



D	d	L	Spring constant N/mm (kgf/mm)	F=LX16% Fmm Load N (kgf)	F=LX18% Fmm Load N (kgf)	F=LX20% Fmm Load N (kgf)	Catalog No.	Base unit price
Operation count			1,000,000	500,000	300,000		Type D—L	1 ~ 19 pieces
25	12.5	25	481 (49.0)	4.0	4.5	5.0	SWB25—25	
		30	400 (40.8)	4.8	5.4	6.0	30	
		35	343 (35.0)	5.6	6.3	7.0	35	
		40	300 (30.6)	6.4	7.2	8.0	40	
		45	267 (27.2)	7.2	8.1	9.0	45	
		50	240 (24.5)	8.0	9.0	10.0	50	
		55	218 (22.3)	8.8	9.9	11.0	55	
		60	200 (20.4)	9.6	10.8	12.0	60	
		65	185 (18.8)	10.4	11.7	13.0	65	
		70	172 (17.5)	11.2	12.6	14.0	70	
		75	160 (16.3)	12.0	13.5	15.0	75	
		80	150 (15.3)	12.8	14.4	16.0	80	
		90	133 (13.6)	14.4	16.2	18.0	90	
		100	120 (12.2)	16.0	18.0	20.0	100	
		125	96.1 (9.8)	20.0	22.5	25.0	125	
27	13.5	150	80.1 (8.2)	24.0	27.0	30.0	150	
		175	68.6 (7.0)	28.0	31.5	35.0	175	
		25	569 (58.0)	4.0	4.5	5.0	SWB27—25	
		30	474 (48.3)	4.8	5.4	6.0	30	
		35	406 (41.4)	5.6	6.3	7.0	35	
		40	355 (36.2)	6.4	7.2	8.0	40	
		45	316 (32.2)	7.2	8.1	9.0	45	
		50	284 (29.0)	8.0	9.0	10.0	50	
		55	259 (26.4)	8.8	9.9	11.0	55	
		60	237 (24.2)	9.6	10.8	12.0	60	
		65	219 (22.3)	10.4	11.7	13.0	65	
		70	203 (20.7)	11.2	12.6	14.0	70	
		75	190 (19.3)	12.0	13.5	15.0	75	
		80	178 (18.1)	12.8	14.4	16.0	80	
		90	158 (16.1)	14.4	16.2	18.0	90	
30	15	100	142 (14.5)	16.0	18.0	20.0	100	
		125	114 (11.6)	20.0	22.5	25.0	125	
		150	94.8 (9.7)	24.0	27.0	30.0	150	
		175	81.3 (8.3)	28.0	31.5	35.0	175	
		25	706 (72.0)	4.0	4.5	5.0	SWB30—25	
		30	588 (60.0)	4.8	5.4	6.0	30	
		35	504 (51.4)	5.6	6.3	7.0	35	
		40	441 (45.0)	6.4	7.2	8.0	40	
		45	392 (40.0)	7.2	8.1	9.0	45	
		50	353 (36.0)	8.0	9.0	10.0	50	
		55	321 (32.7)	8.8	9.9	11.0	55	
		60	294 (30.0)	9.6	10.8	12.0	60	
		65	272 (27.7)	10.4	11.7	13.0	65	
		70	252 (25.7)	11.2	12.6	14.0	70	
35	17.5	75	235 (24.0)	12.0	13.5	15.0	75	
		80	221 (22.5)	12.8	14.4	16.0	80	
		90	196 (20.0)	14.4	16.2	18.0	90	
		100	177 (18.0)	16.0	18.0	20.0	100	
		125	141 (14.4)	20.0	22.5	25.0	125	
		150	118 (12.0)	24.0	27.0	30.0	150	
		175	101 (10.3)	28.0	31.5	35.0	175	
		200	88.3 (9.0)	32.0	36.0	40.0	200	
		40	600 (61.2)	6.4	7.2	8.0	SWB35—40	
		45	534 (54.4)	7.2	8.1	9.0	45	
		50	480 (49.0)	8.0	9.0	10.0	50	
		55	437 (44.5)	8.8	9.9	11.0	55	
		60	400 (40.8)	9.6	10.8	12.0	60	
		65	369 (37.7)	10.4	11.7	13.0	65	
		70	343 (35.0)	11.2	12.6	14.0	70	
35	17.5	75	320 (32.6)	12.0	13.5	15.0	75	
		80	300 (30.6)	12.8	14.4	16.0	80	
		90	267 (27.2)	14.4	16.2	18.0	90	
		100	240 (24.5)	16.0	18.0	20.0	100	
		125	192 (19.6)	20.0	22.5	25.0	125	
		150	160 (16.3)	24.0	27.0	30.0	150	
		175	137 (14.0)	28.0	31.5	35.0	175	
		200	120 (12.2)	32.0	36.0	40.0	200	

D	d	L	Spring constant N/mm (kgf/mm)	F=LX16% Fmm Load N (kgf)	F=LX18% Fmm Load N (kgf)	F=LX20% Fmm Load N (kgf)	Catalog No.	Base unit price
Operation count			1,000,000	500,000	300,000		Type D—L	1 ~ 19 pieces
40	20	40	784 (79.9)	6.4	7.2	8.0	SWB40—40	
		45	697 (71.1)	7.2	8.1	9.0	45	
		50	627 (64.0)	8.0	9.0	10.0	50	
		55	570 (58.1)	8.8	9.9	11.0	55	
		60	523 (53.3)	9.6	10.8	12.0	60	
		65	482 (49.2)	10.4	11.7	13.0	65	
		70	448 (45.7)	11.2	12.6	14.0	70	
		75	418 (42.6)	12.0	13.5	15.0	75	
		80	392 (40.0)	12.8	14.4	16.0	80	
		90	348 (35.5)	14.4	16.2	18.0	90	
		100	314 (32.0)	16.0	18.0	20.0	100	
		125	251 (25.6)	20.0	22.5	25.0	125	
		150	209 (21.3)	24.0	27.0	30.0	150	
		175	179 (18.3)	28.0	31.5	35.0	175	
		200	157 (16.0)	32.0	36.0	40.0	200	
50	25	225	139 (14.2)	36.0	40.5	45.0	225	
		250	125 (12.8)	40.0	45.0	50.0	250	
		275	114 (11.6)	44.0	49.5	55.0	275	
		300	105 (10.7)	48.0	54.0	60.0	300	
		50	980 (100.0)	8.0	9.0	10.0	SWB50—50	
		55	891 (90.9)	8.8	9.9	11.0	55	
		60	817 (83.3)	9.6	10.8	12.0	60	
		65	754 (76.9)	10.4	11.7	13.0	65	
		70	700 (71.4)	11.2	12.6	14.0	70	
		75	653 (66.7)	12.0	13.5	15.0	75	
		80	613 (62.5)	12.8	14.4	16.0	80	
		90	544 (55.6)	14.4	16.2	18.0	90	
		100	490 (50.0)	16.0	18.0	20.0	100	
		125	392 (40.0)	20.0	22.5	25.0	125	
		150	327 (33.3)	24.0	27.0	30.0	150	
60	30	175	280 (28.6)	28.0	31.5	35.0	175	
		200	245 (25.0)	32.0	36.0	40.0	200	
		225	218 (22.2)	36.0	40.5	45.0	225	
		250	196 (20.0)	40.0	45.0	50.0	250	
		275	178 (18.2)	44.0	49.5	55.0	275	
		300	163 (16.7)	48.0	54.0	60.0	300	
		350	140 (14.3)	56.0	63.0	70.0	350	
		60	1176 (120.0)	9.6	10.8	12.0	SWB60—60	
		70	1008 (102.9)	11.2	12.6	14.0	70	
		80	882 (90.0)	12.8	14.4	16.0	80	
		90	784 (80.0)	14.4	16.2	18.0	90	
		100	706 (72.0)	16.0	18.0	20.0	100	
		125	564 (57.6)	20.0	22.5	25.0	125	
		150	470 (48.0)	24.0	27.0	30.0	150	
		175	403 (41.1)	28.0	31.5	35.0	175	
70	38.5	200	353 (36.0)	32.0	36.0	40.0	200	
		225	314 (32.0)	36.0	40.5	45.0	225	
		250	282 (28.8)	40.0	45.0	50.0	250	
		275	257 (26.2)	44.0	49.5	55.0	275	
		300	235 (24.0)	48.0	54.0	60.0	300	
		350	202 (20.6)	56.0	63.0	70.0	350	
		70	1219 (124.3)	11.2	12.6	14.0	SWB70—70	
		80	1067 (108.8)	12.8	14.4	16.0	80	
		90	948 (96.7)	14.4	16.2	18.0	90	
		100	853 (87.0)	16.0	18.0	20.0	100	
		125	683 (69.6)	20.0	22.5	25.0	125	
		150	569 (58.0)	24.0	27.0	30.0	150	
		175	488 (49.7)	28.0	31.5	35.0	175	
		200	427 (43.5)	32.0	36.0	40.0	200	
		250	341 (34.8)	40.0	45.0	50.0	250	
		300	284 (29.0)	48.0	54.0	60.0	300	
		350	244 (24.9)	56.0	63.0	70.0	350	



Alterations



(NT) — Catalog No.
NT — SWB 30—60



Quotation

Alteration	Code	Spec.	Price
No coating	NT	Coating removal Removal of the coil spring coating by shot peening Springs with the coating removed are extremely susceptible to corrosion. Handle them with care. Corrosion of the spring will result in early breakage. There may be greater variation in the load capacity and other characteristics between lots than with ordinary coated products.	Quotation

● Load calculation method: Load=Spring constant×Deflection
(SI unit) N=N/mm×Fmm
kgf=kgf/mm×Fmm
(kgf=N×0.101972)

- Product guide **P.1396** Load graph **P.1432**
- Instructions and precautions for the use of coil springs **P.1397**
- Clearance of D dim. and counterbore hole, and of d dim. and shaft **P.1397**

COIL SPRINGS