



Grade	% Chemical Composition (Max)					Mechanical Properties (Min)		
	C	Si	Mn	P	S	Yield Strength	Tensile Strength	Elongation
						MPa	MPa	%
STKR400	0.25	-	-	0.040	0.040	245	400	23
STKR490	0.18	0.55	1.50	0.040	0.040	325	490	23

Nominal Size A x B	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
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
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	12.3	2.30
75 x 75	1.6	3.64	4.632	41.3	11.0	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	2.3	5.50	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	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	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	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
	9.0	31.1	39.67	865	138	4.67
150 x 150	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
175 x 175	4.5	23.7	30.17	1450	166	6.93
	5.0	26.2	33.36	1590	182	6.91
	6.0	31.1	39.63	1860	213	6.86
200 x 200	4.5	27.2	34.67	2190	219	7.95
	6.0	35.8	45.63	2830	283	7.88
	8.0	46.9	59.79	3620	362	7.78
	9.0	52.3	66.67	3990	399	7.73
	12.0	67.9	86.53	4980	498	7.59
250 x 250	5.0	38.0	48.36	4810	384	9.97
	6.0	45.2	57.63	5670	454	9.92
	8.0	59.5	75.79	7320	585	9.82
	9.0	66.5	84.67	8090	647	9.78
	12.0	86.8	110.5	10300	820	9.63
300 x 300	4.5	41.3	52.67	7630	508	12.0
	6.0	54.7	69.63	9960	664	12.0
	9.0	80.6	102.7	14300	956	11.8
	12.0	106	134.5	18300	1220	11.7

Dimension Tolerances	Length of Side	Thickness
	A,B ≤ 100 mm. : ±1.5 mm. A,B > 100 mm. : ±1.5%	t < 3.0 mm. : ±0.3 mm. t ≥ 3.0 mm. : ±10%



Carbon Steel Rectangular Tubes for General Structure

JIS G3466



Grade	% Chemical Composition (Max)					Mechanical Properties (Min)		
	C	Si	Mn	P	S	Yield Strength	Tensile Strength	Elongation
						MPa	MPa	%
STKR400	0.25	-	-	0.040	0.040	245	400	23
STKR490	0.18	0.55	1.50	0.040	0.040	325	490	23

Nominal Size A x B	Thickness (t)	Weight	Cross Sectional Area A	Geometrical Moment of Inertia		Modulus of Section		Radius of Gyration	
				I _x	I _y	Z _x	Z _y	i _x	i _y
mm.	mm.	kg/m	cm ²	cm ⁴	cm ⁴	cm ³	cm ³	cm	cm
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 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
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	3.60	2.10
	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 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	41.1	31.1	4.60	3.10
	4.00	11.7	14.95	311	141	49.7	37.5	4.56	3.07
	4.50	13.1	16.67	342	155	54.8	41.2	4.53	3.04
	6.00	17.0	21.63	428	192	68.5	51.1	4.45	2.98
150 x 75	3.20	10.8	13.73	402	137	53.6	36.6	5.41	3.16
150 x 80	4.50	15.2	19.37	563	211	75.0	52.9	5.39	3.30
	5.00	16.8	21.36	614	230	81.9	57.5	5.36	3.28
	6.00	19.8	25.23	710	264	94.7	66.1	5.31	3.24
150 x 100	3.20	12.0	15.33	488	262	65.1	52.5	5.64	4.14
	4.50	16.6	21.17	658	352	87.7	70.4	5.58	4.08
	6.00	21.7	27.63	835	444	111	88.8	5.50	4.01
	9.00	31.1	39.67	1130	595	151	119	5.33	3.87
200 x 100	4.50	20.1	25.67	1330	455	133	90.9	7.20	4.21
	6.00	26.4	33.63	1700	577	170	115	7.12	4.14
	9.00	38.2	48.67	2350	782	235	156	6.94	4.01
200 x 150	4.50	23.7	30.17	1760	1130	176	151	7.64	6.13
	6.00	31.1	39.63	2270	1460	227	194	7.56	6.06
	9.00	45.3	57.67	3170	2020	317	270	7.41	5.93
250 x 150	6.00	35.8	45.63	3890	1770	311	236	9.23	6.23
	9.00	52.3	66.67	5480	2470	438	330	9.06	6.09
	12.00	67.9	86.53	6850	3070	548	409	8.90	5.95
300 x 200	6.00	45.2	57.63	7370	3960	491	396	11.3	8.29
	9.00	66.5	84.67	10500	5630	702	563	11.2	8.16
	12.00	86.8	110.5	13400	7110	890	711	11.0	8.02
350 x 150	6.00	45.2	57.63	8910	2390	509	319	12.4	6.44
	9.00	66.5	84.67	12700	3370	726	449	12.3	6.31
	12.00	86.8	110.5	16100	4210	921	562	12.1	6.17
400 x 200	6.00	54.7	69.63	14800	5090	739	509	14.6	8.55
	9.00	80.6	102.7	21300	7270	1070	727	14.4	8.42
	12.00	106	134.5	27300	9230	1360	923	14.2	8.23

Dimension Tolerances	Length of Side	Thickness
	A, B ≤ 100 mm. : ±1.5 mm. A, B > 100 mm. : ±1.5%	t < 3.0 mm. : ±0.3 mm. t ≥ 3.0 mm. : ±10%