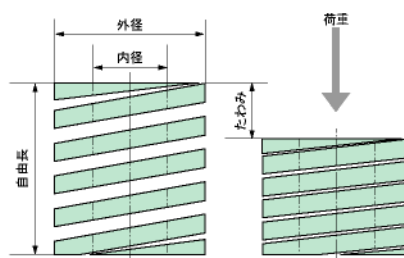


GRE/DSH 重荷重 Heavy load Spring



材 質：SWOSC-V相当
タイプ：重荷重
塗装色：緑色 (green)

RoHS適合



●荷重の計算式

荷重(N)=バネ定数×たわみ(mm)

荷重(kgf)にするには
荷重(N)×0.101972

●最大たわみの計算式

最大たわみ(mm)÷自由長-密着長

DAI Spring の許容差

外 径	内 径	自 由 長		荷 重	直角度	巻方向
		50mm以下	55mm以上			
+0 mm -0.7 mm	+0.7 mm +0.1 mm	± 0.5 mm	± 1 %	± 10 %	2° 以下	右巻

重荷重のバネ定数および使用回数と荷重の関係

赤字は計画中

外径 自由長	6	7	8	9	10	11	12	13	14	15	16	18	20	22	25	27	30	35	40	50	60	70
10		70.00	85.81	102.50	122.58																	
15	38.25	46.67	57.47	68.33	81.39	97.78	116.70															
20	28.44	35.00	43.15	51.25	61.29	73.33	87.28	102.92	120.52	137.71	157.30	198.19	245.17									
25	22.56	28.00	34.52	41.00	49.03	58.67	69.63	82.33	96.40	110.17	125.82	158.47	196.13	236.93	305.97	356.96	441.30					
30	18.63	23.33	28.73	34.17	40.80	48.89	58.55	68.61	80.32	91.81	104.83	132.10	163.38	197.41	254.68	298.22	367.75					
35	16.67	20.00	24.61	29.29	35.01	41.90	50.11	58.81	68.84	78.69	89.83	113.17	140.04	169.65	219.47	256.93	316.36					
40	14.71	17.50	21.57	25.63	30.89	36.67	43.84	51.46	60.21	68.85	78.65	99.05	122.58	148.08	190.93	223.69	275.76	374.81	490.33			
45	12.75	15.56	19.12	22.78	27.16	32.59	39.03	45.74	53.54	61.20	69.82	88.06	108.95	131.41	170.64	199.07	245.17	333.23	435.81			
50	11.77	14.00	17.26	20.50	24.52	29.33	35.11	41.17	48.15	55.08	62.86	79.24	98.07	118.46	152.79	178.97	220.65	299.89	392.26	612.91		
55	10.79		15.69	18.64	22.26	26.67	31.87	37.42	43.74	50.08	57.17	71.98	89.14	107.28	139.25	161.81	200.05	272.62	356.57	557.21		
60	9.81		14.42	17.08	20.40	24.44	29.22	34.31	40.11	45.90	52.37	66.00	81.69	98.65	127.29	149.06	183.87	249.87	326.85	510.73	735.50	
65			13.24	15.77	18.83	22.56	26.87	31.67	37.07	42.37	48.35	60.90	75.41	91.01	117.68	137.29	169.65	230.75	301.75	471.50		
70			12.36	14.64	17.55	20.95	24.91	29.40	34.42	39.35	44.91	56.58	70.02	84.63	109.15	127.78	157.59	214.18	280.17	437.77	630.37	747.26
75			11.47	13.67	16.38	19.56	23.24	27.44	32.07	36.72	41.97	52.86	65.41	78.85	101.99	118.66	147.10	199.96	261.54	408.64		
80			10.79	12.81	15.30	18.33	21.67	25.73	30.11	34.43	39.32	49.52	61.29	74.04	95.42	111.80	137.88	187.40	245.17	383.05	551.62	654.10
90					13.63	16.30	19.42	22.87	26.67	30.60	35.01	44.13	54.43	65.80	84.83	99.34	122.58	166.61	217.90	340.49	490.33	581.53
100									24.12	27.54	31.48	39.62	49.03	59.23	76.39	89.44	110.32	149.94	196.13	306.46	441.30	523.67
125													39.23	47.37	61.10	71.59	88.26	119.93	156.91	245.17	353.04	418.74
150													32.66	39.42	50.99	59.62	73.55	99.93	130.72	204.27	294.20	349.12
175															43.74	51.09	62.96	85.61	111.99	175.05	252.13	299.10
200																	55.11	74.92	98.07	153.18	220.65	261.84
225																			87.28	136.21	196.33	
250																			78.55	122.58	176.62	208.88
275																			71.39	111.40	160.63	
300																			65.41	102.18	147.20	174.56
350																				87.28	125.52	149.06
内 径	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	9	10	11	12.5	13.5	15	17.5	20	25	30	38.5

表中：バネ定数 (N/mm)

荷重 N (kg)	30万回	137.0 (14)	168.0 (17.1)	205.9 (21)	246.0 (25.1)	294.2 (30)	352.0 (35.9)	421.7 (43)	494.0 (50.4)	578.6 (59)	661.0 (67.4)	755.1 (77)	951.2 (97)	1176.8 (120)	1422.0 (145)	1833.8 (187)	2147.7 (219)	2647.8 (270)	3599.0 (367)	4707.2 (480)	7355.0 (750)	10591.2 (1080)	12257.0 (1250)
	50万回	123.0 (13)	151.2 (15.4)	186.3 (19)	221.4 (22.6)	264.8 (27)	316.8 (32.3)	372.7 (38)	444.6 (45.3)	519.8 (53)	594.9 (60.7)	676.7 (69)	853.2 (87)	1059.1 (108)	1274.9 (130)	1657.3 (169)	1931.9 (197)	2383.0 (243)	3236.2 (330)	4236.5 (432)	6619.5 (675)	9541.9 (973)	11301.0 (1152)
	100万回	110.0 (11)	134.4 (13.7)	166.7 (17)	196.8 (20.1)	235.4 (24)	218.6 (22.3)	333.4 (34)	395.2 (40.3)	460.9 (47)	528.8 (53.9)	608.0 (62)	764.9 (78)	941.4 (96)	1137.6 (116)	1471.0 (150)	1716.2 (175)	2118.2 (216)	2873.3 (293)	3765.8 (384)	5884.0 (600)	8472.9 (864)	10046.0 (1024)

使用回数	30万回	50万回	100万回
たわみ (自由長の%)	24.0%	21.6%	19.2%

次ページ詳細

GRE/DSH 重荷重 Heavy load Spring

材質:SWOSC-V相当

RoHS適合

外径 mm	内径 mm	線径 mm	バネ定数		密着長 mm	30万回		50万回		100万回		Code No.	単価(円)			
			N/mm	kgf/mm (約)		たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)		1個~	50個~	200個~	
6	3	15	38.25	3.90	11.0	3.6		3.2		2.9		GRE 6-15	88	82	77	
		20	28.44	2.90	14.7	4.8		4.3		3.8			20	92	86	80
		25	22.56	2.30	18.4	6.0		5.4		4.8			25	92	86	80
		30	18.63	1.90	22.0	7.2		6.5		5.8			30	100	93	87
		35	16.67	1.70	25.7	8.4	137.0 (14)	7.6	123.0 (13)	6.7	110.0 (11)		35	108	101	94
		40	14.71	1.50	29.4	9.6		8.6		7.7			40	116	108	101
		45	12.75	1.30	33.0	10.8		9.7		8.6			45	124	116	108
		50	11.77	1.20	36.7	12.0		10.8		9.6			50	128	120	112
		55	10.79	1.10	40.4	13.2		11.9		10.6			55	136	127	119
60	9.81	1.00	44.0	14.4		13.0		11.5		60	136	127	119			
7	3.5	10	70.00	7.14	7.4	2.4		2.2		1.9		GRE 7-10	79	75	71	
		15	46.67	4.76	11.0	3.6		3.2		2.9			15	79	75	71
		20	35.00	3.57	14.7	4.8		4.3		3.8			20	84	79	75
		25	28.00	2.86	18.4	6.0		5.4		4.8			25	87	82	78
		30	23.33	2.38	22.0	7.2	168.0 (17.1)	6.5	151.2 (15.4)	5.8	134.4 (13.7)		30	97	92	87
		35	20.00	2.04	25.7	8.4		7.6		6.7			35	105	99	94
		40	17.50	1.78	29.4	9.6		8.6		7.7			40	113	107	101
		45	15.56	1.59	33.0	10.8		9.7		8.6			45	121	114	108
		50	14.00	1.43	36.7	12.0		10.8		9.6			50	126	119	113
8	4	10	85.81	8.75	7.4	2.4		2.2		1.9		GRE 8-10	60	56	52	
		15	57.47	5.86	10.8	3.6		3.2		2.9			15	60	56	52
		20	43.15	4.40	14.4	4.8		4.3		3.8			20	68	63	59
		25	34.52	3.52	18.0	6.0		5.4		4.8			25	76	71	66
		30	28.73	2.93	21.6	7.2		6.5		5.8			30	92	86	80
		35	24.61	2.51	25.2	8.4		7.6		6.7			35	100	93	87
		40	21.57	2.20	28.8	9.6	205.9 (21)	8.6	186.3 (19)	7.7	166.7 (17)		40	108	101	94
		45	19.12	1.95	32.4	10.8		9.7		8.6			45	116	108	101
		50	17.26	1.76	36.0	12.0		10.8		9.6			50	124	116	108
		55	15.69	1.60	39.6	13.2		11.9		10.6			55	128	120	112
60	14.42	1.47	43.2	14.4		13.0		11.5		60	136	127	119			
65	13.24	1.35	47.7	15.6		14.0		12.5		65	164	153	143			
70	12.36	1.26	51.4	16.8		15.1		13.4		70	180	168	157			
75	11.47	1.17	55.1	18.0		16.2		14.4		75	196	183	171			
80	10.79	1.10	58.7	19.2		17.3		15.4		80	212	198	185			
9	4.5	10	102.50	10.45	7.4	2.4		2.2		1.9		GRE 9-10	62	58	55	
		15	68.33	6.97	10.8	3.6		3.2		2.9			15	65	61	58
		20	51.25	5.23	14.4	4.8		4.3		3.8			20	68	64	61
		25	41.00	4.18	18.0	6.0		5.4		4.8			25	74	70	66
		30	34.17	3.48	21.6	7.2		6.5		5.8			30	87	82	78
		35	29.29	2.99	25.2	8.4		7.6		6.7			35	95	90	85
		40	25.63	2.61	28.8	9.6		8.6		7.7			40	103	97	92
		45	22.78	2.32	32.4	10.8	246.0 (25.1)	9.7	221.4 (22.6)	8.6	196.8 (20.1)		45	108	102	97
		50	20.50	2.09	36.0	12.0		10.8		9.6			50	116	110	104
		55	18.64	1.90	39.6	13.2		11.9		10.6			55	122	115	109
60	17.08	1.74	43.2	14.4		13.0		11.5		60	130	123	117			
65	15.77	1.61	46.8	15.6		14.0		12.5		65	152	144	136			
70	14.64	1.49	50.4	16.8		15.1		13.4		70	163	154	146			
75	13.67	1.39	54.0	18.0		16.2		14.4		75	175	166	157			
80	12.81	1.31	57.6	19.2		17.3		15.4		80	189	179	170			
10	5	10	122.58	12.50	7.4	2.4		2.2		1.9		GRE 10-10	64	60	56	
		15	81.39	8.30	10.8	3.6		3.2		2.9			15	68	63	59
		20	61.29	6.25	14.4	4.8		4.3		3.8			20	68	63	59
		25	49.03	5.00	18.0	6.0		5.4		4.8			25	72	67	63
		30	40.80	4.16	21.6	7.2		6.5		5.8			30	76	71	66
		35	35.01	3.57	25.2	8.4		7.6		6.7			35	84	78	73
		40	30.89	3.15	28.8	9.6		8.6		7.7			40	92	86	80
		45	27.16	2.77	32.4	10.8	294.2 (30)	9.7	264.8 (27)	8.6	235.4 (24)		45	92	86	80
		50	24.52	2.50	36.0	12.0		10.8		9.6			50	100	93	87
		55	22.26	2.27	39.6	13.2		11.9		10.6			55	108	101	94
60	20.40	2.08	43.2	14.4		13.0		11.5		60	116	108	101			
65	18.83	1.92	46.8	15.6		14.0		12.5		65	124	116	108			
70	17.55	1.79	50.4	16.8		15.1		13.4		70	124	116	108			
75	16.38	1.67	54.0	18.0		16.2		14.4		75	128	120	112			
80	15.30	1.56	57.6	19.2		17.3		15.4		80	136	127	119			
90	13.63	1.39	64.8	21.6		19.4		17.3		90	152	142	133			

外径 mm	内径 mm	線径 mm	バネ定数		密着長 mm	30万回		50万回		100万回		Code No.	単価(円)			
			N/mm	kgf/mm		たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)		1個~	50個~	200個~	
11	5.5	15	97.78	9.97	10.8	3.6		3.2		2.9		GRE 11-15	84	79	75	
		20	73.33	7.48	14.4	4.8		4.3		3.8			20	84	79	75
		25	58.67	5.98	18.0	6.0		5.4		4.8			25	86	81	77
		30	48.89	4.99	21.6	7.2		6.5		5.8			30	92	87	82
		35	41.90	4.27	25.2	8.4		7.6		6.7			35	100	95	90
		40	36.67	3.74	28.8	9.6		8.6		7.7			40	108	102	97
		45	32.59	3.32	32.4	10.8		9.7		8.6			45	114	108	102
		50	29.33	2.99	36.0	12.0	352.0 (35.9)	10.8	316.8 (32.3)	9.6	218.6 (22.3)		50	119	113	107
		55	26.67	2.72	39.6	13.2		11.9		10.6			55	127	120	114
		60	24.44	2.49	43.2	14.4		13.0		11.5			60	130	123	117
		65	22.56	2.30	46.8	15.6		14.0		12.5			65	138	131	124
		70	20.95	2.14	50.4	16.8		15.1		13.4			70	138	131	124
75	19.56	1.99	54.0	18.0		16.2		14.4		75	142	134	127			
80	18.33	1.87	57.6	19.2		17.3		15.4		80	152	144	136			
90	16.30	1.66	64.8	21.6		19.4		17.3		90	168	159	151			
12	6	15	116.70	11.90	10.8	3.6		3.2		2.9		GRE 12-15	92	86	80	
		20	87.28	8.90	14.4	4.8		4.3		3.8			20	92	86	80
		25	69.63	7.10	18.0	6.0		5.4		4.8			25	92	86	80
		30	58.55	5.97	21.6	7.2		6.5		5.8			30	100	93	87
		35	50.11	5.11	25.2	8.4		7.6		6.7			35	108	101	94
		40	43.84	4.47	28.8	9.6		8.6		7.7			40	116	108	101
		45	39.03	3.98	32.4	10.8		9.7		8.6			45	124	116	108
		50	35.11	3.58	36.0	12.0	421.7 (43)	10.8	372.7 (38)	9.6	333.4 (34)		50	128	120	112
		55	31.87	3.25	39.6	13.2		11.9		10.6			55	136	127	119
		60	29.22	2.98	43.2	14.4		13.0		11.5			60	136	127	119
		65	26.87	2.74	46.8	15.6		14.0		12.5			65	144	135	126
		70	24.91	2.54	50.4	16.8		15.1		13.4			70	144	135	126
75	23.24	2.37	54.0	18.0		16.2		14.4		75	148	138	129			
80	21.67	2.21	57.6	19.2		17.3		15.4		80	160	150	140			
90	19.42	1.98	64.8	21.6		19.4		17.3		90	176	165	154			
13	6.5	20	102.92	10.49	14.4	4.8		4.3		3.8		GRE 13-20	103	97	92	
		25	82.33	8.40	18.0	6.0		5.4		4.8			25	103	97	92
		30	68.61	7.00	21.6	7.2		6.5		5.8			30	111	105	99
		35	58.81	6.00	25.2	8.4		7.6		6.7			35	119	113	107
		40	51.46	5.25	28.8	9.6		8.6		7.7			40	124	117	111
		45	45.74	4.66	32.4	10.8		9.7		8.6			45	132	125	118
		50	41.17	4.20	36.0	12.0	494.0 (50.4)	10.8	444.6 (45.3)	9.6	395.2 (40.3)		50	139	132	125
		55	37.42	3.82	39.6	13.2		11.9		10.6			55	144	136	129
		60	34.31	3.50	43.2	14.4		13.0		11.5			60	147	139	132
		65	31.67	3.23	46.8	15.6		14.0		12.5			65	149	141	134
		70	29.40	3.00	50.4	16.8		15.1		13.4			70	155	147	139
		75	27.44	2.80	54.0	18.0		16.2		14.4			75	162	153	145
80	25.73	2.62	57.6	19.2		17.3		15.4		80	165	156	148			
90	22.87	2.33	64.8	21.6		19.4		17.3		90	181	171	162			
14	7	20	120.52	12.29	14.4	4.8		4.3		3.8		GRE 14-20	108	101	94	
		25	96.40	9.83	18.0	6.0		5.4		4.8			25	108	101	94
		30	80.32	8.19	21.6	7.2		6.5		5.8			30	116	108	101
		35	68.84	7.02	25.2	8.4		7.6		6.7			35	124	116	108
		40	60.21	6.14	28.8	9.6		8.6		7.7			40	128	120	112
		45	53.54	5.46	32.4	10.8		9.7		8.6			45	136	127	119
		50	48.15	4.91	36.0	12.0	578.6 (59)	10.8	519.8 (53)	9.6	460.9 (47)		50	144	135	126
		55	43.74	4.46	39.6	13.2		11.9		10.6			55	148	138	129
		60	40.11	4.09	43.2	14.4		13.0		11.5			60	152	142	133
		65	37.07	3.78	46.8	15.6		14.0		12.5			65	152	142	133
		70	34.42	3.51	50.4	16.8		15.1		13.4			70	160	150	140
		75	32.07	3.27	54.0	18.0		16.2		14.4			75	168	157	147
80	30.11	3.07	57.6	19.2		17.3		15.4		80	168	157	147			
90	26.67	2.72	64.8	21.6		19.4		17.3		90	184	172	161			
100	24.12	2.46	72.0	24.0		21.6		19.2		100	200	187	175			

※密着長は参考値になります。ロットにより多少のバラツキがあります。

●赤文字は計画中です。

(単価は1ヶ当り消費税抜きの価格です。)

外径	内径	線径	バネ定数	密着長	30万回	50万回	100万回	Code No.	単価(円)
mm	mm	mm	N/mm	mm	たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)	1個~50個~200個~
15	7.5	20	137.71	14.04	4.8	4.3	3.8	GRE 15-20	119 113 107
		25	110.17	11.23	18.0	6.0	5.4	25	119 113 107
		30	91.81	9.36	21.6	7.2	6.5	30	124 117 111
		35	78.69	8.02	25.2	8.4	7.6	35	138 131 124
		40	68.85	7.02	28.8	9.6	8.6	40	142 134 127
		45	61.20	6.24	32.4	10.8	9.7	45	147 139 132
		50	55.08	5.62	36.0	12.0	10.8	50	160 152 144
		55	50.08	5.11	39.6	13.2	11.9	55	167 158 150
		60	45.90	4.68	43.2	14.4	13.0	60	174 165 156
		65	42.37	4.32	46.8	15.6	14.0	65	185 175 166
		70	39.35	4.01	50.4	16.8	15.1	70	193 183 173
		75	36.72	3.74	54.0	18.0	16.2	75	204 193 183
		80	34.43	3.51	57.6	19.2	17.3	80	210 199 189
		90	30.60	3.12	64.8	21.6	19.4	90	223 211 200
		100	27.54	2.81	72.0	24.0	21.6	100	244 231 219
16	8	20	157.30	16.04	14.4	4.8	4.3	GRE 16-20	124 116 108
		25	125.82	12.83	18.0	6.0	5.4	25	124 116 108
		30	104.83	10.69	21.6	7.2	6.5	30	128 120 112
		35	89.83	9.16	25.2	8.4	7.6	35	144 135 126
		40	78.65	8.02	28.8	9.6	8.6	40	148 138 129
		45	69.82	7.12	32.4	10.8	9.7	45	152 142 133
		50	62.86	6.41	36.0	12.0	10.8	50	168 157 147
		55	57.17	5.83	39.6	13.2	11.9	55	176 165 154
		60	52.37	5.34	43.2	14.4	13.0	60	184 172 161
		65	48.35	4.93	46.8	15.6	14.0	65	200 187 175
		70	44.91	4.58	50.4	16.8	15.1	70	208 195 182
		75	41.97	4.28	54.0	18.0	16.2	75	220 206 192
		80	39.32	4.01	57.6	19.2	17.3	80	228 213 199
		90	35.01	3.57	64.8	21.6	19.4	90	240 225 210
		100	31.48	3.21	72.0	24.0	21.6	100	264 247 231
18	9	20	198.19	20.21	14.4	4.8	4.3	GRE 18-20	124 116 108
		25	158.47	16.16	18.0	6.0	5.4	25	136 127 119
		30	132.10	13.47	21.6	7.2	6.5	30	148 138 129
		35	113.17	11.54	25.2	8.4	7.6	35	152 142 133
		40	99.05	10.10	28.8	9.6	8.6	40	160 150 140
		45	88.06	8.98	32.4	10.8	9.7	45	176 165 154
		50	79.24	8.08	36.0	12.0	10.8	50	184 172 161
		55	71.98	7.34	39.6	13.2	11.9	55	192 180 168
		60	66.00	6.73	43.2	14.4	13.0	60	208 195 182
		65	60.90	6.21	46.8	15.6	14.0	65	216 202 189
		70	56.58	5.77	50.4	16.8	15.1	70	220 206 192
		75	52.86	5.39	54.0	18.0	16.2	75	232 217 203
		80	49.52	5.05	57.6	19.2	17.3	80	240 225 210
		90	44.13	4.50	64.8	21.6	19.4	90	264 247 231
		100	39.62	4.04	72.0	24.0	21.6	100	280 262 245
20	10	20	245.17	25.00	14.4	4.8	4.3	GRE 20-20	127 119 111
		25	196.13	20.00	18.0	6.0	5.4	25	127 119 111
		30	163.38	16.66	21.6	7.2	6.5	30	131 123 115
		35	140.04	14.28	25.2	8.4	7.6	35	147 138 129
		40	122.58	12.50	28.8	9.6	8.6	40	151 142 133
		45	108.95	11.11	32.4	10.8	9.7	45	155 146 136
		50	98.07	10.00	36.0	12.0	10.8	50	172 161 151
		55	89.14	9.09	39.6	13.2	11.9	55	180 169 158
		60	81.69	8.33	43.2	14.4	13.0	60	188 177 165
		65	75.41	7.69	46.8	15.6	14.0	65	205 192 180
		70	70.02	7.14	50.4	16.8	15.1	70	213 200 187
		75	65.41	6.67	54.0	18.0	16.2	75	225 211 198
		80	61.29	6.25	57.6	19.2	17.3	80	233 219 205
		90	54.43	5.55	64.8	21.6	19.4	90	254 238 223
		100	49.03	5.00	72.0	24.0	21.6	100	270 254 237

外径 φmm	内径 φmm	線径 φmm	バネ定数		密着長 mm	30万回		50万回		100万回		Code No.	単価(円)			
			N/mm	kgf/mm		たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)		1個~	50個~	200個~	
22	11	25	236.93	24.16	18.0	6.0		5.4		4.8		GRE 22-25	139	130	122	
		30	197.41	20.13	21.6	7.2		6.5		5.8			30	147	138	129
		35	169.65	17.30	25.2	8.4		7.6		6.7			35	151	142	133
		40	148.08	15.10	28.8	9.6		8.6		7.7			40	155	146	136
		45	131.41	13.40	32.4	10.8		9.7		8.6			45	155	146	136
		50	118.46	12.08	36.0	12.0		10.8		9.6			50	164	154	144
		55	107.28	10.94	39.6	13.2		11.9		10.6			55	172	161	151
		60	98.65	10.06	43.2	14.4	1422.0 (145)	13.0	274.9 (130)	11.5	1137.6 (116)		60	180	169	158
		65	91.01	9.28	46.8	15.6		14.0		12.5			65	188	177	165
		70	84.63	8.63	50.4	16.8		15.1		13.4			70	196	184	172
		75	78.85	8.04	54.0	18.0		16.2		14.4			75	205	192	180
		80	74.04	7.55	57.6	19.2		17.3		15.4			80	213	200	187
		90	65.80	6.71	64.8	21.6		19.4		17.3			90	225	211	198
		100	59.23	6.04	72.0	24.0		21.6		19.2			100	246	231	216
		125	47.37	4.83	90.0	30.0		27.0		24.0			125	287	269	252
150	39.42	4.02	108.0	36.0		32.4		28.8		150	328	308	288			
25	12.5	25	305.97	31.20	18.0	6.0		5.4		4.8		GRE 25-25	153	144	135	
		30	254.68	25.97	21.6	7.2		6.5		5.8			30	157	148	138
		35	219.47	22.38	25.2	8.4		7.6		6.7			35	161	152	142
		40	190.93	19.47	28.8	9.6		8.6		7.7			40	178	168	157
		45	170.64	17.40	32.4	10.8		9.7		8.6			45	187	176	165
		50	152.79	15.58	36.0	12.0		10.8		9.6			50	195	184	172
		55	139.25	14.20	39.6	13.2		11.9		10.6			55	212	200	187
		60	127.29	12.98	43.2	14.4		13.0		11.5			60	221	208	195
		65	117.68	12.00	46.8	15.6	1833.8 (187)	14.0	657.3 (169)	12.5	1471.0 (150)		65	233	220	206
		70	109.15	11.13	50.4	16.8		15.1		13.4			70	242	228	213
		75	101.99	10.40	54.0	18.0		16.2		14.4			75	246	232	217
		80	95.42	9.73	57.6	19.2		17.3		15.4			80	263	248	232
		90	84.83	8.65	64.8	21.6		19.4		17.3			90	280	264	247
		100	76.39	7.79	72.0	24.0		21.6		19.2			100	297	280	262
		125	61.10	6.23	90.0	30.0		27.0		24.0			125	357	336	315
150	50.99	5.20	108.0	36.0		32.4		28.8		150	408	384	360			
175	43.74	4.46	126.0	42.0		37.8		33.6		175	463	436	408			
27	13.5	25	356.96	36.40	18.0	6.0		5.4		4.8		GRE 27-25	161	152	142	
		30	298.22	30.41	21.6	7.2		6.5		5.8			30	170	160	150
		35	256.93	26.20	25.2	8.4		7.6		6.7			35	187	176	165
		40	223.69	22.81	28.8	9.6		8.6		7.7			40	195	184	172
		45	199.07	20.30	32.4	10.8		9.7		8.6			45	204	192	180
		50	178.97	18.25	36.0	12.0		10.8		9.6			50	221	208	195
		55	161.81	16.50	39.6	13.2		11.9		10.6			55	229	216	202
		60	149.06	15.20	43.2	14.4		13.0		11.5			60	233	220	206
		65	137.29	14.00	46.8	15.6	2147.7 (219)	14.0	1931.9 (197)	12.5	1716.2 (175)		65	246	232	217
		70	127.78	13.03	50.4	16.8		15.1		13.4			70	255	240	225
		75	118.66	12.10	54.0	18.0		16.2		14.4			75	263	248	232
		80	111.80	11.40	57.6	19.2		17.3		15.4			80	280	264	247
		90	99.34	10.13	64.8	21.6		19.4		17.3			90	306	288	270
		100	89.44	9.12	72.0	24.0		21.6		19.2			100	340	320	300
		125	71.59	7.30	90.0	30.0		27.0		24.0			125	425	400	375
150	59.62	6.08	108.0	36.0		32.4		28.8		150	493	464	435			
175	51.09	5.21	126.0	42.0		37.8		33.6		175	565	532	498			
30	15	25	441.30	45.00	18.0	6.0		5.4		4.8		GRE 30-25	178	168	157	
		30	367.75	37.50	21.6	7.2		6.5		5.8			30	195	184	172
		35	316.36	32.26	25.2	8.4		7.6		6.7			35	212	200	187
		40	275.76	28.12	28.8	9.6		8.6		7.7			40	229	216	202
		45	245.17	25.00	32.4	10.8		9.7		8.6			45	233	220	206
		50	220.65	22.50	36.0	12.0		10.8		9.6			50	246	232	217
		55	200.05	20.40	39.6	13.2		11.9		10.6			55	263	248	232
		60	183.87	18.75	43.2	14.4		13.0		11.5			60	280	264	247
		65	169.65	17.30	46.8	15.6	2647.8 (270)	14.0	2383.0 (243)	12.5	2118.2 (216)		65	289	272	255
		70	157.59	16.07	50.4	16.8		15.1		13.4			70	297	280	262
		75	147.17	15.00	54.0	18.0		16.2		14.4			75	310	292	273
		80	137.88	14.06	57.6	19.2		17.3		15.4			80	323	304	285
		90	122.58	12.50	64.8	21.6		19.4		17.3			90	365	344	322
		100	110.32	11.25	72.0	24.0		21.6		19.2			100	408	384	360
		125	88.26	9.00	90.0	30.0		27.0		24.0			125	493	464	435
150	73.55	7.50	108.0	36.0		32.4		28.8		150	586	552	517			
175	62.96	6.42	126.0	42.0		37.8		33.6		175	688	648	607			
200	55.11	5.62	144.0	48.0		43.2		38.4		200	769	724	678			

GRE/DSH 重荷重 Heavy load Spring

材質:SWOSC-V相当

RoHS適合

外径 mm	内径 mm	自由長 mm	バネ定数		密着長 mm	30万回		50万回		100万回		Code No.	単価(円)		
			N/mm	kgf/mm		たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)		1個~	50個~	200個~
35	17.5	40	374.81	38.22	28.8	9.6	8.6	7.7	GRE 35-40	263	248	232			
		45	333.23	33.98	32.4	10.8	9.7	8.6		45	280	264	247		
		50	299.89	30.58	36.0	12.0	10.8	9.6		50	306	288	270		
		55	272.62	27.80	39.6	13.2	11.9	10.6		55	323	304	285		
		60	249.87	25.48	43.2	14.4	13.0	11.5		60	357	336	315		
		65	230.75	23.53	46.8	15.6	14.0	12.5		65	382	360	337		
		70	214.18	21.84	50.4	16.8	15.1	13.4		70	403	380	356		
		75	199.96	20.39	54.0	18.0	16.2	14.4		75	425	400	375		
		80	187.40	19.11	57.6	19.2	17.3	15.4		80	442	416	390		
		90	166.61	16.99	64.8	21.6	19.4	17.3		90	493	464	435		
		100	149.94	15.29	72.0	24.0	21.6	19.2		100	539	508	476		
		125	119.93	12.23	90.0	30.0	27.0	24.0		125	654	616	577		
40	20	150	99.93	10.19	108.0	36.0	32.4	28.8	GRE 40-40	150	769	724	678		
		175	85.61	8.73	126.0	42.0	37.8	33.6		175	888	836	783		
		200	74.92	7.64	144.0	48.0	43.2	38.4		200	1,007	948	888		
		40	490.33	50.00	28.8	9.6	8.6	7.7		GRE 40-40	310	297	284		
		45	435.81	44.44	33.0	10.8	9.7	8.6			45	337	323	309	
		50	392.26	40.00	36.0	12.0	10.8	9.6			50	364	349	334	
		55	356.57	36.36	40.4	13.2	11.9	10.6			55	400	383	367	
		60	326.85	33.33	43.2	14.4	13.0	11.5			60	414	396	379	
		65	301.75	30.77	47.7	15.6	14.0	12.5			65	450	431	412	
		70	280.17	28.57	50.4	16.8	15.1	13.4			70	472	452	433	
		75	261.54	26.67	55.1	18.0	16.2	14.4			75	517	495	474	
		80	245.17	25.00	57.6	19.2	17.3	15.4			80	540	517	495	
90	217.90	22.22	64.8	21.6	19.4	17.3	90	589	564		540				
100	196.13	20.00	72.0	24.0	21.6	19.2	100	648	621		594				
50	25	125	156.91	16.00	90.0	30.0	27.0	24.0	GRE 50-50		125	787	754	721	
		150	130.72	13.33	108.0	36.0	32.4	28.8		150	922	884	845		
		175	111.99	11.42	126.0	42.0	37.8	33.6		175	1,057	1,013	969		
		200	98.07	10.00	144.0	48.0	43.2	38.4		200	1,197	1,147	1,097		
		225	87.28	8.90	162.0	54.0	48.6	43.2		225	1,336	1,280	1,225		
		250	78.55	8.01	180.0	60.0	54.0	48.0		250	1,471	1,410	1,348		
		275	71.39	7.28	198.0	66.0	59.4	52.8		275	1,687	1,617	1,546		
		300	65.41	6.67	216.0	72.0	64.8	57.6		300	1,885	1,806	1,728		
		50	612.91	62.50	36.0	12.0	10.8	9.6		GRE 50-50	612	586	561		
		55	557.21	56.82	39.6	13.2	11.9	10.6			55	630	603	577	
		60	510.73	52.08	43.2	14.4	13.0	11.5			60	648	621	594	
		65	471.50	48.08	46.8	15.6	14.0	12.5			65	688	659	631	
70	437.77	44.64	50.4	16.8	15.1	13.4	70	724	694		664				
75	408.64	41.67	54.0	18.0	16.2	14.4	75	769	737		705				
80	383.05	39.06	57.6	19.2	17.3	15.4	80	810	776		742				
90	340.49	34.72	64.8	21.6	19.4	17.3	90	891	853		816				
100	306.46	31.25	72.0	24.0	21.6	19.2	100	972	931		891				
125	245.17	25.00	90.0	30.0	27.0	24.0	125	1,174	1,125		1,076				
150	204.27	20.83	108.0	36.0	32.4	28.8	150	1,381	1,323		1,266				
175	175.05	17.85	126.0	42.0	37.8	33.6	175	1,593	1,526		1,460				
200	153.18	15.62	144.0	48.0	43.2	38.4	200	1,795	1,720	1,645					
225	136.21	13.89	162.0	54.0	48.6	43.2	225	2,002	1,919	1,835					
250	122.58	12.50	180.0	60.0	54.0	48.0	250	2,191	2,100	2,008					
275	111.40	11.36	198.0	66.0	59.4	52.8	275	2,416	2,315	2,215					
300	102.18	10.42	216.0	72.0	64.8	57.6	300	2,632	2,522	2,413					
350	87.28	8.90	256.9	84.0	75.6	67.2	350	3,037	2,910	2,784					

外径 mm	内径 mm	自由長 mm	バネ定数		密着長 mm	30万回		50万回		100万回		Code No.	単価(円)			
			N/mm	kgf/mm		たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)	たわみ mm	荷重 N(kgf)		1個	50個	200個	
60	30	60	735.50	75.00	43.2	14.4		13.0		11.5		GRE 60-60	954	914	874	
		70	630.37	64.28	50.4	16.8		15.1		13.4			70	985	944	903
		80	551.62	56.25	57.6	19.2		17.3		15.4			80	1,098	1,052	1,006
		90	490.33	50.00	64.8	21.6		19.4		17.3			90	1,219	1,168	1,117
		100	441.30	45.00	72.0	24.0		21.6		19.2			100	1,327	1,272	1,216
		125	353.04	36.00	90.0	30.0		27.0		24.0			125	1,611	1,543	1,476
		150	294.20	30.00	108.0	36.0	10591.2 (1080)	32.4	9541.9 (973)	28.8	8472.9 (864)		150	1,894	1,815	1,736
		175	252.13	25.71	126.0	42.0		37.8		33.6			175	2,169	2,078	1,988
		200	220.65	22.50	144.0	48.0		43.2		38.4			200	2,457	2,354	2,252
		225	196.33	20.02	162.0	54.0		48.6		43.2			225	2,664	2,553	2,442
		250	176.62	18.01	180.0	60.0		54.0		48.0			250	2,875	2,755	2,635
		275	160.63	16.38	198.0	66.0		59.4		52.8			275	3,096	2,967	2,838
70	38.5	300	147.20	15.01	216.0	72.0		64.8		57.6		300	3,316	3,178	3,040	
		350	125.52	12.80	256.9	84.0		75.6		67.2		350	3,807	3,648	3,489	
		70	747.6	76.20	50.4	16.8		15.1		13.4		GRE 70-70	1,746	1,697	1,649	
		80	654.10	66.70	57.6	19.2		17.3		15.4			80	1,800	1,750	1,700
		90	581.53	59.30	64.8	21.6		19.4		17.3			90	1,854	1,802	1,751
		100	526.67	53.40	72.0	24.0		21.6		19.2			100	1,917	1,863	1,810
		125	418.74	42.70	90.0	30.0		27.0		24.0			125	2,286	2,222	2,159
		150	349.12	35.60	108.0	36.0	12257.0 (1250)	32.4	11301.0 (1152)	28.8	10045.0 (1024)		150	2,677	2,603	2,528
		175	299.10	30.50	126.0	42.0		37.8		33.6			175	3,037	2,953	2,868
		200	261.84	26.70	144.0	48.0		43.2		38.4			200	3,388	3,294	3,200
		250	208.88	21.30	180.0	60.0		54.0		48.0			250	4,023	3,911	3,799
		300	174.56	17.80	216.0	72.0		64.8		57.6			300	4,756	4,624	4,492
350	149.06	15.20	256.9	84.0		75.6		67.2		350	5,467		5,315	5,163		