 12000 mm)
Exact length	Agreed at the time of enquiry and order

[1)] All external dimensions are measured with a minimum distance from the end of the section. The distance must be a minimum of 100 mm.

Characteristic	**Square hollow sections** Tolerances meet or **exceed** the requirements of EN 10219
Outside dimensions (B, H) [1)]	When B, H < 100 mm ±1 % minimum ±0.5 mm When 100 mm ≤ B, H ≤ 200 mm: ±0.8% When B, H > 200 mm: ±0.6%
Thickness (T)	**-5%**/ +10 %, with a minimum of ±0.2 mm and maximum ±0.5 mm
External corner profile	When T ≤ 6 mm: 1.6 x T–2.4 x T When 6 mm < T ≤ 10 mm: 2.0 x T-3.0 x T When T > 10 mm: 2.4 x T–3.6 x T
Squareness of side	90° ±1°
Concavity/convexity	0.8%, with a minimum of 0.5 mm
Twist	2 mm + 0.5 mm/m
Straightness	0.15% of total length and 3 mm over any 1 m length
Mass per unit length	Individual tube: ±6%
Mill length	0/+50 mm, 6000 ≤ L ≤ 18000 mm (standard lengths 6000 & 12000 mm)
Exact length	Agreed at the time of enquiry and order

[1)] All external dimensions are measured with a minimum distance from the end of the section. The distance must be a minimum of 100 mm.

Characteristic	Rectangular hollow sections Tolerances meet or **exceed** the requirements of EN 10219
Outside dimensions (B, H) [1)]	When B, H < 100 mm ±1 % minimum ±0.5 mm When 100 mm ≤ B, H ≤ 200 mm: ±0.8% When B, H > 200 mm: ±0.6%
Thickness (T)	**-5%**/ +10 %, with a minimum of ±0.2 mm and maximum ±0.5 mm
External corner profile	When T ≤ 6 mm: 1.6 x T–2.4 x T When 6 mm < T ≤ 10 mm: 2.0 x T-3.0 x T When T > 10 mm: 2.4 x T–3.6 x T
Squareness of side	90° ±1°
Concavity/convexity	0.8%, with a minimum of 0.5 mm
Twist	2 mm + 0.5 mm/m
Straightness	0.15% of total length and 3 mm over any 1 m length
Mass per unit length	Individual tube: ±6%
Mill length	0/+50 mm, 6000 ≤ L ≤ 18000 mm (standard lengths 6000 & 12000 mm)
Exact length	Agreed at the time of enquiry and order

[1)] All external dimensions are measured with a minimum distance from the end of the section. The distance must be a minimum of 100 mm.

Contact Information

www.ssab.com/contact