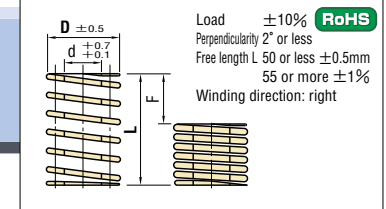
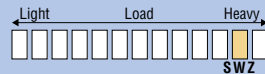


COIL SPRINGS

—SWZ—



D	d	L	Spring constant			Catalog No.	Base unit price	
			N/mm (kgf/mm)	F=LX10.5%	F=LX12%			F=LX13%
Operation count			1,000,000	500,000	300,000	Type D—L	1~19 pieces	
10	5	25	158 (16)	2.6	3.0	3.3	SWZ10—25	
		30	132 (13)	3.2	3.6	3.9	30	
		35	113 (12)	3.7	4.2	4.6	35	
		40	99 (10)	4.2	4.8	5.2	40	
		45	88 (9)	4.7	5.4	5.9	45	
		50	79 (8)	5.3	6.0	6.5	50	
		55	72 (7)	5.8	6.6	7.2	55	
60	66 (7)	6.3	7.2	7.8	60			
12	6	25	215 (22)	2.6	3.0	3.3	SWZ12—25	
		30	179 (18)	3.2	3.6	3.9	30	
		35	153 (16)	3.7	4.2	4.6	35	
		40	134 (14)	4.2	4.8	5.2	40	
		45	119 (12)	4.7	5.4	5.9	45	
		50	107 (11)	5.3	6.0	6.5	50	
		55	98 (10)	5.8	6.6	7.2	55	
60	89 (9)	6.3	7.2	7.8	60			
14	7	30	305 (31)	3.2	3.6	3.9	SWZ14—30	
		35	262 (27)	3.7	4.2	4.6	35	
		40	229 (23)	4.2	4.8	5.2	40	
		45	204 (21)	4.7	5.4	5.9	45	
		50	183 (19)	5.3	6.0	6.5	50	
		55	167 (17)	5.8	6.6	7.2	55	
		60	153 (16)	6.3	7.2	7.8	60	
16	8	30	440 (45)	3.2	3.6	3.9	SWZ16—30	
		35	377 (38)	3.7	4.2	4.6	35	
		40	330 (34)	4.2	4.8	5.2	40	
		45	293 (30)	4.7	5.4	5.9	45	
		50	264 (27)	5.3	6.0	6.5	50	
		55	240 (24)	5.8	6.6	7.2	55	
		60	220 (22)	6.3	7.2	7.8	60	
18	9	30	553 (56)	3.2	3.6	3.9	SWZ18—30	
		35	474 (48)	3.7	4.2	4.6	35	
		40	415 (42)	4.2	4.8	5.2	40	
		45	369 (38)	4.7	5.4	5.9	45	
		50	332 (34)	5.3	6.0	6.5	50	
		55	302 (31)	5.8	6.6	7.2	55	
		60	277 (28)	6.3	7.2	7.8	60	
20	10	30	660 (67)	3.2	3.6	3.9	SWZ20—30	
		35	566 (58)	3.7	4.2	4.6	35	
		40	495 (50)	4.2	4.8	5.2	40	
		45	440 (45)	4.7	5.4	5.9	45	
		50	396 (40)	5.3	6.0	6.5	50	
		55	360 (37)	5.8	6.6	7.2	55	
		60	330 (34)	6.3	7.2	7.8	60	
		65	305 (31)	6.8	7.8	8.5	65	
		70	283 (29)	7.4	8.4	9.1	70	
		75	264 (27)	7.9	9.0	9.8	75	
22	11	35	735 (75)	3.7	4.2	4.6	SWZ22—35	
		40	643 (66)	4.2	4.8	5.2	40	
		45	572 (58)	4.7	5.4	5.9	45	
		50	514 (52)	5.3	6.0	6.5	50	
		55	468 (48)	5.8	6.6	7.2	55	
		60	429 (44)	6.3	7.2	7.8	60	
		65	396 (40)	6.8	7.8	8.5	65	
		70	367 (37)	7.4	8.4	9.1	70	
		75	343 (35)	7.9	9.0	9.8	75	
		80	322 (33)	8.4	9.6	10.4	80	
90	286 (29)	9.5	10.8	11.7	90			
100	257 (26)	10.5	12.0	13.0	100			

D	d	L	Spring constant			Catalog No.	Base unit price	
			N/mm (kgf/mm)	F=LX10.5%	F=LX12%			F=LX13%
Operation count			1,000,000	500,000	300,000	Type D—L	1~19 pieces	
25	12.5	40	922 (94)	4.2	4.8	5.2	SWZ25—40	
		45	820 (84)	4.7	5.4	5.9	45	
		50	738 (75)	5.3	6.0	6.5	50	
		55	671 (68)	5.8	6.6	7.2	55	
		60	615 (63)	6.3	7.2	7.8	60	
		65	568 (58)	6.8	7.8	8.5	65	
		70	527 (54)	7.4	8.4	9.1	70	
		75	492 (50)	7.9	9.0	9.8	75	
		80	461 (47)	8.4	9.6	10.4	80	
		90	410 (42)	9.5	10.8	11.7	90	
		100	369 (38)	10.5	12.0	13.0	100	
		125	295 (30)	12.6	14.4	15.6	125	
		27	13.5	40	1088 (111)	4.2	4.8	5.2
45	967 (99)			4.7	5.4	5.9	45	
50	871 (89)			5.3	6.0	6.5	50	
55	791 (81)			5.8	6.6	7.2	55	
60	726 (74)			6.3	7.2	7.8	60	
65	670 (68)			6.8	7.8	8.5	65	
70	622 (63)			7.4	8.4	9.1	70	
75	580 (59)			7.9	9.0	9.8	75	
80	544 (55)			8.4	9.6	10.4	80	
90	484 (49)			9.5	10.8	11.7	90	
100	435 (44)			10.5	12.0	13.0	100	
125	348 (36)			13.1	15.0	16.3	125	
30	15			35	1422 (145)	3.7	4.2	4.6
		40	1245 (127)	4.2	4.8	5.2	40	
		45	1106 (113)	4.7	5.4	5.9	45	
		50	996 (102)	5.3	6.0	6.5	50	
		55	905 (92)	5.8	6.6	7.2	55	
		60	830 (85)	6.3	7.2	7.8	60	
		65	766 (78)	6.8	7.8	8.5	65	
		70	711 (73)	7.4	8.4	9.1	70	
		75	664 (68)	7.9	9.0	9.8	75	
		80	622 (63)	8.4	9.6	10.4	80	
		90	553 (56)	9.5	10.8	11.7	90	
		100	498 (51)	10.5	12.0	13.0	100	
		125	398 (41)	13.1	15.0	16.3	125	
150	332 (34)	15.8	18.0	19.5	150			
35	17.5	45	1291 (132)	4.7	5.4	5.9	SWZ35—45	
		50	1162 (118)	5.3	6.0	6.5	50	
		55	1056 (108)	5.8	6.6	7.2	55	
		60	968 (99)	6.3	7.2	7.8	60	
		65	894 (91)	6.8	7.8	8.5	65	
		70	830 (85)	7.4	8.4	9.1	70	
		75	774 (79)	7.9	9.0	9.8	75	
		80	726 (74)	8.4	9.6	10.4	80	
		90	645 (66)	9.5	10.8	11.7	90	
		100	581 (59)	10.5	12.0	13.0	100	
		125	465 (47)	13.1	15.0	16.3	125	
		150	387 (39)	15.8	18.0	19.5	150	

D	d	L	Spring constant			Catalog No.	Base unit price			
			N/mm (kgf/mm)	F=LX10.5%	F=LX12%			F=LX13%		
Operation count			1,000,000	500,000	300,000	Type D—L	1~19 pieces			
40	20	45	1752 (179)	4.7	5.4	5.9	SWZ40—45			
		50	1577 (161)	5.3	6.0	6.5	50			
		55	1433 (146)	5.8	6.6	7.2	55			
		60	1314 (134)	6.3	7.2	7.8	60			
		65	1213 (124)	6.8	7.8	8.5	65			
		70	1126 (115)	7.4	8.4	9.1	70			
		75	1051 (107)	7.9	9.0	9.8	75			
		80	985 (100)	8.4	9.6	10.4	80			
		90	876 (89)	9.5	10.8	11.7	90			
		100	788 (80)	10.5	12.0	13.0	100			
		125	631 (64)	13.1	15.0	16.3	125			
		150	526 (54)	15.8	18.0	19.5	150			
		175	451 (46)	18.4	21.0	22.8	175			
		50	25	55	2244 (229)	5.8	6.6	7.2	SWZ50—55	
				60	2057 (210)	6.3	7.2	7.8	60	
65	1899 (194)			6.8	7.8	8.5	65			
70	1763 (180)			7.4	8.4	9.1	70			
75	1646 (168)			7.9	9.0	9.8	75			
80	1543 (157)			8.4	9.6	10.4	80			
90	1371 (140)			9.5	10.8	11.7	90			
100	1234 (126)			10.5	12.0	13.0	100			
125	987 (101)			13.1	15.0	16.3	125			
150	823 (84)			15.8	18.0	19.5	150			
175	705 (72)	18.4	21.0	22.8	175					
200	617 (63)	21.0	24.0	26.0	200					

● Load calculation method: Load=Spring constant×Deflection
 (SI units) 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

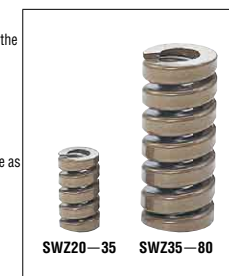
Order **Catalog No.**
SWZ25—80

Days to Ship **Quotation**

Price **Quotation**

Features

- These springs have approximately 1.6 ~ 2 times the load capacity of SWB (P.1423) for the same size and operation count. The spring constant is 2.5 times of that of SWB. They can be used to make the die more compact and reduce the number of springs.
- The spring inner and outer diameters are the same as SWH, SWB, and other spring lineups, making these products effective when higher load capacities are required.



COIL SPRINGS