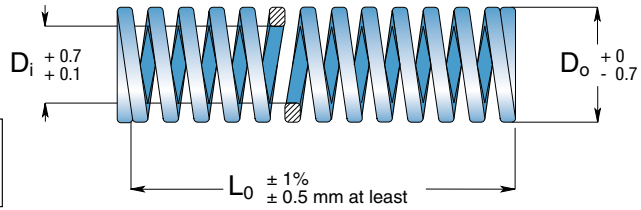
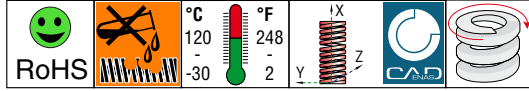


SL SERIES 系列

JIS B 5012 - 1986

EN Light load springs
CN 轻型荷载弹簧



Code 型号	Do Outside Diameter 外径	Di Inside Diameter 内径	L0 Free Length 自由长度	R Spring Constant 弹簧定数 ±10%	A 32% L0 1.000.000 cycles mm Kgf (N)	B 36% L0 500.000 cycles mm Kgf (N)	C 40% L0 300.000 cycles mm Kgf (N)	E do not use approx. mm Pcs	
SL 10 - 020	10	5	20	1.81	6.4	7.2	8.0	9.6	50
SL 10 - 025			25	1.45	8.0	9.0	10.0	12.0	50
SL 10 - 030			30	1.21	9.6	10.8	12.0	14.4	50
SL 10 - 035			35	1.03	11.2	12.6	14.0	16.8	50
SL 10 - 040			40	0.90	12.8	14.4	16.0	19.2	50
SL 10 - 045			45	0.80	14.4	16.2	18.0	21.6	50
SL 10 - 050			50	0.73	16.0	18.0	20.0	24.0	25
SL 10 - 055			55	0.66	17.6	19.8	22.0	26.4	25
SL 10 - 060			60	0.60	19.2	21.6	24.0	28.8	25
SL 10 - 065			65	0.55	20.8	23.4	26.0	31.2	25
SL 10 - 070	70	0.51	22.4	25.2	28.0	33.6	25		
SL 10 - 075	75	0.48	24.0	27.0	30.0	36.0	25		
SL 10 - 080	80	0.45	25.6	28.8	32.0	38.4	25		
SL 12 - 020	12	6	20	2.63	6.4	7.2	8.0	9.6	50
SL 12 - 025			25	2.10	8.0	9.0	10.0	12.0	50
SL 12 - 030			30	1.75	9.6	10.8	12.0	14.4	50
SL 12 - 035			35	1.50	11.2	12.6	14.0	16.8	50
SL 12 - 040			40	1.32	12.8	14.4	16.0	19.2	50
SL 12 - 045			45	1.17	14.4	16.2	18.0	21.6	50
SL 12 - 050			50	1.05	16.0	18.0	20.0	24.0	25
SL 12 - 055			55	0.96	17.6	19.8	22.0	26.4	25
SL 12 - 060			60	0.88	19.2	21.6	24.0	28.8	25
SL 12 - 065			65	0.81	20.8	23.4	26.0	31.2	25
SL 12 - 070	70	0.75	22.4	25.2	28.0	33.6	25		
SL 12 - 075	75	0.70	24.0	27.0	30.0	36.0	25		
SL 12 - 080	80	0.66	25.6	28.8	32.0	38.4	25		
SL 14 - 025	14	7	25	2.80	8.0	9.0	10.0	12.0	50
SL 14 - 030			30	2.34	9.6	10.8	12.0	14.4	50
SL 14 - 035			35	2.00	11.2	12.6	14.0	16.8	50
SL 14 - 040			40	1.75	12.8	14.4	16.0	19.2	50
SL 14 - 045			45	1.56	14.4	16.2	18.0	21.6	25
SL 14 - 050			50	1.40	16.0	18.0	20.0	24.0	25
SL 14 - 055			55	1.27	17.6	19.8	22.0	26.4	25
SL 14 - 060			60	1.17	19.2	21.6	24.0	28.8	25
SL 14 - 065			65	1.08	20.8	23.4	26.0	31.2	25
SL 14 - 070			70	1.00	22.4	25.2	28.0	33.6	25
SL 14 - 075	75	0.93	24.0	27.0	30.0	36.0	25		
SL 14 - 080	80	0.87	25.6	28.8	32.0	38.4	20		
SL 14 - 090	90	0.77	28.8	32.4	36.0	43.2	20		
SL 16 - 025	16	8	25	3.50	8.0	9.0	10.0	12.0	50
SL 16 - 030			30	2.92	9.6	10.8	12.0	14.4	50
SL 16 - 035			35	2.50	11.2	12.6	14.0	16.8	50
SL 16 - 040			40	2.19	12.8	14.4	16.0	19.2	25
SL 16 - 045			45	1.95	14.4	16.2	18.0	21.6	25
SL 16 - 050			50	1.75	16.0	18.0	20.0	24.0	25
SL 16 - 055			55	1.60	17.6	19.8	22.0	26.4	25
SL 16 - 060			60	1.46	19.2	21.6	24.0	28.8	25
SL 16 - 065			65	1.35	20.8	23.4	26.0	31.2	25
SL 16 - 070			70	1.25	22.4	25.2	28.0	33.6	20
SL 16 - 075	75	1.17	24.0	27.0	30.0	36.0	20		
SL 16 - 080	80	1.10	25.6	28.8	32.0	38.4	20		
SL 16 - 090	90	0.98	28.8	32.4	36.0	43.2	20		
SL 16 - 100	100	0.88	32.0	36.0	40.0	48.0	20		
SL 18 - 025	18	9	25	4.30	8.0	9.0	10.0	12.0	50
SL 18 - 030			30	3.58	9.6	10.8	12.0	14.4	50
SL 18 - 035			35	3.07	11.2	12.6	14.0	16.8	25
SL 18 - 040			40	2.69	12.8	14.4	16.0	19.2	25
SL 18 - 045			45	2.39	14.4	16.2	18.0	21.6	25
SL 18 - 050			50	2.15	16.0	18.0	20.0	24.0	25
SL 18 - 055	55	1.96	17.6	19.8	22.0	26.4	25		

Special Springs **30** 1 N = 0.1 daN = 0.102 kgf Load (N) = R (N/mm) x Deflection (mm) SL 27 - 80 (Series) [Do] - [L0]

JIS B 5012 - 1986

系列 **SERIES SL**

Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 32% L ₀ 1,000,000 cycles		B 36% L ₀ 500,000 cycles		C 40% L ₀ 300,000 cycles		E do not use approx.	Pcs
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)		
SL 18 - 060	18	9	60	1.79	19.2		21.6		24.0		28.8	25
SL 18 - 065			65	1.66	20.8		23.4		26.0		31.2	25
SL 18 - 070			70	1.54	22.4		25.2		28.0		33.6	25
SL 18 - 075			75	1.44	24.0	34	27.0	39	30.0	43	36.0	25
SL 18 - 080			80	1.35	25.6	(333)	28.8	(382)	32.0	(422)	38.4	20
SL 18 - 090			90	1.20	28.8		32.4		36.0		43.2	20
SL 18 - 100	100	1.07	32.0		36.0		40.0		48.0	20		
SL 20 - 025	20	10	25	5.40	8.0		9.0		10.0		12.0	50
SL 20 - 030			30	4.50	9.6		10.8		12.0		14.4	50
SL 20 - 035			35	3.86	11.2		12.6		14.0		16.8	25
SL 20 - 040			40	3.38	12.8		14.4		16.0		19.2	25
SL 20 - 045			45	3.00	14.4		16.2		18.0		21.6	25
SL 20 - 050			50	2.70	16.0		18.0		20.0		24.0	25
SL 20 - 055			55	2.45	17.6		19.8		22.0		26.4	25
SL 20 - 060			60	2.25	19.2	43	21.6	49	24.0	54	28.8	25
SL 20 - 065			65	2.08	20.8	(422)	23.4	(481)	26.0	(530)	31.2	25
SL 20 - 070			70	1.93	22.4		25.2		28.0		33.6	25
SL 20 - 075			75	1.80	24.0		27.0		30.0		36.0	25
SL 20 - 080			80	1.69	25.6		28.8		32.0		38.4	20
SL 20 - 090			90	1.50	28.8		32.4		36.0		43.2	20
SL 20 - 100			100	1.35	32.0		36.0		40.0		48.0	20
SL 20 - 125	125	1.08	40.0		45.0		50.0		60.0	10		
SL 20 - 150	150	0.90	48.0		54.0		60.0		72.0	10		
SL 22 - 025	22	11	25	6.70	8.0		9.0		10.0		12.0	50
SL 22 - 030			30	5.60	9.6		10.8		12.0		14.4	25
SL 22 - 035			35	4.80	11.2		12.6		14.0		16.8	25
SL 22 - 040			40	4.20	12.8		14.4		16.0		19.2	25
SL 22 - 045			45	3.72	14.4		16.2		18.0		21.6	25
SL 22 - 050			50	3.35	16.0		18.0		20.0		24.0	25
SL 22 - 055			55	3.05	17.6		19.8		22.0		26.4	25
SL 22 - 060			60	2.80	19.2	54	21.6	60	24.0	67	28.8	25
SL 22 - 065			65	2.58	20.8	(530)	23.4	(588)	26.0	(657)	31.2	25
SL 22 - 070			70	2.40	22.4		25.2		28.0		33.6	20
SL 22 - 075			75	2.23	24.0		27.0		30.0		36.0	20
SL 22 - 080			80	2.10	25.6		28.8		32.0		38.4	20
SL 22 - 090			90	1.86	28.8		32.4		36.0		43.2	20
SL 22 - 100			100	1.68	32.0		36.0		40.0		48.0	20
SL 22 - 125	125	1.34	40.0		45.0		50.0		60.0	10		
SL 22 - 150	150	1.12	48.0		54.0		60.0		72.0	10		
SL 25 - 025	25	12.5	25	8.40	8.0		9.0		10.0		12.0	50
SL 25 - 030			30	7.00	9.6		10.8		12.0		14.4	25
SL 25 - 035			35	6.00	11.2		12.6		14.0		16.8	25
SL 25 - 040			40	5.25	12.8		14.4		16.0		19.2	25
SL 25 - 045			45	4.67	14.4		16.2		18.0		21.6	25
SL 25 - 050			50	4.20	16.0		18.0		20.0		24.0	25
SL 25 - 055			55	3.82	17.6		19.8		22.0		26.4	25
SL 25 - 060			60	3.50	19.2	67	21.6	76	24.0	84	28.8	25
SL 25 - 065			65	3.23	20.8	(657)	23.4	(745)	26.0	(824)	31.2	25
SL 25 - 070			70	3.00	22.4		25.2		28.0		33.6	20
SL 25 - 075			75	2.80	24.0		27.0		30.0		36.0	20
SL 25 - 080			80	2.63	25.6		28.8		32.0		38.4	20
SL 25 - 090			90	2.33	28.8		32.4		36.0		43.2	20
SL 25 - 100			100	2.10	32.0		36.0		40.0		48.0	20
SL 25 - 125	125	1.68	40.0		45.0		50.0		60.0	10		
SL 25 - 150	150	1.40	48.0		54.0		60.0		72.0	10		
SL 25 - 175	175	1.20	56.0		63.0		70.0		84.0	10		
SL 27 - 025	27	13.5	25	10.00	8.0		9.0		10.0		12.0	20
SL 27 - 030			30	8.33	9.6		10.8		12.0		14.4	20
SL 27 - 035			35	7.14	11.2		12.6		14.0		16.8	20
SL 27 - 040			40	6.25	12.8		14.4		16.0		19.2	20
SL 27 - 045			45	5.56	14.4		16.2		18.0		21.6	20
SL 27 - 050			50	5.00	16.0		18.0		20.0		24.0	20
SL 27 - 055			55	4.55	17.6		19.8		22.0		26.4	20
SL 27 - 060			60	4.17	19.2	80	21.6	90	24.0	100	28.8	20
SL 27 - 065			65	3.85	20.8	(785)	23.4	(883)	26.0	(981)	31.2	20
SL 27 - 070			70	3.57	22.4		25.2		28.0		33.6	20
SL 27 - 075			75	3.33	24.0		27.0		30.0		36.0	20
SL 27 - 080			80	3.13	25.6		28.8		32.0		38.4	10
SL 27 - 090			90	2.78	28.8		32.4		36.0		43.2	10
SL 27 - 100			100	2.50	32.0		36.0		40.0		48.0	10
SL 27 - 125	125	2.00	40.0		45.0		50.0		60.0	10		
SL 27 - 150	150	1.67	48.0		54.0		60.0		72.0	10		
SL 27 - 175	175	1.43	56.0		63.0		70.0		84.0	5		

**SL
JIS**

1 N = 0.1 daN = 0.102 kgf

Load (N) = R (N/mm) x Deflection (mm)



SL 27 - 80 ([Series][D_o] - [L₀])

Special Springs **31**

SL SERIES 系列

JIS B 5012 - 1986

Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ±10%	A 32% L ₀ 1.000.000 cycles Kgf (N)	B 36% L ₀ 500.000 cycles Kgf (N)	C 40% L ₀ 300.000 cycles Kgf (N)	E do not use approx. mm	Pcs		
SLR 30 - 025	30	16	25	12.11	8.0	9.0	10.0	12.0	20		
SLR 30 - 030			30	10.08	9.6	10.8	12.0	14.4	20		
SLR 30 - 035			35	8.65	11.2	12.6	14.0	16.8	20		
SLR 30 - 040			40	7.56	12.8	14.4	16.0	19.2	20		
SLR 30 - 045			45	6.73	14.4	16.2	18.0	21.6	20		
SLR 30 - 050			50	6.05	16.0	18.0	20.0	24.0	20		
SLR 30 - 055			55	5.50	17.6	19.8	22.0	26.4	20		
SLR 30 - 060			60	5.04	19.2	21.6	24.0	28.8	20		
SLR 30 - 065			65	4.65	20.8	91.2 (893.8)	23.4	102.6 (1,005.5)	26.0	114	20
SLR 30 - 070			70	4.32	22.4	25.2	28.0	33.6	31.2	20	
SLR 30 - 075			75	4.03	24.0	27.0	30.0	36.0	36.0	20	
SLR 30 - 080			80	3.78	25.6	28.8	32.0	38.4	38.4	10	
SLR 30 - 090			90	3.36	28.8	32.4	36.0	43.2	43.2	10	
SLR 30 - 100			100	3.02	32.0	36.0	40.0	48.0	48.0	10	
SLR 30 - 125			125	2.42	40.0	45.0	50.0	60.0	60.0	10	
SLR 30 - 150			150	2.01	48.0	54.0	60.0	72.0	72.0	10	
SLR 30 - 175			175	1.72	56.0	63.0	70.0	84.0	84.0	5	
SLR 30 - 200			200	1.51	64.0	72.0	80.0	96.0	96.0	5	
SL 35 - 040			35	17.5	40	10.31	12.8	14.4	16.0	19.2	20
SL 35 - 045					45	9.17	14.4	16.2	18.0	21.6	20
SL 35 - 050	50	8.25			16.0	18.0	20.0	24.0	20		
SL 35 - 055	55	7.50			17.6	19.8	22.0	26.4	10		
SL 35 - 060	60	6.87			19.2	21.6	24.0	28.8	10		
SL 35 - 065	65	6.35			20.8	23.4	26.0	31.2	10		
SL 35 - 070	70	5.89			22.4	25.2	28.0	33.6	10		
SL 35 - 075	75	5.50			24.0	27.0	30.0	36.0	10		
SL 35 - 080	80	5.15			25.6	28.8	32.0	38.4	10		
SL 35 - 090	90	4.58			28.8	32.4	36.0	43.2	10		
SL 35 - 100	100	4.12			32.0	36.0	40.0	48.0	10		
SL 35 - 125	125	3.30			40.0	45.0	50.0	60.0	5		
SL 35 - 150	150	2.75			48.0	54.0	60.0	72.0	5		
SL 35 - 175	175	2.35			56.0	63.0	70.0	84.0	5		
SL 35 - 200	200	2.06			64.0	72.0	80.0	96.0	5		
SLR 35 - 040	35	20.5			40	9.15	12.8	14.4	16.0	19.2	20
SLR 35 - 045			45	8.42	14.4	16.2	18.0	21.6	20		
SLR 35 - 050			50	7.85	16.0	18.0	20.0	24.0	20		
SLR 35 - 055			55	7.42	17.6	19.8	22.0	26.4	10		
SLR 35 - 060			60	6.70	19.2	21.6	24.0	28.8	10		
SLR 35 - 065			65	6.25	20.8	23.4	26.0	31.2	10		
SLR 35 - 070			70	5.45	22.4	25.2	28.0	33.6	10		
SLR 35 - 075			75	5.28	24.0	114.6 (1,123.1)	27.0	128.9 (1,263.2)	30.0	143.2 (1,403.4)	10
SLR 35 - 080			80	4.90	25.6	28.8	32.0	38.4	10		
SLR 35 - 090			90	4.20	28.8	32.4	36.0	43.2	10		
SLR 35 - 100			100	3.75	32.0	36.0	40.0	48.0	10		
SLR 35 - 125			125	3.00	40.0	45.0	50.0	60.0	5		
SLR 35 - 150			150	2.40	48.0	54.0	60.0	72.0	5		
SLR 35 - 175			175	2.20	56.0	63.0	70.0	84.0	5		
SLR 35 - 200			200	1.80	64.0	72.0	80.0	96.0	5		
SL 40 - 040			40	20	40	13.50	12.8	14.4	16.0	19.2	20
SL 40 - 050	50	10.80			16.0	18.0	20.0	24.0	20		
SL 40 - 060	60	9.00			19.2	21.6	24.0	28.8	10		
SL 40 - 070	70	7.71			22.4	25.2	28.0	33.6	10		
SL 40 - 080	80	6.75			25.6	28.8	32.0	38.4	10		
SL 40 - 090	90	6.00			28.8	32.4	36.0	43.2	10		
SL 40 - 100	100	5.40			32.0	36.0	40.0	48.0	10		
SL 40 - 125	125	4.32			40.0	45.0	50.0	60.0	5		
SL 40 - 150	150	3.60			48.0	54.0	60.0	72.0	5		
SL 40 - 175	175	3.08			56.0	63.0	70.0	84.0	5		
SL 40 - 200	200	2.70			64.0	72.0	80.0	96.0	5		
SL 40 - 250	250	2.16			80.0	90.0	100.0	120.0	2		

Special Springs **32**

1 N = 0.1 daN = 0.102 kgf

Load (N) = R (N/mm) x Deflection (mm)



SL 40 - 80 (Series D₀ - L₀)

JIS B 5012 - 1986

系列 **SERIES SL**

Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 32% L ₀ 1.000.000 cycles	B 36% L ₀ 500.000 cycles	C 40% 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		
SLR 40 - 040	40	25.5	40	9.30	12.8	14.4	16.0	19.2	20	
SLR 40 - 050			50	7.75	16.0	18.0	20.0	24.0	24.0	20
SLR 40 - 060			60	6.20	19.2	21.6	24.0	28.8	28.8	10
SLR 40 - 070			70	5.00	22.4	25.2	28.0	33.6	33.6	10
SLR 40 - 080			80	4.35	25.6	28.8	32.0	38.4	38.4	10
SLR 40 - 090			90	3.85	28.8	32.4	36.0	43.2	43.2	10
SLR 40 - 100			100	3.50	32.0	36.0	40.0	48.0	48.0	10
SLR 40 - 125			125	2.80	40.0	45.0	50.0	60.0	60.0	5
SLR 40 - 150			150	2.25	48.0	54.0	60.0	72.0	72.0	5
SLR 40 - 175			175	1.95	56.0	63.0	70.0	84.0	84.0	5
SLR 40 - 200			200	1.65	64.0	72.0	80.0	96.0	96.0	5
SLR 40 - 250			250	1.50	80.0	90.0	100.0	120.0	120.0	2
SL 50 - 050	50	25	50	16.89	16.0	18.0	20.0	24.0	5	
SL 50 - 060			60	14.08	19.2	21.6	24.0	28.8	28.8	5
SL 50 - 070			70	12.07	22.4	25.2	28.0	33.6	33.6	5
SL 50 - 080			80	10.56	25.6	28.8	32.0	38.4	38.4	5
SL 50 - 090			90	9.38	28.8	32.4	36.0	43.2	43.2	5
SL 50 - 100			100	8.45	32.0	36.0	40.0	48.0	48.0	5
SL 50 - 125			125	6.76	40.0	45.0	50.0	60.0	60.0	5
SL 50 - 150			150	5.63	48.0	54.0	60.0	72.0	72.0	2
SL 50 - 175			175	4.82	56.0	63.0	70.0	84.0	84.0	2
SL 50 - 200			200	4.22	64.0	72.0	80.0	96.0	96.0	2
SL 50 - 250			250	3.38	80.0	90.0	100.0	120.0	120.0	2
SL 50 - 300			300	2.81	96.0	108.0	120.0	144.0	144.0	2
SLR 50 - 050	50	30.5	50	11.90	16.0	18.0	20.0	24.0	5	
SLR 50 - 060			60	10.60	19.2	21.6	24.0	28.8	28.8	5
SLR 50 - 070			70	9.00	22.4	25.2	28.0	33.6	33.6	5
SLR 50 - 080			80	7.65	25.6	28.8	32.0	38.4	38.4	5
SLR 50 - 090			90	6.75	28.8	32.4	36.0	43.2	43.2	5
SLR 50 - 100			100	5.85	32.0	36.0	40.0	48.0	48.0	5
SLR 50 - 125			125	4.90	40.0	45.0	50.0	60.0	60.0	5
SLR 50 - 150			150	3.55	48.0	54.0	60.0	72.0	72.0	2
SLR 50 - 175			175	3.00	56.0	63.0	70.0	84.0	84.0	2
SLR 50 - 200			200	2.65	64.0	72.0	80.0	96.0	96.0	2
SLR 50 - 250			250	2.40	80.0	90.0	100.0	120.0	120.0	2
SLR 50 - 300			300	2.20	96.0	108.0	120.0	144.0	144.0	2
SL 60 - 060	60	30	60	20.25	19.2	21.6	24.0	28.8	5	
SL 60 - 070			70	17.35	22.4	25.2	28.0	33.6	33.6	5
SL 60 - 080			80	15.18	25.6	28.8	32.0	38.4	38.4	5
SL 60 - 090			90	13.50	28.8	32.4	36.0	43.2	43.2	5
SL 60 - 100			100	12.15	32.0	36.0	40.0	48.0	48.0	5
SL 60 - 125			125	9.72	40.0	45.0	50.0	60.0	60.0	2
SL 60 - 150			150	8.10	48.0	54.0	60.0	72.0	72.0	2
SL 60 - 175			175	6.94	56.0	63.0	70.0	84.0	84.0	2
SL 60 - 200			200	6.07	64.0	72.0	80.0	96.0	96.0	2
SL 60 - 250			250	4.86	80.0	90.0	100.0	120.0	120.0	2
SL 60 - 300			300	4.05	96.0	108.0	120.0	144.0	144.0	2
SLR 60 - 060			60	35.5	60	16.80	19.2	21.6	24.0	28.8
SLR 60 - 070	70	14.40			22.4	25.2	28.0	33.6	33.6	5
SLR 60 - 080	80	12.10			25.6	28.8	32.0	38.4	38.4	5
SLR 60 - 090	90	10.65			28.8	32.4	36.0	43.2	43.2	5
SLR 60 - 100	100	9.80			32.0	36.0	40.0	48.0	48.0	5
SLR 60 - 125	125	8.50			40.0	45.0	50.0	60.0	60.0	2
SLR 60 - 150	150	6.80			48.0	54.0	60.0	72.0	72.0	2
SLR 60 - 175	175	6.00			56.0	63.0	70.0	84.0	84.0	2
SLR 60 - 200	200	5.20			64.0	72.0	80.0	96.0	96.0	2
SLR 60 - 250	250	3.90			80.0	90.0	100.0	120.0	120.0	2
SLR 60 - 300	300	3.10			96.0	108.0	120.0	144.0	144.0	2

**SL
JIS**

1 N = 0.1 daN = 0.102 kgf

Load (N) = R (N/mm) x Deflection (mm)



SL 40 - 80 (Series D₀ - L₀)

Special Springs **33**