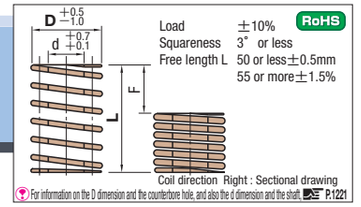
COIL SPRINGS

—LOW DEFLECTION SWN—



F(Allowable deflection) is due to the measurement at normal temperature (40℃). Refer to P.1220 for the maximum allowable deflection at high temperature (150℃/200℃).

D	d	L	Spring constant N/mm{kgf/mm}	F=L×30% Fmm	F=L×30% Load N{kgf}	Part Number Type D—L	U/Price 1～19
14.5	8.5	20	45.76 {4.67}	6.0	274.6 {28.0}	SWN 14.5— 20	
		25	36.61 {3.73}	7.5		25	
		30	30.51 {3.11}	9.0		30	
		35	26.15 {2.67}	10.5		35	
		40	22.88 {2.33}	12.0		40	
		45	20.34 {2.07}	13.5		45	
		50	18.31 {1.87}	15.0		50	
		55	16.64 {1.70}	16.5		55	
		60	15.25 {1.56}	18.0		60	
		65	14.08 {1.44}	19.5		65	
		70	13.08 {1.33}	21.0		70	
		75	12.20 {1.24}	22.5		75	
		80	11.44 {1.17}	24.0		80	
		90	10.17 {1.04}	27.0		90	
		100	9.15 {0.93}	30.0		100	
		125	7.32 {0.75}	37.5		125	
		150	6.10 {0.62}	45.0		150	
17	10.5	25	49.69 {5.07}	7.5	372.7 {38.0}	SWN 17— 25	
		30	41.41 {4.22}	9.0		30	
		35	35.49 {3.62}	10.5		35	
		40	31.05 {3.17}	12.0		40	
		45	27.60 {2.81}	13.5		45	
		50	24.84 {2.53}	15.0		50	
		55	22.59 {2.30}	16.5		55	Quotation
		60	20.70 {2.11}	18.0		60	
		65	19.11 {1.95}	19.5		65	
		70	17.75 {1.81}	21.0		70	
		75	16.56 {1.69}	22.5		75	
		80	15.53 {1.58}	24.0		80	
		90	13.80 {1.41}	27.0		90	
		100	12.42 {1.27}	30.0		100	
		125	9.94 {1.01}	37.5		125	
		150	8.28 {0.84}	45.0		150	
21	13.5	30	54.48 {5.56}	9.0	490.3 {50.0}	SWN 21— 30	
		35	46.70 {4.76}	10.5		35	
		40	40.86 {4.17}	12.0		40	
		45	36.32 {3.70}	13.5		45	
		50	32.69 {3.33}	15.0		50	
		55	29.72 {3.03}	16.5		55	
		60	27.24 {2.78}	18.0		60	
		65	25.15 {2.56}	19.5		65	
		70	23.35 {2.38}	21.0		70	
		75	21.79 {2.22}	22.5		75	
		80	20.43 {2.08}	24.0		80	
		90	18.16 {1.85}	27.0		90	
		100	16.34 {1.67}	30.0		100	
		110	14.86 {1.52}	33.0		110	
		120	13.62 {1.39}	36.0		120	
		125	13.08 {1.33}	37.5		125	
		130	12.57 {1.28}	39.0		130	
		140	11.67 {1.19}	42.0		140	
		150	10.90 {1.11}	45.0		150	
		175	9.34 {0.95}	52.5		175	
		200	8.17 {0.83}	60.0		200	

D	d	L	Spring constant N/mm{kgf/mm}	F=L×30% Fmm	F=L×30% Load N{kgf}	Part Number Type D—L	U/Price 1～19
26	16.5	30	76.27 {7.78}	9.0	686.5 {70.0}	SWN 26— 30	
		35	65.38 {6.67}	10.5		35	
		40	57.21 {5.83}	12.0		40	
		45	50.85 {5.19}	13.5		45	
		50	45.76 {4.67}	15.0		50	
		55	41.60 {4.24}	16.5		55	
		60	38.14 {3.89}	18.0		60	
		65	35.20 {3.59}	19.5		65	
		70	32.69 {3.33}	21.0		70	
		75	30.51 {3.11}	22.5		75	
		80	28.60 {2.92}	24.0		80	
		90	25.42 {2.59}	27.0		90	
		100	22.88 {2.33}	30.0		100	
		110	20.80 {2.12}	33.0		110	
		120	19.07 {1.94}	36.0		120	
		125	18.31 {1.87}	37.5		125	
		130	17.60 {1.79}	39.0		130	
		140	16.34 {1.67}	42.0		140	
		150	15.25 {1.56}	45.0		150	
		175	13.08 {1.33}	52.5		175	
		200	11.44 {1.17}	60.0		200	Quotation
		225	10.17 {1.04}	67.5		225	
		250	9.15 {0.93}	75.0		250	
31	21	40	69.46 {7.08}	12.0	833.6 {85.0}	SWN 31— 40	
		45	61.75 {6.3 }	13.5		45	
		50	55.57 {5.67}	15.0		50	
		55	50.52 {5.15}	16.5		55	
		60	46.31 {4.72}	18.0		60	
		65	42.75 {4.36}	19.5		65	
		70	39.69 {4.05}	21.0		70	
		75	37.05 {3.78}	22.5		75	
		80	34.73 {3.54}	24.0		80	
		90	30.87 {3.15}	27.0		90	
		100	27.79 {2.83}	30.0		100	
		110	25.26 {2.58}	33.0		110	
		120	23.15 {2.36}	36.0		120	
		125	22.23 {2.27}	37.5		125	
		130	21.37 {2.18}	39.0		130	
		140	19.85 {2.02}	42.0		140	
		150	18.52 {1.89}	45.0		150	
		160	17.37 {1.77}	48.0		160	
		170	16.34 {1.67}	51.0		170	
		175	15.88 {1.62}	52.5		175	
		180	15.44 {1.57}	54.0		180	
		190	14.62 {1.49}	57.0		190	
		200	13.89 {1.42}	60.0		200	
		250	11.11 {1.13}	75.0		250	
		300	9.26 {0.94}	90.0		300	

D	d	L	Spring constant N/mm{kgf/mm}	F=L×30% Fmm	F=L×30% Load N{kgf}	Part Number Type D—L	U/Price 1～19
37	26	40	73.55 {7.50}	12.0	882.6 {90.0}	SWN 37— 40	
		45	65.38 {6.67}	13.5		45	
		50	58.84 {6.00}	15.0		50	
		55	53.49 {5.45}	16.5		55	
		60	49.03 {5.00}	18.0		60	
		65	45.26 {4.62}	19.5		65	
		70	42.03 {4.29}	21.0		70	
		75	39.23 {4.00}	22.5		75	
		80	36.77 {3.75}	24.0		80	
		90	32.69 {3.33}	27.0		90	Quotation
		100	29.42 {3.00}	30.0		100	
		110	26.75 {2.73}	33.0		110	
		120	24.52 {2.50}	36.0		120	
		125	23.54 {2.40}	37.5		125	
		130	22.63 {2.31}	39.0		130	
		140	21.01 {2.14}	42.0		140	
		150	19.61 {2.00}	45.0		150	
		160	18.39 {1.88}	48.0		160	
		170	17.31 {1.76}	51.0		170	
		175	16.81 {1.71}	52.5		175	
		180	16.34 {1.67}	54.0		180	
		190	15.48 {1.58}	57.0		190	
		200	14.71 {1.50}	60.0		200	
		250	11.77 {1.20}	75.0		250	
		300	9.81 {1.00}	90.0		300	

M Equivalent of SWOSC—V (Steel Wire Oil Temper Silicon for Valve)

●Load calculation method: Load=Spring constant×Deflection

(International unit) N=N/mm×Fmm

kgf=kgf/mm×Fmm

(kgf=N×0.101972)

Times used: 1 million (300 thousand times for L×35%)

Product guide P.1219

Instructions and notes for coil springs P.1221

Load deflection diagram P.1258

Order — Part Number: SWN21—100

Days to Ship — Quotation

Price — Quotation

Alterations — (NT) — Part Number: NT — SWN 31—70; Quotation

Alteration	Code	Spec.	Details
No painting	NT	**Paint peeling** Peel the coating by shot peening. Since the springs which have undergone the painting peeling are easy to rust, be careful in handling. A rusted spring could cause early breakage. Compared to painted springs, there may be some dispersions in terms of load, etc. depending on the lot.	P.1257