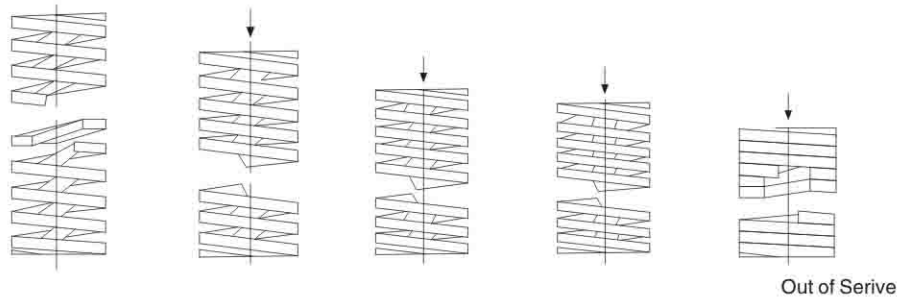


弹簧种类 SPRING TYPES

Relationship between working times of spring and description rate

Working Times Deflection	100万次 1million (%offree length)	50万次 0.5million (%offree length)	30万次 0.3million (%offree length)	最大变形量 MaxDescription (%offree length)	Color
轻少荷重 Lightest Load	40.0%	45.0%	50.0%	Approx.58.0%	Yellow
轻荷重 Light Load	32.0%	36.0%	40.0%	Approx.48.0%	Blue
中荷重 Medium Load	25.6%	28.8%	32.0%	Approx.38.0%	Red
重荷重 Heavy Load	19.2%	21.6%	24.0%	Approx.28.0%	Green
极重荷重 Ultra Heavy Load	16.0%	18.0%	20.0%	Approx.24.0%	Brown
超重荷重 Overweight Load	16.0%	18.0%	20.0%	Approx.24.0%	Black
高变形 HighDeflection	40%	45%	50%	Approx.60.0%	Argent
中变形 Middle Deflection	40%	45%	50%	Approx.60.0%	Purple



Tolerance of Metal Mold Spring

外径 Outer Dia.	内径 Inner Dia.	自由长 Free Length		荷重 Load kgf	Coil D irection.
		below 50mm	over 55mm		
+0mm -0.7mm	+0.7mm -0.1mm	± 0.5mm	± 1%	± 10%	right

产品标准化 Standardized products

		外径 O.Dmm															
		8	10	12	14	16	18	20	22	25	27	30	35	40	50	60	70
自由长 mm	10	●															
	15	●															
	20	●	●	●													
	25	●	●	●	●	●	●	●	●	●	●	●					
	30	●	●	●	●	●	●	●	●	●	●	●					
	35	●	●	●	●	●	●	●	●	●	●	●	●				
	40	●	●	●	●	●	●	●	●	●	●	●	●	●			
	45	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
	50	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	55	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	60	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	65	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	70	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	75	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	80	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	90	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	100		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	125			●	●	●	●	●	●	●	●	●	●	●	●	●	●
	150						●	●	●	●	●	●	●	●	●	●	●
	175							●	●	●	●	●	●	●	●	●	●
200								●	●	●	●	●	●	●	●	●	
225									●	●	●	●	●	●	●	●	
250										●	●	●	●	●	●	●	
275											●	●	●	●	●	●	
300												●	●	●	●	●	
350													●	●	●	●	
400														●	●	●	
450															●	●	
500																●	



TF

TF

轻少荷重
LIGHTTEST LOAD

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TF 8x10	8	4	10	1.56	5.0	4.5	4.0	4.0	6	
15			15	1.04	7.5	6.8	6.0	6.0	6	
20			20	0.78	10.0	9.0	8.0	8.0	6	
25			25	0.62	12.5	11.2	10.0	10.0	6	
30			30	0.52	15.0	13.5	12.0	12.0	6	
35			35	0.44	17.5	15.7	14.0	14.0	6	
40			40	0.39	20.0	18.0	16.0	16.0	6	
45			45	0.35	22.5	20.2	18.0	18.0	6	
50			50	0.31	25.0	22.5	20.0	20.0	6	
55			55	0.28	27.5	24.7	22.0	22.0	6	
60			60	0.26	30.0	27.0	24.0	24.0	6	
65			65	0.24	32.5	29.2	26.0	26.0	6	
70			70	0.22	35.0	31.5	28.0	28.0	6	
75			75	0.21	37.5	33.7	30.0	30.0	6	
80			80	0.20	40.0	36.0	32.0	32.0	6	
90	90	0.17	45.0	40.5	36.0	36.0	6			
TF 10x10	10	5	10	2.00	5.0	4.5	4.0	8		
15			15	1.32	7.5	6.8	6.0	8		
20			20	1.00	10.0	9.0	8.0	8		
25			25	0.80	12.5	11.2	10.0	8		
30			30	0.67	15.0	13.5	12.0	8		
35			35	0.57	17.5	15.7	14.0	8		
40			40	0.50	20.0	18.0	16.0	8		
45			45	0.44	22.5	20.2	18.0	8		
50			50	0.40	25.0	22.5	20.0	8		
55			55	0.36	27.5	24.7	22.0	8		
60			60	0.33	30.0	27.0	24.0	8		
65			65	0.31	32.5	29.2	26.0	8		
70			70	0.29	35.0	31.5	28.0	8		
75			75	0.27	37.5	33.7	30.0	8		
80			80	0.25	40.0	36.0	32.0	8		
90	90	0.22	45.0	40.5	36.0	8				
100	100	0.20	50.0	45.0	40.0	8				
TF 12x20	12	6	20	1.40	10.0	9.0	8.0	11		
25			25	1.12	12.5	11.2	10.0	11		
30			30	0.93	15.0	13.5	12.0	11		
35			35	0.80	17.5	15.7	14.0	11		
40			40	0.70	20.0	18.0	16.0	11		
45			45	0.62	22.5	20.2	18.0	11		
50			50	0.56	25.0	22.5	20.0	11		
55			55	0.51	27.5	24.7	22.0	11		
60			60	0.47	30.0	27.0	24.0	11		
65			65	0.43	32.5	29.2	26.0	11		
70			70	0.40	35.0	31.5	28.0	11		
75			75	0.37	37.5	33.7	30.0	11		
80			80	0.35	40.0	36.0	32.0	11		
90			90	0.31	45.0	40.5	36.0	11		
100			100	0.28	50.0	45.0	40.0	11		
TF 14x20	14	7	20	1.78	10.0	9.0	8.0	14.5		
25			25	1.44	12.5	11.2	10.0	14.5		
30			30	1.20	15.0	13.5	12.0	14.5		
35			35	1.03	17.5	15.7	14.0	14.5		
40			40	0.90	20.0	18.0	16.0	14.5		
45			45	0.80	22.5	20.2	18.0	14.5		
50			50	0.72	25.0	22.5	20.0	14.5		
55			55	0.65	27.5	24.7	22.0	14.5		
60			60	0.60	30.0	27.0	24.0	14.5		
65			65	0.55	32.5	29.2	26.0	14.5		
70			70	0.51	35.0	31.5	28.0	14.5		
75			75	0.48	37.5	33.7	30.0	14.5		
80			80	0.45	40.0	36.0	32.0	14.5		
90			90	0.40	45.0	40.5	36.0	14.5		
100			100	0.36	50.0	45.0	40.0	14.5		
125	125	0.29	62.5	56.2	50.0	14.5				

※kgf(N)(荷重)=kgf/1mm(定数)×mm(变形量)

-07-

TF

轻少荷重
LIGHTTEST LOAD荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TF 16x20	16	8	20	2.11	10.0	9.0	8.0	17		
25			25	1.68	12.5	11.2	10.0	17		
30			30	1.40	15.0	13.5	12.0	17		
35			35	1.20	17.5	15.7	14.0	17		
40			40	1.05	20.0	18.0	16.0	17		
45			45	0.94	22.5	20.2	18.0	17		
50			50	0.84	25.0	22.5	20.0	17		
55			55	0.77	27.5	24.7	22.0	17		
60			60	0.70	30.0	27.0	24.0	17		
65			65	0.65	32.5	29.2	26.0	17		
70			70	0.60	35.0	31.5	28.0	17		
75			75	0.56	37.5	33.7	30.0	17		
80			80	0.53	40.0	36.0	32.0	17		
90			90	0.47	45.0	40.5	36.0	17		
100			100	0.42	50.0	45.0	40.0	17		
125	125	0.34	62.5	56.2	50.0	17				
TF 18x20	18	9	20	2.56	10.0	9.0	8.0	21		
25			25	2.08	12.5	11.2	10.0	21		
30			30	1.74	15.0	13.5	12.0	21		
35			35	1.49	17.5	15.7	14.0	21		
40			40	1.30	20.0	18.0	16.0	21		
45			45	1.16	22.5	20.2	18.0	21		
50			50	1.04	25.0	22.5	20.0	21		
55			55	0.95	27.5	24.7	22.0	21		
60			60	0.87	30.0	27.0	24.0	21		
65			65	0.80	32.5	29.2	26.0	21		
70			70	0.74	35.0	31.5	28.0	21		
75			75	0.70	37.5	33.7	30.0	21		
80			80	0.65	40.0	36.0	32.0	21		
90			90	0.58	45.0	40.5	36.0	21		
100			100	0.52	50.0	45.0	40.0	21		
125	125	0.42	62.5	56.2	50.0	21				
TF 20x20	20	11	20	3.22	10.0	9.0	8.0	26		
25			25	2.56	12.5	11.2	10.0	26		
30			30	2.13	15.0	13.5	12.0	26		
35			35	1.83	17.5	15.7	14.0	26		
40			40	1.60	20.0	18.0	16.0	26		
45			45	1.42	22.5	20.2	18.0	26		
50			50	1.28	25.0	22.5	20.0	26		
55			55	1.16	27.5	24.7	22.0	26		
60			60	1.07	30.0	27.0	24.0	26		
65			65	0.98	32.5	29.2	26.0	26		
70			70	0.91	35.0	31.5	28.0	26		
75			75	0.85	37.5	33.7	30.0	26		
80			80	0.80	40.0	36.0	32.0	26		
90			90	0.71	45.0	40.5	36.0	26		
100			100	0.64	50.0	45.0	40.0	26		
125	125	0.51	62.5	56.2	50.0	26				
150	150	0.43	75.0	67.5	60.0	26				
175	175	0.37	87.5	78.7	70.0	26				
TF 22x25	22	11	25	3.20	12.5	11.2	10.0	32		
30			30	2.67	15.0	13.5	12.0	32		
35			35	2.29	17.5	15.7	14.0	32		
40			40	2.00	20.0	18.0	16.0	32		
45			45	1.78	22.5	20.2	18.0	32		
50			50	1.60	25.0	22.5	20.0	32		
55			55	1.46	27.5	24.7	22.0	32		
60			60	1.33	30.0	27.0	24.0	32		
65			65	1.23	32.5	29.2	26.0	32		
70			70	1.14	35.0	31.5	28.0	32		
75			75	1.07	37.5	33.7	30.0	32		
80			80	1.00	40.0	36.0	32.0	32		
90			90	0.89	45.0	40.5	36.0	32		
100			100	0.80	50.0	45.0	40.0	32		
125			125	0.64	62.5	56.2	50.0	32		
150	150	0.53	75.0	67.5	60.0	32				
175	175	0.46	87.5	78.7	70.0	32				

-08-

TF

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

轻少荷重
LIGHTEST LOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TF 25x25	25	13.5	25	4.00	12.5	50	11.2	45	10.0	40
30			30	3.33	15.0		13.5		12.0	
35			35	2.85	17.5		15.7		14.0	
40			40	2.50	20.0		18.0		16.0	
45			45	2.22	22.5		20.2		18.0	
50			50	2.00	25.0		22.5		20.0	
55			55	1.82	27.5		24.7		22.0	
60			60	1.67	30.0		27.0		24.0	
65			65	1.54	32.5		29.2		26.0	
70			70	1.43	35.0		31.5		28.0	
75			75	1.33	37.5		33.7		30.0	
80			80	1.25	40.0		36.0		32.0	
90			90	1.11	45.0		40.5		36.0	
100			100	1.00	50.0		45.0		40.0	
125			125	0.80	62.5		56.2		50.0	
150			150	0.67	75.0		67.5		60.0	
175			175	0.57	87.5		78.7		70.0	
200	200	0.50	100.0	90.0	80.0					
TF 27x25	27	13.5	25	4.80	12.5	60	11.2	54	10.0	48
30			30	4.00	15.0		13.5		12.0	
35			35	3.43	17.5		15.7		14.0	
40			40	3.00	20.0		18.0		16.0	
45			45	2.67	22.5		20.2		18.0	
50			50	2.40	25.0		22.5		20.0	
55			55	2.18	27.5		24.7		22.0	
60			60	2.00	30.0		27.0		24.0	
65			65	1.85	32.5		29.2		26.0	
70			70	1.71	35.0		31.5		28.0	
75			75	1.60	37.5		33.7		30.0	
80			80	1.50	40.0		36.0		32.0	
90			90	1.33	45.0		40.5		36.0	
100			100	1.20	50.0		45.0		40.0	
125			125	0.96	62.5		56.2		50.0	
150			150	0.80	75.0		67.5		60.0	
175			175	0.69	87.5		78.7		70.0	
200	200	0.60	100.0	90.0	80.0					
TF 30x25	30	16	25	5.80	12.5	72	11.2	65	10.0	58
30			30	4.83	15.0		13.5		12.0	
35			35	4.13	17.5		15.7		14.0	
40			40	3.60	20.0		18.0		16.0	
45			45	3.21	22.5		20.2		18.0	
50			50	2.88	25.0		22.5		20.0	
55			55	2.63	27.5		24.7		22.0	
60			60	2.40	30.0		27.0		24.0	
65			65	2.22	32.5		29.2		26.0	
70			70	2.05	35.0		31.5		28.0	
75			75	1.93	37.5		33.7		30.0	
80			80	1.80	40.0		36.0		32.0	
90			90	1.60	45.0		40.5		36.0	
100			100	1.44	50.0		45.0		40.0	
125			125	1.15	62.5		56.2		50.0	
150			150	0.96	75.0		67.5		60.0	
175			175	0.82	87.5		78.7		70.0	
200	200	0.72	100.0	90.0	80.0					
TF 35x35	35	19	35	5.60	17.5	98	15.7	88	14.0	78
40			40	4.90	20.0		18.0		16.0	
45			45	4.36	22.5		20.2		18.0	
50			50	3.92	25.0		22.5		20.0	
55			55	3.56	27.5		24.7		22.0	
60			60	3.26	30.0		27.0		24.0	
65			65	3.02	32.5		29.0		26.0	
70			70	2.80	35.0		31.5		28.0	
75			75	2.61	37.5		33.7		30.0	
80			80	2.45	40.0		36.0		32.0	
90			90	2.17	45.0		40.5		36.0	
100			100	1.96	50.0		45.0		40.0	
125			125	1.57	62.5		56.2		50.0	
150			150	1.30	75.0		67.5		60.0	
175			175	1.12	87.5		78.7		70.0	
200			200	0.98	100.0		90.0		80.0	

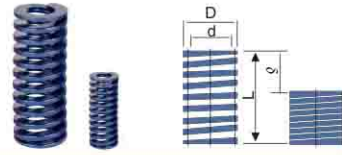
TF

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

轻少荷重
LIGHTEST LOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TF 40x40	40	22	40	6.38	20.0	128	18.0	115	16.0	102
45			45	5.67	22.5		20.2		18.0	
50			50	5.12	25.0		22.5		20.0	
55			55	4.64	27.5		24.7		22.0	
60			60	4.26	30.0		27.0		24.0	
65			65	3.93	32.5		29.2		26.0	
70			70	3.65	35.0		31.5		28.0	
75			75	3.40	37.5		33.7		30.0	
80			80	3.20	40.0		36.0		32.0	
90			90	2.84	45.0		40.5		36.0	
100			100	2.56	50.0		45.0		40.0	
125			125	2.04	62.5		56.2		50.0	
150			150	1.70	75.0		67.5		60.0	
175			175	1.46	87.5		78.7		70.0	
200			200	1.28	100.0		90.0		80.0	
225			225	1.13	112.5		101.2		90.0	
250			250	1.02	125.0		112.5		100.0	
275			275	0.93	137.5		123.7		110.0	
300			300	0.85	150.0		135.0		120.0	
TF 50x50			50	27.5	50		8.00		25.0	
55	55	7.27			27.5	24.7	22.0			
60	60	6.66			30.0	27.0	24.0			
65	65	6.15			32.5	29.2	26.0			
70	70	5.71			35.0	31.5	28.0			
75	75	5.33			37.5	33.7	30.0			
80	80	5.00			40.0	36.0	32.0			
90	90	4.44			45.0	40.5	35.0			
100	100	4.00			50.0	45.0	40.0			
125	125	3.20			62.5	56.2	50.0			
150	150	2.66			75.0	67.5	60.0			
175	175	2.28			87.5	78.7	70.0			
200	200	2.00			100.0	90.0	80.0			
225	225	1.78			112.5	101.2	90.0			
250	250	1.60			125.0	112.5	100.0			
275	275	1.45			137.5	123.7	110.0			
300	300	1.33			150.0	135.0	120.0			
350	350	1.14			175.0	157.5	140.0			
400	400	1.00			200.0	180.0	160.0			
450	450	0.89			225.0	202.5	180.0			
500	500	0.80	250.0	225.0	200.0					
TF 60x60	60	33	60	9.59	30.0	288	27.0	259	24.0	230
70			70	8.22	35.0		31.5		28.0	
80			80	7.19	40.0		36.0		32.0	
90			90	6.40	45.0		40.5		36.0	
100			100	5.76	50.0		45.0		40.0	
125			125	4.60	62.5		56.2		50.0	
150			150	3.84	75.0		67.5		60.0	
175			175	3.29	87.5		78.7		70.0	
200			200	2.88	100.0		90.0		80.0	
225			225	2.56	112.5		101.3		90.0	
250			250	2.30	125.0		112.5		100.0	
275			275	2.09	137.5		123.8		110.0	
300			300	1.92	150.0		135.0		120.0	
350			350	1.65	175.0		157.5		140.0	
400			400	1.44	200.0		180.0		160.0	
450			450	1.28	225.0		202.5		180.0	
500			500	1.15	250.0		225.0		200.0	
TF 70x70	70	40	70	11.43	35.0	400	31.5	360	28.0	320
80			80	10.00	40.0		36.0		32.0	
90			90	8.89	45.0		40.5		36.0	
100			100	8.00	50.0		45.0		40.0	
125			125	6.40	62.5		56.2		50.0	
150			150	5.33	75.0		67.5		60.0	
175			175	4.57	87.5		78.7		70.0	
200			200	4.00	100.0		90.0		80.0	
225			225	3.56	112.5		101.2		90.0	
250			250	3.20	125.0		112.5		100.0	
275			275	2.91	137.5		123.8		110.0	
300			300	2.67	150.0		135.0		120.0	
350			350	2.29	175.0		157.5		140.0	

TL



轻荷重
LIGHTEST LOAD

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TL 8x10	8	4	10	2.50	4.0		3.6		3.2	
15			15	1.67	6.0		5.4		4.8	
20			20	1.25	8.0		7.2		6.4	
25			25	1.00	10.0		9.0		8.0	
30			30	0.83	12.0		10.8		9.6	
35			35	0.71	14.0		12.6		11.2	
40			40	0.63	16.0		14.4		12.8	
45			45	0.56	18.0		16.2		14.4	
50			50	0.50	20.0		18.0	9	16.0	8
55			55	0.46	22.0		19.8		17.6	
60			60	0.42	24.0		21.6		19.2	
65			65	0.38	26.0		23.4		20.8	
70			70	0.36	28.0		25.2		22.4	
75			75	0.33	30.0		27.0		24.0	
80			80	0.31	32.0		28.8		25.6	
90	90	0.28	36.0		32.4		28.8			
TL 10x10	10	5	10	3.61	4.0		3.6		3.2	
15			15	2.41	6.0		5.4		4.8	
20			20	1.81	8.0		7.2		6.4	
25			25	1.45	10.0		9.0		8.0	
30			30	1.21	12.0		10.8		9.6	
35			35	1.03	14.0		12.6		11.2	
40			40	0.90	16.0		14.4		12.8	
45			45	0.80	18.0		16.2		14.4	
50			50	0.73	20.0	14.5	18.0	13	16.0	11.5
55			55	0.66	22.0		19.8		17.6	
60			60	0.60	24.0		21.6		19.2	
65			65	0.55	26.0		23.4		20.8	
70			70	0.51	28.0		25.2		22.4	
75			75	0.48	30.0		27.0		24.0	
80			80	0.45	32.0		28.8		25.6	
90	90	0.40	36.0		32.4		28.8			
100	100	0.36	40.0		36.0		32.0			
TL 12x20	12	6	20	2.63	8.0		7.2		6.4	
25			25	2.10	10.0		9.0		8.0	
30			30	1.75	12.0		10.8		9.6	
35			35	1.50	14.0		12.6		11.2	
40			40	1.32	16.0		14.4		12.8	
45			45	1.17	18.0		16.2		14.4	
50			50	1.05	20.0		18.0		16.0	
55			55	0.96	22.0	21	19.8	19	17.6	17
60			60	0.88	24.0		21.6		19.2	
65			65	0.81	26.0		23.4		20.8	
70			70	0.75	28.0		25.2		22.4	
75			75	0.70	30.0		27.0		24.0	
80			80	0.66	32.0		28.8		25.6	
90			90	0.58	36.0		32.4		28.8	
100			100	0.53	40.0		36.0		32.0	
TL 14x20	14	7	20	3.47	8.0		7.2		6.4	
25			25	2.80	10.0		9.0		8.0	
30			30	2.34	12.0		10.8		9.6	
35			35	2.00	14.0		12.6		11.2	
40			40	1.75	16.0		14.4		12.8	
45			45	1.56	18.0		16.2		14.4	
50			50	1.40	20.0		18.0		16.0	
55			55	1.27	22.0	28	19.8	25	17.6	22
60			60	1.17	24.0		21.6		19.2	
65			65	1.08	26.0		23.4		20.8	
70			70	1.00	28.0		25.2		22.4	
75			75	0.93	30.0		27.0		24.0	
80			80	0.87	32.0		28.8		25.6	
90			90	0.77	36.0		32.4		28.8	
100			100	0.70	40.0		36.0		32.0	
125	125	0.56	50.0		45.0		40.0			

TL

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

轻荷重
LIGHTEST LOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TL 16x20	16	8	20	4.44	8.0		7.2		6.4	
25			25	3.50	10.0		9.0		8.0	
30			30	2.92	12.0		10.8		9.6	
35			35	2.50	14.0		12.6		11.2	
40			40	2.19	16.0		14.4		12.8	
45			45	1.95	18.0		16.2		14.4	
50			50	1.75	20.0		18.0		16.0	
55			55	1.60	22.0		19.8		17.6	
60			60	1.46	24.0	35	21.6	32	19.2	28
65			65	1.35	26.0		23.4		20.8	
70			70	1.25	28.0		25.2		22.4	
75			75	1.17	30.0		27.0		24.0	
80			80	1.10	32.0		28.8		25.6	
90			90	0.98	36.0		32.4		28.8	
100			100	0.88	40.0		36.0		32.0	
125	125	0.70	50.0		45.0		40.0			
TL 18x20	18	9	20	5.42	8.0		7.2		6.4	
25			25	4.30	10.0		9.0		8.0	
30			30	3.58	12.0		10.8		9.6	
35			35	3.07	14.0		12.6		11.2	
40			40	2.69	16.0		14.4		12.8	
45			45	2.39	18.0		16.2		14.4	
50			50	2.15	20.0		18.0		16.0	
55			55	1.96	22.0		19.8		17.6	
60			60	1.79	24.0	43	21.6	39	19.2	34
65			65	1.66	26.0		23.4		20.8	
70			70	1.54	28.0		25.2		22.4	
75			75	1.44	30.0		27.0		24.0	
80			80	1.35	32.0		28.8		25.6	
90			90	1.20	36.0		32.4		28.8	
100			100	1.07	40.0		36.0		32.0	
125	125	0.86	50.0		45.0		40.0			
TL 20x20	20	10	20	6.81	8.0		7.2		6.4	
25			25	5.40	10.0		9.0		8.0	
30			30	4.50	12.0		10.8		9.6	
35			35	3.86	14.0		12.6		11.2	
40			40	3.38	16.0		14.4		12.8	
45			45	3.00	18.0		16.2		14.4	
50			50	2.70	20.0		18.0		16.0	
55			55	2.45	22.0		19.8		17.6	
60			60	2.25	24.0	54	21.6	49	19.2	43
65			65	2.08	26.0		23.4		20.8	
70			70	1.93	28.0		25.2		22.4	
75			75	1.80	30.0		27.0		24.0	
80			80	1.69	32.0		28.8		25.6	
90			90	1.50	36.0		32.4		28.8	
100			100	1.35	40.0		36.0		32.0	
125	125	1.08	50.0		45.0		40.0			
150	150	0.90	60.0		54.0		48.0			
175	175	0.77	70.0		63.0		56.0			
TL 22x25	22	11	25	6.70	10.0		9.0		8.0	
30			30	5.60	12.0		10.8		9.6	
35			35	4.80	14.0		12.6		11.2	
40			40	4.20	16.0		14.4		12.8	
45			45	3.72	18.0		16.2		14.4	
50			50	3.35	20.0		18.0		16.0	
55			55	3.05	22.0		19.8		17.6	
60			60	2.80	24.0	67	21.6	60	19.2	54
65			65	2.58	26.0		23.4		20.8	
70			70	2.40	28.0		25.2		22.4	
75			75	2.23	30.0		27.0		24.0	
80			80	2.10	32.0		28.8		25.6	
90			90	1.86	36.0		32.4		28.8	
100			100	1.68	40.0		36.0		32.0	
125			125	1.34	50.0		45.0		40.0	
150	150	1.12	60.0		54.0		48.0			
175	175	0.96	70.0		63.0		56.0			

TL

荷重±10%
 直角度2°以下
 自由长50mm以下±0.5mm
 55mm以上±1%

轻荷重
 LIGHTEST LOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 [0.3million]		50万 [0.5million]		100万 [1million]						
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf					
TL 25x25	25	12.5	25	8.40	10.0	9.0	8.0	8.0	84	76	67				
30			30	7.00	12.0	10.8	9.6								
35			35	6.00	14.0	12.6	11.2								
40			40	5.25	16.0	14.4	12.8								
45			45	4.67	18.0	16.2	14.4								
50			50	4.20	20.0	18.0	16.0								
55			55	3.82	22.0	19.8	17.6								
60			60	3.50	24.0	21.6	19.2								
65			65	3.23	26.0	23.4	20.8								
70			70	3.00	28.0	25.2	22.4								
75			75	2.80	30.0	27.0	24.0								
80			80	2.63	32.0	28.8	25.6								
90			90	2.33	36.0	32.4	28.8								
100			100	2.10	40.0	36.0	32.0								
125			125	1.68	50.0	45.0	40.0								
150			150	1.40	60.0	54.0	48.0								
175			175	1.20	70.0	63.0	56.0								
200			200	1.05	80.0	72.0	64.0								
TL 27x25			27	13.5	25	10.00	10.0	9.0				8.0	100	90	80
30					30	8.33	12.0	10.8				9.6			
35	35	7.14			14.0	12.6	11.2								
40	40	6.25			16.0	14.4	12.8								
45	45	5.56			18.0	16.2	14.4								
50	50	5.00			20.0	18.0	16.0								
55	55	4.55			22.0	19.8	17.6								
60	60	4.17			24.0	21.6	19.2								
65	65	3.85			26.0	23.4	20.8								
70	70	3.57			28.0	25.2	22.4								
75	75	3.33			30.0	27.0	24.0								
80	80	3.13			32.0	28.8	25.6								
90	90	2.78			36.0	32.4	28.8								
100	100	2.50			40.0	36.0	32.0								
125	125	2.00			50.0	45.0	40.0								
150	150	1.67			60.0	54.0	48.0								
175	175	1.43			70.0	63.0	56.0								
200	200	1.25			80.0	72.0	64.0								
TL 30x25	30	15			25	12.11	10.0	9.0	8.0	121	109	80			
30					30	10.08	12.0	10.8	9.6						
35			35	8.65	14.0	12.6	11.2								
40			40	7.56	16.0	14.4	12.8								
45			45	6.73	18.0	16.2	14.4								
50			50	6.05	20.0	18.0	16.0								
55			55	5.50	22.0	19.8	17.6								
60			60	5.04	24.0	21.6	19.2								
65			65	4.65	26.0	23.4	20.8								
70			70	4.32	28.0	25.2	22.4								
75			75	4.03	30.0	27.0	24.0								
80			80	3.78	32.0	28.8	25.6								
90			90	3.36	36.0	32.4	28.8								
100			100	3.02	40.0	36.0	32.0								
125			125	2.42	50.0	45.0	40.0								
150			150	2.01	60.0	54.0	48.0								
175			175	1.72	70.0	63.0	56.0								
200			200	1.51	80.0	72.0	64.0								
TL 35x35			35	17.5	35	11.78	14.0	12.6	11.2				165	149	132
40					40	10.31	16.0	14.4	12.8						
45	45	9.17			18.0	16.2	14.4								
50	50	8.25			20.0	18.0	16.0								
55	55	7.50			22.0	19.8	17.6								
60	60	6.87			24.0	21.6	19.2								
65	65	6.35			26.0	23.4	20.8								
70	70	5.89			28.0	25.2	22.4								
75	75	5.50			30.0	27.0	24.0								
80	80	5.15			32.0	28.8	25.6								
90	90	4.58			36.0	32.4	28.8								
100	100	4.12			40.0	36.0	32.0								
125	125	3.30			50.0	45.0	40.0								
150	150	2.75			60.0	54.0	48.0								
175	175	2.35			70.0	63.0	56.0								
200	200	2.06			80.0	72.0	64.0								

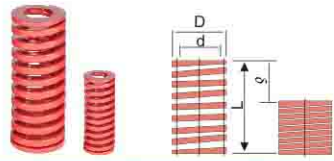
TL

荷重±10%
 直角度2°以下
 自由长50mm以下±0.5mm
 55mm以上±1%

轻荷重
 LIGHTEST LOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 [0.3million]		50万 [0.5million]		100万 [1million]						
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf					
TL 40x40	40	20	40	13.50	16.0	14.4	12.8	216	194	173					
45			45	12.00	18.0	16.2	14.4								
50			50	10.80	20.0	18.0	16.0								
55			55	9.32	22.0	19.8	17.6								
60			60	9.00	24.0	21.6	19.2								
65			65	8.31	26.0	23.4	20.8								
70			70	7.71	28.0	25.2	22.4								
75			75	7.20	30.0	27.0	24.0								
80			80	6.75	32.0	28.8	25.6								
90			90	6.00	36.0	32.4	28.6								
100			100	5.40	40.0	36.0	32.0								
125			125	4.32	50.0	45.0	40.0								
150			150	3.60	60.0	54.0	48.0								
175			175	3.08	70.0	63.0	56.0								
200			200	2.70	80.0	72.0	64.0								
225			225	2.40	90.0	81.0	72.0								
250			250	2.16	100.0	90.0	80.0								
275			275	1.96	110.0	99.0	88.0								
300			300	1.80	120.0	108.0	96.0								
TL 50x50			50	25	50	16.89	20.0				18.0	16.0	338	304	270
55	55	15.35			22.0	19.8	17.6								
60	60	14.08			24.0	21.6	19.2								
65	65	12.99			26.0	23.4	20.8								
70	70	12.07			28.0	25.2	22.4								
75	75	11.26			30.0	27.0	24.0								
80	80	10.56			32.0	28.8	25.6								
90	90	9.38			36.0	32.4	28.8								
100	100	8.45			40.0	36.0	32.0								
125	125	6.76			50.0	45.0	40.0								
150	150	5.63			60.0	54.0	48.0								
175	175	4.82			70.0	63.0	56.0								
200	200	4.22			80.0	72.0	64.0								
225	225	3.75			90.0	81.0	72.0								
250	250	3.38			100.0	90.0	80.0								
275	275	3.07			110.0	99.0	88.0								
300	300	2.81			120.0	108.0	96.0								
350	350	2.41			140.0	126.0	112.0								
400	400	2.11			160.0	144.0	128.0								
450	450	1.88			180.0	162.0	144.0								
500	500	1.69	200.0	180.0	160.0										
TL 60x60	60	30	60	20.25	24.0	21.6	19.2	486	437	389					
70			70	17.35	28.0	25.2	22.4								
80			80	15.18	32.0	28.8	25.6								
90			90	13.50	36.0	32.4	28.8								
100			100	12.15	40.0	36.0	32.0								
125			125	9.72	50.0	45.0	40.0								
150			150	8.10	60.0	54.0	48.0								
175			175	6.94	70.0	63.0	56.0								
200			200	6.07	80.0	72.0	64.0								
225			225	5.40	90.0	81.0	72.0								
250			250	4.86	100.0	90.0	80.0								
275			275	4.42	110.0	99.0	88.0								
300			300	4.05	120.0	108.0	96.0								
350			350	3.47	140.0	126.0	112.0								
400			400	3.04	160.0	144.0	128.0								
450			450	2.70	180.0	162.0	144.0								
500			500	2.43	200.0	180.0	160.0								
TL 70x70			70	40	70	21.79	28.0				25.2	22.4	610	549	488
80					80	19.06	32.0				28.8	25.6			
90					90	16.94	36.0				32.4	28.8			
100	100	15.25			40.0	36.0	32.0								
125	125	12.20			50.0	45.0	40.0								
150	150	10.17			60.0	54.0	48.0								
175	175	8.71			70.0	63.0	56.0								
200	200	7.62			80.0	72.0	64.0								
225	225	6.78			90.0	81.0	72.0								
250	250	6.10			100.0	90.0	80.0								
275	275	5.55			110.0	99.0	88.0								
300	300	5.08			120.0	108.0	96.0								
350	350	4.36			140.0	126.0	112.0								

TM



中荷重
MEDIUM LOAD

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 spring constant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TM 8x10	8	4	10	4.34	3.2		2.9		2.6	
15			15	2.89	4.8		4.3		3.8	
20			20	2.17	6.4		5.8		5.1	
25			25	1.74	8.0		7.2		6.4	
30			30	1.45	9.6		8.6		7.7	
35			35	1.24	11.2		10.1		9.0	
40			40	1.09	12.8		11.5		10.2	
45			45	0.79	14.4		13.0		11.5	
50			50	0.87	16.0		14.4	12.5	12.8	11
55			55	0.79	17.6		15.8		14.1	
60			60	0.72	19.2		17.3		15.4	
65			65	0.67	20.8		18.7		16.6	
70			70	0.62	22.4		20.2		17.9	
75			75	0.58	24.0		21.6		19.2	
80	80	0.54	25.6		23.0		20.5			
90	90	0.48	28.8		25.9		23.0			
TM 10x10	10	5	10	6.21	3.2		2.9		2.6	
15			15	4.09	4.8		4.4		3.8	
20			20	3.13	6.4		5.8		5.1	
25			25	2.50	8.0		7.2		6.4	
30			30	2.08	9.6		8.6		7.7	
35			35	1.78	11.2		10.1		9.0	
40			40	1.56	12.8		11.5		10.2	
45			45	1.38	14.4		13.0		11.5	
50			50	1.25	16.0		14.4	18	12.8	16
55			55	1.13	17.6		15.8		14.1	
60			60	1.04	19.2		17.3		15.4	
65			65	0.96	20.8		18.7		16.6	
70			70	0.89	22.4		20.2		17.9	
75			75	0.83	24.0		21.6		19.2	
80	80	0.78	25.6		23.0		20.5			
90	90	0.70	28.8		25.9		23.0			
100	100	0.63	32.0		28.8		25.6			
TM 12x20	12	6	20	4.53	6.4		5.8		5.1	
25			25	3.62	8.0		7.2		6.4	
30			30	3.02	9.6		8.6		7.7	
35			35	2.58	11.2		10.1		9.0	
40			40	2.27	12.8		11.5		10.2	
45			45	2.01	14.4		13.0		11.5	
50			50	1.81	16.0		14.4		12.8	
55			55	1.64	17.6		15.8	26	14.1	23
60			60	1.51	19.2		17.3		15.4	
65			65	1.39	20.8		18.7		16.6	
70			70	1.29	22.4		20.2		17.9	
75			75	1.20	24.0		21.6		19.2	
80			80	1.13	25.6		23.0		20.5	
90			90	1.01	28.8		25.9		23.0	
100	100	0.91	32.0		28.8		25.6			
TM 14x20	14	7	20	6.03	6.4		5.8		5.1	
25			25	4.87	8.0		7.2		6.4	
30			30	4.06	9.6		8.6		7.7	
35			35	3.48	11.2		10.1		9.0	
40			40	3.04	12.8		11.5		10.2	
45			45	2.70	14.4		13.0		11.5	
50			50	2.43	16.0		14.4		12.8	
55			55	2.21	17.6		15.8	35	14.1	31
60			60	2.03	19.2		17.3		15.4	
65			65	1.87	20.8		18.7		16.6	
70			70	1.74	22.4		20.2		17.9	
75			75	1.62	24.0		21.6		19.2	
80			80	1.52	25.6		23.0		20.5	
90			90	1.35	28.8		25.9		23.0	
100	100	1.22	32.0		28.8		25.6			
120	120	0.97	40.0		36.0		32.0			

TM

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

中荷重
MEDIUM LOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 spring constant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TM 16x20	16	8	20	7.93	6.4		5.8		5.1	
25			25	6.39	8.0		7.2		6.4	
30			30	5.32	9.6		8.6		7.7	
35			35	4.55	11.2		10.1		9.0	
40			40	3.98	12.8		11.5		10.2	
45			45	3.54	14.4		13.0		11.5	
50			50	3.18	16.0		14.4		12.8	
55			55	2.89	17.6		15.8	46	14.1	41
60			60	2.65	19.2		17.3		15.4	
65			65	2.45	20.8		18.7		16.6	
70			70	2.27	22.4		20.2		17.9	
75			75	2.11	24.0		21.6		19.2	
80			80	1.99	25.6		23.0		20.5	
90			90	1.77	28.8		25.9		23.0	
100	100	1.59	32.0		28.8		25.6			
125	125	1.28	40.0		36.0		32.0			
TM 18x20	18	9	20	10.00	6.4		5.8		5.1	
25			25	8.12	8.0		7.2		6.4	
30			30	6.77	9.6		8.6		7.7	
35			35	5.80	11.2		10.1		9.0	
40			40	5.07	12.8		11.5		10.2	
45			45	4.51	14.4		13.0		11.5	
50			50	4.06	16.0		14.4		12.8	
55			55	3.69	17.6		15.8	58	14.1	52
60			60	3.38	19.2		17.3		15.4	
65			65	3.12	20.8		18.7		16.6	
70			70	2.90	22.4		20.2		17.9	
75			75	2.70	24.0		21.6		19.2	
80			80	2.53	25.6		23.0		20.5	
90			90	2.25	28.8		25.9		23.0	
100	100	2.02	32.0		28.8		25.6			
125	125	1.62	40.0		36.0		32.0			
TM 20x20	20	10	20	12.41	6.4		5.8		5.1	
25			25	10.00	8.0		7.2		6.4	
30			30	8.33	9.6		8.6		7.7	
35			35	7.14	11.2		10.1		9.0	
40			40	6.25	12.8		11.5		10.2	
45			45	5.55	14.4		13.0		11.5	
50			50	5.00	16.0		14.4		12.8	
55			55	4.54	17.6		15.8		14.1	
60			60	4.16	19.2		17.3	72	15.4	84
65			65	3.84	20.8		18.7		16.6	
70			70	3.57	22.4		20.2		17.9	
75			75	3.33	24.0		21.6		19.2	
80			80	3.12	25.6		23.0		20.5	
90			90	2.77	28.8		25.9		23.0	
100	100	2.50	32.0		28.8		25.6			
125	125	2.00	40.0		36.0		32.0			
150	150	1.67	48.0		43.2		38.4			
175	175	1.43	56.0		50.4		44.8			
TM 22x25	22	11	25	12.13	8.0		7.2		6.4	
30			30	10.10	9.6		8.6		7.7	
35			35	8.65	11.2		10.1		9.0	
40			40	7.57	12.8		11.5		10.2	
45			45	6.74	14.4		13.0		11.5	
50			50	6.06	16.0		14.4		12.8	
55			55	5.50	17.6		15.8		14.1	
60			60	5.05	19.2		17.3	87	15.4	78
65			65	4.66	20.8		18.7		16.6	
70			70	4.33	22.4		20.2		17.9	
75			75	4.04	24.0		21.6		19.2	
80			80	3.78	25.6		23.0		20.5	
90			90	3.36	28.8		25.9		23.0	
100			100	3.03	32.0		28.8		25.6	
125	125	2.42	40.0		36.0		32.0			
150	150	2.01	48.0		43.2		38.4			
175	175	1.73	56.0		50.4		44.8			

TM

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

中荷重
MEDIUM LOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)		
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	
TM 25x25	25	12.5	25	15.63	8.0	7.2	6.4	100	125	112	100
30			30	13.02	9.6	8.6	7.7	11.5			
35			35	11.20	11.2	10.1	9.0	12.8			
40			40	9.76	12.8	11.5	10.2	14.4			
45			45	8.68	14.4	13.0	11.5	15.4			
50			50	7.81	16.0	14.4	12.8	16.6			
55			55	7.10	17.6	15.8	14.1	17.9			
60			60	6.51	19.2	17.3	15.4	19.2			
65			65	6.00	20.8	18.7	16.6	20.5			
70			70	5.58	22.4	20.2	17.9	21.6			
75			75	5.21	24.0	21.6	19.2	23.0			
80			80	4.88	25.6	23.0	20.5	24.4			
90			90	4.34	28.8	25.9	23.0	25.6			
100			100	3.90	32.0	28.8	25.6	27.0			
125			125	3.12	40.0	36.0	32.0	32.0			
150			150	2.60	48.0	43.2	38.4	38.4			
175			175	2.23	56.0	50.4	44.8	44.8			
200	200	1.95	64.0	57.6	51.2	51.2					
TM 27x25	27	13.5	25	18.25	8.0	7.2	6.4	117	146	131	117
30			30	15.20	9.6	8.6	7.7	12.8			
35			35	13.04	11.2	10.1	9.0	14.4			
40			40	11.40	12.8	11.5	10.2	15.4			
45			45	10.14	14.4	13.0	11.5	16.6			
50			50	9.12	16.0	14.4	12.8	17.9			
55			55	8.30	17.6	15.8	14.1	19.2			
60			60	7.60	19.2	17.3	15.4	20.5			
65			65	7.00	20.8	18.7	16.6	21.6			
70			70	6.51	22.4	20.2	17.9	23.0			
75			75	6.08	24.0	21.6	19.2	24.4			
80			80	5.70	25.6	23.0	20.5	25.6			
90			90	5.06	28.8	25.9	23.0	27.0			
100			100	4.56	32.0	28.8	25.6	28.8			
125			125	3.65	40.0	36.0	32.0	32.0			
150			150	3.04	48.0	43.2	38.4	38.4			
175			175	2.61	56.0	50.4	44.8	44.8			
200	200	2.28	64.0	57.6	51.2	51.2					
TM 30x25	30	15	25	22.50	8.0	7.2	6.4	144	180	161	144
30			30	18.75	9.6	8.6	7.7	15.4			
35			35	16.10	11.2	10.1	9.0	16.6			
40			40	14.06	12.8	11.5	10.2	17.9			
45			45	12.50	14.4	13.0	11.5	19.2			
50			50	11.25	16.0	14.4	12.8	20.5			
55			55	10.23	17.6	15.8	14.1	21.6			
60			60	9.37	19.2	17.3	15.4	23.0			
65			65	8.65	20.8	18.7	16.6	24.4			
70			70	8.03	22.4	20.2	17.9	25.6			
75			75	7.50	24.0	21.6	19.2	27.0			
80			80	7.03	25.6	23.0	20.5	28.8			
90			90	6.25	28.8	25.9	23.0	30.0			
100			100	5.62	32.0	28.8	25.6	32.0			
125			125	4.50	40.0	36.0	32.0	32.0			
150			150	3.75	48.0	43.2	38.4	38.4			
175			175	3.21	56.0	50.4	44.8	44.8			
200	200	2.81	64.0	57.6	51.2	51.2					
TM 35x35	35	17.5	35	21.87	11.2	10.1	9.0	195	245	220	195
40			40	19.14	12.8	11.5	10.2	20.5			
45			45	17.01	14.4	13.0	11.5	21.6			
50			50	15.31	16.0	14.4	12.8	23.0			
55			55	13.92	17.6	15.8	14.1	24.4			
60			60	12.76	19.2	17.3	15.4	25.6			
65			65	11.77	20.8	18.7	16.6	27.0			
70			70	10.93	22.4	20.2	17.9	28.8			
75			75	10.20	24.0	21.6	19.2	30.0			
80			80	9.57	25.6	23.0	20.5	32.0			
90			90	8.50	28.8	25.9	23.0	32.0			
100			100	7.65	32.0	28.8	25.6	38.4			
125			125	6.12	40.0	36.0	32.0	38.4			
150			150	5.10	48.0	43.2	38.4	44.8			
175			175	4.37	56.0	50.4	44.8	44.8			
200			200	3.82	64.0	57.6	51.2	51.2			

TM

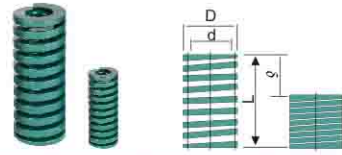
荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

中荷重
MEDIUM LOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)				
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf			
TM 40x40	40	20	40	25.02	12.8	11.5	10.2	256	320	288	256		
45			45	22.26	14.4	13.0	11.5	28.8					
50			50	20.00	16.0	14.4	12.8	32.0					
55			55	18.15	17.6	15.8	14.1	36.0					
60			60	16.60	19.2	17.3	15.4	40.0					
65			65	15.40	20.8	18.7	16.6	44.8					
70			70	14.28	22.4	20.2	17.9	50.4					
75			75	13.34	24.0	21.6	19.2	56.0					
80			80	12.50	25.6	23.0	20.5	62.0					
90			90	11.11	28.8	25.9	23.0	68.0					
100			100	10.00	32.0	28.8	25.6	74.0					
125			125	8.00	40.0	36.0	32.0	80.0					
150			150	6.66	48.0	43.2	38.4	86.0					
175			175	5.71	56.0	50.4	44.8	92.0					
200			200	5.00	64.0	57.6	51.2	98.0					
225			225	4.44	72.0	64.8	57.6	104.0					
250			250	4.00	80.0	72.0	64.0	110.0					
275			275	3.64	88.0	79.2	70.4	116.0					
300			300	3.33	96.0	86.4	76.8	122.0					
TM 50x50			50	25	50	31.25	16.0	14.4	12.8	400	500	450	400
55	55	28.41			17.6	15.8	14.1	44.8					
60	60	26.04			19.2	17.3	15.4	50.4					
65	65	24.04			20.8	18.7	16.6	56.0					
70	70	22.32			22.4	20.2	17.9	62.0					
75	75	20.83			24.0	21.6	19.2	68.0					
80	80	19.53			25.6	23.0	20.5	74.0					
90	90	17.36			28.8	25.9	23.0	80.0					
100	100	15.62			32.0	28.8	25.6	86.0					
125	125	12.50			40.0	36.0	32.0	92.0					
150	150	10.41			48.0	43.2	38.4	98.0					
175	175	8.92			56.0	50.4	44.8	104.0					
200	200	7.81			64.0	57.6	51.2	110.0					
225	225	6.94			72.0	64.8	57.6	116.0					
250	250	6.25			80.0	72.0	64.0	122.0					
275	275	5.68			88.0	79.2	70.4	128.0					
300	300	5.20			96.0	86.4	76.8	134.0					
350	350	4.46	112.0	100.8	89.6	140.0							
TM 60x60	60	30	60	37.40	19.2	17.3	15.4	575	720	648	575		
70			70	32.10	22.4	20.2	17.9	62.0					
80			80	28.12	25.6	23.0	20.5	68.0					
90			90	25.00	28.8	25.9	23.0	74.0					
100			100	22.50	32.0	28.8	25.6	80.0					
125			125	18.00	40.0	36.0	32.0	86.0					
150			150	15.00	48.0	43.2	38.4	92.0					
175			175	12.85	56.0	50.4	44.8	98.0					
200			200	11.25	64.0	57.6	51.2	104.0					
225			225	10.00	72.0	64.8	57.6	110.0					
250			250	9.00	80.0	72.0	64.0	116.0					
275			275	8.18	88.0	79.2	70.4	122.0					
300			300	7.50	96.0	86.4	76.8	128.0					
350			350	6.43	112.0	100.8	89.6	134.0					
TM 70x70			70	40	70	44.64	22.4	20.1	17.9	800	1000	900	800
80					80	39.06	25.6	23.0	20.5	86.0			
90					90	34.72	28.8	25.9	23.0	92.0			
100	100	31.25			32.0	28.8	25.6	98.0					
125	125	25.00			40.0	36.0	32.0	104.0					
150	150	20.83			48.0	43.2	38.4	110.0					
175	175	17.86			56.0	50.4	44.8	116.0					
200	200	15.63			64.0	57.6	51.2	122.0					
225	225	13.89			72.0	64.8	57.6	128.0					
250	250	12.50			80.0	72.0	64.0	134.0					
275	275	11.36			88.0	79.2	70.4	140.0					
300	300	10.42			96.0	86.4	76.8	146.0					
350	350	8.93			112.0	100.8	89.6	152.0					

TH

重荷重
HEAVY LOAD



荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TH 8x10	8	4	10	8.8	2.4	2.2	1.9	2.2	1.9	1.7
15			15	5.86	3.6	3.2	2.9	3.2	2.9	2.4
20			20	4.40	4.8	4.3	3.8	4.3	3.8	3.2
25			25	3.52	6.0	5.4	4.8	5.4	4.8	4.0
30			30	2.93	7.2	6.5	5.8	6.5	5.8	4.8
35			35	2.51	8.4	7.6	6.7	7.6	6.7	5.4
40			40	2.20	9.6	8.6	7.7	8.6	7.7	6.0
45			45	1.95	10.8	9.7	8.6	9.7	8.6	6.6
50			50	1.76	12.0	10.8	9.6	10.8	9.6	7.2
55			55	1.60	13.2	11.9	10.6	11.9	10.6	7.8
60			60	1.47	14.4	13.0	11.5	13.0	11.5	8.4
65			65	1.35	15.6	14.0	12.5	14.0	12.5	9.0
70			70	1.26	16.8	15.1	13.4	15.1	13.4	9.6
75			75	1.17	18.0	16.2	14.4	16.2	14.4	10.2
80			80	1.10	19.2	17.3	15.4	17.3	15.4	10.8
90	90	0.98	21.6	19.4	17.3	19.4	17.3	11.4		
TH 10x10	10	5	10	12.27	2.4	2.2	1.9	2.2	1.9	1.7
15			15	8.18	3.6	3.3	2.9	3.3	2.9	2.4
20			20	6.25	4.8	4.3	3.8	4.3	3.8	3.2
25			25	5.00	6.0	5.4	4.8	5.4	4.8	4.0
30			30	4.16	7.2	6.5	5.8	6.5	5.8	4.8
35			35	3.57	8.4	7.6	6.7	7.6	6.7	5.4
40			40	3.15	9.6	8.6	7.7	8.6	7.7	6.0
45			45	2.77	10.8	9.7	8.6	9.7	8.6	6.6
50			50	2.50	12.0	10.8	9.6	10.8	9.6	7.2
55			55	2.27	13.2	11.9	10.6	11.9	10.6	7.8
60			60	2.08	14.4	13.0	11.5	13.0	11.5	8.4
65			65	1.92	15.6	14.0	12.5	14.0	12.5	9.0
70			70	1.79	16.8	15.1	13.4	15.1	13.4	9.6
75			75	1.67	18.0	16.2	14.4	16.2	14.4	10.2
80			80	1.56	19.2	17.3	15.4	17.3	15.4	10.8
90	90	1.39	21.6	19.4	17.3	19.4	17.3	11.4		
100	100	1.25	24.0	21.6	19.2	21.6	19.2	12.0		
TH 12x20	12	6	20	8.90	4.8	4.3	3.8	4.3	3.8	3.2
25			25	7.10	6.0	5.4	4.8	5.4	4.8	4.0
30			30	5.97	7.2	6.5	5.8	6.5	5.8	4.8
35			35	5.11	8.4	7.6	6.7	7.6	6.7	5.4
40			40	4.47	9.6	8.6	7.7	8.6	7.7	6.0
45			45	3.98	10.8	9.7	8.6	9.7	8.6	6.6
50			50	3.58	12.0	10.8	9.6	10.8	9.6	7.2
55			55	3.25	13.2	11.9	10.6	11.9	10.6	7.8
60			60	2.98	14.4	13.0	11.5	13.0	11.5	8.4
65			65	2.74	15.6	14.0	12.5	14.0	12.5	9.0
70			70	2.54	16.8	15.1	13.4	15.1	13.4	9.6
75			75	2.37	18.0	16.2	14.4	16.2	14.4	10.2
80			80	2.21	19.2	17.3	15.4	17.3	15.4	10.8
90			90	1.98	21.6	19.4	17.3	19.4	17.3	11.4
100			100	1.78	24.0	21.6	19.2	21.6	19.2	12.0
TH 14x20	14	7	20	12.05	4.8	4.4	3.8	4.4	3.8	3.2
25			25	9.83	6.0	5.4	4.8	5.4	4.8	4.0
30			30	8.19	7.2	6.5	5.8	6.5	5.8	4.8
35			35	7.02	8.4	7.6	6.7	7.6	6.7	5.4
40			40	6.14	9.6	8.6	7.7	8.6	7.7	6.0
45			45	5.46	10.8	9.7	8.6	9.7	8.6	6.6
50			50	4.91	12.0	10.8	9.6	10.8	9.6	7.2
55			55	4.46	13.2	11.9	10.6	11.9	10.6	7.8
60			60	4.09	14.4	13.0	11.5	13.0	11.5	8.4
65			65	3.78	15.6	14.0	12.5	14.0	12.5	9.0
70			70	3.51	16.8	15.1	13.4	15.1	13.4	9.6
75			75	3.27	18.0	16.2	14.4	16.2	14.4	10.2
80			80	3.07	19.2	17.3	15.4	17.3	15.4	10.8
90			90	2.72	21.6	19.4	17.3	19.4	17.3	11.4
100			100	2.46	24.0	21.6	19.2	21.6	19.2	12.0
120	120	1.97	30.0	27.0	24.0	27.0	24.0	15.0		

※kgf(N)(荷重)=kgf/mm(定数)×mm(变形量)

TH

重荷重
HEAVY LOAD

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TH 16x20	16	8	20	15.68	4.8	4.4	3.8	4.4	3.8	3.2
25			25	12.83	6.0	5.4	4.8	5.4	4.8	4.0
30			30	10.69	7.2	6.5	5.8	6.5	5.8	4.8
35			35	9.16	8.4	7.6	6.7	7.6	6.7	5.4
40			40	8.02	9.6	8.6	7.7	8.6	7.7	6.0
45			45	7.12	10.8	9.7	8.6	9.7	8.6	6.6
50			50	6.41	12.0	10.8	9.6	10.8	9.6	7.2
55			55	5.83	13.2	11.9	10.6	11.9	10.6	7.8
60			60	5.34	14.4	13.0	11.5	13.0	11.5	8.4
65			65	4.93	15.6	14.0	12.5	14.0	12.5	9.0
70			70	4.58	16.8	15.1	13.4	15.1	13.4	9.6
75			75	4.28	18.0	16.2	14.4	16.2	14.4	10.2
80			80	4.01	19.2	17.3	15.4	17.3	15.4	10.8
90			90	3.57	21.6	19.4	17.3	19.4	17.3	11.4
100			100	3.21	24.0	21.6	19.2	21.6	19.2	12.0
125	125	2.57	30.0	27.0	24.0	27.0	24.0	15.0		
TH 18x20	18	9	20	19.77	4.8	4.4	3.8	4.4	3.8	3.2
25			25	16.16	6.0	5.4	4.8	5.4	4.8	4.0
30			30	13.47	7.2	6.5	5.8	6.5	5.8	4.8
35			35	11.54	8.4	7.6	6.7	7.6	6.7	5.4
40			40	10.10	9.6	8.6	7.7	8.6	7.7	6.0
45			45	8.98	10.8	9.7	8.6	9.7	8.6	6.6
50			50	8.08	12.0	10.8	9.6	10.8	9.6	7.2
55			55	7.34	13.2	11.9	10.6	11.9	10.6	7.8
60			60	6.73	14.4	13.0	11.5	13.0	11.5	8.4
65			65	6.21	15.6	14.0	12.5	14.0	12.5	9.0
70			70	5.77	16.8	15.1	13.4	15.1	13.4	9.6
75			75	5.39	18.0	16.2	14.4	16.2	14.4	10.2
80			80	5.05	19.2	17.3	15.4	17.3	15.4	10.8
90			90	4.50	21.6	19.4	17.3	19.4	17.3	11.4
100			100	4.04	24.0	21.6	19.2	21.6	19.2	12.0
125	125	3.23	30.0	27.0	24.0	27.0	24.0	15.0		
TH 20x20	20	10	20	24.55	4.8	4.4	3.7	4.4	3.7	3.2
25			25	20.00	6.0	5.4	4.8	5.4	4.8	4.0
30			30	16.66	7.2	6.5	5.8	6.5	5.8	4.8
35			35	14.28	8.4	7.6	6.7	7.6	6.7	5.4
40			40	12.50	9.6	8.6	7.7	8.6	7.7	6.0
45			45	11.11	10.8	9.7	8.6	9.7	8.6	6.6
50			50	10.00	12.0	10.8	9.6	10.8	9.6	7.2
55			55	9.09	13.2	11.9	10.6	11.9	10.6	7.8
60			60	8.33	14.4	13.0	11.5	13.0	11.5	8.4
65			65	7.69	15.6	14.0	12.5	14.0	12.5	9.0
70			70	7.14	16.8	15.1	13.4	15.1	13.4	9.6
75			75	6.67	18.0	16.2	14.4	16.2	14.4	10.2
80			80	6.25	19.2	17.3	15.4	17.3	15.4	10.8
90			90	5.55	21.6	19.4	17.3	19.4	17.3	11.4
100			100	5.00	24.0	21.6	19.2	21.6	19.2	12.0
125	125	4.00	30.0	27.0	24.0	27.0	24.0	15.0		
150	150	3.33	36.0	32.4	28.8	32.4	28.8	18.0		
175	175	2.86	42.0	37.8	33.6	37.8	33.6	21.0		
TH 22x25	22	11	25	24.16	6.0	5.4	4.8	5.4	4.8	4.0
30			30	20.13	7.2	6.5	5.8	6.5	5.8	4.8
35			35	17.30	8.4	7.6	6.7	7.6	6.7	5.4
40			40	15.10	9.6	8.6	7.7	8.6	7.7	6.0
45			45	13.40	10.8	9.7	8.6	9.7	8.6	6.6
50			50	12.08	12.0	10.8	9.6	10.8	9.6	7.2
55			55	10.94	13.2	11.9	10.6	11.9	10.6	7.8
60			60	10.06	14.4	13.0	11.5	13.0	11.5	8.4
65			65	9.28	15.6	14.0	12.5	14.0	12.5	9.0
70			70	8.63	16.8	15.1	13.4	15.1	13.4	9.6
75			75	8.04	18.0	16.2	14.4	16.2	14.4	10.2
80			80	7.55	19.2	17.3	15.4	17.3	15.4	10.8
90			90	6.71	21.6	19.4	17.3	19.4	17.3	11.4
100			100	6.04	24.0	21.6	19.2	21.6	19.2	12.0
125			125	4.83	30.0	27.0	24.0	27.0	24.0	15.0
150	150	4.02	36.0	32.4	28.8	32.4	28.8	18.0		
175	175	3.45	42.0	37.8	33.6	37.8	33.6	21.0		

TH

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

重荷重
HEAVY LOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TH 25x25	25	12.5	25	31.20	6.0	187	5.4	169	4.8	150
30			30	25.97	7.2		6.5		5.8	
35			35	22.38	8.4		7.6		6.7	
40			40	19.47	9.6		8.6		7.7	
45			45	17.40	10.8		9.7		8.6	
50			50	15.58	12.0		10.8		9.6	
55			55	14.20	13.2		11.9		10.6	
60			60	12.98	14.4		13.0		11.5	
65			65	12.00	15.6		14.0		12.5	
70			70	11.13	16.8		15.1		13.4	
75			75	10.40	18.0		16.2		14.4	
80			80	9.73	19.2		17.3		15.4	
90			90	8.65	21.6		19.4		17.3	
100			100	7.79	24.0		21.6		19.2	
125			125	6.23	30.0		27.0		24.0	
150			150	5.20	36.0		32.4		28.8	
175			175	4.46	42.0		37.8		33.6	
200	200	3.90	48.0	43.2	38.4					
TH 27x25	27	13.5	25	36.40	6.0	219	5.4	197	4.8	175
30			30	30.41	7.2		6.5		5.8	
35			35	26.20	8.4		7.6		6.7	
40			40	22.8	9.6		8.6		7.7	
45			45	20.30	10.8		9.7		8.6	
50			50	18.25	12.0		10.8		9.6	
55			55	16.50	13.2		11.9		10.6	
60			60	15.20	14.4		13.0		11.5	
65			65	14.00	15.6		14.0		12.5	
70			70	13.03	16.8		15.1		13.4	
75			75	12.10	18.0		16.2		14.4	
80			80	11.40	19.2		17.3		15.4	
90			90	10.13	21.6		19.4		17.3	
100			100	9.12	24.0		21.6		19.2	
125			125	7.30	30.0		27.0		24.0	
150			150	6.08	36.0		32.4		28.8	
175			175	5.21	42.0		37.8		33.6	
200	200	4.56	48.0	43.2	38.4					
TH 30x25	30	15	25	45.00	6.0	270	5.4	243	4.8	216
30			30	37.50	7.2		6.5		5.8	
35			35	32.26	8.4		7.6		6.7	
40			40	28.12	9.6		8.6		7.7	
45			45	25.00	10.8		9.7		8.6	
50			50	22.50	12.0		10.8		9.6	
55			55	20.40	13.2		11.9		10.6	
60			60	18.75	14.4		13.0		11.5	
65			65	17.30	15.6		14.0		12.5	
70			70	16.07	16.8		15.1		13.4	
75			75	15.00	18.0		16.2		14.4	
80			80	14.06	19.2		17.3		15.4	
90			90	12.50	21.6		19.4		17.3	
100			100	11.25	24.0		21.6		19.2	
125			125	9.00	30.0		27.0		24.0	
150			150	7.50	36.0		32.4		28.8	
175			175	6.42	42.0		37.8		33.6	
200	200	5.62	48.0	43.2	38.4					
TH 35x35	35	17.5	35	43.68	8.4	367	7.6	330	6.7	293
40			40	38.22	9.6		8.6		7.7	
45			45	33.98	10.8		9.7		8.6	
50			50	30.58	12.0		10.8		9.6	
55			55	27.80	13.2		11.9		10.6	
60			60	25.48	14.4		13.0		11.5	
65			65	23.53	15.6		14.0		12.5	
70			70	21.84	16.8		15.1		13.4	
75			75	20.39	18.0		16.2		14.4	
80			80	19.11	19.2		17.3		15.4	
90			90	16.99	21.6		19.4		17.3	
100			100	15.29	24.0		21.6		19.2	
125			125	12.23	30.0		27.0		24.0	
150			150	10.19	36.0		32.4		28.8	
175			175	8.73	42.0		37.8		33.6	
200			200	7.64	48.0		43.2		38.4	

TH

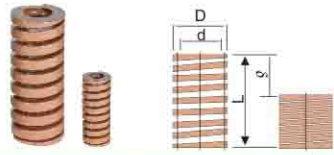
荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

重荷重
HEAVY LOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)						
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf					
TH 40x40	40	20	40	50.00	9.6	480	8.6	432	7.7	384					
45			45	44.44	10.8		9.7		8.6						
50			50	40.00	12.0		10.8		9.6						
55			55	36.36	13.2		11.9		10.6						
60			60	33.33	14.4		13.0		11.5						
65			65	30.77	15.6		14.0		12.5						
70			70	28.57	16.8		15.1		13.4						
75			75	26.67	18.0		16.2		14.4						
80			80	25.00	19.2		17.3		15.4						
90			90	22.22	21.6		19.4		17.3						
100			100	20.00	24.0		21.6		19.2						
125			125	16.00	30.0		27.0		24.0						
150			150	13.33	36.0		32.4		28.8						
175			175	11.42	42.0		37.8		33.6						
200			200	10.00	48.0		43.2		38.4						
225			225	8.89	54.0		48.6		43.2						
250			250	8.00	60.0		54.0		48.0						
275	275	7.27	66.0	59.4	52.8										
300	300	6.67	72.0	64.8	57.6										
TH 50x50	50	25	50	62.50	12.0	750	10.8	675	9.6	600					
55			55	56.82	13.2		11.9		10.6						
60			60	52.08	14.4		13.0		11.5						
65			65	48.08	15.6		14.0		12.5						
70			70	44.64	16.8		15.1		13.4						
75			75	41.67	18.0		16.2		14.4						
80			80	39.06	19.2		17.3		15.4						
90			90	34.72	21.6		19.4		17.3						
100			100	31.25	24.0		21.6		19.2						
125			125	25.00	30.0		27.0		24.0						
150			150	20.83	36.0		32.4		28.8						
175			175	17.85	42.0		37.8		33.6						
200			200	15.62	48.0		43.2		38.4						
225			225	13.89	54.0		48.6		43.2						
250			250	12.50	60.0		54.0		48.0						
275			275	11.36	66.0		59.4		52.8						
300			300	10.41	72.0		64.8		57.6						
350	350	8.93	84.0	75.6	67.2										
TH 60x60	60	30	60	75.00	14.4	1080	13.0	973	11.5	864					
65			65	69.64	15.6		14.0		12.5						
70			70	64.28	16.8		15.1		13.4						
80			80	56.25	19.2		17.3		15.4						
90			90	50.00	21.6		19.4		17.3						
100			100	45.00	24.0		21.6		19.2						
125			125	36.00	30.0		27.0		24.0						
150			150	30.00	36.0		32.4		28.8						
175			175	25.71	42.0		37.8		33.6						
200			200	22.50	48.0		43.2		38.4						
225			225	20.00	54.0		48.6		43.2						
250			250	18.00	60.0		54.0		48.0						
275			275	16.36	66.0		59.4		52.8						
300			300	15.00	72.0		64.8		57.6						
350			350	12.86	84.0		75.6		67.2						
TH 70x70			70	40	70		83.33		16.8		1400	15.1	1260	14.4	1120
80					80		72.92		19.2			16.2		14.4	
90	90	64.81			21.6	17.3	15.4								
100	100	58.33			24.0	19.4	17.3								
125	125	46.67			30.0	27.0	24.0								
150	150	38.89			36.0	32.4	28.8								
175	175	33.33			42.0	37.8	33.6								
200	200	29.17			48.0	43.2	38.4								
225	225	25.93			54.0	48.6	43.2								
250	250	23.33			60.0	54.0	48.0								
275	275	21.21			66.0	59.4	52.8								
300	300	19.44			72.0	64.8	57.6								
350	350	16.67			84.0	75.6	67.2								

TB

极重荷重
SUPERLOAD



荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)		
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	
TB 8x10	8	4	10	16.94	2.0		1.8		1.6		
15			15	11.30	3.0		2.7		2.4		
20			20	8.47	4.0		3.6		3.2		
25			25	6.78	5.0		4.5		4.0		
30			30	5.65	6.0		5.4		4.8		
35			35	4.84	7.0		6.3		5.6		
40			40	4.24	8.0		7.2		6.4		
45			45	3.77	9.0		8.1		7.2		
50			50	3.39	10.0		9.0	31	8.0	26	
55			55	3.08	11.0		9.9		8.8		
60			60	2.82	12.0		10.8		9.6		
65			65	2.61	13.0		11.7		10.4		
70			70	2.42	14.0		12.6		11.2		
75			75	2.26	15.0		13.5		12.0		
80			80	2.12	16.0		14.4		12.8		
90	90	1.88	18.0		16.2		14.4				
TB 10x10	10	5	10	22.78	2.0		1.8		1.6		
15			15	15.19	3.0		2.7		2.4		
20			20	11.25	4.0		3.6		3.2		
25			25	9.00	5.0		4.5		4.0		
30			30	7.50	6.0		5.4		4.8		
35			35	6.43	7.0		6.3		5.6		
40			40	5.63	8.0		7.2		6.4		
45			45	5.00	9.0		8.1		7.2		
50			50	4.50	10.0		9.0	41	8.0	36	
55			55	4.09	11.0		9.9		8.8		
60			60	3.75	12.0		10.8		9.6		
65			65	3.47	13.0		11.7		10.4		
70			70	3.21	14.0		12.6		11.2		
75			75	3.00	15.0		13.5		12.0		
80			80	2.82	16.0		14.4		12.8		
90	90	2.50	18.0		16.2		14.4				
100	100	2.25	20.0		18.0		16.0				
TB 12x20	12	6	20	14.50	4.0		3.6		3.2		
25			25	11.60	5.0		4.5		4.0		
30			30	9.67	6.0		5.4		4.8		
35			35	8.29	7.0		6.3		5.6		
40			40	7.25	8.0		7.2		6.4		
45			45	6.44	9.0		8.1		7.2		
50			50	5.80	10.0		9.0		8.0		
55			55	5.27	11.0		9.9	52	8.8	46	
60			60	4.83	12.0		10.8		9.6		
65			65	4.44	13.0		11.7		10.4		
70			70	4.13	14.0		12.6		11.2		
75			75	3.85	15.0		13.5		12.0		
80			80	3.61	16.0		14.4		12.8		
90			90	3.22	18.0		16.2		14.4		
100			100	2.90	20.0		18.0		16.0		
TB 14x20	14	7	20	18.89	4.0		3.6		3.2		
25			25	15.00	5.0		4.5		4.0		
30			30	12.50	6.0		5.4		4.8		
35			35	10.72	7.0		6.3		5.6		
40			40	9.38	8.0		7.2		6.4		
45			45	8.34	9.0		8.1		7.2		
50			50	7.50	10.0		9.0		8.0		
55			55	6.82	11.0		9.9	68	8.8	60	
60			60	6.25	12.0		10.8		9.6		
65			65	5.77	13.0		11.7		10.4		
70			70	5.36	14.0		12.6		11.2		
75			75	5.00	15.0		13.5		12.0		
80			80	4.69	16.0		14.4		12.8		
90			90	4.17	18.0		16.2		14.4		
100			100	3.75	20.0		18.0		16.0		
120	120	3.00	25.0		22.5		20.0				

※kgf(N)(荷重)=kgf/mm(定数)×mm(变形量)

TB

极重荷重
SUPERLOAD

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)		
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	
TB 16x20	16	8	20	25.00	4.0		3.6		3.2		
25			25	20.00	5.0		4.5		4.0		
30			30	16.67	6.0		5.4		4.8		
35			35	14.29	7.0		6.3		5.6		
40			40	12.50	8.0		7.2		6.4		
45			45	11.11	9.0		8.1		7.2		
50			50	10.00	10.0		9.0		8.0		
55			55	9.09	11.0		9.9	100	8.8	80	
60			60	8.34	12.0		10.8		9.6		
65			65	7.69	13.0		11.7		10.4		
70			70	7.14	14.0		12.6		11.2		
75			75	6.67	15.0		13.5		12.0		
80			80	6.25	16.0		14.4		12.8		
90			90	5.56	18.0		16.2		14.4		
100			100	5.00	20.0		18.0		16.0		
125	125	4.00	25.0		22.5		20.0				
TB 18x20	18	9	20	31.39	4.0		3.6		3.2		
25			25	25.00	5.0		4.5		4.0		
30			30	20.84	6.0		5.4		4.8		
35			35	17.86	7.0		6.3		5.6		
40			40	15.63	8.0		7.2		6.4		
45			45	13.89	9.0		8.1		7.2		
50			50	12.50	10.0		9.0		8.0		
55			55	11.37	11.0		9.9	125	8.8	100	
60			60	10.42	12.0		10.8		9.6		
65			65	9.62	13.0		11.7		10.4		
70			70	8.93	14.0		12.6		11.2		
75			75	8.34	15.0		13.5		12.0		
80			80	7.82	16.0		14.4		12.8		
90			90	6.95	18.0		16.2		14.4		
100			100	6.26	20.0		18.0		16.0		
125	125	5.00	25.0		22.5		20.0				
TB 20x20	20	10	20	40.00	4.0		3.6		3.2		
25			25	32.00	5.0		4.5		4.0		
30			30	26.67	6.0		5.4		4.8		
35			35	22.86	7.0		6.3		5.6		
40			40	20.00	8.0		7.2		6.4		
45			45	17.78	9.0		8.1		7.2		
50			50	16.00	10.0		9.0		8.0		
55			55	14.55	11.0		9.9		8.8		
60			60	13.33	12.0		10.8		9.6		
65			65	12.31	13.0		11.7	160	10.4	128	
70			70	11.43	14.0		12.6		11.2		
75			75	10.67	15.0		13.5		12.0		
80			80	10.00	16.0		14.4		12.8		
90			90	8.89	18.0		16.2		14.4		
100			100	8.00	20.0		18.0		16.0		
125	125	6.40	25.0		22.5		20.0				
150	150	5.33	30.0		27.0		24.0				
175	175	4.57	35.0		31.5		28.0				
TB 22x25	22	11	25	39.00	5.0		4.5		4.0		
30			30	32.50	6.0		5.4		4.8		
35			35	27.86	7.0		6.3		5.6		
40			40	24.38	8.0		7.2		6.4		
45			45	21.67	9.0		8.1		7.2		
50			50	19.50	10.0		9.0		8.0		
55			55	17.73	11.0		9.9		8.8		
60			60	16.25	12.0		10.8		9.6		
65			65	15.00	13.0		11.7	195	10.4	156	
70			70	13.93	14.0		12.6		11.2		
75			75	13.00	15.0		13.5		12.0		
80			80	12.19	16.0		14.4		12.8		
90			90	10.83	18.0		16.2		14.4		
100			100	9.75	20.0		18.0		16.0		
125			125	7.80	25.0		22.5		20.0		
150	150	6.50	30.0		27.0		24.0				
175	175	5.57	35.0		31.5		28.0				

TB

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

极重荷重
SUPERLOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)	
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf
TB 25x25	25	12.5	25	49.00	5.0	245	4.5	221	4.0	196
30			30	40.80	6.0		5.4		4.8	
35			35	35.00	7.0		6.3		5.6	
40			40	30.60	8.0		7.2		6.4	
45			45	27.20	9.0		8.1		7.2	
50			50	24.50	10.0		9.0		8.0	
55			55	22.30	11.0		9.9		8.8	
60			60	20.40	12.0		10.8		9.6	
65			65	18.80	13.0		11.7		10.4	
70			70	17.50	14.0		12.6		11.2	
75			75	16.30	15.0		13.5		12.0	
80			80	15.30	16.0		14.4		12.8	
90			90	13.60	18.0		16.2		14.4	
100			100	12.30	20.0		18.0		16.0	
125			125	9.80	25.0		22.5		20.0	
150			150	8.17	30.0		27.0		24.0	
175			175	7.00	35.0		31.5		28.0	
200	200	6.13	40.0	36.0	32.0					
TB 27x25	27	13.5	25	58.00	5.0	290	4.5	261	4.0	232
30			30	48.33	6.0		5.4		4.8	
35			35	41.43	7.0		6.3		5.6	
40			40	36.25	8.0		7.2		6.4	
45			45	32.22	9.0		8.1		7.2	
50			50	29.00	10.0		9.0		8.0	
55			55	26.36	11.0		9.9		8.8	
60			60	24.17	12.0		10.8		9.6	
65			65	22.31	13.0		11.7		10.4	
70			70	20.71	14.0		12.6		11.2	
75			75	19.33	15.0		13.5		12.0	
80			80	18.13	16.0		14.4		12.8	
90			90	16.11	18.0		16.2		14.4	
100			100	14.50	20.0		18.0		16.0	
125			125	11.60	25.0		22.5		20.0	
150			150	9.67	30.0		27.0		24.0	
175			175	8.28	35.0		31.5		28.0	
200	200	7.25	40.0	36.0	32.0					
TB 30x25	30	15	25	72.00	5.0	360	4.5	324	4.0	288
30			30	60.00	6.0		5.4		4.8	
35			35	51.43	7.0		6.3		5.6	
40			40	45.00	8.0		7.2		6.4	
45			45	40.00	9.0		8.1		7.2	
50			50	36.00	10.0		9.0		8.0	
55			55	32.72	11.0		9.9		8.8	
60			60	30.00	12.0		10.8		9.6	
65			65	27.69	13.0		11.7		10.4	
70			70	25.71	14.0		12.6		11.2	
75			75	24.00	15.0		13.5		12.0	
80			80	22.50	16.0		14.4		12.8	
90			90	20.00	18.0		16.2		14.4	
100			100	18.00	20.0		18.0		16.0	
125			125	14.40	25.0		22.5		20.0	
150			150	12.00	30.0		27.0		24.0	
175			175	10.28	35.0		31.5		28.0	
200	200	9.00	40.0	36.0	32.0					
TB 35x35	35	17.5	35	69.94	7.0	490	6.3	441	5.6	392
40			40	61.25	8.0		7.2		6.4	
45			45	54.44	9.0		8.1		7.2	
50			50	49.00	10.0		9.0		8.0	
55			55	44.54	11.0		9.9		8.8	
60			60	40.83	12.0		10.8		9.6	
65			65	37.69	13.0		11.7		10.4	
70			70	35.00	14.0		12.6		11.2	
75			75	32.67	15.0		13.5		12.0	
80			80	30.62	16.0		14.4		12.8	
90			90	27.22	18.0		16.2		14.4	
100			100	24.50	20.0		18.0		16.0	
125			125	19.60	25.0		22.5		20.0	
150			150	16.33	30.0		27.0		24.0	
175			175	14.00	35.0		31.5		28.0	
200			200	12.25	40.0		36.0		32.0	

TB

荷重±10%
直角度2°以下
自由长50mm以下±0.5mm
55mm以上±1%

极重荷重
SUPERLOAD

呼称 Model	外径 Outer Dia.	内径 Inner Dia.	自由长 Free length (mm)	定数 springconstant (kg/mm)	30万 (0.3million)		50万 (0.5million)		100万 (1million)						
					变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf	变形量 Deflection mm	荷重 Load kgf					
TB 40x40	40	20	40	80.00	8.0	640	7.2	576	6.4	512					
45			45	71.11	9.0		8.1		7.2						
50			50	64.00	10.0		9.0		8.0						
55			55	58.18	11.0		9.9		8.8						
60			60	53.33	12.0		10.8		9.6						
65			65	49.23	13.0		11.7		10.4						
70			70	45.71	14.0		12.6		11.2						
75			75	42.67	15.0		13.5		12.0						
80			80	40.00	16.0		14.4		12.8						
90			90	35.55	18.0		16.2		14.4						
100			100	32.00	20.0		18.0		16.0						
125			125	25.60	25.0		22.5		20.0						
150			150	21.33	30.0		27.0		24.0						
175			175	18.28	35.0		31.5		28.0						
200			200	16.00	40.0		36.0		32.0						
225			225	14.22	45.0		40.5		36.0						
250			250	12.80	50.0		45.0		40.0						
275			275	11.64	55.0		49.5		44.0						
300			300	10.67	60.0		54.0		48.0						
TB 50x50			50	25	50		100.00		10.0		1000	9.0	900	8.0	800
55	55	90.91			11.0	9.9	8.8								
60	60	83.33			12.0	10.8	9.6								
65	65	76.92			13.0	11.7	10.4								
70	70	71.42			14.0	12.6	11.2								
75	75	66.67			15.0	13.5	12.0								
80	80	62.50			16.0	14.4	12.8								
90	90	55.55			18.0	16.2	14.4								
100	100	50.00			20.0	18.0	16.0								
125	125	40.00			25.0	22.5	20.0								
150	150	33.33			30.0	27.0	24.0								
175	175	28.57			35.0	31.5	28.0								
200	200	25.00			40.0	36.0	32.0								
225	225	22.22			45.0	40.5	36.0								
250	250	20.00			50.0	45.0	40.0								
275	275	18.18			55.0	49.5	44.0								
300	300	16.66			60.0	54.0	48.0								
350	350	14.29	70.0	63.0	56.0										
TB 60x60	60	30	60	120.00	12.0	1440	10.8	1296	9.6	1152					
70			70	102.86	14.0		12.6		11.2						
80			80	90.00	16.0		14.4		12.8						
90			90	80.00	18.0		16.2		14.4						
100			100	72.00	20.0		18.0		16.0						
125			125	57.60	25.0		22.5		20.0						
150			150	48.00	30.0		27.0		24.0						
175			175	41.14	35.0		31.5		28.0						
200			200	36.00	40.0		36.0		32.0						
225			225	32.00	45.0		40.5		36.0						
250			250	28.80	50.0		45.0		40.0						
275			275	26.18	55.0		49.5		44.0						
300			300	24.00	60.0		54.0		48.0						
350			350	20.57	70.0		63.0		56.0						
TB 70x70			70	40	70		142.86		14.0		2000	12.6	1800	11.2	1600
80					80		125.00		16.0			14.4		12.8	
90					90		111.11		18.0			16.2		14.4	
100	100	100.00			20.0	18.0	16.0								
125	125	80.00			25.0	22.5	20.0								
150	150	66.67			30.0	27.0	24.0								
175	175	57.14			35.0	31.5	28.0								
200	200	50.00			40.0	36.0	32.0								
225	225	44.44			45.0	40.5	36.0								
250	250	40.00			50.0	45.0	40.0								
275	275	36.36			55.0	49.5	44.0								
300	300	33.33			60.0	54.0	48.0								
350	350	28.57			70.0	63.0	56.0								