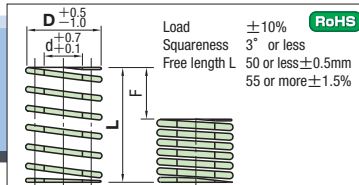


# COIL SPRINGS

—ULTRA HIGH DEFLECTION SWY—



Coil direction Right: Sectional drawing  
For information on the D dimension and the counterbore hole, and also the d dimension and the shot. P.1221

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

D	d	L	Spring constant N/mm(kgf/mm)	F=LX65% Fmm Load N(kgf)	Part Number	U/Price	D	d	L	Spring constant N/mm(kgf/mm)	F=LX65% Fmm Load N(kgf)	Part Number	U/Price
11	7	20	2.26 (0.23)	13.0	SWY11-20	20	20.5	13.5	30	5.58 (0.57)	19.5	SWY20.5-30	30
		25	1.81 (0.18)	16.3	25	35			4.78 (0.49)	22.8	35		
		30	1.51 (0.15)	19.5	30	40			4.19 (0.43)	26.0	40		
		35	1.29 (0.13)	22.8	35	45			3.72 (0.38)	29.3	45		
		40	1.13 (0.12)	26.0	40	50			3.35 (0.34)	32.5	50		
		45	1.01 (0.10)	29.3	45	55			3.04 (0.31)	35.8	55		
		50	0.91 (0.092)	32.5	50	60			2.79 (0.28)	39.0	60		
		55	0.82 (0.084)	35.8	55	65			2.58 (0.26)	42.3	65		
		60	0.75 (0.077)	39.0	60	70			2.39 (0.24)	45.5	70		
		65	0.70 (0.071)	42.3	65	75			2.23 (0.23)	48.8	75		
12.5	8.5	20	3.09 (0.32)	13.0	SWY12.5-20	20	24.5	16.5	30	6.99 (0.71)	19.5	SWY24.5-30	30
		25	2.47 (0.25)	16.3	25	35			5.99 (0.61)	22.8	35		
		30	2.06 (0.21)	19.5	30	40			5.24 (0.53)	26.0	40		
		35	1.77 (0.18)	22.8	35	45			4.66 (0.48)	29.3	45		
		40	1.55 (0.16)	26.0	40	50			4.19 (0.43)	32.5	50		
		45	1.37 (0.14)	29.3	45	55			3.81 (0.39)	35.8	55		
		50	1.24 (0.13)	32.5	50	60			3.50 (0.36)	39.0	60		
		55	1.12 (0.11)	35.8	55	65			3.23 (0.33)	42.3	65		
		60	1.03 (0.11)	39.0	60	70			3.00 (0.31)	45.5	70		
		65	0.95 (0.10)	42.3	65	75			2.80 (0.29)	48.8	75		
16.5	10.5	20	7.02 (0.72)	13.0	SWY16.5-20	20	30	21	30	8.79 (0.90)	22.8	SWY30-35	35
		25	5.61 (0.57)	16.3	25	40			7.69 (0.78)	26.0	40		
		30	4.68 (0.48)	19.5	30	45			6.84 (0.70)	29.3	45		
		35	4.01 (0.41)	22.8	35	50			6.16 (0.63)	32.5	50		
		40	3.51 (0.36)	26.0	40	55			5.60 (0.57)	35.8	55		
		45	3.12 (0.32)	29.3	45	60			5.13 (0.52)	39.0	60		
		50	2.81 (0.29)	32.5	50	65			4.74 (0.48)	42.3	65		
		55	2.55 (0.26)	35.8	55	70			4.40 (0.45)	45.5	70		
		60	2.34 (0.24)	39.0	60	75			4.10 (0.42)	48.8	75		
		65	2.16 (0.22)	42.3	65	80			3.85 (0.39)	52.0	80		
20	15	20	10.90 (1.11)	9.0	SWY15-20	20	37	26	120	3.77 (0.38)	78.0	SWY37-40	40
		25	8.17 (0.83)	12.0	25	130			3.48 (0.36)	84.5	130		
		30	6.54 (0.67)	15.0	30	140			3.23 (0.33)	91.0	140		
		35	5.45 (0.56)	18.0	35	150			3.02 (0.31)	97.5	150		
		40	4.67 (0.48)	21.0	40	160			2.83 (0.29)	104.0	160		
		45	4.09 (0.42)	24.0	45	170			2.66 (0.27)	110.5	170		
		50	3.63 (0.37)	27.0	50	180			2.51 (0.26)	117.0	180		
		55	3.27 (0.33)	30.0	55	190			2.38 (0.24)	123.5	190		
		60	2.97 (0.30)	33.0	60	200			2.26 (0.23)	130.0	200		
		65	2.72 (0.28)	36.0	65	225			2.01 (0.21)	146.3	225		

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

D	d	L	Spring constant N/mm(kgf/mm)	F=LX60% Fmm Load N(kgf)	Part Number	U/Price	D	d	L	Spring constant N/mm(kgf/mm)	F=LX60% Fmm Load N(kgf)	Part Number	U/Price
10.5	6.0	15	7.63 (0.78)	9.0	SWU10.5-15	15	21	13.5	25	15.04 (1.53)	15.0	SWU21-25	25
		20	5.72 (0.58)	12.0	20	30			12.53 (1.28)	18.0	30		
		25	4.58 (0.47)	15.0	25	35			10.74 (1.10)	21.0	35		
		30	3.81 (0.39)	18.0	30	40			9.40 (0.96)	24.0	40		
		35	3.27 (0.33)	21.0	35	45			8.35 (0.85)	27.0	45		
		40	2.86 (0.29)	24.0	40	50			7.52 (0.77)	30.0	50		
		45	2.54 (0.26)	27.0	45	55			6.83 (0.70)	33.0	55		
		50	2.29 (0.23)	30.0	50	60			6.27 (0.64)	36.0	60		
		55	2.08 (0.21)	33.0	55	65			5.78 (0.59)	39.0	65		
		60	1.91 (0.19)	36.0	60	70			5.37 (0.55)	42.0	70		
12.5	7.0	15	8.72 (0.89)	9.0	SWU12.5-15	15	26	16.5	30	16.34 (1.67)	18.0	SWU26-30	30
		20	6.54 (0.67)	12.0	20	35			14.01 (1.43)	21.0	35		
		25	5.23 (0.53)	15.0	25	40			12.26 (1.25)	24.0	40		
		30	4.36 (0.44)	18.0	30	45			10.90 (1.11)	27.0	45		
		35	3.74 (0.38)	21.0	35	50			9.81 (1.00)	30.0	50		
		40	3.27 (0.33)	24.0	40	55			8.92 (0.91)	33.0	55		
		45	2.91 (0.30)	27.0	45	60			8.17 (0.83)	36.0	60		
		50	2.62 (0.27)	30.0	50	65			7.54 (0.77)	39.0	65		
		55	2.38 (0.24)	33.0	55	70			7.00 (0.71)	42.0	70		
		60	2.18 (0.22)	36.0	60	75			6.54 (0.67)	45.0	75		
14.5	8.5	15	10.90 (1.11)	9.0	SWU14.5-15	15	31	21	30	21.75 (2.21)	21.0	SWU31-35	35
		20	8.17 (0.83)	12.0	20	40			15.53 (1.58)	24.0	40		
		25	6.54 (0.67)	15.0	25	45			13.80 (1.41)	27.0	45		
		30	5.45 (0.56)	18.0	30	50			12.42 (1.27)	30.0	50		
		35	4.67 (0.48)	21.0	35	55			11.29 (1.15)	33.0	55		
		40	4.09 (0.42)	24.0	40	60			10.35 (1.06)	36.0	60		
		45	3.63 (0.37)	27.0	45	65			9.56 (0.97)	39.0	65		
		50	3.27 (0.33)	30.0	50	70			8.87 (0.90)	42.0	70		
		55	2.97 (0.30)	33.0	55	75			8.28 (0.84)	45.0	75		
		60	2.72 (0.28)	36.0	60	80			7.76 (0.79)	48.0	80		
17	10.5	20	12.26 (1.25)	12.0	SWU17-20	20	37	26	120	3.77 (0.38)	78.0	SWU37-40	40
		25	9.81 (1.00)	15.0	25	130			3.48 (0.36)	84.5	130		
		30	8.17 (0.83)	18.0	30	140			3.23 (0.33)	91.0	140		
		35	7.00 (0.71)	21.0	35	150			3.02 (0.31)	97.5	150		
		40	6.13 (0.63)	24.0	40	160			2.83 (0.29)	104.0	160		
		45	5.45 (0.56)	27.0	45	170			2.66 (0.27)	110.5	170		
		50	4.90 (0.50)	30.0	50	180			2.51 (0.26)	117.0	180		
		55	4.46 (0.45)	33.0	55	190			2.38 (0.24)	123.5	190		
		60	4.09 (0.42)	36.0	60	200			2.26 (0.23)	130.0	200		
		65	3.77 (0.38)	39.0	65	225			2.01 (0.21)	146.3	225		

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

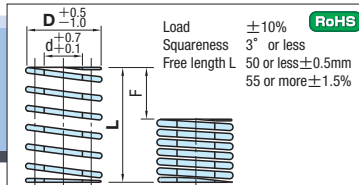
Times used: 1 million (300 thousand times for LX70%)  
Product guide P.1219 Load deflection diagram P.1258  
Instructions and notes for coil springs P.1221



Alteration Code Spec. Price Details P.1257

# COIL SPRINGS

—SUPER HIGH DEFLECTION SWU—



Coil direction Right: Sectional drawing  
For information on the D dimension and the counterbore hole, and also the d dimension and the shot. P.1221

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

D	d	L	Spring constant N/mm(kgf/mm)	F=LX60% Fmm Load N(kgf)	Part Number	U/Price	D	d	L	Spring constant N/mm(kgf/mm)	F=LX60% Fmm Load N(kgf)	Part Number	U/Price
10.5	6.0	15	7.63 (0.78)	9.0	SWU10.5-15	15	21	13.5	25	15.04 (1.53)	15.0	SWU21-25	25
		20	5.72 (0.58)	12.0	20	30			12.53 (1.28)	18.0	30		
		25	4.58 (0.47)	15.0	25	35			10.74 (1.10)	21.0	35		
		30	3.81 (0.39)	18.0	30	40			9.40 (0.96)	24.0	40		
		35	3.27 (0.33)	21.0	35	45			8.35 (0.85)	27.0	45		
		40	2.86 (0.29)	24.0	40	50			7.52 (0.77)	30.0	50		
		45	2.54 (0.26)	27.0	45	55			6.83 (0.70)	33.0	55		
		50	2.29 (0.23)	30.0	50	60			6.27 (0.64)	36.0	60		
		55	2.08 (0.21)	33.0	55	65			5.78 (0.59)	39.0	65		
		60	1.91 (0.19)	36.0	60	70			5.37 (0.55)	42.0	70		
12.5	7.0	15	8.72 (0.89)	9.0	SWU12.5-15	15	26	16.5	30	16.34 (1.67)	18.0	SWU26-30	30
		20	6.54 (0.67)	12.0	20	35			14.01 (1.43)	21.0	35		
		25	5.23 (0.53)	15.0	25	40			12.26 (1.25)	24.0	40		
		30	4.36 (0.44)	18.0	30	45			10.90 (1.11)	27.0	45		
		35	3.74 (0.38)	21.0	35	50			9.81 (1.00)	30.0	50		
		40	3.27 (0.33)	24.0	40	55			8.92 (0.91)	33.0	55		
		45	2.91 (0.30)	27.0	45	60			8.17 (0.83)	36.0	60		
		50	2.62 (0.27)	30.0	50	65			7.54 (0.77)	39.0	65		
		55	2.38 (0.24)	33.0	55	70			7.00 (0.71)	42.0	70		
		60	2.18 (0.22)	36.0	60	75			6.54 (0.67)	45.0	75		
14.5	8.5	15	10.90 (1.11)	9.0	SWU14.5-15	15	31	21	30	21.75 (2.21)	21.0	SWU31-35	35
		20	8.17 (0.83)	12.0	20	40			15.53 (1.58)	24.0	40		
		25	6.54 (0.67)	15.0	25	45			13.80 (1.41)	27.0	45		
		30	5.45 (0.56)	18.0	30	50			12.42 (1.27)	30.0	50		
		35	4.67 (0.48)	21.0	35	55			11.29 (1.15)	33.0	55		
		40	4.09 (0.42)	24.0	40	60			10.35 (1.06)	36.0	60		
		45	3.63 (0.37)	27.0	45	65			9.56 (0.97)	39.0	65		
		50	3.27 (0.33)	30.0	50	70			8.87 (0.90)	42.0	70		
		55	2.97 (0.30)	33.0	55	75			8.28 (0.84)	45.0	75		
		60	2.72 (0.28)	36.0	60	80			7.76 (0.79)	48.0	80		
17	10.5	20	12.26 (1.25)	12.0	SWU17-20	20	37						