



Model	Outer Dia D (mm)	Inner Dia d (mm)	Free Length L (mm)	Spring Const (kgf/mm)	0.3 million		0.5 million		1 million	
					Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)
SL 8 × 10	8	4	10	2.50	4.0	10	3.6	9	3.2	8
15			1.67	6.0	5.4		4.8			
20			1.25	8.0	7.2		6.4			
25			1.00	10.0	9.0		8.0			
30			0.83	12.0	10.8		9.6			
35			0.71	14.0	12.6		11.2			
40			0.63	16.0	14.4		12.8			
45			0.56	18.0	16.2		14.4			
50			0.50	20.0	18.0		16.0			
55			0.46	22.0	19.8		17.6			
60			0.42	24.0	21.6		19.2			
65			0.38	26.0	23.4		20.8			
70			0.36	28.0	25.2		22.4			
75	0.33	30.0	27.0	24.0						
80	0.31	32.0	28.8	25.6						
90	0.28	36.0	32.4	28.8						
SL 10 × 10	10	5	10	3.61	4.0	14.5	3.6	13	3.2	11.5
15			2.41	6.0	5.4		4.8			
20			1.81	8.0	7.2		6.4			
25			1.45	10.0	9.0		8.0			
30			1.21	12.0	10.8		9.6			
35			1.03	14.0	12.6		11.2			
40			0.90	16.0	14.4		12.8			
45			0.80	18.0	16.2		14.4			
50			0.73	20.0	18.0		16.0			
55			0.66	22.0	19.8		17.6			
60			0.60	24.0	21.6		19.2			
65			0.55	26.0	23.4		20.8			
70			0.51	28.0	25.2		22.4			
75	0.48	30.0	27.0	24.0						
80	0.45	32.0	28.8	25.6						
90	0.40	36.0	32.4	28.8						
100	0.36	40.0	36.0	32.0						

Model	Outer Dia D (mm)	Inner Dia d (mm)	Free Length L (mm)	Spring Const (kgf/mm)	0.3 million		0.5 million		1 million	
					Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)
SL 12 × 20	12	6	20	2.63	8.0	21	7.2	19	6.4	17
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		19.8		17.6	
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	
SL 14 × 20	14	7	20	3.47	8.0	28	7.2	25	6.4	22
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		19.8		17.6	
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					
SL 16 × 20	16	8	20	4.44	8.0	35	7.2	32	6.4	28
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		21.6		19.2	
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					

Model	Outer Dia D (mm)	Inner Dia d (mm)	Free Length L (mm)	Spring Const (kgf/mm)	0.3 million		0.5 million		1 million	
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SL 18 × 20	18	9	20	5.42	8.0	43	7.2	39	6.4	34
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		21.6		19.2	
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					
SL 20 × 20	20	10	20	6.81	8.0	54	7.2	49	6.4	43
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		21.6		19.2	
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					
SL 22 × 25	22	11	25	6.70	10.0	67	9.0	60	8.0	54
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		21.6		19.2	
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					

Model	Outer Dia D (mm)	Inner Dia d (mm)	Free Length L (mm)	Spring Const (kgf/mm)	0.3 million		0.5 million		1 million	
					Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)
SL 25 × 25	25	12.5	25	8.40	10.0	84	9.0	76	8.0	67
30			30	7.00	12.0		10.8			
35			35	6.00	14.0		12.6			
40			40	5.25	16.0		14.4			
45			45	4.67	18.0		16.2			
50			50	4.20	20.0		18.0			
55			55	3.82	22.0		19.8			
60			60	3.50	24.0		21.6			
65			65	3.23	26.0		23.4			
70			70	3.00	28.0		25.2			
75			75	2.80	30.0		27.0			
80			80	2.63	32.0		28.8			
90			90	2.33	36.0		32.4			
100			100	2.10	40.0		36.0			
125			125	1.68	50.0		45.0			
150			150	1.40	60.0		54.0			
175	175	1.20	70.0	63.0						
200	200	1.05	80.0	72.0						
SL 27 × 25	27	13.5	25	10.00	10.0	100	9.0	90	8.0	80
30			30	8.33	12.0		10.8			
35			35	7.14	14.0		12.6			
40			40	6.25	16.0		14.4			
45			45	5.56	18.0		16.2			
50			50	5.00	20.0		18.0			
55			55	4.55	22.0		19.8			
60			60	4.17	24.0		21.6			
65			65	3.85	26.0		23.4			
70			70	3.57	28.0		25.2			
75			75	3.33	30.0		27.0			
80			80	3.13	32.0		28.8			
90			90	2.78	36.0		32.4			
100			100	2.50	40.0		36.0			
125			125	2.00	50.0		45.0			
150			150	1.67	60.0		54.0			
175	175	1.43	70.0	63.0						
200	200	1.25	80.0	72.0						
SL 30 × 25	30	15	25	12.11	10.0	121	9.0	109	8.0	97
30			30	10.08	12.0		10.8			
35			35	8.65	14.0		12.6			
40			40	7.56	16.0		14.4			
45			45	6.73	18.0		16.2			
50			50	6.05	20.0		18.0			
55			55	5.50	22.0		19.8			
60			60	5.04	24.0		21.6			
65			65	4.65	26.0		23.4			
70			70	4.32	28.0		25.2			
75			75	4.03	30.0		27.0			
80			80	3.78	32.0		28.8			
90			90	3.36	36.0		32.4			
100			100	3.02	40.0		36.0			
125			125	2.42	50.0		45.0			

Model	Outer Dia D (mm)	Inner Dia d (mm)	Free Length L (mm)	Spring Const (kgf/mm)	0.3 million		0.5 million		1 million	
					Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)
SL 30 × 150	30	15	150	2.01	60.0	121	54.0	109	48.0	97
175			175	1.72	70.0		63.0		56.0	
200			200	1.51	80.0		72.0		64.0	
SL 35 × 35	35	17.5	35	11.78	14.0	165	12.6	149	11.2	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					
SL 40 × 40	40	20	40	13.50	16.0	216	14.4	194	12.8	173
45			45	12.00	18.0		16.2		14.4	
50			50	10.80	20.0		18.0		16.0	
55			55	9.82	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		28.8	
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					
SL 50 × 50	50	25	50	16.89	20.0	338	18.0	304	16.0	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					

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SL 50 × 225	30	25	225	3.75	90.0	338	81.0	304	72.0	270
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	
SL 60 × 60	60	30	60	20.25	24.0	486	21.6	437	19.2	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					
SLR 30 × 30	30	16	30	6.33	12.0	76	10.8	68	9.6	61
35			35	5.43	14.0		12.6		11.2	
40			40	4.75	16.0		14.4		12.8	
45			45	4.22	18.0		16.2		14.4	
50			50	3.80	20.0		18.0		16.0	
55			55	3.45	22.0		19.8		17.6	
60			60	3.17	24.0		21.6		19.2	
65			65	2.92	26.0		23.4		20.8	
70			70	2.71	28.0		25.2		22.4	
75			75	2.53	30.0		27.0		24.0	
80			80	2.38	32.0		28.8		25.6	
90			90	2.11	36.0		32.4		28.8	
100			100	1.90	40.0		36.0		32.0	
125			125	1.52	50.0		45.0		40.0	
150			150	1.27	60.0		54.0		48.0	
175			175	1.09	70.0		63.0		56.0	
SLR 35 × 40	35	21	40	9.69	16.0	155	14.4	140	12.8	124
45			45	8.61	18.0		16.2		14.4	
50			50	7.75	20.0		18.0		16.0	
55			55	7.05	22.0		19.8		17.6	
60			60	6.46	24.0		21.6		19.2	
65			65	5.96	26.0		23.4		20.8	
70			70	5.54	28.0		25.2		22.4	
75			75	5.17	30.0		27.0		24.0	
80	80	4.84	32.0	28.8	25.6					
90	90	4.31	36.0	32.4	28.8					

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SLR 35 x 100	35	21	100	3.88	40.0	155	36.0	140	32.0	124
125			3.10	50.0	45.0		40.0			
150			2.58	60.0	54.0		48.0			
175			2.21	70.0	63.0		56.0			
200			1.94	80.0	72.0		64.0			
SLR 40 x 50	40	26	50	8.70	20.0	174	18.0	157	16.0	138
60			7.25	24.0	21.6		19.2			
70			6.21	28.0	25.2		22.4			
80			5.44	32.0	28.8		25.6			
90			4.83	36.0	32.4		28.8			
100			4.35	40.0	36.0		32.0			
125			3.48	50.0	40.0		40.0			
150			2.90	60.0	54.0		48.0			
175			2.49	70.0	63.0		56.0			
200			2.18	80.0	72.0		64.0			
250	1.74	100.0	90.0	80.0						
SLR 50 x 60	50	30	60	10.83	24.0	260	21.6	233	19.2	207
70			9.29	28.0	25.2		22.4			
80			8.13	32.0	28.8		25.6			
90			7.22	36.0	32.4		28.8			
100			6.50	40.0	36.0		32.0			
125			5.20	50.0	45.0		40.0			
150			4.33	60.0	54.0		48.0			
175			3.71	70.0	63.0		56.0			
200			3.25	80.0	72.0		64.0			
250			2.60	100.0	90.0		80.0			
300	2.17	120.0	108.0	96.0						
SLR 60 x 90	60	35	90	10.67	36.0	384	32.4	345	28.8	307
100			9.60	40.0	36.0		32.0			
125			7.68	50.0	45.0		40.0			
150			6.40	60.0	54.0		48.0			
175			5.49	70.0	63.0		56.0			
200			4.80	80.0	72.0		64.0			
250			3.84	100.0	90.0		80.0			
300	3.20	120.0	108.0	96.0						



Order Example

TYPE	D	L
SL	D25	L100