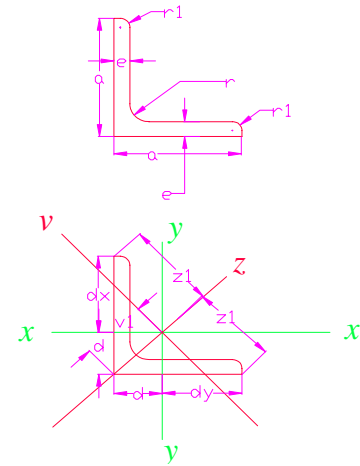


Prepared By Ismail Ali

Date 1/4/2005

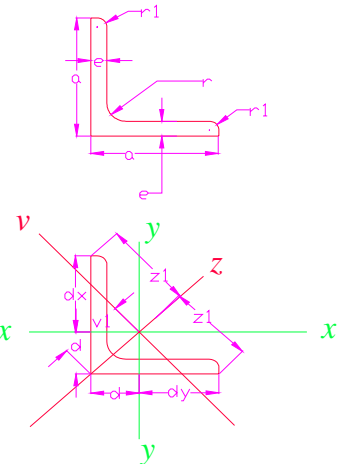
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a	e	r	r1	Weight	Area	Painting surface	d	lx=ly	Zx=Zy	ix=iy	Z1	lx	Zz	iz	v1	lv	Zv	iv	
mm	mm	mm	mm	kg/m	cm2	m2/m	m2/t	cm	cm4	cm3	cm	cm4	cm3	cm	cm	cm4	cm3	cm	
20	2.5	3	1.5	0.75	0.95	0.077	104	0.58	0.34	0.24	0.58	1.41	0.53	0.37	0.75	0.82	0.14	0.17	0.38
20	3	4	2	0.88	1.13		87.5	0.6	0.39	0.28	0.59	1.41	0.61	0.44	0.74	0.84	0.16	0.19	0.38
20	4	4	2	1.14	1.46		67.6	0.63	0.49	0.36	0.58	1.41	0.77	0.55	0.72	0.9	0.21	0.23	0.38
25	2.5	3	1.5	0.94	1.2	0.097	103.2	0.7	0.69	0.38	0.75	1.77	1.1	0.62	0.95	1	0.28	0.28	0.48
25	3	4	2	1.12	1.43		86.6	0.72	0.8	0.45	0.75	1.77	1.26	0.72	0.94	1.02	0.33	0.33	0.48
25	4	4	2	1.46	1.86		66.5	0.76	1.01	0.58	0.74	1.77	1.6	0.91	0.93	1.07	0.43	0.4	0.48
25	5	4	2	1.78	2.27		54.5	0.8	1.2	0.71	0.73	1.77	1.89	1.06	0.91	1.13	0.52	0.46	0.48
30	3	5	2.5	1.36	1.74	0.116	85.3	0.84	1.4	0.65	0.9	2.12	2.23	1.06	1.13	1.18	0.58	0.49	0.58
30	4	5	2.5	1.78	2.27		65.2	0.88	1.8	0.85	0.89	2.12	2.85	1.34	1.12	1.24	0.75	0.61	0.58
30	5	5	2.5	2.18	2.78		53.3	0.92	2.16	1.04	0.88	2.12	3.41	1.61	1.11	1.3	0.92	0.71	0.57
35	3.5	3.5	1.75	1.85	2.35	0.136	73.6	0.98	2.63	1.04	1.06	2.47	4.03	1.63	1.33	1.39	1.18	0.85	0.71
35	4	5	2.5	2.1	2.67		64.8	1	2.95	1.18	1.05	2.47	4.68	1.89	1.33	1.42	1.23	0.86	0.68
35	5	5	2.5	2.57	3.28		53	1.04	3.56	1.45	1.04	2.47	5.64	2.28	1.31	1.48	1.49	1.01	0.67
35	6	5	2.5	3.04	3.87		44.7	1.08	4.14	1.71	1.04	2.47	6.5	2.63	1.3	1.53	1.77	1.16	0.68
40	4	6	3	2.42	3.08	0.155	64	1.12	4.47	1.55	1.21	2.83	7.09	2.5	1.52	1.58	1.86	1.17	0.78
40	5	6	3	2.97	3.79		52.2	1.16	5.43	1.91	1.2	2.83	8.6	3.05	1.51	1.64	2.26	1.37	0.77
40	6	6	3	3.52	4.48		44	1.2	6.31	2.26	1.19	2.83	9.98	3.53	1.49	1.7	2.65	1.56	0.77
45	4.5	7	3.5	3.04	3.9	0.174	57.2	1.26	7.15	2.2	1.37	3.18	11.3	3.55	1.7	1.79	2.95	1.65	0.87
45	5	7	3.5	3.38	4.3		51.5	1.28	7.84	2.43	1.35	3.18	12.4	3.9	1.7	1.81	3.26	1.8	0.87
45	6	7	3.5	4	5.09		43.5	1.32	9.16	2.88	1.34	3.18	14.5	4.56	1.69	1.87	3.82	2.05	0.87
45	7	7	3.5	4.6	5.86		37.8	1.36	10.4	3.31	1.33	3.18	16.4	5.16	1.67	1.92	4.39	2.29	0.87
50	5	7	3.5	3.77	4.8	0.194	51.5	1.4	11	3.05	1.51	3.54	17.4	4.91	1.9	1.99	4.54	2.29	0.97
50	6	7	3.5	4.47	5.69		43.4	1.45	12.8	3.61	1.5	3.54	20.3	5.76	1.89	2.04	5.33	2.61	0.97
50	7	7	3.5	5.15	6.56		37.7	1.49	14.6	4.16	1.49	3.54	23.1	6.52	1.88	2.1	6.11	2.91	0.96
50	8	7	3.5	5.82	7.41		33.3	1.52	16.3	4.68	1.48	3.54	25.7	7.26	1.86	2.16	6.87	3.19	0.96
50	9	7	3.5	6.47	8.24		30	1.56	17.9	5.2	1.47	3.54	28.1	7.94	1.85	2.21	7.67	3.47	0.97
55	5.5	8	4	4.54	5.82	0.213	46.9	1.54	16.3	4.1	1.67	3.89	25.8	6.63	2.1	2.2	6.75	3.06	1.08
55	6	8	4	4.95	6.31		43	1.56	17.3	4.4	1.66	3.89	27.4	7.04	2.08	2.21	7.24	3.28	1.07
55	7	8	4	5.68	7.27		37.5	1.6	19.7	5.05	1.64	3.89	31.1	8	2.06	2.26	8.29	3.67	1.06
55	8	8	4	6.46	8.23		33	1.64	22.1	5.72	1.64	3.89	34.8	8.95	2.06	2.32	9.35	4.03	1.07



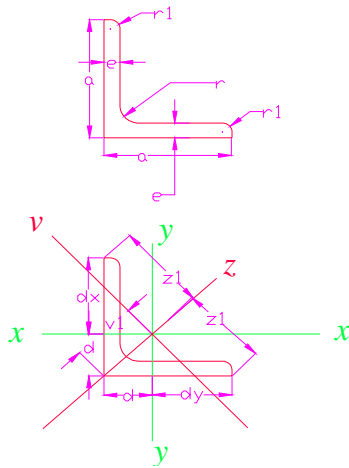
Equal Angles

a	e	r	r1	Weight	Area	Painting surface	d	lx=ly	Zx=Zy	ix=iy	Z1	lx	Zz	iz	v1	lv	Zv	iv	
mm	mm	mm	mm	kg/m	cm2	m2/m	m2/t	cm	cm4	cm3	cm	cm4	cm3	cm	cm	cm4	cm3	cm	
60	6	8	4	5.42	6.91	0.233	43	1.69	22.8	5.29	1.82	4.24	36.2	8.51	2.29	2.39	9.43	3.95	1.17
	7	8	4	6.26	7.98		37.2	1.72	25.7	6.02	1.79	4.24	40.7	9.6	2.26	2.43	10.7	4.4	1.16
	8	8	4	7.09	9.03		32.9	1.77	29.2	6.89	1.8	4.24	46.2	10.9	2.26	2.5	12.2	4.86	1.16
	10	8	4	8.69	11.1		26.8	1.85	34.9	8.41	1.78	4.24	55.1	13	2.23	2.61	14.8	5.67	1.16
65	7	9	4.5	6.83	8.7	0.252	36.9	1.85	33.4	7.18	1.96	4.6	53	11.5	2.47	2.62	13.8	5.27	1.26
	9	9	4.5	8.62	11		29.3	1.93	41.3	9.04	1.94	4.6	65.4	14.2	2.44	2.73	17.2	6.3	1.25
	11	9	4.5	10.3	13.2		24.5	2	48.8	10.8	1.91	4.6	76.8	16.7	2.42	2.83	20.7	7.31	1.25
70	7	9	4.5	7.38	9.4	0.272	36.9	1.97	42.3	8.41	2.12	4.95	76.1	13.5	2.67	2.79	17.5	6.27	1.36
	8	9	4.5	8.36	10.6		32.6	2.01	47.5	9.52	2.11	4.95	75.3	15.2	2.66	2.85	19.7	6.91	1.36
	9	9	4.5	9.34	11.9		29.1	2.05	52.6	10.6	2.1	4.95	83.1	16.8	2.64	2.9	22	7.59	1.36
	10	9	4.5	10.3	13.1		26.4	2.09	57.2	11.7	2.09	4.95	90.5	18.2	2.63	2.96	23.9	8.1	1.35
	11	9	4.5	11.2	14.3		24.3	2.13	61.8	12.7	2.08	4.95	97.6	19.7	2.61	3.01	26	8.64	1.35
75	8	10	5	9.03	11.5	0.291	32.2	2.13	58.9	11	2.26	5.3	93.3	17.6	2.85	3.01	24.4	8.11	1.46
	9	10	5	10.1	12.8		28.9	2.17	65.1	12.2	2.26	5.3	103	19.4	2.84	3.07	27.1	8.81	1.46
	10	10	5	11.1	14.1		26.2	2.21	71.4	13.5	2.25	5.3	113	22.4	2.83	3.12	29.8	9.55	1.45
80	8	10	5	9.66	12.3	0.311	32.2	2.26	72.2	12.6	2.43	5.66	115	20.3	3.06	3.19	29.9	9.36	1.56
	9	10	5	10.8	13.7		28.8	2.31	80.7	14.2	2.43	5.66	128	22.6	3.06	3.24	33.6	10.3	1.56
	10	10	5	11.9	15.1		26.1	2.34	87.5	15.4	2.41	5.66	139	24.6	3.03	3.3	36.3	11	1.55
	12	10	5	14.1	17.9		22.1	2.41	102	18.2	2.39	5.66	161	28.4	3	3.41	42.7	12.5	1.55
90	9	11	5.5	12.2	15.5	0.351	28.8	2.54	116	17.9	2.73	6.36	184	28.9	3.44	3.59	47.8	13.3	1.76
	10	11	5.5	13.4	17.1		26.2	2.58	127	19.8	2.72	6.36	201	31.6	3.43	3.65	52.5	14.4	1.75
	11	11	5.5	14.7	18.7		23.9	2.62	138	21.6	2.72	6.36	218	34.3	3.41	3.7	57.1	15.4	1.75
	12	11	5.5	15.9	20.3		22.1	2.66	148	23.3	2.7	6.36	234	36.8	3.4	3.76	61.7	16.4	1.74
	13	11	5.5	17.1	21.8		20.5	2.7	158	25.1	2.69	6.36	250	39.3	3.39	3.81	65.9	17.3	1.74
100	10	12	6	15.1	19.2	0.39	25.8	2.82	177	24.6	3.04	7.07	280	39.6	3.83	3.99	72.9	18.3	1.95
	12	12	6	17.8	22.7		21.9	2.9	207	29.1	3.02	7.07	328	46.4	3.8	4.11	85.7	20.9	1.94
	14	12	6	20.6	26.2		18.9	2.98	235	33.5	3.01	7.07	372	52.6	3.77	4.21	98.3	23.3	1.94
	15	12	6	21.9	27.9		17.8	3.02	249	35.6	2.98	7.07	393	55.6	3.75	4.27	104	24.4	1.93
110	10	12	6	16.6	21.2	0.43	25.9	3.07	239	30.1	3.36	7.78	379	48.7	4.23	4.34	98.6	22.7	2.16
	12	12	6	19.7	25.1		21.9	3.15	280	35.7	3.34	7.78	444	57.1	4.21	4.45	116	26.1	2.15



Equal Angles

a	e	r	r1	Weight	Area	Painting surface		d	Ix=ly	Zx=Zy	ix=iy	Z1	Ix	Zz	iz	v1	Iv	Zv	iv
mm	mm	mm	mm	kg/m	cm2	m2/m	m2/t	cm	cm4	cm3	cm	cm	cm4	cm3	cm	cm	cm4	cm3	cm
120	11	13	6.5	19.9	25.4	0.469	23.6	3.36	341	39.5	3.66	8.49	541	63.7	4.26	4.75	140	29.5	2.35
	12	13	6.5	21.6	27.5		21.7	3.4	368	42.7	3.65	8.49	584	68.8	4.6	4.8	152	31.5	2.35
	13	13	6.5	23.3	29.7		20.1	3.44	394	46	3.64	8.49	625	73.6	4.59	4.86	162	33.3	2.34
	14	13	6.5	25	31.8		18.8	3.47	420	49.2	3.63	8.49	665	78.4	4.57	4.91	174	35.4	2.34
	15	13	6.5	26.6	33.9		17.6	3.51	445	52.4	3.62	8.49	705	83	4.56	4.97	185	37.1	2.33
130	12	14	7	23.6	30	0.508	21.5	3.64	472	50.4	3.97	9.19	750	81.6	5	5.15	194	37.7	2.54
	14	14	7	27.2	34.7		18.7	3.72	540	58.2	3.94	9.19	857	93.3	4.97	5.26	223	42.4	2.53
140	13	15	7.5	27.5	35	0.547	19.9	3.92	638	63.3	4.27	9.9	1010	103	5.38	5.54	262	47.3	2.74
	15	15	7.5	31.4	40		17.4	4	723	72.3	4.25	9.9	1150	116	5.36	5.66	298	52.7	2.73
	17	15	7.5	35.3	45		15.5	4.08	805	81.2	4.23	9.9	1280	129	5.33	5.77	334	57.9	2.72
150	14	16	8	31.6	40.3	0.586	18.6	4.21	845	78.2	4.58	10.6	1340	126	5.77	5.95	347	58.3	2.94
	15	16	8	33.8	43		17.3	4.25	898	83.5	4.57	10.6	1430	135	5.76	6.01	370	61.6	2.93
	16	16	8	35.9	45.7		16.3	4.29	949	88.7	4.56	10.6	1510	143	5.74	6.07	391	64.4	2.93
	18	16	8	40.1	51		14.6	4.37	1050	98.7	4.54	10.6	1670	157	5.71	6.17	435	70.4	2.92
160	15	17	8.5	36.2	46.1	0.626	17.3	4.49	1100	95.6	4.88	11.3	1750	155	6.15	6.35	453	71.3	3.14
	17	17	8.5	40.7	51.8		15.4	4.57	1230	108	4.86	11.3	1950	173	6.13	6.46	506	78.3	3.13
180	15	18	9	40.9	52.1	0.705	17.2	4.98	1590	122	5.52	12.7	2520	198	6.96	7.05	653	92.6	3.54
	18	18	9	48.6	61.9		14.5	5.1	1870	145	5.49	12.7	2960	234	6.92	7.22	768	106	3.52
	20	18	9	53.7	68.3		13.1	5.18	2040	159	5.47	12.7	3240	257	6.89	7.33	743	115	3.51
200	20	18	9	59.9	76.3	0.785	13.1	5.66	2850	199	6.11	14.1	4530	322	7.7	8.04	1170	146	3.92
	24	18	9	71.1	90.6		11	5.84	3330	235	6.06	14.1	5280	374	7.64	8.26	1380	167	3.9
	28	18	9	82	104.5		9.6	5.99	3784	270	6.02	14.1	5989	425	7.57	8.47	1573	186	3.88
	30	18	9	87.6	111.4		9	6.06	4002	287	6	14.1	6323	448	7.53	8.57	1681	196	3.88



Equal Angles