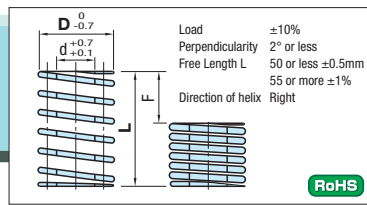


Coil Spring

Light Load SWL



RoHS

D	d	L	Spring Constant N/mm(kgf/mm)	F=Lx32% Fmm Load N(kgf)	F=Lx36% Fmm Load N(kgf)	F=Lx40% Fmm Load N(kgf)	Part Number Type D-L	Unit Price
6	3	15	13.1(1.33)	4.8	5.4	6.0	SWL 6-15	
		20	9.8(1.00)	6.4	7.2	8.0	20	
		25	7.8(0.80)	8.0	9.0	10.0	25	
		30	6.5(0.67)	9.6	10.8	12.0	30	
		35	5.6(0.57)	11.2	12.6	14.0	35	
		40	4.9(0.50)	12.8	14.4	16.0	40	
8	4	10	24.5(2.50)	3.2	3.6	4.0	SWL 8-10	
		15	16.3(1.67)	4.8	5.4	6.0	15	
		20	12.3(1.25)	6.4	7.2	8.0	20	
		25	9.8(1.00)	8.0	9.0	10.0	25	
		30	8.2(0.83)	9.6	10.8	12.0	30	
		35	7.0(0.71)	11.2	12.6	14.0	35	
		40	6.1(0.63)	12.8	14.4	16.0	40	
		45	5.4(0.56)	14.4	16.2	18.0	45	
		50	4.9(0.50)	16.0	18.0	20.0	50	
		55	4.5(0.45)	17.6	19.8	22.0	55	
		60	4.1(0.42)	19.2	21.6	24.0	60	
		65	3.8(0.38)	20.8	23.4	26.0	65	
		70	3.5(0.36)	22.4	25.2	28.0	70	
		75	3.3(0.33)	24.0	27.0	30.0	75	
10	5	80	3.1(0.31)	25.6	28.8	32.0	80	
		10	34.3(3.50)	3.2	3.6	4.0	SWL 10-10	
		15	22.9(2.33)	4.8	5.4	6.0	15	
		20	17.2(1.75)	6.4	7.2	8.0	20	
		25	13.7(1.40)	8.0	9.0	10.0	25	
		30	11.4(1.17)	9.6	10.8	12.0	30	
		35	9.8(1.00)	11.2	12.6	14.0	35	
		40	8.6(0.88)	12.8	14.4	16.0	40	
		45	7.6(0.78)	14.4	16.2	18.0	45	
		50	6.9(0.70)	16.0	18.0	20.0	50	
		55	6.2(0.64)	17.6	19.8	22.0	55	
		60	5.7(0.58)	19.2	21.6	24.0	60	
		65	5.3(0.54)	20.8	23.4	26.0	65	
		70	4.9(0.50)	22.4	25.2	28.0	70	
12	6	75	4.6(0.47)	24.0	27.0	30.0	75	
		80	4.3(0.44)	25.6	28.8	32.0	80	
		90	3.8(0.39)	28.8	32.4	36.0	90	
		15	34.3(3.50)	4.8	5.4	6.0	SWL 12-15	
		20	25.7(2.63)	6.4	7.2	8.0	20	
		25	20.6(2.10)	8.0	9.0	10.0	25	
		30	17.2(1.75)	9.6	10.8	12.0	30	
		35	14.7(1.50)	11.2	12.6	14.0	35	
		40	12.9(1.31)	12.8	14.4	16.0	40	
		45	11.4(1.17)	14.4	16.2	18.0	45	
		50	10.3(1.05)	16.0	18.0	20.0	50	
		55	9.4(0.95)	17.6	19.8	22.0	55	
		60	8.6(0.88)	19.2	21.6	24.0	60	
		65	7.9(0.81)	20.8	23.4	26.0	65	
14	7	70	7.4(0.75)	22.4	25.2	28.0	70	
		75	6.9(0.70)	24.0	27.0	30.0	75	
		80	6.4(0.66)	25.6	28.8	32.0	80	
		90	5.7(0.58)	28.8	32.4	36.0	90	
		20	34.3(3.50)	6.4	7.2	8.0	SWL 14-20	
		25	27.5(2.80)	8.0	9.0	10.0	25	
		30	22.9(2.33)	9.6	10.8	12.0	30	
		35	19.6(2.00)	11.2	12.6	14.0	35	
		40	17.2(1.75)	12.8	14.4	16.0	40	
		45	15.3(1.56)	14.4	16.2	18.0	45	
		50	13.7(1.40)	16.0	18.0	20.0	50	
		55	12.5(1.27)	17.6	19.8	22.0	55	
		60	11.4(1.17)	19.2	21.6	24.0	60	
		65	10.6(1.08)	20.8	23.4	26.0	65	



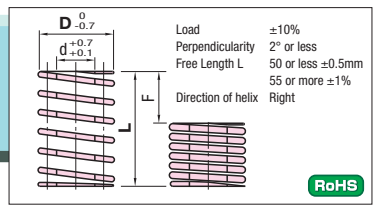
Ordering Example
Part Number
SWL22-100
SWM20-80

• Load calculation method = Spring constant x Deflection
(Nt Unit)
N=N/mmxFmm
kgf=kgf/mmxFmm
(kgf=Nx0.101972)

Material: Oil tempered wires for springs

Coil Spring

Medium Load SWM



RoHS

D	d	L	Spring Constant N/mm(kgf/mm)	F=Lx25.6% Fmm Load N(kgf)	F=Lx28.8% Fmm Load N(kgf)	F=Lx32% Fmm Load N(kgf)	Part Number Type D-L	Unit Price
6	3	15	20.4(2.08)	3.8	4.3	4.8	SWM 6-15	
		20	15.3(1.56)	5.1	5.8	6.4	20	
		25	12.3(1.25)	6.4	7.2	8.0	25	
		30	10.2(1.04)	7.7	8.6	9.6	30	
		35	8.8(0.89)	9.0	10.1	11.2	35	
		40	7.7(0.78)	10.2	11.5	12.8	40	
		45	6.8(0.69)	11.5	13.0	14.4	45	
		50	6.1(0.63)	12.8	14.4	16.0	50	
		55	5.6(0.57)	14.1	15.8	17.6	55	
		60	5.1(0.52)	15.4	17.3	19.2	60	
		10	42.9(4.37)	2.6	2.9	3.2	SWM 8-10	
		15	28.6(2.91)	3.8	4.3	4.8	15	
		20	21.5(2.18)	5.1	5.8	6.4	20	
		25	17.2(1.75)	6.4	7.2	8.0	25	
8	4	30	14.3(1.46)	7.7	8.6	9.6	30	
		35	12.2(1.25)	9.0	10.1	11.2	35	
		40	10.7(1.09)	10.2	11.5	12.8	40	
		45	9.5(0.97)	11.5	13.0	14.4	45	
		50	8.6(0.87)	12.8	14.4	16.0	50	
		55	7.8(0.79)	14.1	15.8	17.6	55	
		60	7.1(0.73)	15.4	17.3	19.2	60	
		65	6.6(0.67)	16.6	18.7	20.8	65	
		70	6.1(0.62)	17.9	20.2	22.4	70	
		75	5.7(0.58)	19.2	21.6	24.0	75	
		80	5.4(0.55)	20.5	23.0	25.6	80	
		10	61.3(6.25)	2.6	2.9	3.2	SWM 10-10	
		15	40.9(4.17)	3.8	4.3	4.8	15	
		20	30.6(3.13)	5.1	5.8	6.4	20	
10	5	25	24.5(2.50)	6.4	7.2	8.0	25	
		30	20.4(2.08)	7.7	8.6	9.6	30	
		35	17.5(1.79)	9.0	10.1	11.2	35	
		40	15.3(1.56)	10.2	11.5	12.8	40	
		45	13.6(1.39)	11.5	13.0	14.4	45	
		50	12.3(1.25)	12.8	14.4	16.0	50	
		55	11.1(1.14)	14.1	15.8	17.6	55	
		60	10.2(1.04)	15.4	17.3	19.2	60	
		65	9.4(0.96)	16.6	18.7	20.8	65	
		70	8.8(0.89)	17.9	20.2	22.4	70	
		75	8.2(0.83)	19.2	21.6	24.0	75	
		80	7.7(0.78)	20.5	23.0	25.6	80	
		90	6.8(0.69)	23.0	25.9	28.8	90	
		15	59.2(6.04)	3.8	4.3	4.8	SWM 12-15	
12	6	20	44.4(4.53)	5.1	5.8	6.4	20	
		25	35.5(3.63)	6.4	7.2	8.0	25	
		30	29.6(3.02)	7.7	8.6	9.6	30	
		35	25.4(2.59)	9.0	10.1	11.2	35	
		40	22.2(2.27)	10.2	11.5	12.8	40	
		45	19.7(2.01)	11.5	13.0	14.4	45	
		50	17.8(1.81)	12.8	14.4	16.0	50	
		55	16.2(1.65)	14.1	15.8	17.6	55	
		60	14.8(1.51)	15.4	17.3	19.2	60	
		65	13.7(1.39)	16.6	18.7	20.8	65	
		70	12.7(1.29)	17.9	20.2	22.4	70	
		75	11.8(1.21)	19.2	21.6	24.0	75	
		80	11.1(1.13)	20.5	23.0	25.6	80	
		90	9.9(1.01)	23.0	25.9	28.8	90	
14	7	20	59.8(6.09)	5.1	5.8	6.4	SWM 14-20	
		25	47.9(4.88)	6.4	7.2	8.0	25	
		30	39.9(4.08)	7.7	8.6	9.6	30	
		35	34.2(3.48)	9.0	10.1	11.2	35	
		40	29.9(3.05)	10.2	11.5	12.8	40	
		45	26.6(2.71)	11.5	13.0	14.4	45	
		50	23.9(2.44)	12.8	14.4	16.0	50	
		55	21.8(2.22)	14.1	15.8	17.6	55	
		60	19.9(2.03)	15.4	17.3	19.2	60	
		65	18.4(1.88)	16.6	18.7	20.8	65	
		70	17.1(1.74)	17.9	20.2	22.4	70	
		75	16.0(1.63)	19.2	21.6	24.0	75	
		80	15.0(1.52)	20.5	23.0	25.6	80	
		90	13.3(1.35)	23.0	25.9	28.8	90	

Usage Count 1 Million Times500,000 Times300,000 Times

D	d	L	Spring Constant N/mm(kgf/mm)	F=Lx25.6% Fmm Load N(kgf)	F=Lx28.8% Fmm Load N(kgf)	F=Lx32% Fmm Load N(kgf)	Part Number Type D-L	Unit Price	
16	8	20	78.1(7.97)	5.1	5.8	6.4	SWM 16-20	20	
		25	62.5(6.38)	6.4	7.2	8.0		25	
		30	52.1(5.31)	7.7	8.6	9.6		30	
		35	44.7(4.55)	9.0	10.1	11.2		35	
		40	39.1(3.98)	10.2	11.5	12.8		40	
		45	34.7(3.54)	11.5	13.0	14.4		45	
		50	31.3(3.19)	12.8	14.4	16.0		50	
		55	28.4(2.90)	14.1	15.8	17.6		55	
		60	26.0(2.66)	15.4	17.3	19.2		60	
		65	24.0(2.45)	16.6	18.7	20.8		65	
18	9	70	22.3(2.28)	17.9	20.2	22.4	SWM 18-20	70	
		75	20.8(2.13)	19.2	21.6	24.0		75	
		80	19.5(1.99)	20.5	23.0	25.6		80	
		90	17.4(1.77)	23.0	25.9	28.8		90	
		100	15.6(1.59)	25.6	28.8	32.0		100	
		20	99.6(10.2)	5.1	5.8	6.4		SWM 18-20	20
		25	79.7(8.13)	6.4	7.2	8.0			25
		30	66.4(6.77)	7.7	8.6	9.6			30
		35	56.9(5.80)	9.0	10.1	11.2			35
		40	49.8(5.08)	10.2	11.5	12.8			40
45	44.3(4.51)	11.5	13.0	14.4	45				
50	39.8(4.06)	12.8	14.4	16.0	50				
55	36.2(3.69)	14.1	15.8	17.6	55				
60	33.3(3.39)	15.4	17.3	19.2	60				
65	30.6(3.13)	16.6	18.7	20.8	65				
20	10	70	28.5(2.90)	17.9	20.2	22.4	SWM 20-20	70	
		75	26.6(2.71)	19.2	21.6	24.0		75	
		80	24.9(2.54)	20.5	23.0	25.6		80	
		90	22.1(2.26)	23.0	25.9	28.8		90	
		100	19.9(2.03)	25.6	28.8	32.0		100	
		25	129(12.5)	5.1	5.8	6.4		SWM 20-20	25
		30	98.0(10.0)	6.4	7.2	8.0			30
		35	81.7(8.33)	7.7	8.6	9.6			35
		40	70.0(7.14)	9.0	10.1	11.2			40
		45	61.3(6.25)	10.2	11.5	12.8			45
50	54.4(5.55)	11.5	13.0	14.4	50				
55	49.0(5.00)	12.8	14.4	16.0	55				
60	44.5(4.55)	14.1	15.8	17.6	60				
65	40.8(4.17)	15.4	17.3	19.2	65				
70	37.7(3.85)	16.6	18.7	20.8	70				
22	11	75	35.0(3.57)	17.9	20.2	22.4	SWM 22-20	75	
		80	32.7(3.33)	19.2	21.6	24.0		80	
		85	30.6(3.13)	20.5	23.0	25.6		85	
		90	27.2(2.78)	23.0	25.9	28.8		90	
		100	24.5(2.50)	25.6	28.8	32.0		100	
		125	19.6(2.00)	32.0	36.0	40.0		125	
		150	16.3(1.67)	38.4	43.2	48.0		150	
		25	119(12.1)	6.4	7.2	8.0		SWM 22-20	25
		30	99.1(10.1)	7.7	8.6	9.6			30
		35	84.9(8.66)	9.0	10.1	11.2			35
40	74.3(7.58)	10.2	11.5	12.8	40				
45	66.1(6.74)	11.5	13.0	14.4	45				
50	59.5(6.06)	12.8	14.4	16.0	50				
55	54.0(5.51)	14.1	15.8	17.6	55				
60	49.5(5.05)	15.4	17.3	19.2	60				
65	45.7(4.66)	16.6	18.7	20.8	65				
70	42.5(4.33)	17.9	20.2	22.4	70				
25	12.5	75	39.6(4.04)	19.2	21.6	24.0	SWM 25-20	75	
		80	37.3(3.79)	20.5	23.0	25.6		80	
		90	33.0(3.37)	23.0	25.9	28.8		90	
		100	29.7(3.03)	25.6	28.8	32.0		100	
		125	23.8(2.43)	32.0	36.0	40.0		125	
		150	19.8(2.02)	38.4	43.2	48.0		150	
		25	153(15.6)	6.4	7.2	8.0		SWM 25-20	25
		30	128(13.0)	7.7	8.6	9.6			30
		35	109(11.2)	9.0	10.1	11.2			35
		40	95.7(9.77)	10.2	11.5	12.8			40
45	85.1(9.68)	11.5	13.0	14.4	45				
50	76.6(7.81)	12.8	14.4	16.0	50				
55	69.6(7.10)	14.1	15.8	17.6	55				
60	63.8(6.51)	15.4	17.3	19.2	60				
65	58.9(6.01)	16.6	18.7	20.8	65				
70	54.7(5.58)	17.9	20.2	22.4	70				
25	12.5	75	51.0(5.21)	19.2	21.6	24.0	SWM 25-20	75	
		80	47.9(4.88)	20.5	23.0	25.6		80	
		90	42.5(4.34)	23.0	25.9	28.8		90	
		100	38.3(3.91)	25.6	28.8	32.0		100	
		125	30.6(3.13)	32.0	36.0	40.0		125	
		150	25.5(2.60)	38.4	43.2	48.0		150	
		175	21.9(2.23)	44.8	50.4	56.0		175	
		Usage Count			1 Million Times300,000 Times300,000 Times				