

Carbon Steel Tubes For General Structural Purposes

JIS G 3444 - 1988 - STK 290 JIS G 3444 - 1988 - STK 500
 JIS G 3444 - 1988 - STK 400 JIS G 3444 - 1988 - STK 540

Outside Diameter	Wall Thickness	Calculated Weight	Cross-Sectional Area	Geometrical Moment of Inertia	Modulus of Section	Radius of Gyration of Area
mm	mm	kg/mm	cm ²	cm ⁴	cm ³	cm
190.7	4.5	20.7	26.32	1140	120	6.59
	5.0	22.9	29.17	1260	132	6.57
	6.0	27.3	34.82	1490	156	6.53
	7.0	31.7	40.40	1710	179	6.50
216.3	4.5	23.5	29.94	1680	155	7.49
	6.0	31.1	39.64	2190	203	7.44
	7.0	36.1	46.03	2520	233	7.40
267.4	6.0	38.7	49.27	421x10	315	9.24
	6.6	42.4	54.08	460x10	344	9.22
	7.0	45.0	57.26	486x10	363	9.21
	8.0	51.2	65.19	549x10	411	9.18
	9.0	57.3	73.06	611x10	457	9.14
	9.3	59.2	75.41	629x10	470	9.13
355.6	6.4	55.1	70.21	107x10 ²	602	12.30
	7.9	67.7	86.29	130x10 ²	734	12.30
	9.0	76.9	98.00	147x10 ²	828	12.30
	9.5	81.1	103.30	155x10 ²	871	12.20
	12.0	102.0	129.50	191x10 ²	108x10	12.20
	12.7	107.0	136.80	201x10 ²	113x10	12.10
406.4	7.9	77.6	98.90	196x10 ²	967	14.10
	9.0	88.2	112.40	222x10 ²	109x10	14.10
	9.5	93.0	118.50	233x10 ²	115x10	14.00
	12.0	117.0	148.70	289x10 ²	142x10	14.00
	12.7	123.0	157.10	305x10 ²	150x10	13.90
	16.0	154.0	196.20	374x10 ²	184x10	13.80
457.2	9.0	99.5	126.70	318x10 ²	140x10	15.80
	9.5	105.0	133.60	335x10 ²	147x10	15.80
	12.0	132.0	167.80	416x10 ²	182x10	15.70
	12.7	139.0	177.30	438x10 ²	192x10	15.70
	16.0	174.0	221.80	540x10 ²	236x10	15.60

Tolerances:

Description	Tolerance	
	Thickness (t)	t < 3mm
	3mm ≤ t < 12mm	± 10%
	12mm ≥ t	+ 10%, - 1.2mm
Outside Diameter (OD)	OD < 50mm	± 0.25mm
	50mm ≥ OD	± 0.5%

Tolerances - ASTM A-500

Tolerances	Square & Rectangular Hollow Sections		
	ASTM A-500		
Outside Dimension	Largest Outside Dia. Across Flat in (mm)	Tolerance, plus & minus in (mm)	
	2 1/2 (63.5) and under	0.020 (0.50)	
	Over 2 1/2 to 3 1/2 (63.5 to 88.9), incl	0.025 (0.64)	
	Over 3 1/2 to 5 1/2 (88.9 to 139.7), incl	0.030 (0.76)	
Over 5 1/2 (139.7)	1%		
Thickness	Plus and minus 10% of nominal thickness, exclusive of weld area		
Tolerances of Length	Plus 2 in (50.8mm) and minus zero on ordered lengths. (Please specify if any lighter tolerances is required)		
Out of Roundness	-		
Concavity / Convexity	Shall not exceed the outside dimension tolerance		
Squareness of Size	Adjacent side may deviate from 90 degrees by plus and minus 2 degrees max.		
External Corner Profile	3T (max.)		
Twist	Specified Dia of Longest Side, in (mm)	Max. Twist in 3ft, in	Max. Twist in 1m, mm
	1 1/2 (38.1) and under	0.050	1.390
	Over 1 1/2 to 2 1/2 (38.1 to 63.5), incl	0.062	1.720
	Over 2 1/2 to 4 (63.5 to 101.6), incl	0.075	2.090
	Over 4 to 6 (101.6 to 152.4), incl	0.087	2.420
	Over 6 to 8 (152.4 to 203.2), incl	0.100	2.780
Over 8 (203.2)	0.112	3.110	
Straightness	1/8 in x Total Length in ft 5		
Mass	-		