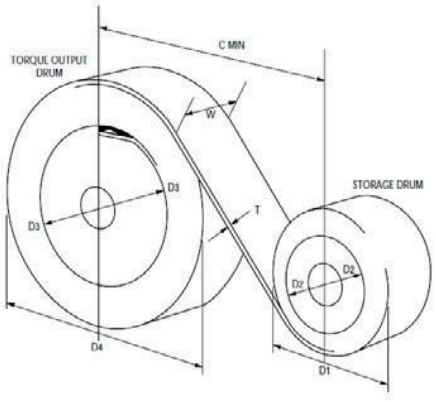
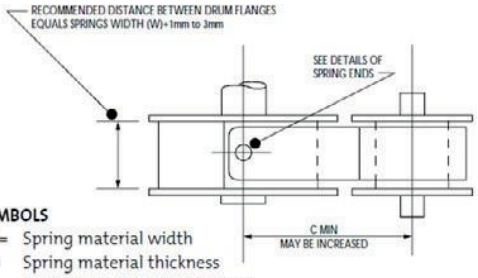
KERN LIEBERS

FACTORS AFFECTING DESIGN

MOTOR SPRINGS

TORQUE +/- 10%		MATERIAL			D2	D3	D1	D4	C	I/D SPRING	WORKING	SPRING	SPRING	Average Fatigue Life Cycles
NM	Kg/cms	W	T	L	mm	mm	mm	mm	mm	mm	TURNS	ENDS	No.	
0,004	0,04	3	0,05	1168	7	11	11	14	14	6	27	E	SR79	5000
0,008	0,08	6	0,05	1168	7	11	11	14	14	6	27	E	SR80	5000
0,01	0,1	5	0,08	1753	10	17	17	21	20	8	27	E	SR81	5000
0,02	0,2	8	0,08	1753	10	17	17	21	20	8	27	E	SR82	5000
0,03	0,3	6	0,10	2337	13	22	22	28	27	11	27	E	SR83	5000
0,05	0,5	10	0,10	2337	13	22	22	28	27	11	27	D	SR84	5000
0,08	0,8	10	0,13	2921	17	28	27	35	34	14	27	A	SR85	5000
0,1	1	13	0,13	2921	17	28	27	35	34	14	27	A	SR86	5000
0,15	1,5	13	0,15	3505	20	33	33	42	41	17	27	A	SR87	5000
0,18	1,9	16	0,15	3505	20	33	33	42	41	17	27	A	SR88	5000
0,29	3	14	0,20	4674	26	44	44	56	54	22	27	A	SR89	5000
0,5	5,2	16	0,26	5842	33	55	55	71	68	28	27	A	SR90	5000
0,9	8,9	19	0,30	7010	40	67	66	85	82	33	27	A	SR91	5000
1,2	11,9	25	0,30	7010	40	67	66	85	82	33	27	C	SR92	5000
1,6	16,3	25	0,35	8179	47	78	78	99	96	39	27	C	SR93	5000
2,3	23,8	51	0,30	7010	40	67	66	85	82	33	27	F	SR94	5000
3,2	32,6	51	0,35	8179	47	78	78	99	96	39	27	F	SR95	5000
4	40,3	38	0,46	10516	60	100	100	127	122	50	27	F	SR96	5000
5,3	54	51	0,46	10516	60	100	100	127	122	50	27	F	SR97	5000
7,9	80,5	51	0,56	12852	73	122	122	156	150	61	27	K	SR98	5000
10	103	51	0,64	14605	83	138	138	177	170	69	27	K	SR99	5000
0,003	0,03	3	0,05	1168	10	16	13	18	17	8	20	E	SR100	20000
0,006	0,06	6	0,05	1168	10	16	13	18	17	8	20	E	SR101	20000
0,01	0,1	5	0,08	1753	14	24	19	27	25	12	20	E	SR102	20000
0,02	0,2	8	0,08	1753	14	24	19	27	25	12	20	E	SR103	20000
0,03	0,3	6	0,10	2337	19	32	26	36	34	16	20	E	SR104	20000
0,04	0,5	10	0,10	2337	19	32	26	36	34	16	20	D	SR105	20000
0,06	0,6	10	0,13	2921	24	40	33	45	42	20	20	A	SR106	20000
0,09	0,9	13	0,13	2921	24	40	33	45	42	20	20	A	SR107	20000
0,12	1,2	13	0,15	3505	29	48	39	54	51	24	20	A	SR108	20000
0,14	1,5	16	0,15	3505	29	48	39	54	51	24	20	A	SR109	20000
0,23	2,3	14	0,20	4674	38	64	52	72	68	32	20	A	SR110	20000
0,4	4	16	0,26	5842	48	79	65	90	85	40	20	A	SR111	20000





SYMBOLS

W = Spring material width
T = Spring material thickness
L = Spring length (reference only)
C = Distance between drum centres (min)
D_2 = Storage drum diameter
D_3 = Torque drum diameter
D_1 = Outside diameter of spring when fully wound on storage drum
D_4 = Outside diameter of spring when fully wound on torque drum

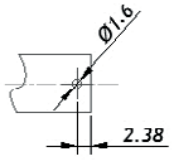
KERN LIEBERS

FACTORS AFFECTING DESIGN

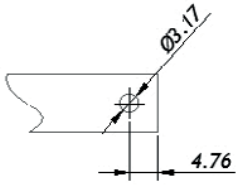
MOTOR SPRINGS

TORQUE +/- 10%		MATERIAL			D2	D3	D1	D4	C	I/D SPRING	WORKING	SPRING	SPRING	Average Fatigue Life Cycles
NM	Kg/cms	W	T	L	mm	mm	mm	mm	mm	mm	TURNS	ENDS	No.	
0,7	7	19	0,30	7010	57	95	78	109	102	48	20	A	SR112	20000
0,9	9,3	25	0,30	7010	57	95	78	109	102	48	20	C	SR113	20000
1,3	12,7	25	0,35	8179	67	111	90	128	118	55	20	C	SR114	20000
1,8	18,7	51	0,30	7010	57	95	78	109	102	48	20	F	SR115	20000
2,5	25,4	51	0,35	8179	67	111	90	127	118	55	20	F	SR116	20000
3,1	31,6	38	0,46	10516	86	143	117	163	152	71	20	F	SR117	20000
4,1	42,2	51	0,46	10516	86	143	117	163	152	71	20	F	SR118	20000
6,2	63	51	0,56	12852	105	175	142	199	186	87	20	K	SR119	20000
8	81,5	51	0,64	14605	119	198	163	266	222	99	20	K	SR120	20000

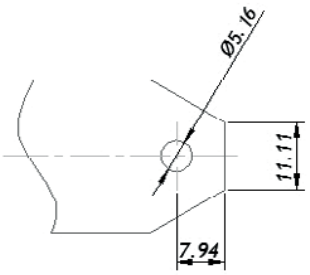
TYPE E EXTENSION



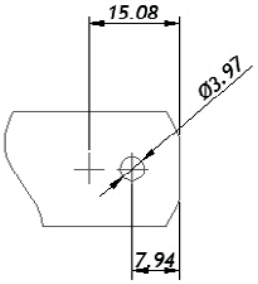
TYPE D EXTENSION



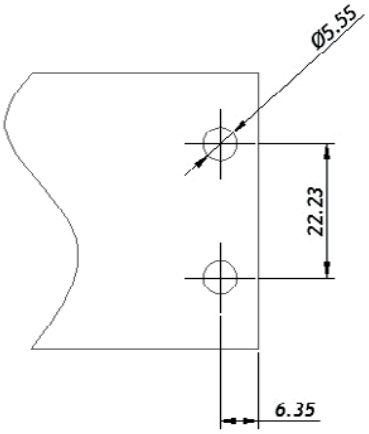
TYPE C EXTENSION



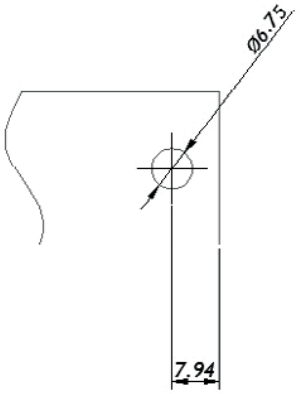
TYPE A EXTENSION



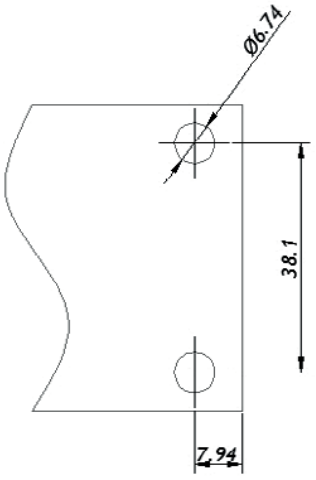
TYPE F EXTENSION



TYPE G EXTENSION



TYPE K EXTENSION



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