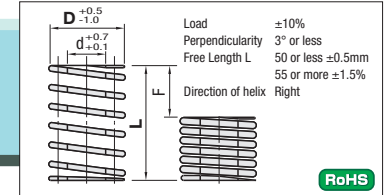


# Coil Spring

## For Ultra High Deflection SWY

# Coil Spring

## For Ultra Deflection SWU



D	d	L	Spring Constant		F=Lx65%	Part Number	Unit Price
			N/mm(kgf/mm)	Fmm			
11	7	29.4 (3.0)	20	2.26(0.23)	13.0	SWY 11- 20	
			25	1.81(0.18)	16.3		
			30	1.51(0.15)	19.5		
			35	1.29(0.13)	22.8		
			40	1.13(0.12)	26.0		
			45	1.01(0.10)	29.3		
			50	0.91(0.092)	32.5		
			55	0.82(0.084)	35.8		
			60	0.75(0.077)	39.0		
			65	0.70(0.071)	42.3		
12.5	8.5	40.2 (4.1)	20	3.09(0.32)	13.0	SWY 12.5- 20	
			25	2.47(0.25)	16.3		
			30	2.06(0.21)	19.5		
			35	1.77(0.18)	22.8		
			40	1.55(0.16)	26.0		
			45	1.37(0.14)	29.3		
			50	1.24(0.13)	32.5		
			55	1.12(0.11)	35.8		
			60	1.03(0.11)	39.0		
			65	0.95(0.10)	42.3		
16.5	10.5	91.2 (9.3)	20	7.02(0.72)	13.0	SWY 16.5- 20	
			25	5.61(0.57)	16.3		
			30	4.68(0.48)	19.5		
			35	4.01(0.41)	22.8		
			40	3.51(0.36)	26.0		
			45	3.12(0.32)	29.3		
			50	2.81(0.29)	32.5		
			55	2.55(0.26)	35.8		
			60	2.34(0.24)	39.0		
			65	2.16(0.22)	42.3		

D	d	L	Spring Constant		F=Lx65%	Part Number	Unit Price
			N/mm(kgf/mm)	Fmm			
20.5	13.5	108.9 (11.1)	30	5.58(0.57)	19.5	SWY20.5- 30	
			35	4.78(0.49)	22.8		
			40	4.19(0.43)	26.0		
			45	3.72(0.38)	29.3		
			50	3.35(0.34)	32.5		
			55	3.04(0.31)	35.8		
			60	2.79(0.28)	39.0		
			65	2.58(0.26)	42.3		
			70	2.39(0.24)	45.5		
			75	2.23(0.23)	48.8		
24.5	16.5	136.3 (13.9)	30	6.99(0.71)	19.5	SWY24.5- 30	
			35	5.99(0.61)	22.8		
			40	5.24(0.53)	26.0		
			45	4.66(0.48)	29.3		
			50	4.19(0.43)	32.5		
			55	3.81(0.39)	35.8		
			60	3.50(0.36)	39.0		
			65	3.23(0.33)	42.3		
			70	3.00(0.31)	45.5		
			75	2.80(0.29)	48.8		

D	d	L	Spring Constant		F=Lx65%	Part Number	Unit Price
			N/mm(kgf/mm)	Fmm			
37	26	294.2 (30.0)	40	11.32(1.15)	26.0	SWY 37- 40	
			45	10.06(1.03)	29.3		
			50	9.05(0.92)	32.5		
			55	8.23(0.84)	35.8		
			60	7.54(0.77)	39.0		
			65	6.96(0.71)	42.3		
			70	6.47(0.66)	45.5		
			75	6.03(0.62)	48.8		
			80	5.66(0.58)	52.0		
			90	5.03(0.51)	58.5		
42	31	392.3 (40.0)	50	12.07(1.23)	32.5	SWY 42- 50	
			60	10.06(1.03)	39.0		
			70	8.62(0.88)	45.5		
			80	7.54(0.77)	52.0		
			90	6.71(0.68)	58.5		
			100	6.03(0.62)	65.0		
			110	5.49(0.56)	71.5		
			120	5.03(0.51)	78.0		
			130	4.64(0.47)	84.5		
			140	4.31(0.44)	91.0		

D	d	L	Spring Constant		F=Lx65%	Part Number	Unit Price
			N/mm(kgf/mm)	Fmm			
30	21	200.1 (20.4)	35	8.79(0.90)	22.8	SWY 30- 35	
			40	7.69(0.78)	26.0		
			45	6.84(0.70)	29.3		
			50	6.16(0.63)	32.5		
			55	5.60(0.57)	35.8		
			60	5.13(0.52)	39.0		
			65	4.74(0.48)	42.3		
			70	4.40(0.45)	45.5		
			75	4.10(0.42)	48.8		
			80	3.85(0.39)	52.0		

D	d	L	Spring Constant		F=Lx65%	Part Number	Unit Price
			N/mm(kgf/mm)	Fmm			
17	10.5	147.1 (15.0)	20	12.26(1.25)	12.0	SWU 17- 20	
			25	9.81(1.00)	15.0		
			30	8.17(0.83)	18.0		
			35	7.00(0.71)	21.0		
			40	6.13(0.63)	24.0		
			45	5.45(0.56)	27.0		
			50	4.90(0.50)	30.0		
			55	4.46(0.45)	33.0		
			60	4.09(0.42)	36.0		
			65	3.77(0.38)	39.0		

D	d	L	Spring Constant		F=Lx60%	Part Number	Unit Price
			N/mm(kgf/mm)	Fmm			
10.5	6.0	68.6 (7.0)	15	7.63(0.78)	9.0	SWU10.5-15	
			20	5.72(0.58)	12.0		
			25	4.58(0.47)	15.0		
			30	3.81(0.39)	18.0		
			35	3.27(0.33)	21.0		
			40	2.86(0.29)	24.0		
			45	2.54(0.26)	27.0		
			50	2.29(0.23)	30.0		
			55	2.08(0.21)	33.0		
			60	1.91(0.19)	36.0		
12.5	7.0	78.5 (8.0)	15	8.72(0.89)	9.0	SWU12.5-15	
			20	6.54(0.67)	12.0		
			25	5.23(0.53)	15.0		
			30	4.36(0.44)	18.0		
			35	3.74(0.38)	21.0		
			40	3.27(0.33)	24.0		
			45	2.91(0.30)	27.0		
			50	2.62(0.27)	30.0		
			55	2.38(0.24)	33.0		
			60	2.18(0.22)	36.0		

D	d	L	Spring Constant		F=Lx60%	Part Number	Unit Price
			N/mm(kgf/mm)	Fmm			
21	13.5	225.6 (23.0)	25	15.04(1.53)	15.0	SWU 21- 25	
			30	12.53(1.28)	18.0		
			35	10.74(1.10)	21.0		
			40	9.40(0.96)	24.0		
			45	8.35(0.85)	27.0		
			50	7.52(0.77)	30.0		
			55	6.83(0.70)	33.0		
			60	6.27(0.64)	36.0		
			65	5.78(0.59)	39.0		
			70	5.37(0.55)	42.0		
26	16.5	294.2 (30.0)	25	16.34(1.67)	18.0	SWU 26- 30	
			30	14.01(1.43)	21.0		
			35	12.26(1.25)	24.0		
			40	10.74(1.10)	27.0		
			45	9.40(0.96)	30.0		
			50	8.35(0.85)	33.0		
			55	7.52(0.77)	36.0		
			60	6.83(0.70)	39.0		
			65	6.27(0.64)	42.0		
			70	5.78(0.59)	45.0		

D	d	L	Spring Constant		F=Lx60%	Part Number	Unit Price
			N/mm(kgf/mm)	Fmm			
37	26	460.9 (47.0)	40	19.20(1.96)	24.0	SWU 37- 40	
			45	17.07(1.74)	27.0		
			50	15.36(1.57)	30.0		
			55	13.97(1.42)	33.0		
			60	12.80(1.31)	36.0		
			65	11.82(1.21)	39.0		
			70	10.97(1.12)	42.0		
			75	10.24(1.04)	45.0		
			80	9.60(0.98)	48.0		
			90	8.54(0.87)	54.0		
43	31	588.4 (60.0)	40	19.20(1.96)	24.0	SWU 43- 50	
			45	17.07(1.74)	27.0		
			50	15.36(1.57)	30.0		
			55	13.97(1.42)	33.0		
			60	12.80(1.31)	36.0		
			65	11.82(1.21)	39.0		
			70	10.97(1.12)	42.0		
			75	10.24(1.04)	45.0		
			80	9.60(0.98)	48.0		
			90	8.54(0.87)	54.0		

Ⓜ Material: Oil tempered wires for springs  
 • Load calculation method = Spring constant x Deflection (Int'l Unit) N=N/mmxFmm kgf=kgf/mmxFmm (kgf=Nx0.101972)  
 Ⓜ Usage count: 1 Million Times (Lx70% is 300,000 Times)  
 Ⓜ How to use coil springs, and precautions P.328  
 Ⓜ About D dimension and back facing hole, and D dimension and shaft, see P.1881.

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Ordering Example Part Number  
 SWY 12.5-40

Ordering Example Part Number  
 SWU17-40

Ⓜ Material: Oil tempered wires for springs  
 • Load calculation method = Spring constant x Deflection (Int'l Unit) N=N/mmxFmm kgf=kgf/mmxFmm (kgf=Nx0.101972)

Ⓜ Material: Oil tempered wires for springs  
 • Load calculation method = Spring constant x Deflection (Int'l Unit) N=N/mmxFmm kgf=kgf/mmxFmm (kgf=Nx0.101972)