



Load $\pm 10\%$
 Perpendicularity 2° or less
 Free length L 50 or less $\pm 0.5\text{mm}$
 55 or more $\pm 1\%$
 Winding direction: right



Part Number	D	d	L	Spring Constant		F = L x 16%		F = L x 18%		F = L x 20%		
				N/mm (kgf/mm)	Fmm	Load N(Kgf)	Fmm	Load N(Kgf)	Fmm	Load N(Kgf)		
Type D -L	Operation Count			1000000	500000		300000					
DE-SWG20 - 35	20	10	35	294(30.0)	5.6	1648 (168)	6.3	1853 (189)	7	2059 (210)		
40			257(26.3)	6.4	7.2	8						
45			229(23.3)	7.2	8.1	9						
50			206(21.0)	8	9	10						
55			187(19.1)	8.8	9.9	11						
60			172(17.5)	9.6	10.8	12						
65			158(16.2)	10.4	11.7	13						
70			147(15.0)	11.2	12.6	14						
75			137(14.0)	12	13.5	15						
80			129(13.1)	12.8	14.4	16						
90			114(11.7)	14.4	16.2	18						
DE-SWG22 - 35	22	11	35	336(34.3)	5.6	1883 (192)	6.3	2118 (216)	7	2354 (240)		
40			294(30.0)	6.4	7.2	8						
45			262(26.7)	7.2	8.1	9						
50			235(24.0)	8	9	10						
55			214(21.8)	8.8	9.9	11						
60			196(20.0)	9.6	10.8	12						
65			181(18.5)	10.4	11.7	13						
70			168(17.1)	11.2	12.6	14						
75			157(16.0)	12	13.5	15						
80			147(15.0)	12.8	14.4	16						
90			131(13.3)	14.4	16.2	18						
DE-SWG25 - 25	25	12.5	25	608(62.0)	4	2432 (248)	4.5	2736 (279)	5	3040 (310)		
30			507(51.7)	4.8	5.4	6						
35			434(44.3)	5.6	6.3	7						
40			380(38.8)	6.4	7.2	8						
45			338(34.4)	7.2	8.1	9						
50			304(31.0)	8	9	10						
55			276(28.2)	8.8	9.9	11						
60			253(25.8)	9.6	10.8	12						
65			234(23.8)	10.4	11.7	13						
70			217(22.1)	11.2	12.6	14						
75			203(20.7)	12	13.5	15						
80			190(19.4)	12.8	14.4	16						
90			169(17.2)	14.4	16.2	18						
100			152(15.5)	16	18	20						
125	121.6(12.4)	20	22.5	25								
DE-SWG27 - 25	27	13.5	25	726(74.0)	4	2903 (296)	4.5	3266 (333)	5	3628 (370)		
30			605(61.7)	4.8	5.4	6						
35			518(52.9)	5.6	6.3	7						
40			454(46.3)	6.4	7.2	8						
45			403(41.1)	7.2	8.1	9						
50			363(37.0)	8	9	10						
55			330(33.6)	8.8	9.9	11						
60			302(30.8)	9.6	10.8	12						
65			279(28.5)	10.4	11.7	13						
70			259(26.4)	11.2	12.6	14						
75			242(24.7)	12	13.5	15						
80			227(23.1)	12.8	14.4	16						
90			202(20.6)	14.4	16.2	18						
100			181(18.5)	16	18	20						
125			145(14.8)	20	22.5	25						
150	121(12.3)	24	27	30								
DE-SWG30 - 15	30	15	30	785(80.0)	4.8	3766 (384)	5.4	4236 (432)	6	4707 (480)		
35			672(68.6)	5.6	6.3	7						
40			588(60.0)	6.4	7.2	8						
45			523(53.3)	7.2	8.1	9						
50			471(48.0)	8	9	10						
55			428(43.6)	8.8	9.9	11						
60			392(40.0)	9.6	10.8	12						
65			362(36.9)	10.4	11.7	13						
70			336(34.3)	11.2	12.6	14						
75			314(32.0)	12	13.5	15						
80			294(30.0)	12.8	14.4	16						
90			262(26.7)	14.4	16.2	18						
100			235(24.0)	16	18	20						
125			188(19.2)	20	22.5	25						
150			157(16.0)	24	27	30						
175	134(13.7)	28	31.5	35								

Part Number	D	d	L	Spring Constant		F = L x 16%		F = L x 18%		F = L x 20%		
				N/mm (kgf/mm)	Fmm	Load N(Kgf)	Fmm	Load N(Kgf)	Fmm	Load N(Kgf)		
Type D -L	Operation Count			1000000	500000		300000					
DE-SWG35-35	35	17.5	35	883(90.0)	5.6	4943 (504)	6.3	5560 (567)	7	6178 (630)		
40			772(78.8)	6.4	7.2	8						
45			686(70.0)	7.2	8.1	9						
50			618(63.0)	8	9	10						
55			562(57.3)	8.8	9.9	11						
60			515(52.5)	9.6	10.8	12						
65			475(48.5)	10.4	11.7	13						
70			441(45.0)	11.2	12.6	14						
75			412(42.0)	12	13.5	15						
80			386(39.4)	12.8	14.4	16						
90			343(35.0)	14.4	16.2	18						
DE-SWG40-35	40	20	35	1149(117.1)	5.6	6433 (656)	6.3	7237 (738)	7	8041 (820)		
40			1005(102.5)	6.4	7.2	8						
45			893(91.1)	7.2	8.1	9						
50			804(82.0)	8	9	10						
55			731(74.5)	8.8	9.9	11						
60			670(68.3)	9.6	10.8	12						
65			619(63.1)	10.4	11.7	13						
70			574(58.6)	11.2	12.6	14						
75			536(54.7)	12	13.5	15						
80			503(51.3)	12.8	14.4	16						
90			447(45.6)	14.4	16.2	18						
DE-SWG50-50	50	25	50	1226(125.0)	8	9807 (1000)	9	11032 (1125)	10	12258 (1250)		
55			1114(113.6)	8.8	9.9	11						
60			1022(104.2)	9.6	10.8	12						
65			943(96.2)	10.4	11.7	13						
70			876(89.3)	11.2	12.6	14						
75			817(83.3)	12	13.5	15						
80			766(78.1)	12.8	14.4	16						
90			681(69.4)	14.4	16.2	18						
100			613(62.5)	16	18	20						
125			490(50.0)	20	22.5	25						
150			409(41.7)	24	27	30						
175	350(35.7)	28	31.5	35								
200	306(31.3)	32	36	40								

Load calculation method: Load = Spring constant x Deflection

(SI units) $N = N/mm \times Fmm$
 $kgf = kgf/mm \times Fmm$
 $(kgf = N \times 0.101972)$

Features

- These springs have approximately 1.1 ~ 1.3 times the load capacity of E-SWB at the same deflection.
- They can be used to make the die more compact and reduce the number of springs.

