TIS 107 (JIS G3466)

Carbon Steel Rectangular Tubes for General Structure

JIS

TIS.107-2561

Nominal Size	Thickness	Weight	Cross Sectional Area	Geometrical Moment of Inertia		Modulus of Section		Radius of Gyration	
A x B	(t)		A	Ix	Iy	Zx	Zy	ix	iy
mm	mm	kg/m	cm^2	cm^4	cm^4	cm^3	cm^3	cm	cm
50 x 20	1.60*	1.63	2.072	6.08	1.42	2.43	1.42	1.17	0.829
	2.30*	2.25	2.872	8.00	1.83	3.20	1.83	1.67	0.798
50 x 25	2.00*	2.15	2.737	8.38	2.81	3.35	2.25	1.75	1.01
	2.30	2.44	3.102	9.31	3.10	3.72	2.48	1.73	1.00
	3.20	3.24	4.127	11.6	3.80	4.65	3.04	1.68	0.96
50 x 30	1.60*	1.88	2.392	7.96	3.60	3.18	2.40	1.82	1.23
	2.30*	2.62	3.332	10.6	4.76	4.25	3.17	1.79	1.20
60 x 30	1.60*	2.13	2.712	12.5	4.25	4.16	2.83	2.15	1.25
	2.30	2.98	3.792	16.8	5.65	5.61	3.76	2.11	1.22
	3.20	3.99	5.087	21.4	7.08	7.15	4.72	2.05	1.18
75 x 20	1.60*	2.25	2.872	17.6	2.10	4.69	2.10	2.47	0.855
	2.30*	3.16	4.022	23.7	2.73	6.31	2.73	2.43	0.824
75 x 38	2.30	3.81	4.850	34.6	12.0	9.23	6.30	2.67	1.57
	3.20	5.15	6.559	45.0	15.4	12.0	8.09	2.62	1.53
75 x 45	1.60*	2.88	3.672	28.4	12.9	7.56	5.75	2.78	1.88
	2.30	4.06	5.172	38.9	17.6	10.4	7.82	2.74	1.84
	3.20	5.50	7.007	50.8	22.8	13.5	10.1	2.69	1.80
80 x 40	1.60*	2.88	3.672	30.7	10.5	7.68	5.26	2.89	1.69
	2.30*	4.06	5.172	42.1	14.3	10.5	7.14	2.85	1.66
	3.20*	5.50	7.007	54.9	18.4	13.7	9.21	2.80	1.62
90 x 45	2.30*	4.60	5.862	61.0	20.8	13.6	9.22	3.23	1.88
	3.20*	6.25	7.967	80.2	27.0	17.8	12.00	3.17	1.84
100 x 20	1.60*	2.88	3.672	38.1	2.78	7.61	2.78	3.22	0.870
	2.30*	4.06	5.172	51.9	3.6	10.4	3.64	3.17	0.839
100 x 40	1.60*	3.38	4.312	53.5	12.9	10.7	6.44	3.52	1.73
	2.30*	4.78	6.092	73.9	17.5	14.8	8.77	3.48	1.70
	4.20*	8.32	10.6	120.0	27.6	24.0	13.8	3.36	1.61
100 x 50	1.60*	3.64	4.632	61.3	21.1	12.3	8.43	3.64	2.13
	2.30	5.14	6.552	84.8	29.0	17.0	11.6	3.6	2.1
	3.20	7.01	8.927	112	38.0	22.5	15.2	3.55	2.06
	4.50	9.55	12.17	147	48.9	29.3	19.5	3.47	2.00
125 x 40	1.60*	4.01	5.112	94.4	15.8	15.1	7.91	4.30	1.76
	2.30*	5.69	7.242	131	21.6	20.9	10.8	4.25	1.73
125 x 50	2.30*	6.05	7.702	148	35.5	23.7	14.2	4.39	2.15
	2.50*	6.55	8.339	160	38.1	25.5	15.2	4.37	2.14
	2.80*	7.29	9.285	176	41.9	28.2	16.8	4.36	2.12
125 x 75	2.30	6.95	8.852	192	87.5	30.6	23.3	4.65	3.14
	3.20	9.52	12.13	257	117.0	41.1	31.1	4.60	3.10
	4.00	11.70	14.95	311	141.0	49.7	37.5	4.56	3.07
	4.50	13.10	16.67	342	155.0	54.8	41.2	4.53	3.04
	6.00	17.00	21.63	428	192.0	68.5	51.1	4.45	2.98
150 x 50	2.30	6.95	8.85	236	42.0	31.4	16.8	5.16	2.18
	3.20	9.52	12.10	316	55.5	42.1	22.2	5.10	2.14
	4.50	13.10	16.70	420	72.2	56.0	28.9	5.02	2.08

Note : * Check availability of products

Dimension Tolerances

Length of Side	A,B ≤ 100 mm : ± 1.5 mm A,B > 100 mm ± 1.5%
Thickness	< 3mm : ± 0.3 mm ≥ 3 mm : ± 10%
Weight	TIS ± 10% , JIS N/A

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Nominal Size	Thickness	Weight	Cross Sectional Area	Geometrical Moment of Inertia		Modulus of Section		Radius of Gyration	
A x B	(t)		A	Ix	Iy	Zx	Zy	ix	iy
mm	mm	kg/m	cm^2	cm^4	cm^4	cm^3	cm^3	cm	cm
150 x 75	3.20	10.80	13.73	402	137	53.6	36.6	5.41	3.16
	4.50	14.90	18.92	539	183	71.9	48.7	5.34	3.11
150 x 80	4.50*	15.20	19.37	563	211	75.0	52.9	5.39	3.30
	5.00*	16.80	21.36	614	230	81.9	57.5	5.36	3.28
	6.00*	19.80	25.23	710	264	94.7	66.1	5.31	3.24
150 x 100	3.20	12.00	15.33	488	262	65.1	52.5	5.64	4.14
	4.50	16.60	21.17	658	352	87.7	70.4	5.58	4.08
	6.00	21.70	27.63	835	444	111	88.8	5.50	4.01
	9.00*	31.10	39.67	1,130	595	151	119	5.33	3.87
200 x 50	2.80	10.60	13.48	595	65	59.5	26.1	6.64	2.20
	3.20	12.00	15.33	671	73	67.1	29.2	6.62	2.18
200 x 100	3.20	14.50	18.53	981	337	98.1	67.5	7.28	4.27
	4.50	20.10	25.67	1,330	455	133	90.9	7.20	4.21
	6.00	26.40	33.63	1,700	577	170	115	7.12	4.14
	9.00*	38.20	48.67	2,350	782	235	156	6.94	4.01

Note : * Check availability of products

Dimension Tolerances

Length of Side	A,B ≤ 100 mm : ± 1.5 mm A,B > 100 mm ± 1.5%
Thickness	< 3mm : ± 0.3 mm ≥ 3 mm : ± 10%
Weight	TIS ± 10% , JIS N/A



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Norminal Size	Thickness (t)	Weight	Cross Sectional Area A	Geometrical Moment of Inertia Ix , Iy	Modulus of Section Zx , Zy	Radius of Gyration Ix , Iy
mm	mm	kg/m	cm^2	cm^4	cm^3	cm
25 x 25	2.0	1.36	1.737	1.48	1.19	0.924
	2.3	1.53	1.972	1.61	1.29	0.904
32 x 32	2.0*	2.04	2.896	3.71	2.32	1.20
	2.3*	2.69	3.423	4.54	2.84	1.15
38 x 38	2.3	2.47	3.148	6.54	3.44	1.44
	3.2	3.29	4.191	8.18	4.30	1.40
40 x 40	1.6*	1.88	2.392	5.79	2.90	1.56
	2.3*	2.62	3.332	7.73	3.86	1.52
50 x 50	1.6*	2.38	3.032	11.7	4.68	1.96
	2.3	3.34	4.252	15.9	6.34	1.93
	3.2	4.50	5.727	20.4	8.16	1.89
	4.5	6.02	7.669	25.5	10.20	1.82
	6.0	7.56	9.633	29.5	11.78	1.75
60 x 60	1.6*	2.88	3.672	20.7	6.89	2.37
	2.3	4.06	5.172	28.3	9.44	2.34
	3.2	5.50	7.007	36.9	12.30	2.30
75 x 75	1.6*	3.64	4.632	41.3	11.00	2.99
	2.3*	5.14	6.552	57.1	15.20	2.95
	3.2	7.01	8.927	75.5	20.10	2.91
	4.5	9.55	12.17	98.6	26.30	2.85
80 x 80	2.3*	5.50	7.012	69.9	17.50	3.16
	3.2*	7.51	9.567	92.7	23.20	3.11
	4.5*	10.3	13.07	122	30.40	3.05
90 x 90	2.3*	6.23	7.932	101	22.40	3.56
	3.2*	8.51	10.85	135	29.90	3.52
100 x 100	2.3	6.95	8.852	140	27.90	3.97
	3.2	9.52	12.13	187	37.50	3.93
	4.0	11.70	14.95	226	45.30	3.89
	4.5	13.10	16.67	249	49.90	3.87
	6.0	17.00	21.63	311	62.30	3.79
	9.0	24.10	30.67	408	81.60	3.65
	12.0*	30.20	38.53	471	94.30	3.50
125 x 125	2.3	8.75	11.15	278	44.50	4.99
	3.2	12.00	15.33	376	60.10	4.95
	4.5	16.60	21.17	506	80.90	4.89
	5.0*	18.30	23.36	553	88.40	4.86
	6.0	21.70	27.63	641	103.00	4.82
	9.0*	31.10	39.67	865	138.00	4.67
	12.0*	39.70	50.53	1,030	165.00	4.52
150 x 150	3.2	14.54	18.53	661	88.10	5.97
	4.5	20.10	25.67	896	120.00	5.91
	5.0*	22.30	28.36	982	131.00	5.89
	6.0	26.40	33.63	1,150	153.00	5.84
	9.0*	38.20	48.67	1,580	210.00	5.69

Note : * Check availability of products

Dimension Tolerances

Length of Side	A,B ≤ 100 mm : ± 1.5 mm A,B > 100 mm ± 1.5%
Thickness	< 3mm : ± 0.3 mm ≥ 3 mm : ± 10%
Weight	TIS ± 10% , JIS N/A