

# SM

## MEDIUM LOAD SPRINGS

## JIS B 5012

Outside Dia.	Inside Dia.	Free Length	Spring Code	Spring Constant	0.3 million		0.5 million		1 million	
					Deflection	Load	Deflection	Load	Deflection	Load
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)
10	5	20	SM 10 - 020	3.13	6.4	20 (196.1)	5.8	18 (176.5)	5.1	16 (156.9)
		25	SM 10 - 025	2.50	8.0		7.2		6.4	
		30	SM 10 - 030	2.08	9.6		8.6		7.7	
		35	SM 10 - 035	1.78	11.2		10.1		9.0	
		40	SM 10 - 040	1.56	12.8		11.5		10.2	
		45	SM 10 - 045	1.38	14.4		13.0		11.5	
		50	SM 10 - 050	1.25	16.0		14.4		12.8	
		55	SM 10 - 055	1.13	17.6		15.8		14.1	
		60	SM 10 - 060	1.04	19.2		17.3		15.4	
		65	SM 10 - 065	0.96	20.8		18.7		16.6	
		70	SM 10 - 070	0.89	22.4		20.2		17.9	
		75	SM 10 - 075	0.83	24.0		21.6		19.2	
80	SM 10 - 080	0.78	25.6	23.0	20.5					
12	6	20	SM 12 - 020	4.53	6.4	29 (284)	5.8	26 (255)	5.1	23 (226)
		25	SM 12 - 025	3.62	8.0		7.2		6.4	
		30	SM 12 - 030	3.02	9.6		8.6		7.7	
		35	SM 12 - 035	2.58	11.2		10.1		9.0	
		40	SM 12 - 040	2.27	12.8		11.5		10.2	
		45	SM 12 - 045	2.01	14.4		13.0		11.5	
		50	SM 12 - 050	1.81	16.0		14.4		12.8	
		55	SM 12 - 055	1.64	17.6		15.8		14.1	
		60	SM 12 - 060	1.51	19.2		17.3		15.4	
		65	SM 12 - 065	1.39	20.8		18.7		16.6	
		70	SM 12 - 070	1.29	22.4		20.2		17.9	
		75	SM 12 - 075	1.20	24.0		21.6		19.2	
80	SM 12 - 080	1.13	25.6	23.0	20.5					
14	7	25	SM 14 - 025	4.87	8.0	39 (383)	7.2	35 (343)	6.4	31 (304)
		30	SM 14 - 030	4.06	9.6		8.6		7.7	
		35	SM 14 - 035	3.48	11.2		10.1		9.0	
		40	SM 14 - 040	3.04	12.8		11.5		10.2	
		45	SM 14 - 045	2.70	14.4		13.0		11.5	
		50	SM 14 - 050	2.43	16.0		14.4		12.8	
		55	SM 14 - 055	2.21	17.6		15.8		14.1	
		60	SM 14 - 060	2.03	19.2		17.3		15.4	
		65	SM 14 - 065	1.87	20.8		18.7		16.6	
		70	SM 14 - 070	1.74	22.4		20.2		17.9	
		75	SM 14 - 075	1.62	24.0		21.6		19.2	
		80	SM 14 - 080	1.52	25.6		23.0		20.5	
90	SM 14 - 090	1.35	28.8	25.9	23.0					
16	8	25	SM 16 - 025	6.39	8.0	51 (500)	7.2	46 (451)	6.4	41 (402)
		30	SM 16 - 030	5.32	9.6		8.6		7.7	
		35	SM 16 - 035	4.55	11.2		10.1		9.0	
		40	SM 16 - 040	3.98	12.8		11.5		10.2	
		45	SM 16 - 045	3.54	14.4		13.0		11.5	
		50	SM 16 - 050	3.18	16.0		14.4		12.8	
		55	SM 16 - 055	2.89	17.6		15.8		14.1	
		60	SM 16 - 060	2.65	19.2		17.3		15.4	
		65	SM 16 - 065	2.45	20.8		18.7		16.6	
		70	SM 16 - 070	2.27	22.4		20.2		17.9	
		75	SM 16 - 075	2.11	24.0		21.6		19.2	
		80	SM 16 - 080	1.99	25.6		23.0		20.5	
90	SM 16 - 090	1.77	28.8	25.9	23.0					
100	SM 16 - 100	1.59	32.0	28.8	25.6					



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					Deflection	Load	Deflection	Load	Deflection	Load
mm	mm	mm		Kgf / mm	mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)
18	9	25	SM 18 - 025	8.12	8.0	65 (637)	7.2	58 (569)	6.4	52 (510)
		30	SM 18 - 030	6.77	9.6		8.6		7.7	
		35	SM 18 - 035	5.80	11.2		10.1		9.0	
		40	SM 18 - 040	5.07	12.8		11.5		10.2	
		45	SM 18 - 045	4.51	14.4		13.0		11.5	
		50	SM 18 - 050	4.06	16.0		14.4		12.8	
		55	SM 18 - 055	3.69	17.6		15.8		14.1	
		60	SM 18 - 060	3.38	19.2		17.3		15.4	
		65	SM 18 - 065	3.12	20.8		18.7		16.6	
		70	SM 18 - 070	2.90	22.4		20.2		17.9	
		75	SM 18 - 075	2.70	24.0		21.6		19.2	
		80	SM 18 - 080	2.53	25.6		23.0		20.5	
		90	SM 18 - 090	2.25	28.8		25.9		23.0	
100	SM 18 - 100	2.02	32.0	28.8	25.6					
20	10	25	SM 20 - 025	10.00	8.0	80 (785)	7.2	72 (706)	6.4	64 (628)
		30	SM 20 - 030	8.33	9.6		8.6		7.7	
		35	SM 20 - 035	7.14	11.2		10.1		9.0	
		40	SM 20 - 040	6.25	12.8		11.5		10.2	
		45	SM 20 - 045	5.55	14.4		13.0		11.5	
		50	SM 20 - 050	5.00	16.0		14.4		12.8	
		55	SM 20 - 055	4.54	17.6		15.8		14.1	
		60	SM 20 - 060	4.16	19.2		17.3		15.4	
		65	SM 20 - 065	3.84	20.8		18.7		16.6	
		70	SM 20 - 070	3.57	22.4		20.2		17.9	
		75	SM 20 - 075	3.33	24.0		21.6		19.2	
		80	SM 20 - 080	3.12	25.6		23.0		20.5	
		90	SM 20 - 090	2.77	28.8		25.9		23.0	
100	SM 20 - 100	2.50	32.0	28.8	25.6					
125	SM 20 - 125	2.00	40.0	36.0	32.0					
150	SM 20 - 150	1.67	48.0	43.2	38.4					
22	11	25	SM 22 - 025	12.13	8.0	97 (951)	7.2	87 (853)	6.4	78 (765)
		30	SM 22 - 030	10.10	9.6		8.6		7.7	
		35	SM 22 - 035	8.65	11.2		10.1		9.0	
		40	SM 22 - 040	7.57	12.8		11.5		10.2	
		45	SM 22 - 045	6.74	14.4		13.0		11.5	
		50	SM 22 - 050	6.06	16.0		14.4		12.8	
		55	SM 22 - 055	5.50	17.6		15.8		14.1	
		60	SM 22 - 060	5.05	19.2		17.3		15.4	
		65	SM 22 - 065	4.66	20.8		18.7		16.6	
		70	SM 22 - 070	4.33	22.4		20.2		17.9	
		75	SM 22 - 075	4.04	24.0		21.6		19.2	
		80	SM 22 - 080	3.78	25.6		23.0		20.5	
		90	SM 22 - 090	3.36	28.8		25.9		23.0	
100	SM 22 - 100	3.03	32.0	28.8	25.6					
125	SM 22 - 125	2.42	40.0	36.0	32.0					
150	SM 22 - 150	2.01	48.0	43.2	38.4					



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					Deflection	Load	Deflection	Load	Deflection	Load
mm	mm	mm		Kgf / mm	mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)
25	12.5	25	SM 25 - 025	15.63	8.0	125 (1,226)	7.2	112 (1,098)	6.4	100 (981)
		30	SM 25 - 030	13.02	9.6		8.6		7.7	
		35	SM 25 - 035	11.20	11.2		10.0		9.0	
		40	SM 25 - 040	9.76	12.8		11.5		10.2	
		45	SM 25 - 045	8.68	14.4		13.0		11.5	
		50	SM 25 - 050	7.81	16.0		14.4		12.8	
		55	SM 25 - 055	7.10	17.6		15.8		14.1	
		60	SM 25 - 060	6.51	19.2		17.3		15.4	
		65	SM 25 - 065	6.00	20.8		18.7		16.6	
		70	SM 25 - 070	5.58	22.4		20.2		17.9	
		75	SM 25 - 075	5.21	24.0		21.6		19.2	
		80	SM 25 - 080	4.88	25.6		23.0		20.5	
		90	SM 25 - 090	4.34	28.8		25.9		23.0	
		100	SM 25 - 100	3.90	32.0		28.8		25.6	
		125	SM 25 - 125	3.12	40.0		36.0		32.0	
150	SM 25 - 150	2.60	48.0	43.2	38.4					
175	SM 25 - 175	2.23	56.0	50.4	44.8					
27	13.5	25	SM 27 - 025	18.25	8.0	146 (1,432)	7.2	131 (1,285)	6.4	117 (1,147)
		30	SM 27 - 030	15.20	9.6		8.6		7.7	
		35	SM 27 - 035	13.04	11.2		10.0		9.0	
		40	SM 27 - 040	11.40	12.8		11.5		10.2	
		45	SM 27 - 045	10.14	14.4		13.0		11.5	
		50	SM 27 - 050	9.12	16.0		14.4		12.8	
		55	SM 27 - 055	8.30	17.6		15.8		14.1	
		60	SM 27 - 060	7.60	19.2		17.3		15.4	
		65	SM 27 - 065	7.00	20.8		18.7		16.6	
		70	SM 27 - 070	6.51	22.4		20.2		17.9	
		75	SM 27 - 075	6.08	24.0		21.6		19.2	
		80	SM 27 - 080	5.70	25.6		23.0		20.5	
		90	SM 27 - 090	5.06	28.8		25.9		23.0	
		100	SM 27 - 100	4.56	32.0		28.8		25.6	
		125	SM 27 - 125	3.65	40.0		36.0		32.0	
150	SM 27 - 150	3.04	48.0	43.2	38.4					
175	SM 27 - 175	2.61	56.0	50.4	44.8					
30	15	25	SM 30 - 025	22.50	8.0	180 (1,785)	7.2	161 (1,579)	6.4	144 (1,412)
		30	SM 30 - 030	18.75	9.6		8.6		7.7	
		35	SM 30 - 035	16.10	11.2		10.0		9.0	
		40	SM 30 - 040	14.06	12.8		11.5		10.2	
		45	SM 30 - 045	12.50	14.4		13.0		11.5	
		50	SM 30 - 050	11.25	16.0		14.4		12.8	
		55	SM 30 - 055	10.23	17.6		15.8		14.1	
		60	SM 30 - 060	9.37	19.2		17.3		15.4	
		65	SM 30 - 065	8.65	20.8		18.7		16.6	
		70	SM 30 - 070	8.03	22.4		20.2		17.9	
		75	SM 30 - 075	7.50	24.0		21.6		19.2	
		80	SM 30 - 080	7.03	25.6		23.0		20.5	
		90	SM 30 - 090	6.25	28.8		25.9		23.0	
		100	SM 30 - 100	5.62	32.0		28.8		25.6	
		125	SM 30 - 125	4.50	40.0		36.0		32.0	
		150	SM 30 - 150	3.75	48.0		43.2		38.4	
		175	SM 30 - 175	3.21	56.0		50.4		44.8	
200	SM 30 - 200	2.81	64.0	57.6	51.2					

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					Deflection	Load	Deflection	Load	Deflection	Load
mm	mm	mm		Kgf / mm	mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)
35	17.5	40	SM 35 - 040	19.14	12.8	245 (2,400)	11.5	220 (2,160)	10.2	195 (1,912)
		45	SM 35 - 045	17.01	14.4		13.0		11.5	
		50	SM 35 - 050	15.31	16.0		14.4		12.8	
		55	SM 35 - 055	13.92	17.6		15.8		14.0	
		60	SM 35 - 060	12.76	19.2		17.3		15.4	
		65	SM 35 - 065	11.77	20.8		18.7		16.6	
		70	SM 35 - 070	10.93	22.4		20.2		17.9	
		75	SM 35 - 075	10.20	24.0		21.6		19.2	
		80	SM 35 - 080	9.57	25.6		23.0		20.5	
		90	SM 35 - 090	8.50	28.8		25.9		23.0	
		100	SM 35 - 100	7.65	32.0		28.8		25.6	
		125	SM 35 - 125	6.12	40.0		36.0		32.0	
		150	SM 35 - 150	5.10	48.0		43.2		38.4	
		175	SM 35 - 175	4.37	56.0		50.4		44.8	
200	SM 35 - 200	3.82	64.0	57.6	51.2					
40	20	40	SM 40 - 040	25.02	12.8	320 (3,140)	11.5	288 (2,820)	10.2	256 (2,510)
		50	SM 40 - 050	20.00	16.0		14.4		12.8	
		60	SM 40 - 060	16.60	19.2		17.3		15.4	
		70	SM 40 - 070	14.28	22.4		20.2		17.9	
		80	SM 40 - 080	12.50	25.6		23.0		20.5	
		90	SM 40 - 090	11.11	28.8		25.9		23.0	
		100	SM 40 - 100	10.00	32.0		28.8		25.6	
		125	SM 40 - 125	8.00	40.0		36.0		32.0	
		150	SM 40 - 150	6.66	48.0		43.2		38.4	
		175	SM 40 - 175	5.71	56.0		50.4		44.8	
		200	SM 40 - 200	5.00	64.0		57.6		51.2	
250	SM 40 - 250	4.00	80.0	72.0	64.0					
50	25	50	SM 50 - 050	31.25	16.0	500 (4,900)	14.4	450 (4,410)	12.8	400 (3,920)
		60	SM 50 - 060	26.04	19.2		17.3		15.4	
		70	SM 50 - 070	22.32	22.4		20.2		17.9	
		80	SM 50 - 080	19.53	25.6		23.0		20.5	
		90	SM 50 - 090	17.36	28.8		25.9		23.0	
		100	SM 50 - 100	15.62	32.0		28.8		25.6	
		125	SM 50 - 125	12.50	40.0		36.0		32.0	
		150	SM 50 - 150	10.41	48.0		43.2		38.4	
		175	SM 50 - 175	8.92	56.0		50.4		44.8	
		200	SM 50 - 200	7.81	64.0		57.6		51.2	
		250	SM 50 - 250	6.25	80.0		72.0		64.0	
300	SM 50 - 300	5.20	96.0	86.4	76.8					
60	30	60	SM 60 - 060	37.40	19.2	720 (7,060)	17.3	648 (6,350)	15.4	575 (5,640)
		70	SM 60 - 070	32.10	22.4		20.2		17.9	
		80	SM 60 - 080	28.12	25.6		23.0		20.5	
		90	SM 60 - 090	25.00	28.8		25.9		23.0	
		100	SM 60 - 100	22.50	32.0		28.8		25.6	
		125	SM 60 - 125	18.00	40.0		36.0		32.0	
		150	SM 60 - 150	15.00	48.0		43.2		38.4	
		175	SM 60 - 175	12.85	56.0		50.4		44.8	
		200	SM 60 - 200	11.25	64.0		57.6		51.2	
		250	SM 60 - 250	9.00	80.0		72.0		64.0	
		300	SM 60 - 300	7.50	96.0		86.4		76.8	

