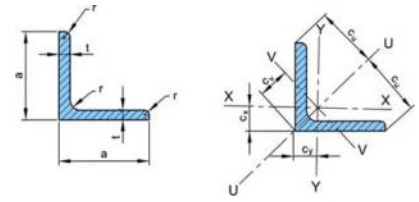


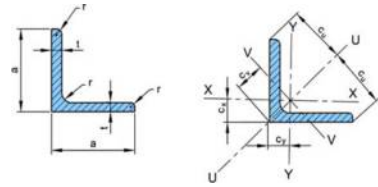
Equal Angle Bar
Grade JIS SS400 S275JR



Designation Size	Thickness	Mass Per Metre	Radius		Area Of Section	Distance Of Centre Of Gravity	Second Moment Of Area			Radius Of Gyration		Elastic Modulus	
			Root	Toe			Axis x-x, y-y	Axis u-u	Axis v-v	Axis x-x, y-y	Axis u-u		Axis v-v
AxA	t		r ₁	r ₂		C _x and C _y	cm ⁴	cm ⁴	cm ⁴	cm	cm	cm	cm ³
mm	mm	kg/m	mm	mm	cm ²	cm	cm ⁴	cm ⁴	cm ⁴	cm	cm	cm	cm ³
20x20	3	0.885	3.5	2.4	1.11	0.593	0.381	0.601	0.160	0.585	0.735	0.380	0.271
25x25	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	1.45	3.5	2.4	1.84	0.758	1.00	1.58	0.422	0.737	0.926	0.479	0.574
	5	1.70	3.5	2.4	2.25	0.796	1.19	1.87	0.516	0.728	0.912	0.479	0.701
30x30	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
	5	2.16	5	2.4	2.78	0.919	2.17	3.42	0.921	0.884	1.11	0.576	1.04
35X35	6	1.65	5	2.4	3.87	1.08	4.13	6.51	1.76	1.03	1.30	0.674	1.71
38x38	3	1.72	6	2.4	2.24	1.03	2.99	4.72	1.25	1.15	1.45	0.748	1.08
	4	2.36	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	3.33	6	2.4	4.25	1.15	5.40	8.51	2.29	1.13	1.41	0.733	2.04
40x40	3	1.83	6	2.4	2.36	1.08	3.51	5.55	1.47	1.22	1.53	0.789	1.20
	4	2.42	6	2.4	3.09	1.12	4.53	7.18	1.89	1.21	1.52	0.782	1.58
	5	2.95	6	2.4	3.80	1.17	5.48	8.68	2.29	1.20	1.51	0.776	1.94
	6	3.52	6	2.4	4.49	1.20	6.37	10.1	2.69	1.19	1.50	0.773	2.28
45x45	4	2.74	7	2.4	3.52	1.24	6.59	10.4	2.75	1.37	1.72	0.884	2.02
	5	3.38	7	2.4	4.33	1.29	7.99	12.6	3.34	1.36	1.71	0.878	2.49
	6	3.99	7	2.4	5.12	1.33	9.31	14.7	3.90	1.35	1.69	0.873	2.93
50x50	3	2.33	7	2.4	2.99	1.32	7.06	11.1	2.97	1.54	1.93	0.997	1.92
	4	3.06	7	2.4	3.92	1.37	9.17	14.5	3.82	1.53	1.92	0.987	2.52
	4.5	3.40	7	2.4	4.38	1.39	10.2	16.1	4.23	1.52	1.92	0.984	2.82
	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	13.0	20.6	5.43	1.51	1.90	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
60x60	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	1.70	23.2	36.8	9.65	1.83	2.30	1.18	5.40
63X63	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
	8	7.42	8	2.4	9.55	1.85	34.5	54.6	14.4	1.90	2.39	1.23	7.76
65x65	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
70x70	6	6.38	9	2.4	8.19	1.94	37.7	59.8	15.7	2.15	2.70	1.38	7.46
	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	9.70
75x75	5	5.69	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
	10	10.99	10	4.8	14.1	2.21	71.3	113	29.8	2.25	2.83	1.45	13.5
	12	13.00	10	4.8	16.7	2.29	82.7	130	35.0	2.23	2.80	1.45	15.9
80x80	6	7.34	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
	10	11.8	10	4.8	15.1	2.34	87.7	139	36.5	2.41	3.03	1.55	15.5
90x90	6	8.30	11	4.8	10.6	2.41	81.0	128	33.7	2.76	3.48	1.78	12.3
	7	9.61	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	13.40	11	4.8	17.2	2.58	128	202	52.9	2.73	3.43	1.76	19.9
	12	15.90	11	4.8	20.3	2.66	149	235	62.1	2.70	3.40	1.75	23.5
	13	17.00	11	4.8	21.9	2.70	159	251	66.6	2.69	3.39	1.74	25.2



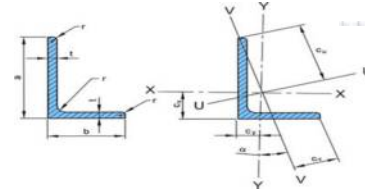
Equal Angle Bar
Grade JIS SS400 S275JR



Designation Size	Thickness	Mass Per Metre	Radius		Area Of Section	Distance Centre Of Gravity	Second Moment Of Area			Radius Of Gyration			Elastic Modulus
			Root	Toe			Axis x-x, y-y	Axis u-u	Axis v-v	Axis x-x, y-y	Axis u-u	Axis v-v	
AxA	t		r ₁	r ₂		C _x and C _y	x-x, y-y	u-u	v-v	x-x, y-y	u-u	v-v	Axis x-x, y-y
mm	mm	kg/m	mm	mm	cm ²	cm	cm ⁴	cm ⁴	cm ⁴	cm	cm	cm	cm ³
100x100	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
	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
	13	19.10	12	4.8	24.5	2.95	222	352	92.8	3.01	3.79	1.95	31.5
15	21.90	12	4.8	28.0	3.02	250	395	105	2.99	3.76	1.94	35.8	
120x120	8	14.70	13	4.8	18.8	3.24	259	411	107	3.71	4.67	2.38	29.5
	10	18.20	13	4.8	23.3	3.32	316	502	130	3.69	4.64	2.37	36.4
	12	21.60	13	4.8	27.6	3.41	371	588	153	3.66	4.62	2.36	43.1
15	26.60	13	4.8	34.0	3.52	448	710	186	3.63	4.57	2.34	52.8	
125x125	8	14.90	14	4.8	19.7	3.36	294	466	122	3.87	4.87	2.49	32.2
	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
130x130	8	15.90	14	4.8	20.5	3.48	332	527	138	4.03	5.07	2.59	34.9
	9	17.90	14	4.8	22.9	3.53	370	586	153	4.02	5.06	2.58	39.0
	10	19.70	14	4.8	25.3	3.57	406	645	168	4.01	5.05	2.57	43.1
	12	23.50	14	4.8	30.1	3.65	477	758	197	3.98	5.02	2.56	51.1
	15	28.80	14	4.8	37.1	3.77	578	916	240	3.95	4.97	2.54	62.6
16	30.70	14	4.8	39.4	3.81	610	966	253	3.94	4.95	2.54	66.3	
150x150	8	18.00	16	4.8	23.8	3.97	518	820	215	4.66	5.87	3.01	46.9
	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
	16	35.70	16	4.8	45.9	4.30	960	1523	397	4.57	5.76	2.94	89.8
	18	40.10	16	4.8	51.2	4.38	1060	1680	440	4.55	5.73	2.93	99.8
19	41.90	16	4.8	53.8	4.42	1109	1756	462	4.54	5.71	2.93	105	
175x175	12	31.80	16	4.8	41.0	4.77	1208	1920	497	5.43	6.84	3.48	94.9
	15	39.40	16	4.8	50.7	4.89	1474	2342	606	5.39	6.80	3.46	117
200x200	12	36.55	18	4.8	47.2	5.38	1829	2906	753	6.23	7.85	4.00	125
	13	39.49	18	4.8	50.9	5.42	1967	3126	809	6.22	7.84	3.99	135
	15	45.30	18	4.8	58.3	5.50	2237	3555	919	6.19	7.81	3.97	154
	16	48.50	18	4.8	62.0	5.54	2369	3765	973	6.18	7.79	3.96	164
	18	54.20	18	4.8	69.4	5.62	2627	4174	1080	6.15	7.76	3.95	183
	20	59.90	18	4.8	76.6	5.70	2877	4569	1185	6.13	7.72	3.93	201
	24	71.10	18	4.8	90.8	5.85	3357	5322	1391	6.08	7.65	3.91	237
	25	73.60	18	4.8	94.3	5.89	3472	5502	1442	6.07	7.64	3.91	246
26	76.80	18	4.8	97.8	5.93	3586	5680	1492	6.05	7.62	3.91	255	
250x250	25	93.70	20	4.8	120	7.14	7030	11170	2891	7.67	9.67	4.92	394
	28	104.00	20	4.8	133	7.25	7741	12290	3195	7.63	9.61	4.90	436
	32	118.00	20	4.8	151	7.40	8650	13710	3593	7.58	9.54	4.89	491
	35	128.00	20	4.8	164	7.51	9305	14720	3887	7.54	9.49	4.88	532
300x300	35	155.00	24	18	197	8.71	16300	25900	6690	9.09	11.50	5.82	766
350x350	35	182.00	24	18	232	9.96	26600	42300	10800	10.70	13.50	6.83	1060



Unequal Angle Bar
Grade SS400 S275JR



Designation Size	Thickness t	Mass Per Metre	Radius		Area Of Section	Distance Centre Of Gravity		Second Moment Of Area				Radius of Gyration				Elastic Modulus		Angle x-x Axis to u-u Axis
			Root	Toe		C _x	C _y	Axis x-x	Axis y-y	Axis u-u	Axis v-v	Axis x-x	Axis y-y	Axis u-u	Axis v-v	Axis x-x	Axis y-y	
AxB	mm	kg/m	r ₁	r ₂	cm ²	cm	cm	cm ⁴	cm ⁴	cm ⁴	cm ⁴	cm	cm	cm	cm	cm ³	cm ³	
63x38	4.5	3.45	6	2.4	4.4	2.10	0.870	18.0	4.90	20.0	3.00	2.01	1.06	2.12	0.820	4.20	1.68	0.362
	6	4.43	6	2.4	5.75	2.17	0.930	23.0	6.30	25.0	3.80	1.99	1.04	2.10	0.820	5.50	2.18	0.358
75x50	6	5.65	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	0.436
	8	7.39	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	0.430
100x65	7	8.8	10	4.8	11.2	3.23	1.52	113	37.7	128	22.1	3.18	1.84	3.39	1.41	16.7	7.56	0.415
	8	9.4	10	4.8	12.7	3.28	1.56	127	42.3	144	24.9	3.17	1.83	3.38	1.40	18.9	8.57	0.414
	9	11.0	10	7.0	14.0	3.31	1.58	138	45.5	157	26.8	3.14	1.80	3.34	1.38	20.6	9.26	0.410
	10	12.3	10	4.8	15.6	3.36	1.64	154	51.1	175	30.2	3.14	1.81	3.35	1.39	23.2	10.5	0.410
	12	14.4	10	7.0	18.4	3.43	1.70	177	58.0	201	34.7	3.11	1.78	3.30	1.37	27.0	12.1	0.404
100x75	7	9.3	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	0.548
	8	10.6	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	0.548
	9	11.8	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	0.546
	10	13.0	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	0.545
	12	15.4	10	4.8	19.7	3.27	2.03	189	90.3	230	49.5	3.10	2.14	3.42	1.59	28.1	16.5	0.541
	13	16.5	10	4.8	21.2	3.31	2.07	202	96.3	245	53.1	3.09	2.13	3.40	1.58	30.2	17.7	0.539
125x75	6.5	10.0	11	4.8	12.7	4.07	1.62	206	56.6	228	34.4	4.02	2.11	4.23	1.64	24.4	9.63	0.360
	7	10.7	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	0.360
	8	12.2	11	4.8	15.5	4.14	1.69	249	68.1	275	41.3	4.00	2.10	4.21	1.63	29.7	11.7	0.360
	9	13.5	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	0.359
	10	15.0	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	0.358
	12	17.8	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	0.354
150x75	7	12.1	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	0.263
	8	13.8	11	4.8	17.5	5.23	1.54	411	71.2	436	45.8	4.84	2.02	4.99	1.62	42.1	11.9	0.263
	9	15.3	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	0.259
	10	17.0	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	0.261
	12	20.2	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	0.259
	15	24.8	11	4.8	31.7	5.53	1.81	715	120	756	79.2	4.75	1.95	4.89	1.58	75.5	21.1	0.254
150x90	8	14.3	10	5.0	18.7	4.93	1.97	436	121	484	72.7	4.83	2.54	5.09	1.97	43.3	17.2	0.364
	9	16.4	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	0.361
	10	18.2	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	0.361
	12	21.6	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	0.359
	15	26.6	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	0.354
150x100	8	15.2	12	8.5	19.4	4.70	2.24	441	158	508	90.9	4.77	2.86	5.12	2.17	42.8	20.3	0.437
	9	17.1	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	0.439
	10	19.0	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	0.437
	12	22.4	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	0.435
	14	26.1	12	6.0	33.2	4.98	2.50	744	265	856	153	4.74	2.82	5.08	2.15	74.3	35.3	0.434
	15	27.7	12	8.5	35.2	5.01	2.53	781	276	897	161	4.71	2.80	5.04	2.14	78.2	37.0	0.431
200x100	10	23.0	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	0.264
	12	27.3	15	4.8	34.9	7.04	2.11	1454	252	1544	162	6.45	2.68	6.65	2.16	112	31.9	0.263
	14	31.6	15	7.5	40.3	7.12	2.18	1654	282	1755	182	6.41	2.65	6.60	2.12	128	36.1	0.261
	15	33.7	15	4.8	43.1	7.17	2.23	1772	303	1879	197	6.41	2.65	6.60	2.14	138	39.0	0.260
200x150	12	32.0	15	4.8	40.9	6.10	3.63	1667	813	2046	434	6.38	4.45	7.07	3.26	120	71.5	0.554
	15	39.6	15	4.8	50.6	6.22	3.75	2037	989	2496	530	6.34	4.42	7.02	3.23	148	87.9	0.552
	18	47.4	15	4.8	60.1	6.34	3.86	2390	1155	2923	622	6.30	4.38	6.97	3.22	175	104	0.549