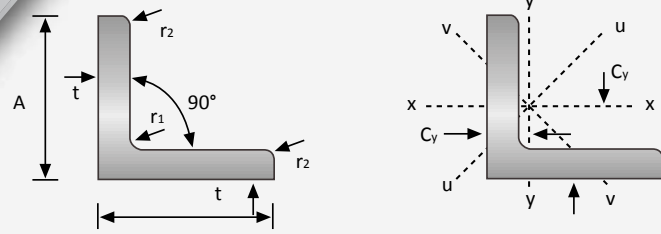
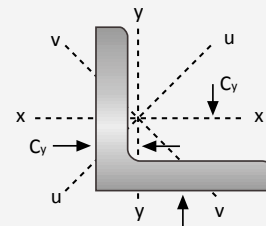
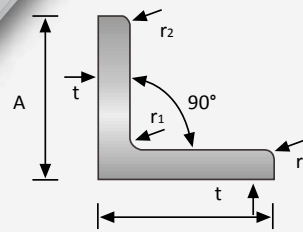


# ANGLE BARS



Standard Sectional Dimension		Unit Weight	Radius		Sectional Area	Distance Centre Of Gravity	Second Moment of Area			Radius Of Gyration			Elastic Modulus
			Root	Toe			Axis	Axis	Axis	Axis	Axis	Axis	
			r <sub>1</sub>	r <sub>2</sub>			C <sub>x</sub> and C <sub>y</sub>	x-x, y-y	u-u	v-v	x-x, y-y	u-u	v-v
A x A	Thickness t (mm)	Kg/m	mm	mm	cm <sup>2</sup>	cm	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm	cm <sup>3</sup>
20 x 20	2.5	0.74	--	--	--	--	--	--	--	--	--	--	--
	3	0.86	3.5	2.4	1.11	0.593	0.381	0.601	0.160	0.585	0.735	0.380	0.271
25 x 25	2.5	0.95	--	--	--	--	--	--	--	--	--	--	--
	3	1.12	3.5	2.4	1.41	0.718	0.784	1.24	0.326	0.745	0.938	0.481	0.440
	4	1.5	3.5	2.4	1.84	0.758	1.00	1.58	0.422	0.737	0.926	0.479	0.574
	5	1.76	3.5	2.4	2.25	0.796	1.19	1.87	0.516	0.728	0.912	0.479	0.701
30 x 30	6	2.24	--	--	--	--	--	--	--	--	--	--	--
	2.5	1.14	--	--	--	--	--	--	--	--	--	--	--
	3	1.36	5	2.4	1.74	0.836	1.41	2.23	0.590	0.901	1.13	0.582	0.652
	4	1.76	5	2.4	2.27	0.879	1.81	2.86	0.758	0.893	1.12	0.578	0.853
38 x 38	5	2.16	5	2.4	2.78	0.919	2.17	3.42	0.921	0.884	1.11	0.576	1.04
	6	2.74	--	--	--	--	--	--	--	--	--	--	--
	2.5	1.46	--	--	--	--	--	--	--	--	--	--	--
	3	1.74	6	2.4	2.24	1.03	2.99	4.72	1.25	1.15	1.45	0.748	1.08
50 x 50	4	2.26	6	2.4	2.93	1.07	3.85	6.10	1.61	1.15	1.44	0.741	1.41
	5	2.79	6	2.4	3.60	1.12	4.66	7.36	1.95	1.14	1.43	0.736	1.73
	6	3.50	6	2.4	4.25	1.15	5.40	8.51	2.29	1.13	1.41	0.733	2.04
	3	2.33	7	2.4	2.99	1.32	7.06	11.1	2.97	1.54	1.93	0.997	1.92
60 x 60	4	3.06	7	2.4	3.92	1.37	9.17	14.5	3.82	1.53	1.92	0.987	2.52
	5	3.77	7	2.4	4.83	1.41	11.2	17.7	4.64	1.52	1.91	0.980	3.11
	6	4.43	7	2.4	5.72	1.45	13	20.6	5.43	1.51	1.9	0.974	3.67
	8	5.78	7	2.4	7.44	1.53	16.5	25.9	6.97	1.49	1.87	0.968	4.74
63 x 63	5	4.55	8	2.4	5.86	1.65	19.8	31.4	8.24	1.84	2.31	1.19	4.56
	6	5.42	8	2.4	6.95	1.7	23.2	36.8	9.65	1.83	2.30	1.18	5.4
65 x 65	5	4.75	8	2.4	6.16	1.73	23.1	36.6	9.58	1.93	2.44	1.25	5.05
	6	5.71	8	2.4	7.31	1.77	27.1	42.9	11.2	1.92	2.42	1.24	5.98
70 x 70	5	5.00	9	2.4	6.40	1.77	25.5	40.3	10.6	2.00	2.51	1.29	5.39
	6	5.91	9	2.4	7.59	1.82	29.9	47.4	12.4	1.98	2.50	1.28	6.38
	8	7.66	9	2.4	9.91	1.90	38.2	60.4	15.9	1.96	2.47	1.27	8.29
	9	8.55	9	2.4	11.0	1.94	42.0	66.4	17.6	1.95	2.45	1.26	9.21
75 x 75	6	6.38	9	2.4	8.19	1.94	37.7	59.8	15.7	2.15	2.7	1.38	7.48
	7	7.38	9	2.4	9.46	1.98	43.1	68.3	17.9	2.13	2.69	1.38	8.59
	8	8.43	9	2.4	10.71	2.02	48.3	76.5	20.1	2.12	2.67	1.37	9.7
80 x 80	5	5.76	10	4.8	7.37	2.00	38.7	61.2	16.2	2.29	2.88	1.48	7.02
	6	6.85	10	4.8	8.76	2.04	45.7	72.4	19.0	2.28	2.88	1.47	8.38
	8	9.03	10	4.8	11.5	2.13	59.0	93.5	24.5	2.27	2.85	1.46	11.0
	9	9.96	10	4.8	12.8	2.17	65.3	103	27.2	2.26	2.84	1.46	12.3
	12	13.00	10	4.8	16.7	2.29	82.7	130	35.0	2.23	2.80	1.45	15.9
80 x 80	6	7.32	10	4.8	9.36	2.17	56.0	88.7	23.2	2.45	3.08	1.58	9.6
	8	9.66	10	4.8	12.3	2.26	72.4	115	30.0	2.43	3.06	1.56	12.6
	9	10.70	10	4.8	--	--	--	--	--	--	--	--	--

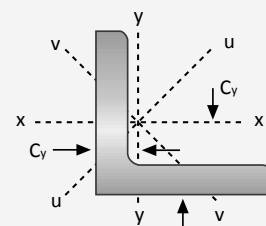
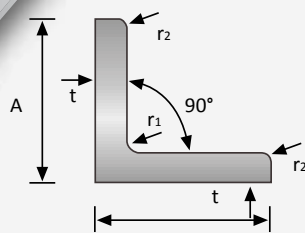
# ANGLE BARS



Standard Sectional Dimension		Unit Weight	Radius		Sectional Area	Distance Centre Of Gravity	Second Moment of Area			Radius Of Gyration			Elastic Modulus
			Root	Toe			Axis	Axis	Axis	Axis	Axis	Axis	
			r <sub>1</sub>	r <sub>2</sub>			C <sub>x</sub> and C <sub>y</sub>	x-x, y-y	u-u	v-v	x-x, y-y	u-u	
A x A	Thickness t (mm)	Kg/m	mm	mm	cm <sup>2</sup>	cm	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm	cm <sup>3</sup>
90 x 90	6	8.28	11	4.8	10.6	2.41	81.0	128	33.7	2.76	3.48	1.78	12.3
	7	9.59	11	4.8	12.3	2.46	93.2	148	38.7	2.76	3.47	1.77	14.3
	8	10.90	11	4.8	13.9	2.50	105	167	43.5	2.75	3.46	1.77	16.2
	9	12.20	11	4.8	15.6	2.54	117	185	48.2	2.74	3.45	1.76	18.0
	10	13.30	11	4.8	17.2	2.58	128	202	52.9	2.73	3.43	1.76	19.9
100 x 100	6	9.20	12	4.8	11.9	2.65	113	178	47.0	3.08	3.88	1.99	15.3
	7	10.70	12	4.8	13.7	2.70	130	206	53.9	3.08	3.87	1.98	17.8
	8	12.20	12	4.8	15.6	2.75	146	232	60.6	3.07	3.86	1.97	20.2
	9	13.50	12	4.8	--	--	--	--	--	--	--	--	--
	10	15.00	12	4.8	19.2	2.83	178	283	73.8	3.05	3.84	1.96	24.8
	12	17.80	12	4.8	22.8	2.91	208	330	86.5	3.02	3.81	1.95	29.4
125 x 125	10	19.09	14	4.8	24.3	3.44	360	570	149	3.84	4.84	2.47	39.7
	12	22.67	14	4.8	28.9	3.53	422	669	174	3.82	4.81	2.46	47.0
150 x 150	10	23.00	16	4.8	29.5	4.06	635	1008	263	4.64	5.85	2.99	58.0
	12	27.30	16	4.8	35.0	4.14	748	1187	309	4.62	5.82	2.97	68.9
	15	33.80	16	4.8	43.2	4.26	909	1442	375	4.59	5.78	2.95	84.6
200 x 200	15	45.30	18	4.8	58.3	5.50	2237	3555	919	6.19	7.81	3.97	154
	20	59.90	18	4.8	76.6	5.70	2877	4569	1185	6.13	7.72	3.93	201

Grades:  
 EN 10025 S275JR, S355JR  
 ASTM A36  
 JIS G 3101 SS400

# ANGLE BARS



Standard Sectional Dimension		Unit Weight	Radius		Sectional Area	Distance Centre Of Gravity		Second Moment of Area				Radius Of Gyration				Elastic Modulus	
			Root	Toe				Axis		Axis		Axis		Axis			
			r <sub>1</sub>	r <sub>2</sub>				x-x	y-y	u-u	v-v	x-x	y-y	u-u	v-v	x-x	y-y
A x B	Thickness t (mm)	Kg/m	mm	mm	cm <sup>2</sup>	cm		cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm <sup>4</sup>	cm	cm	cm	cm	cm <sup>3</sup>	cm <sup>3</sup>
75 x 50	6	5.76	7	2.4	7.22	2.45	1.21	40.9	14.6	47.1	8.48	2.38	1.42	2.55	1.08	8.10	3.87
	8	7.35	7	2.4	9.44	2.53	1.29	52.4	18.6	60.1	10.9	2.36	1.40	2.52	1.07	10.5	5.01
100 x 75	7	9.32	10	5.0	11.9	3.06	1.84	118	56.9	144	30.7	3.15	2.19	3.49	1.61	17.0	10.1
	8	10.60	10	4.8	13.5	3.11	1.88	133	64.2	163	34.6	3.14	2.18	3.48	1.60	19.3	11.4
	9	11.80	10	4.8	15.1	3.15	1.92	148	71.1	181	38.4	3.13	2.17	3.46	1.60	21.6	12.7
	10	13.00	10	4.8	16.6	3.19	1.96	162	77.7	198	42.2	3.12	2.16	3.45	1.59	23.8	14.0
125 x 75	7	10.70	11	4.8	13.7	4.10	1.64	220	60.5	244	36.7	4.01	2.10	4.22	1.64	26.2	10.3
	9	13.60	11	4.8	17.4	4.19	1.73	276	75.5	306	45.8	3.99	2.09	4.20	1.62	33.2	13.1
	10	15.00	11	4.8	19.2	4.23	1.77	303	82.6	336	50.2	3.98	2.08	4.18	1.62	36.7	14.4
	12	17.80	11	4.8	22.7	4.32	1.84	355	96.0	392	58.8	3.95	2.06	4.16	1.61	43.4	17.0
150 x 75	7	12.10	12	5.0	15.5	5.17	1.50	364	63.1	386	40.8	4.85	2.02	5.00	1.62	37.0	10.5
	9	15.30	12	8.5	19.4	5.25	1.55	447	75.3	473	48.7	4.79	1.97	4.93	1.58	45.8	12.7
	10	17.00	11	4.8	21.7	5.32	1.62	503	86.3	533	55.8	4.82	2.00	4.96	1.60	52.0	14.7
	12	20.10	11	4.8	25.7	5.41	1.70	591	100	626	65.3	4.79	1.98	4.93	1.59	61.6	17.3
150 x 90	9	16.40	12	6.0	20.9	4.95	2.00	485	133	537	80.5	4.81	2.52	5.06	1.96	48.2	19.0
	10	18.20	12	4.8	23.2	5.00	2.04	536	147	595	89.2	4.81	2.52	5.06	1.96	53.7	21.2
	12	21.60	12	4.8	27.6	5.09	2.12	630	172	698	105	4.78	2.50	5.03	1.95	63.6	25.0
	15	26.60	12	4.8	34.0	5.21	2.24	764	207	844	127	4.74	2.47	4.99	1.93	78.1	30.6
150 x 100	9	17.10	12	6.0	21.8	4.77	2.30	502	181	579	104	4.79	2.88	5.15	2.18	49.1	23.5
	10	18.79	13	6.5	24.2	4.80	2.34	552	198	635	114	4.78	2.86	5.13	2.17	54.1	25.8
	12	22.40	12	8.5	28.6	4.88	2.41	642	228	738	132	4.74	2.83	5.08	2.15	63.4	30.1
200 x 100	10	23.00	15	4.8	29.4	6.95	2.03	1233	215	1309	138	6.48	2.70	6.68	2.17	94.5	27.0
	12	27.30	15	4.8	34.9	7.04	2.11	1454	252	1544	162	6.45	2.68	6.65	2.16	112	31.9
	15	33.70	15	4.8	43.1	7.17	2.23	1772	303	1879	197	6.41	2.65	6.60	2.14	138	39.0

Grades:  
 EN 10025 S275JR  
 ASTM A36  
 JIS G 3101 SS400