

## Chemical Composition

	STKR 400 Max	STK 490 Max
Carbon	0.25	0.18
Silicon	-	0.55
Manganese	-	1.65
Phosphorus	0.04	0.04
Sulphur	0.04	0.04

## Mechanical Properties

	STKR 400 Min	STK 490 Min
Tensile	400 MPa	490 MPa
Yield	245 MPa	325 MPa
Elongation	23%	23%

## JIS G3466 : CARBON STEEL TUBES FOR GENERAL STRUCTURE - SQUARE TUBES

Nominal Size (mm)			Thickness	Unit Mass	Cross Sectional area	Moment of Inertia	Modulus of Section	Radius of Gyration
A X B	min	max				cm <sup>4</sup>	cm <sup>3</sup>	cm
mm	mm	mm	mm	kg/m	cm <sup>2</sup>	I <sub>x</sub> I <sub>y</sub>	Z <sub>x</sub> Z <sub>y</sub>	i <sub>x</sub> i <sub>y</sub>
40 x 40	38.5 x 38.5	41.5 x 41.5	1.6	1.88	2.392	5.79	2.9	1.56
			2.3	2.62	3.332	7.73	3.86	1.52
50 x 50	48.5 x 48.5	51.5 x 51.5	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
60 x 60	58.5 x 58.5	61.5 x 61.5	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	5.5	7.007	36.9	12.3	2.3
75 x 75	73.5 x 73.5	76.5 x 76.5	1.6	3.64	4.632	41.3	11	2.99
			2.3	5.14	6.552	57.1	15.2	2.95
			3.2	7.01	8.927	75.5	20.1	2.91
			4.5	9.55	12.17	98.6	26.3	2.85
80 x 80	78.5 x 78.5	81.5 x 81.5	2.3	5.5	7.012	69.9	17.5	3.16
			3.2	7.51	9.567	92.7	23.2	3.11
			4.5	10.3	13.07	122	30.4	3.05
90 x 90	88.5 x 88.5	91.5 x 91.5	2.3	6.23	7.932	101	22.4	3.56
			3.2	8.51	10.85	135	29.9	3.52
100 x 100	98.5 x 98.5	101.5 x 101.5	2.3	6.95	8.852	140	27.9	3.97
			3.2	9.52	12.13	187	37.5	3.93
			4.0	11.7	14.95	226	45.3	3.89
			4.5	13.1	16.67	249	49.9	3.87
			6.0	17.0	21.63	311	62.3	3.79
			9.0	24.1	30.67	408	81.6	3.65
125 x 125	123.13 x 123.13	126.88 x 126.88	12.0	30.2	38.53	471	94.3	3.5
			3.2	12.0	15.33	376	60.1	4.95
			4.5	16.6	21.17	506	80.9	4.89
			5.0	18.3	23.36	553	88.4	4.86
			6.0	21.7	27.63	641	103	4.82
150 x 150	147.75 x 147.75	152.25 x 152.25	9.0	31.1	39.67	865	138	4.67
			4.5	20.1	25.67	896	120	5.91
			5.0	22.3	28.36	982	131	5.89
			6.0	26.4	33.63	1150	153	5.84
			9.0	38.2	48.67	1580	210	5.69

## TOLERANCE

OD	A,B ≤ 100 mm:	± 1.5 mm
	A,B > 100 mm:	± 1.5%
WT	t < 3.0 mm	± 0.3 mm
	t ≥ 3.0 mm	± 10%

## Chemical Composition

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Phosphorus	0.04	0.04
Sulphur	0.04	0.04

## Mechanical Properties

	STKR 400 <b>Min</b>	STK 490 <b>Min</b>
Tensile	400 MPa	490 MPa
Yield	245 MPa	325 MPa
Elongation	23%	23%

## JIS G3466: CARBON STEEL TUBES FOR GENERAL STRUCTURE - RECTANGULAR TUBES

Nominal Size (mm)			Thickness	Unit Mass	Cross Sectional area	Moment of Inertia		Modulus of Section		Radius of Gyration	
A X B	min	max				cm <sup>4</sup>		cm <sup>3</sup>		cm	
mm	mm	mm	mm	kg/m	cm <sup>2</sup>	$I_x$	$I_y$	$Z_x$	$Z_y$	$i_x$	$i_y$
50 x 20	48.5 x 18.5	51.5 x 21.5	1.6	1.63	2.072	6.08	1.42	2.43	1.42	1.71	0.829
			2.3	2.25	2.872	8	1.83	3.2	1.83	1.67	0.798
50 x 30	48.5 x 28.5	51.5 x 31.5	1.6	1.88	2.392	7.96	3.6	3.18	2.4	1.82	1.23
			2.3	2.62	3.332	10.6	4.76	4.25	3.17	1.79	1.2
60 x 30	58.5 x 28.5	61.5 x 31.5	1.6	2.13	2.712	12.5	4.25	4.16	2.83	2.15	1.25
			2.3	2.98	3.792	16.8	5.65	5.61	3.76	2.11	1.22
			3.2	3.99	5.087	21.4	7.08	7.15	4.72	2.05	1.18
75 x 20	73.5 x 18.5	76.5 x 21.5	1.6	2.25	2.872	17.6	2.1	4.69	2.1	2.47	0.855
			2.3	3.16	4.022	23.7	2.73	6.31	2.73	2.43	0.824
100 x 50	98.5 x 48.5	101.5 x 51.5	1.6	3.64	4.632	61.3	21.1	12.3	8.43	3.64	2.13
			2.3	5.14	6.552	84.8	29	17	11.6	3.6	2.1
			3.2	7.01	8.927	112	38	22.5	15.2	3.55	2.06
			4.5	9.55	12.17	147	48.9	29.3	19.5	3.47	2
125 x 75	123.12 x 73.5	126.87 x 76.5	2.3	6.95	8.852	192	87.5	30.6	23.3	4.65	3.14
			3.2	9.52	12.13	257	117	41.1	31.1	4.6	3.1
			4.0	11.7	14.95	311	141	49.7	37.5	4.56	3.07
			4.5	13.1	16.67	342	155	54.8	41.2	4.53	3.04
			6.0	17	21.63	428	192	68.5	51.1	4.45	2.98
150 x 75	147.75 x 73.5	152.25 x 76.5	3.2	10.8	13.73	402	137	53.6	36.6	5.41	3.16
150 x 100	147.75 x 98.5	152.25 x 101.5	3.2	12	15.33	488	262	65.1	52.5	5.64	4.14
			4.5	16.6	21.17	658	352	87.7	70.4	5.58	4.08
			6.0	21.7	27.63	835	444	111	88.8	5.5	4.01
			9.0	31.1	39.67	1130	595	151	119	5.33	3.87
200 x 100	197 x 98.5	203 x 101.5	4.5	20.1	25.67	1130	455	133	90.9	7.2	4.21
			6.0	26.4	33.63	1700	577	170	115	7.12	4.14
			9.0	38.2	48.67	2350	782	235	156	6.94	4.01

## TOLERANCE

OD	A,B ≤ 100 mm: ± 1.5 mm
	A,B > 100 mm: ± 1.5%
WT	t < 3.0 mm ± 0.3 mm
Weight	t ≥ 3.0 mm ± 10%