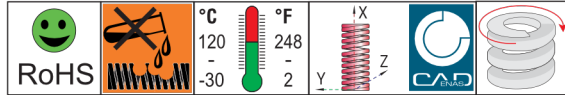
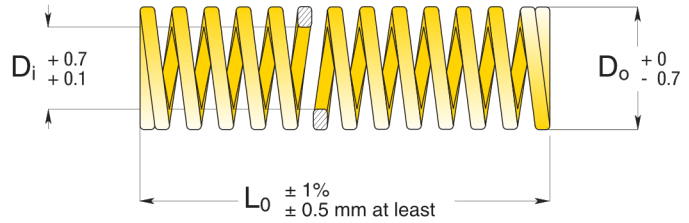


SF SERIES

JIS B 5012 - 1986

EN Lightest load springs
CN 最轻型荷载弹簧



Code R 型号	Do Outside Diameter 外径	Di Inside Diameter 内径	L0 Free Length 自由长度	Spring Constant 弹簧定数 ± 10%	A 40% L0 1.000.000 cycles	B 45% L0 500.000 cycles	C 50% L0 300.000 cycles	E do not use approx.	Pcs
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm	
SF 10 - 020	10	5	20	1.00	8.0	9.0	10.0	11.6	50
SF 10 - 025			25	0.80	10.0	11.2	12.5	14.5	50
SF 10 - 030			30	0.67	12.0	13.5	15.0	17.4	50
SF 10 - 035			35	0.57	14.0	15.7	17.5	20.3	50
SF 10 - 040			40	0.50	16.0	18.0	20.0	23.2	50
SF 10 - 045			45	0.44	18.0	20.2	22.5	26.1	50
SF 10 - 050			50	0.40	20.0	22.5	25.0	29.0	25
SF 10 - 055			55	0.36	22.0	24.7	27.5	31.9	25
SF 10 - 060			60	0.33	24.0	27.0	30.0	34.8	25
SF 10 - 065			65	0.31	26.0	29.2	32.5	37.7	25
SF 10 - 070			70	0.29	28.0	31.5	35.0	40.6	25
SF 10 - 075			75	0.27	30.0	33.7	37.5	43.5	25
SF 10 - 080			80	0.25	32.0	36.0	40.0	46.4	25
SF 12 - 020	12	6	20	1.40	8.0	9.0	10.0	11.6	50
SF 12 - 025			25	1.12	10.0	11.2	12.5	14.5	50
SF 12 - 030			30	0.93	12.0	13.5	15.0	17.4	50
SF 12 - 035			35	0.80	14.0	15.7	17.5	20.3	50
SF 12 - 040			40	0.70	16.0	18.0	20.0	23.2	50
SF 12 - 045			45	0.62	18.0	20.2	22.5	26.1	50
SF 12 - 050			50	0.56	20.0	22.5	25.0	29.0	25
SF 12 - 055			55	0.51	22.0	24.7	27.5	31.9	25
SF 12 - 060			60	0.47	24.0	27.0	30.0	34.8	25
SF 12 - 065			65	0.43	26.0	29.2	32.5	37.7	25
SF 12 - 070			70	0.40	28.0	31.5	35.0	40.6	25
SF 12 - 075			75	0.37	30.0	33.7	37.5	43.5	25
SF 12 - 080			80	0.35	32.0	36.0	40.0	46.4	25
SF 14 - 025	14	7	25	1.44	10.0	11.2	12.5	14.5	50
SF 14 - 030			30	1.20	12.0	13.5	15.0	17.4	50
SF 14 - 035			35	1.03	14.0	15.7	17.5	20.3	50
SF 14 - 040			40	0.90	16.0	18.0	20.0	23.2	50
SF 14 - 045			45	0.80	18.0	20.2	22.5	26.1	25
SF 14 - 050			50	0.72	20.0	22.5	25.0	29.0	25
SF 14 - 055			55	0.65	22.0	24.7	27.5	31.9	25
SF 14 - 060			60	0.60	24.0	27.0	30.0	34.8	25
SF 14 - 065			65	0.55	26.0	29.2	32.5	37.7	25
SF 14 - 070			70	0.51	28.0	31.5	35.0	40.6	25
SF 14 - 075			75	0.48	30.0	33.7	37.5	43.5	25
SF 14 - 080			80	0.45	32.0	36.0	40.0	46.4	20
SF 14 - 090			90	0.40	36.0	40.5	45.0	52.2	20
SF 16 - 025	16	8	25	1.68	10.0	11.2	12.5	14.5	50
SF 16 - 030			30	1.40	12.0	13.5	15.0	17.4	50
SF 16 - 035			35	1.20	14.0	15.7	17.5	20.3	50
SF 16 - 040			40	1.05	16.0	18.0	20.0	23.2	25
SF 16 - 045			45	0.94	18.0	20.2	22.5	26.1	25
SF 16 - 050			50	0.84	20.0	22.5	25.0	29.0	25
SF 16 - 055			55	0.77	22.0	24.7	27.5	31.9	25
SF 16 - 060			60	0.70	24.0	27.0	30.0	34.8	25
SF 16 - 065			65	0.65	26.0	29.2	32.5	37.7	25
SF 16 - 070			70	0.60	28.0	31.5	35.0	40.6	20
SF 16 - 075			75	0.56	30.0	33.7	37.5	43.5	20
SF 16 - 080			80	0.53	32.0	36.0	40.0	46.4	20
SF 16 - 090			90	0.47	36.0	40.5	45.0	52.2	20
SF 16 - 100			100	0.42	40.0	45.0	50.0	58.0	20



JIS B 5012 - 1986

SERIES SF

Code R 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	Spring Constant 弹簧定数 ± 10%	A 40% L ₀ 1.000.000 cycles	B 45% L ₀ 500.000 cycles	C 50% L ₀ 300.000 cycles	E approx. do not use	Pcs
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm	
SF 18 - 025	18	9	25	2.08	10.0	11.2	12.5	14.5	50
SF 18 - 030			30	1.74	12.0	13.5	15.0	17.4	50
SF 18 - 035			35	1.49	14.0	15.7	17.5	20.3	25
SF 18 - 040			40	1.30	16.0	18.0	20.0	23.2	25
SF 18 - 045			45	1.16	18.0	20.2	22.5	26.1	25
SF 18 - 050			50	1.04	20.0	22.5	25.0	29.0	25
SF 18 - 055			55	0.95	22.0	24.7	27.5	31.9	25
SF 18 - 060			60	0.87	24.0	27.0	30.0	34.8	25
SF 18 - 065			65	0.80	26.0	29.2	32.5	37.7	25
SF 18 - 070			70	0.74	28.0	31.5	35.0	40.6	25
SF 18 - 075			75	0.70	30.0	33.7	37.5	43.5	25
SF 18 - 080			80	0.65	32.0	36.0	40.0	46.4	20
SF 18 - 090			90	0.58	36.0	40.5	45.0	52.2	20
SF 18 - 100			100	0.52	40.0	45.0	50.0	58.0	20
SF 20 - 025	20	11	25	2.56	10.0	11.2	12.5	14.5	50
SF 20 - 030			30	2.13	12.0	13.5	15.0	17.4	50
SF 20 - 035			35	1.83	14.0	15.7	17.5	20.3	25
SF 20 - 040			40	1.60	16.0	18.0	20.0	23.2	25
SF 20 - 045			45	1.42	18.0	20.2	22.5	26.1	25
SF 20 - 050			50	1.28	20.0	22.5	25.0	29.0	25
SF 20 - 055			55	1.16	22.0	24.7	27.5	31.9	25
SF 20 - 060			60	1.07	24.0	27.0	30.0	34.8	25
SF 20 - 065			65	0.98	26.0	29.2	32.5	37.7	25
SF 20 - 070			70	0.91	28.0	31.5	35.0	40.6	25
SF 20 - 075			75	0.85	30.0	33.7	37.5	43.5	25
SF 20 - 080			80	0.80	32.0	36.0	40.0	46.4	20
SF 20 - 090			90	0.71	36.0	40.5	45.0	52.2	20
SF 20 - 100			100	0.64	40.0	45.0	50.0	58.0	20
SF 20 - 125			125	0.51	50.0	56.2	62.5	72.5	10
SF 20 - 150			150	0.43	60.0	67.5	75.0	87.0	10
SF 22 - 025	22	11	25	3.20	10.0	11.2	12.5	14.5	50
SF 22 - 030			30	2.67	12.0	13.5	15.0	17.4	25
SF 22 - 035			35	2.29	14.0	15.7	17.5	20.3	25
SF 22 - 040			40	2.00	16.0	18.0	20.0	23.2	25
SF 22 - 045			45	1.78	18.0	20.2	22.5	26.1	25
SF 22 - 050			50	1.60	20.0	22.5	25.0	29.0	25
SF 22 - 055			55	1.46	22.0	24.7	27.5	31.9	25
SF 22 - 060			60	1.33	24.0	27.0	30.0	34.8	25
SF 22 - 065			65	1.23	26.0	29.2	32.5	37.7	25
SF 22 - 070			70	1.14	28.0	31.5	35.0	40.6	20
SF 22 - 075			75	1.07	30.0	33.7	37.5	43.5	20
SF 22 - 080			80	1.00	32.0	36.0	40.0	46.4	20
SF 22 - 090			90	0.89	36.0	40.5	45.0	52.2	20
SF 22 - 100			100	0.80	40.0	45.0	50.0	58.0	20
SF 22 - 125			125	0.64	50.0	56.2	62.5	72.5	10
SF 22 - 150			150	0.53	60.0	67.5	75.0	87.0	10
SF 25 - 025	25	13.5	25	4.00	10.0	11.2	12.5	14.5	50
SF 25 - 030			30	3.33	12.0	13.5	15.0	17.4	25
SF 25 - 035			35	2.85	14.0	15.7	17.5	20.3	25
SF 25 - 040			40	2.50	16.0	18.0	20.0	23.2	25
SF 25 - 045			45	2.22	18.0	20.2	22.5	26.1	25
SF 25 - 050			50	2.00	20.0	22.5	25.0	29.0	25
SF 25 - 055			55	1.82	22.0	24.7	27.5	31.9	25
SF 25 - 060			60	1.67	24.0	27.0	30.0	34.8	25
SF 25 - 065			65	1.54	26.0	29.2	32.5	37.7	25
SF 25 - 070			70	1.43	28.0	31.5	35.0	40.6	20
SF 25 - 075			75	1.33	30.0	33.7	37.5	43.5	20
SF 25 - 080			80	1.25	32.0	36.0	40.0	46.4	20
SF 25 - 090			90	1.11	36.0	40.5	45.0	52.2	20
SF 25 - 100			100	1.00	40.0	45.0	50.0	58.0	20
SF 25 - 125			125	0.80	50.0	56.2	62.5	72.5	10
SF 25 - 150			150	0.67	60.0	67.5	75.0	87.0	10
SF 25 - 175			175	0.57	70.0	78.7	87.5	101.5	10

SF
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SF SERIES

JIS B 5012 - 1986

Code R 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	Spring Constant ± 10% 弹簧定数	A 40% L ₀ 1.000.000 cycles	B 45% L ₀ 500.000 cycles	C 50% L ₀ 300.000 cycles	E do not use approx.	Pcs
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm	
SF 27 - 025	27	13.5	25	4.80	10.0	11.2	12.5	14.5	20
SF 27 - 030			30	4.00	12.0	13.5	15.0	17.4	20
SF 27 - 035			35	3.43	14.0	15.7	17.5	20.3	20
SF 27 - 040			40	3.00	16.0	18.0	20.0	23.2	20
SF 27 - 045			45	2.67	18.0	20.2	22.5	26.1	20
SF 27 - 050			50	2.40	20.0	22.5	25.0	29.0	20
SF 27 - 055			55	2.18	22.0	24.7	27.5	31.9	20
SF 27 - 060			60	2.00	24.0	27.0	30.0	34.8	20
SF 27 - 065			65	1.85	26.0	29.2	32.5	37.7	20
SF 27 - 070			70	1.71	28.0	31.5	35.0	40.6	20
SF 27 - 075			75	1.60	30.0	33.7	37.5	43.5	20
SF 27 - 080			80	1.50	32.0	36.0	40.0	46.4	10
SF 27 - 090			90	1.33	36.0	40.5	45.0	52.2	10
SF 27 - 100			100	1.20	40.0	45.0	50.0	58.0	10
SF 27 - 125			125	0.96	50.0	56.2	62.5	72.5	10
SF 27 - 150			150	0.80	60.0	67.5	75.0	87.0	10
SF 27 - 175			175	0.69	70.0	78.7	87.5	101.5	5
SF 30 - 025	30	16	25	5.80	10.0	11.2	12.5	14.5	20
SF 30 - 030			30	4.80	12.0	13.5	15.0	17.4	20
SF 30 - 035			35	4.13	14.0	15.7	17.5	20.3	20
SF 30 - 040			40	3.60	16.0	18.0	20.0	23.2	20
SF 30 - 045			45	3.21	18.0	20.2	22.5	26.1	20
SF 30 - 050			50	2.88	20.0	22.5	25.0	29.0	20
SF 30 - 055			55	2.63	22.0	24.7	27.5	31.9	20
SF 30 - 060			60	2.40	24.0	27.0	30.0	34.8	20
SF 30 - 065			65	2.22	26.0	29.2	32.5	37.7	20
SF 30 - 070			70	2.05	28.0	31.5	35.0	40.6	20
SF 30 - 075			75	1.93	30.0	33.7	37.5	43.5	20
SF 30 - 080			80	1.80	32.0	36.0	40.0	46.4	10
SF 30 - 090			90	1.60	36.0	40.5	45.0	52.2	10
SF 30 - 100			100	1.44	40.0	45.0	50.0	58.0	10
SF 30 - 125			125	1.15	50.0	56.2	62.5	72.5	10
SF 30 - 150			150	0.96	60.0	67.5	75.0	87.0	10
SF 30 - 175			175	0.82	70.0	78.7	87.5	101.5	5
SF 30 - 200			200	0.72	80.0	90.0	100.0	116.0	5
SFR 35 - 040	35	21	40	4.90	16.0	18.0	20.0	23.2	20
SFR 35 - 045			45	4.36	18.0	20.25	22.5	26.1	20
SFR 35 - 050			50	3.92	20.0	22.5	25.0	29.0	20
SFR 35 - 055			55	3.56	22.0	24.75	27.5	31.9	10
SFR 35 - 060			60	3.26	24.0	27.0	30.0	34.8	10
SFR 35 - 065			65	3.02	26.0	29.25	32.5	37.7	10
SFR 35 - 070			70	2.80	28.0	31.5	35.0	40.6	10
SFR 35 - 075			75	2.61	30.0	33.75	37.5	43.5	10
SFR 35 - 080			80	2.45	32.0	36.0	40.0	46.4	10
SFR 35 - 090			90	2.17	36.0	40.5	45.0	52.2	10
SFR 35 - 100			100	1.96	40.0	45.0	50.0	58.0	10
SFR 35 - 125			125	1.57	50.0	56.25	62.5	72.5	5
SFR 35 - 150			150	1.30	60.0	67.5	75.0	87.0	5
SFR 35 - 175			175	1.12	70.0	78.75	87.5	101.5	5
SFR 35 - 200			200	0.98	80.0	90.0	100.0	116.0	5
SF 40 - 040	40	22	40	6.38	16.0	18.0	20.0	23.2	20
SF 40 - 045			45	5.68	18.0	20.3	22.5	26.1	20
SF 40 - 050			50	5.12	20.0	22.5	25.0	29.0	20
SF 40 - 055			55	4.65	22.0	24.8	27.5	31.9	20
SF 40 - 060			60	4.26	24.0	27.0	30.0	34.8	10
SF 40 - 065			66	3.93	26.0	29.3	32.5	37.7	10
SF 40 - 070			70	3.65	28.0	31.5	35.0	40.6	10
SF 40 - 075			75	3.41	30.0	33.8	37.5	43.5	10
SF 40 - 080			80	3.20	32.0	36.0	40.0	46.4	10
SF 40 - 090			90	2.84	36.0	40.5	45.0	52.2	10
SF 40 - 100			100	2.56	40.0	45.0	50.0	58.0	10
SF 40 - 125			125	2.04	50.0	56.2	62.5	72.5	5
SF 40 - 150			150	1.70	60.0	67.5	75.0	87.0	5
SF 40 - 175			175	1.46	70.0	78.7	87.5	101.5	5
SF 40 - 200			200	1.28	80.0	90.0	100.0	116.0	5
SF 40 - 250			250	1.02	100.0	112.5	125.0	145.0	2



JIS B 5012 - 1986

SERIES SF

Code R 型号	D _o	D _i	L ₀		A		B		C		E	
	Outside Diameter 外径	Inside Diameter 内径	Free Length 自由长度	Spring Constant 弹簧定数	40% L ₀		45% L ₀		50% L ₀			
				± 10%	1.000.000 cycles		500.000 cycles		300.000 cycles			
	mm	mm	mm	Kgf/mm	mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)	mm	Pcs
SFR 40 - 040	40	26	40	4.00	16.0	52 (509.6)	18.0	58.5 (573.3)	20.0	65 (637)	23.2	20
SFR 40 - 050			50	3.20	20.0		22.5		25.0		29.0	20
SFR 40 - 060			60	2.60	24.0		27.0		30.0		34.8	10
SFR 40 - 070			70	2.35	28.0		31.5		35.0		40.6	10
SFR 40 - 080			80	2.05	32.0		36.0		40.0		46.4	10
SFR 40 - 090			90	1.80	36.0		40.5		45.0		52.2	10
SFR 40 - 100			100	1.50	40.0		45.0		50.0		58.0	10
SFR 40 - 125			125	1.15	50.0		56.25		62.5		72.5	5
SFR 40 - 150			150	0.90	60.0		67.5		75.0		87.0	5
SFR 40 - 175			175	0.75	70.0		78.75		87.5		101.5	5
SFR 40 - 200	200	0.60	80.0	90.0	100.0	116.0	5					
SFR 40 - 250	250	0.40	100.0	112.5	125.0	145.0	2					
SF 50 - 050	50	27.5	50	8.00	20.0	160 (1,569)	22.5	180 (1,765)	25.0	200 (1,961)	29.0	5
SF 50 - 055			55	7.27	22.0		24.8		27.5		31.9	5
SF 50 - 060			60	6.66	24.0		27.0		30.0		34.8	5
SF 50 - 065			65	6.15	26.0		29.3		32.5		37.7	5
SF 50 - 070			70	5.71	28.0		31.5		35.0		40.6	5
SF 50 - 075			75	5.33	30.0		33.8		37.5		43.5	5
SF 50 - 080			80	5.00	32.0		36.0		40.0		46.4	5
SF 50 - 090			90	4.44	36.0		40.5		45.0		52.2	5
SF 50 - 100			100	4.00	40.0		45.0		50.0		58.0	5
SF 50 - 125			125	3.20	50.0		56.2		62.5		72.5	5
SF 50 - 150			150	2.66	60.0		67.5		75.0		87.0	2
SF 50 - 175			175	2.28	70.0		78.7		87.5		101.5	2
SF 50 - 200			200	2.00	80.0		90.0		100.0		116.0	2
SF 50 - 250			250	1.60	100.0		112.5		125.0		145.0	2
SF 50 - 300	300	1.33	120.0	135.0	150.0	174.0	2					
SFR 50 - 050	50	31	50	5.40	20.0	99 (970.2)	22.5	111.4 (1,091.4)	25.0	123.3 (1,212.3)	29.0	5
SFR 50 - 060			60	4.50	24.0		27.0		30.0		34.8	5
SFR 50 - 070			70	3.60	28.0		31.5		35.0		40.6	5
SFR 50 - 080			80	3.00	32.0		36.0		40.0		46.4	5
SFR 50 - 090			90	2.65	36.0		40.5		45.0		52.2	5
SFR 50 - 100			100	2.40	40.0		45.0		50.0		58.0	5
SFR 50 - 125			125	1.90	50.0		56.25		62.5		72.5	5
SFR 50 - 150			150	1.55	60.0		67.5		75.0		87.0	2
SFR 50 - 175			175	1.30	70.0		78.75		87.5		101.5	2
SFR 50 - 200			200	1.10	80.0		90.0		100.0		116.0	2
SFR 50 - 250			250	0.90	100.0		112.5		125.0		145.0	2
SFR 50 - 300			300	0.75	120.0		135.0		150.0		174.0	2
SF 60 - 060	60	33	60	9.59	24.0	230 (2,260)	27.0	259 (2,540)	30.0	288 (2,820)	34.8	5
SF 60 - 070			70	8.22	28.0		31.5		35.0		40.6	5
SF 60 - 080			80	7.19	32.0		36.0		40.0		46.4	5
SF 60 - 090			90	6.40	36.0		40.5		45.0		52.2	5
SF 60 - 100			100	5.76	40.0		45.0		50.0		58.0	5
SF 60 - 125			125	4.60	50.0		56.2		62.5		72.5	2
SF 60 - 150			150	3.84	60.0		67.5		75.0		87.0	2
SF 60 - 175			175	3.29	70.0		78.7		87.5		101.5	2
SF 60 - 200			200	2.88	80.0		90.0		100.0		116.0	2
SF 60 - 250			250	2.30	100.0		112.5		125.0		145.0	2
SF 60 - 300			300	1.92	120.0		135.0		150.0		174.0	2
SFR 60 - 060			60	36	60		7.40		24.0		148.8 (1,458.2)	27.0
SFR 60 - 070	70	6.30			28.0	31.5	35.0	40.6	5			
SFR 60 - 080	80	5.30			32.0	36.0	40.0	46.4	5			
SFR 60 - 090	90	4.20			36.0	40.5	45.0	52.2	5			
SFR 60 - 100	100	3.10			40.0	45.0	50.0	58.0	5			
SFR 60 - 125	125	2.35			50.0	56.25	62.5	72.5	2			
SFR 60 - 150	150	2.10			60.0	67.5	75.0	87.0	2			
SFR 60 - 175	175	1.90			70.0	78.75	87.5	101.5	2			
SFR 60 - 200	200	1.60			80.0	90.0	100.0	116.0	2			
SFR 60 - 250	250	1.30			100.0	112.5	125.0	145.0	2			
SFR 60 - 300	300	1.00	120.0	135.0	150.0	174.0	2					

SF
JIS

