



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)
SF 8 × 10	8	4	10	1.56	5.0	8	4.5	7	4.0	6
			15	1.04	7.5		6.8		6.0	
			20	0.78	10.0		9.0		8.0	
			25	0.62	12.5		11.2		10.0	
			30	0.52	15.0		13.5		12.0	
			35	0.44	17.5		15.7		14.0	
			40	0.39	20.0		18.0		16.0	
			45	0.35	22.5		20.2		18.0	
			50	0.31	25.0		22.5		20.0	
			55	0.28	27.5		24.7		22.0	
			60	0.26	30.0		27.0		24.0	
			65	0.24	32.5		29.2		26.0	
			70	0.22	35.0		31.5		28.0	
			75	0.21	37.5		33.7		30.0	
			80	0.20	40.0		36.0		32.0	
90	0.17	45.0	40.5	36.0						
SF 10 × 10	10	5	10	2.00	5.0	10	4.5	9	4.0	8
			15	1.32	7.5		6.8		6.0	
			20	1.00	10.0		9.0		8.0	
			25	0.80	12.5		11.2		10.0	
			30	0.67	15.0		13.5		12.0	
			35	0.57	17.5		15.7		14.0	
			40	0.50	20.0		18.0		16.0	
			45	0.44	22.5		20.2		18.0	
			50	0.40	25.0		22.5		20.0	
			55	0.36	27.5		24.7		22.0	
			60	0.33	30.0		27.0		24.0	
			65	0.31	32.5		29.2		26.0	
			70	0.29	35.0		31.5		28.0	
			75	0.27	37.5		33.7		30.0	
			80	0.25	40.0		36.0		32.0	
90	0.22	45.0	40.5	36.0						
100	0.20	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	
					Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)
SF 12 × 20	12	6	20	1.40	10.0	14	9.0	12.5	8.0	11
			25	1.12	12.5		11.2		10.0	
			30	0.93	15.0		13.5		12.0	
			35	0.80	17.5		15.7		14.0	
			40	0.70	20.0		18.0		16.0	
			45	0.62	22.5		20.2		18.0	
			50	0.56	25.0		22.5		20.0	
			55	0.51	27.5		24.7		22.0	
			60	0.47	30.0		27.0		24.0	
			65	0.43	32.5		29.2		26.0	
			70	0.40	35.0		31.5		28.0	
			75	0.37	37.5		33.7		30.0	
			80	0.35	40.0		36.0		32.0	
			90	0.31	45.0		40.5		36.0	
100	0.28	50.0	45.0	40.0						
SF 14 × 20	14	7	20	1.78	10.0	18	9.0	16	8.0	14.5
			25	1.44	12.5		11.2		10.0	
			30	1.20	15.0		13.5		12.0	
			35	1.03	17.5		15.7		14.0	
			40	0.90	20.0		18.0		16.0	
			45	0.80	22.5		20.2		18.0	
			50	0.72	25.0		22.5		20.0	
			55	0.65	27.5		24.7		22.0	
			60	0.60	30.0		27.0		24.0	
			65	0.55	32.5		29.2		26.0	
			70	0.51	35.0		31.5		28.0	
			75	0.48	37.5		33.7		30.0	
			80	0.45	40.0		36.0		32.0	
			90	0.40	45.0		40.5		36.0	
100	0.36	50.0	45.0	40.0						
125	0.29	62.5	56.2	50.0						
SF 16 × 20	16	8	20	2.11	10.0	21	9.0	19	8.0	17
			25	1.68	12.5		11.2		10.0	
			30	1.40	15.0		13.5		12.0	
			35	1.20	17.5		15.7		14.0	
			40	1.05	20.0		18.0		16.0	
			45	0.94	22.5		20.2		18.0	
			50	0.84	25.0		22.5		20.0	
			55	0.77	27.5		24.7		22.0	
			60	0.70	30.0		27.0		24.0	
			65	0.65	32.5		29.2		26.0	
			70	0.60	35.0		31.5		28.0	
			75	0.56	37.5		33.7		30.0	
			80	0.53	40.0		36.0		32.0	
			90	0.47	45.0		40.5		36.0	
100	0.42	50.0	45.0	40.0						
125	0.34	62.5	56.2	50.0						

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)
SF 18 × 20	18	9	20	2.56	10.0	26	9.0	23	8.0	21
			25	2.08	12.5		11.2		10.0	
			30	1.74	15.0		13.5		12.0	
			35	1.49	17.5		15.7		14.0	
			40	1.30	20.0		18.0		16.0	
			45	1.16	22.5		20.2		18.0	
			50	1.04	25.0		22.5		20.0	
			55	0.95	27.5		24.7		22.0	
			60	0.87	30.0		27.0		24.0	
			65	0.80	32.5		29.2		26.0	
			70	0.74	35.0		31.5		28.0	
			75	0.70	37.5		33.7		30.0	
			80	0.65	40.0		36.0		32.0	
			90	0.58	45.0		40.5		36.0	
			100	0.52	50.0		45.0		40.0	
SF 20 × 20	20	11	20	3.22	10.0	32	9.0	29	8.0	26
			25	2.56	12.5		11.2		10.0	
			30	2.13	15.0		13.5		12.0	
			35	1.83	17.5		15.7		14.0	
			40	1.60	20.0		18.0		16.0	
			45	1.42	22.5		20.2		18.0	
			50	1.28	25.0		22.5		20.0	
			55	1.16	27.5		24.7		22.0	
			60	1.07	30.0		27.0		24.0	
			65	0.98	32.5		29.2		26.0	
			70	0.91	35.0		31.5		28.0	
			75	0.85	37.5		33.7		30.0	
			80	0.80	40.0		36.0		32.0	
			90	0.71	45.0		40.5		36.0	
			100	0.64	50.0		45.0		40.0	
SF 22 × 25	22	11	25	3.20	12.5	40	11.2	36	10.0	32
			30	2.67	15.0		13.5		12.0	
			35	2.29	17.5		15.7		14.0	
			40	2.00	20.0		18.0		16.0	
			45	1.78	22.5		20.2		18.0	
			50	1.60	25.0		22.5		20.0	
			55	1.46	27.5		24.7		22.0	
			60	1.33	30.0		27.0		24.0	
			65	1.23	32.5		29.2		26.0	
			70	1.14	35.0		31.5		28.0	
			75	1.07	37.5		33.7		30.0	
			80	1.00	40.0		36.0		32.0	
			90	0.89	45.0		40.5		36.0	
			100	0.80	50.0		45.0		40.0	
			125	0.64	62.5		56.2		50.0	
150	0.53	75.0	67.5	60.0						
175	0.46	87.5	78.7	70.0						

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)
SF 25 × 25	25	13.5	25	4.00	12.5	50	11.2	45	10.0	40
			30	3.33	15.0		13.5			
			35	2.85	17.5		15.7			
			40	2.50	20.0		18.0			
			45	2.22	22.5		20.2			
			50	2.00	25.0		22.5			
			55	1.82	27.5		24.7			
			60	1.67	30.0		27.0			
			65	1.54	32.5		29.2			
			70	1.43	35.0		31.5			
			75	1.33	37.5		33.7			
			80	1.25	40.0		36.0			
			90	1.11	45.0		40.5			
			100	1.00	50.0		45.0			
			125	0.80	62.5		56.2			
			150	0.67	75.0		67.5			
			175	0.57	87.5		78.7			
200	0.50	100.0	90.0							
SF 27 × 25	27	13.5	25	4.80	12.5	60	11.2	54	10.0	48
			30	4.00	15.0		13.5			
			35	3.43	17.5		15.7			
			40	3.00	20.0		18.0			
			45	2.67	22.5		20.2			
			50	2.40	25.0		22.5			
			55	2.18	27.5		24.7			
			60	2.00	30.0		27.0			
			65	1.85	32.5		29.2			
			70	1.71	35.0		31.5			
			75	1.60	37.5		33.7			
			80	1.50	40.0		36.0			
			90	1.33	45.0		40.5			
			100	1.20	50.0		45.0			
			125	0.96	62.5		56.2			
			150	0.80	75.0		67.5			
			175	0.69	87.5		78.7			
200	0.60	100.0	90.0							
SF 30 × 25	30	16	25	5.80	12.5	72	11.2	65	10.0	58
			30	4.83	15.0		13.5			
			35	4.13	17.5		15.7			
			40	3.60	20.0		18.0			
			45	3.21	22.5		20.2			
			50	2.88	25.0		22.5			
			55	2.63	27.5		24.7			
			60	2.40	30.0		27.0			
			65	2.22	32.5		29.2			
			70	2.05	35.0		31.5			

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)	
SF 30 × 75	30	16	75	1.93	72	72	65	58	37.5	33.7	30.0
			80	1.80					40.0	36.0	32.0
			90	1.60					45.0	40.5	36.0
			100	1.44					50.0	45.0	40.0
			125	1.15					62.5	56.2	50.0
			150	0.96					75.0	67.5	60.0
			175	0.82					87.5	78.7	70.0
			200	0.72					100.0	90.0	80.0
SF 35 × 35	35	19	35	5.60	98	88	78	17.5	15.7	14.0	
			40	4.90				20.0	18.0	16.0	
			45	4.36				22.5	20.2	18.0	
			50	3.92				25.0	22.5	20.0	
			55	3.56				27.5	24.7	22.0	
			60	3.26				30.0	27.0	24.0	
			65	3.02				32.5	29.2	26.0	
			70	2.80				35.0	31.5	28.0	
			75	2.61				37.5	33.7	30.0	
			80	2.45				40.0	36.0	32.0	
			90	2.17				45.0	40.5	36.0	
			100	1.96				50.0	45.0	40.0	
			125	1.57				62.5	56.2	50.0	
			150	1.30				75.0	67.5	60.0	
			175	1.12				87.5	78.7	70.0	
			200	0.98				100.0	90.0	80.0	
SF 40 × 40	40	22	40	6.38	128	115	102	20.0	18.0	16.0	
			45	5.67				22.5	20.2	18.0	
			50	5.12				25.0	22.5	20.0	
			55	4.64				27.5	24.7	22.0	
			60	4.26				30.0	27.0	24.0	
			65	3.93				32.5	29.2	26.0	
			70	3.65				35.0	31.5	28.0	
			75	3.40				37.5	33.7	30.0	
			80	3.20				40.0	36.0	32.0	
			90	2.84				45.0	40.5	36.0	
			100	2.56				50.0	45.0	40.0	
			125	2.04				62.5	56.2	50.0	
			150	1.70				75.0	67.5	60.0	
			175	1.46				87.5	78.7	70.0	
			200	1.28				100.0	90.0	80.0	
			SF 50 × 50	50				27.5	50	8.00	200
55	7.27	27.5			24.7	22.0					
60	6.66	30.0			27.0	24.0					
65	6.15	32.5			29.2	26.0					

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)
SF 50 × 70	50	27.5	70	5.71	35.0	200	31.5	180	28.0	160
			75	5.33	37.5		33.7		30.0	
			80	5.00	40.0		36.0		32.0	
			90	4.44	45.0		40.5		36.0	
			100	4.00	50.0		45.0		40.0	
			125	3.20	62.5		56.2		50.0	
			150	2.66	75.0		67.5		60.0	
			175	2.28	87.5		78.7		70.0	
			200	2.00	100.0		90.0		80.0	
			225	1.78	112.5		101.2		90.0	
			250	1.60	125.0		112.5		100.0	
			275	1.45	137.5		123.7		110.0	
			300	1.33	150.0		135.0		120.0	
			350	1.14	175.0		157.5		140.0	
			400	1.00	200.0		180.0		160.0	
			450	0.89	225.0		202.5		180.0	
500	0.80	250.0	225.0	200.0						
SF 60 × 60	60	33	60	9.59	30.0	288	27.0	259	24.0	230
			70	8.22	35.0		31.5		28.0	
			80	7.19	40.0		36.0		32.0	
			90	6.40	45.0		40.5		36.0	
			100	5.76	50.0		45.0		40.0	
			125	4.60	62.5		56.2		50.0	
			150	3.84	75.0		67.5		60.0	
			175	3.29	87.5		78.7		70.0	
			200	2.88	100.0		90.0		80.0	
			225	2.56	112.5		101.2		90.0	
			250	2.30	125.0		112.5		100.0	
			275	2.09	137.5		123.8		110.0	
			300	1.92	150.0		135.0		120.0	
			350	1.65	175.0		157.5		140.0	
			400	1.44	200.0		180.0		160.0	
			450	1.28	225.0		202.5		180.0	
500	1.15	250.0	225.0	200.0						
SFR 35 × 40	35	21	40	4.60	20.0	92	18.0	83	16.0	74
			45	4.09	22.5		20.3		18.0	
			50	3.68	25.0		22.5		20.0	
			55	3.35	27.5		24.8		22.0	
			60	3.07	30.0		27.0		24.0	
			65	2.83	32.5		29.3		26.0	
			70	2.63	35.0		31.5		28.0	
			75	2.45	37.5		33.8		30.0	
			80	2.30	40.0		36.0		32.0	
			90	2.04	45.0		40.5		36.0	
			100	1.84	50.0		45.0		40.0	
			125	1.47	62.5		56.3		50.0	
			150	1.23	75.0		67.5		60.0	
			175	1.05	87.5		78.8		70.0	
			200	0.92	100.0		90.0		80.0	

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					Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)	Deflection F (mm)	Load kgf(N)
SFR 40 × 50	40	26	50	4.20	25.0	105	22.5	95	20.0	84
60			60	3.50	30.0		27.0		24.0	
70			70	3.00	35.0		31.5		28.0	
80			80	2.63	40.0		36.0		32.0	
90			90	2.33	45.0		40.5		36.0	
100			100	2.10	50.0		45.0		40.0	
125			125	1.68	62.5		56.3		50.0	
150			150	1.40	75.0		67.5		60.0	
175			175	1.20	87.5		78.8		70.0	
200			200	1.05	100.0		90.0		80.0	
250			250	0.84	125.0		112.5		100.0	
SFR 50 × 60			50	31	60		6.67		30.0	
70	70	5.71			35.0	31.5	28.0			
80	80	5.00			40.0	36.0	32.0			
90	90	4.44			45.0	40.5	36.0			
100	100	4.00			50.0	45.0	40.0			
125	125	3.20			62.5	56.3	50.0			
150	150	2.67			75.0	67.5	60.0			
175	175	2.29			87.5	78.8	70.0			
200	200	2.00			100.0	90.0	80.0			
250	250	1.60			125.0	112.5	100.0			
300	300	1.33			150.0	135.0	120.0			
SFR 60 × 90	60	37			90	6.40	45.0	288	40.5	259
100			100	5.76	50.0	45.0	40.0			
125			125	4.61	62.5	56.3	50.0			
150			150	3.84	75.0	67.5	60.0			
175			175	3.29	87.5	78.8	70.0			
200			200	2.88	100.0	90.0	80.0			
250			250	2.30	125.0	112.5	100.0			
300			300	1.92	150.0	135.0	120.0			



Order Example

TYPE	D	L
SF	- D40	- L100