SSAB Domex Plus Tube Imperial

General Product Description

SSAB Domex Plus Tube 500MH is extra-high-strength structural hollow section.

It is available in rectangular, square and special shapes. Customized shapes and other tailoring options are available upon request. It is typically used in advanced engineering and construction where weight reduction, lower costs and safety are important. It meets the standard requirements of EN 10219 when applicable and is CE marked according to EN 1090-2.

SSAB Domex Plus Tube 500MH is manufactured by cold forming and high frequency welding from clean, high quality environmentally friendly steel by modern and efficient tube lines.

Imperial Dimensions

H		**B**		**T**			
inch	mm	inch	mm	3/16 inch 0.188 inch 4.78 mm	1/4 inch 0.25 inch 6.35 mm	5/16 inch 0.313 inch 7.95 mm	3/8 inch 0.375 inch 9.53 mm
6	152.4	**4**	101.6	15	15	15	15
6	152.4	**6**	152.4		15	15	15
7	177.8	**7**	177.8	15	15	15	15
8	203.2	**4**	101.6	50	15	15	15
10	254	**4**	101.6	15	15	15	15
8	203.2	**8**	203.2	15	15	15	15
9	228.6	**7**	177.8	50	50	50	15
10	254	**6**	152.4	15	15	15	15

For other dimensions, please contact Technical Support.

Mechanical Properties

Yield strength $R_{p0.2}$ (min MPa)	**Tensile strength R_m (MPa)**	**Elongation A_5 [1] (min %)**	**Charpy-V -40°C 10x10 mm test specimen [2] (J)**
500	580 - 760	15	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] 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.

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

Chemical Composition (ladle analysis)

C (max %)	**Si (max %)**	**Mn (max %)**	**P (max %)**	**S (max %)**	**Nb (max %)**	**V (max %)**	**Ti (max %)**
0.16 [1]	0.04	1.70	0.020 [1]	0.012 [1]	0.090	0.120	0.060

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] Value **exceed** the requirements of EN 10219.

Carbon Equivalent

Wall Thickness (mm)	**2.0 - 12.5**
CEV (max %)	0.41

CEV value exceeds the requirements of EN 10219.

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

Tolerances

Tolerance Square

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 ≤ 12000 - 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.

Tolerance Rectangular

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 ≤ 12000 - 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

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