



Model	Outer Dia D (mm)	Inner Dia d (mm)	Free Length L (mm)	Spring Const (kgf/mm)	0.3 million	
					Deflection F (mm)	Load kgf(N)
TR 10.5 × 15	10.5	6	15	1.07	7.5	8
20			20	0.80	10.0	
25			25	0.64	12.5	
30			30	0.53	15.0	
35			35	0.46	17.5	
40			40	0.40	20.0	
45			45	0.36	22.5	
50			50	0.32	25.0	
55			55	0.29	27.5	
60			60	0.27	30.0	
65			65	0.25	32.5	
70			70	0.23	35.0	
75			75	0.21	37.5	
80			80	0.20	40.0	
TR 12.5 × 15	12.5	7	15	1.20	7.5	9
20			20	0.90	10.0	
25			25	0.72	12.5	
30			30	0.60	15.0	
35			35	0.51	17.5	
40			40	0.45	20.0	
45			45	0.40	22.5	
50			50	0.36	25.0	
55			55	0.33	27.5	
60			60	0.30	30.0	
65			65	0.28	32.5	
70			70	0.26	35.0	
75			75	0.24	37.5	
80			80	0.23	40.0	
90	90	0.20	45.0			
100	100	0.18	50.0			

Model	Outer Dia D (mm)	Inner Dia d (mm)	Free Length L (mm)	Spring Const (kgf/mm)	0.3 million	
					Deflection F (mm)	Load kgf(N)
TR 14.5 × 15	14.5	8.5	15	1.73	7.5	13
			20	1.30	10.0	
			25	1.04	12.5	
			30	0.87	15.0	
			35	0.74	17.5	
			40	0.65	20.0	
			45	0.58	22.5	
			50	0.52	25.0	
			55	0.47	27.5	
			60	0.43	30.0	
			65	0.40	32.5	
			70	0.37	35.0	
			75	0.35	37.5	
			80	0.33	40.0	
			90	0.29	45.0	
			100	0.26	50.0	
125	0.21	62.5				
150	0.17	75.0				
TR 17 × 20	17	10.5	20	2.00	10.0	20
			25	1.60	12.5	
			30	1.33	15.0	
			35	1.14	17.5	
			40	1.00	20.0	
			45	0.89	22.5	
			50	0.80	25.0	
			55	0.73	27.5	
			60	0.67	30.0	
			65	0.62	32.5	
			70	0.57	35.0	
			75	0.53	37.5	
			80	0.50	40.0	
			90	0.44	45.0	
			100	0.40	50.0	
			125	0.32	62.5	
150	0.27	75.0				
175	0.23	87.5				
TR 21 × 25	21	13.5	25	2.40	12.5	30
			30	2.00	15.0	
			35	1.71	17.5	
			40	1.50	20.0	
			45	1.33	22.5	
			50	1.20	25.0	
			55	1.09	27.5	
			60	1.00	30.0	
			65	0.92	32.5	
			70	0.86	35.0	
			75	0.80	37.5	
			80	0.75	40.0	
			90	0.67	45.0	
			100	0.60	50.0	
			110	0.55	55.0	
			120	0.50	60.0	
125	0.48	62.5				
130	0.46	65.0				

Model	Outer Dia D (mm)	Inner Dia d (mm)	Free Length L (mm)	Spring Const (kgf/mm)	0.3 million	
					Deflection F (mm)	Load kgf(N)
TR 21 × 140	21	13.5	140	0.43	70.0	30
150			0.40	75.0		
175			0.34	87.5		
200			0.30	100.0		
TR 26 × 25			26	16.5	25	
30	2.67	15.0				
35	2.29	17.5				
40	2.00	20.0				
45	1.78	22.5				
50	1.60	25.0				
55	1.45	27.5				
60	1.33	30.0				
65	1.23	32.5				
70	1.14	35.0				
75	1.07	37.5				
80	1.00	40.0				
90	0.89	45.0				
100	0.80	50.0				
110	0.73	55.0				
120	0.67	60.0				
125	0.64	62.5				
130	0.62	65.0				
140	0.57	70.0				
150	0.53	75.0				
175	0.46	87.5				
200	0.40	100.0				
225	0.36	112.5				
250	0.32	125.0				
TR 31 × 35	31	21			35	2.86
40			2.50	20.0		
45			2.22	22.5		
50			2.00	25.0		
55			1.82	27.5		
60			1.67	30.0		
65			1.54	32.5		
70			1.43	35.0		
75			1.33	37.5		
80			1.25	40.0		
90			1.11	45.0		
100			1.00	50.0		
110			0.91	55.0		
120			0.83	60.0		
125			0.80	62.5		
130			0.77	65.0		
140			0.71	70.0		
150			0.67	75.0		
160			0.63	80.0		
170			0.59	85.0		
175			0.57	87.5		
180	0.56	90.0				
190	0.53	95.0				
200	0.50	100.0				
250	0.40	125.0				
300	0.33	150.0				

Model	Outer Dia D (mm)	Inner Dia d (mm)	Free Length L (mm)	Spring Const (kgf/mm)	0.3 million	
					Deflection F (mm)	Load kgf(N)
TR 37 × 35	37	26	35	3.43	17.5	60
40			40	3.00	20.0	
45			45	2.67	22.5	
50			50	2.40	25.0	
55			55	2.18	27.5	
60			60	2.00	30.0	
65			65	1.85	32.5	
70			70	1.71	35.0	
75			75	1.60	37.5	
80			80	1.50	40.0	
90			90	1.33	45.0	
100			100	1.20	50.0	
110			110	1.09	55.0	
120			120	1.00	60.0	
125			125	0.96	62.5	
130			130	0.92	65.0	
140			140	0.86	70.0	
150			150	0.80	75.0	
160			160	0.75	80.0	
170			170	0.71	85.0	
175			175	0.69	87.5	
180	180	0.67	90.0			
190	190	0.63	95.0			
200	200	0.60	100.0			
250	250	0.48	125.0			
300	300	0.40	150.0			
TR 43 × 50	43	31	50	3.40	25.0	85
60			60	2.83	30.0	
70			70	2.43	35.0	
80			80	2.13	40.0	
90			90	1.89	45.0	
100			100	1.70	50.0	
110			110	1.55	55.0	
120			120	1.42	60.0	
130			130	1.31	65.0	
140			140	1.21	70.0	
150			150	1.13	75.0	
160			160	1.06	80.0	
170			170	1.00	85.0	
180			180	0.94	90.0	
190			190	0.89	95.0	
200			200	0.85	100.0	
225			225	0.76	112.5	
250			250	0.68	125.0	
275			275	0.62	137.5	
300			300	0.57	150.0	

Model	Outer Dia D (mm)	Inner Dia d (mm)	Free Length L (mm)	Spring Const (kgf/mm)	0.3 million	
					Deflection F (mm)	Load kgf(N)
TR 46 × 50	46	33	50	4.40	25.0	110
60			60	3.67	30.0	
70			70	3.14	35.0	
80			80	2.75	40.0	
90			90	2.44	45.0	
100			100	2.20	50.0	
110			110	2.00	55.0	
120			120	1.83	60.0	
125			125	1.76	62.5	
130			130	1.69	65.0	
140			140	1.57	70.0	
150			150	1.47	75.0	
175			175	1.26	87.5	
200			200	1.10	100.0	
225			225	0.98	112.5	
250			250	0.88	125.0	
275			275	0.80	137.5	
300	300	0.73	150.0			
TR 50 × 50	50	36	50	5.40	25.0	135
60			60	4.50	30.0	
70			70	3.86	35.0	
80			80	3.38	40.0	
90			90	3.00	45.0	
100			100	2.70	50.0	
110			110	2.45	55.0	
120			120	2.25	60.0	
130			130	2.08	65.0	
140			140	1.93	70.0	
150			150	1.80	75.0	
175			175	1.54	87.5	
200			200	1.35	100.0	
225			225	1.20	112.5	
250			250	1.08	125.0	
275			275	0.98	137.5	
300			300	0.90	150.0	
350	350	0.77	175.0			
400	400	0.68	200.0			



Order Example

TYPE	D	L
TR	D31	L100