


COIL SPRINGS

Name	WIRE SPRINGS	Internal diameter standard type	COIL SPRINGS
Catalog No.	WY・WR・WF・WL・WT・WM・WH・WB	NWL・NWM・WP	SWY SWU SWR SWG
Delivery	①	①	① ① ① ①
Page	1058~1065	1066	1067 1068 1069 1071

SWC	SWF	SWL	SWM	SWH	SWB	SWG	SWZ	SWV	SWX
①	①	①	①	①	①	①	①	①	①
1073	1075	1077	1079	1081	1083	1085	1087	1089	1090

COIL SPRINGS "Stainless type"	SPRING GUIDE UNITS	WASHERS FOR COIL SPRING	FLANGE FOR SPRING UNITS	SPRING GUIDE PINS	SPRING GUIDE RETAINERS
SWUF・SWUL・SWUM・SWUH	CUK	SSWA・SSWB・SSWC	WUNT	SGA	SGC
①	②	①	②④	①	①
1081	1095	1097	1098	1099	1100

Category	Features	Page	Type		Outside diameter		Full length		Allowable deflection	Load N/kgf	
			Catalog No.	Color	min.	max.	min.	max.		min.	max.
Round wire coil springs		P.1058	WY	—	φ 3	φ 16	5	70	75% (1 million shots)	0.38 (0.04)	10.3 (1.05)
		P.1059	WR	—	φ 3	φ 27	5	90	60% (1 million shots)	0.9 (0.09)	23.5 (2.4)
		P.1060	WF	—	φ 3	φ 27	5	90	45% (1 million shots)	1.1 (0.11)	35.3 (3.6)
		P.1061	WL	—	φ 2	φ 27	5	100	40% (1 million shots)	0.98 (0.1)	117.7 (12.0)
		P.1062	WT	—	φ 3	φ 27	5	80	40% (1 million shots)	2.9 (0.3)	125.5 (12.8)
		P.1063	WM	—	φ 3	φ 27	5	100	35% (1 million shots)	3.4 (0.4)	171.6 (17.5)
		P.1064	WH	—	φ 4	φ 27	5	100	30% (1 million shots)	4.9 (0.5)	441.3 (45.0)
		P.1065	WB	—	φ 3	φ 27	5	100	25% (1 million shots)	4.9 (0.5)	735.5 (75.0)
		P.1066	NWL (Int. diam.)	—	φ 5.5 (Int. diam.)	φ 16.6 (Int. diam.)	30	60	40% (1 million shots)	13.7 (1.4)	27.5 (2.8)
		P.1066	NWM (Int. diam.)	—	φ 5.5 (Int. diam.)	φ 16.6 (Int. diam.)	30	60	32% (1 million shots)	20.6 (2.1)	34.3 (3.5)
		P.1066	WP (Long type)	—	φ 11.5	φ 17	100	500	70% (1 million shots)	21.3 (2.2)	34.3 (3.5)
		● Spring constant is fixed for each diameter. (Load varies depending on Full length.)									

● Operating temperature





The data shown on this catalog such as load values have been obtained through measurements conducted at normal temperatures (40°C or less). If coil springs are used at temperatures higher than normal temperature, the load capacity and maximum number of durable operating times may be reduced, though it also depends on other conditions.

The maximum working ambient temperature is up to 80°C. Although the allowable temperature limit of spring wires are higher than springs' maximum operating temperatures limit (120°C for round wires, 200°C for irregular shaped wires); if springs are used at temperatures higher than working ambient temperatures, significant degradation in their functions is expected. ♡ Except stainless steel type (P.1081)

● Allowable deflection

Do not use the springs exceeding the allowable deflection values. If they are used exceeding the allowable deflection, their load capacity and durability will degrade, leading to their breakage in the worst case.

♡ If once round wire coil springs are compressed exceeding the allowable deflection, their dimension L will be shortened.

Category	Features	Page	Type			Outside diameter		Overall length		Allowable deflection	Load N(kgf)	
			Load	Catalog No.	Color	min.	max.	min.	max.		min.	max.
irregular shaped wire coil springs	 <p>high deflection type</p> <p>• Load is fixed for each diameter.</p>	P.1067	Light	SWY	Pastel green	φ 11	φ 42	20	300	65% (1 million shots) 70% (300,000 shots)	29.4 (3.0)	392.3 (40.0)
		P.1068		SWU	Light blue	φ 10.5	φ 43	15	300	60% (1 million shots) 65% (300,000 shots)	68.6 (7.0)	588.4 (60.0)
		P.1069		SWR	Ivory	φ 10.5	φ 50	15	400	50% (1 million shots) 55% (300,000 shots)	78.5 (8.0)	1323.9 (135.0)
		P.1071		SWS	Orange	φ 10.5	φ 52	20	300	40% (1 million shots) 45% (300,000 shots)	87.2 (8.9)	1456.3 (160.0)
	 <p>heavy load type</p> <p>• Load is fixed for each diameter.</p>	P.1073		SWC	Purple	φ 6 (φ 3)	φ 30 (φ 15)	15	200	50% (1 million shots) 60% (300,000 shots)	27 (2.8)	392 (40.0)
		P.1075		SWF	Yellow	φ 6 (φ 3)	φ 70 (φ 38.5)	10	500	40% (1 million shots) 50% (300,000 shots)	47 (4.8)	3136 (320)
		P.1077		SWL	Blue	φ 6 (φ 3)	φ 70 (φ 38.5)	10	350	32% (1 million shots) 40% (300,000 shots)	63 (6.4)	4782 (488)
		P.1079		SWM	Red	φ 6 (φ 3)	φ 70 (φ 38.5)	10	350	25.6% (1 million shots) 32% (300,000 shots)	79 (8.0)	6664 (680)
		P.1081		SWH	Green	φ 6 (φ 3)	φ 70 (φ 38.5)	10	350	19.2% (1 million shots) 24% (300,000 shots)	110 (11)	10046 (1024)
		P.1083		SWB	Brown	φ 6 (φ 3)	φ 70 (φ 38.5)	10	350	16% (1 million shots) 20% (300,000 shots)	142 (14)	13655 (1392)
		P.1085		SWG	Black	φ 10 (φ 5)	φ 50 (φ 25)	15	200	16% (1 million shots) 20% (300,000 shots)	392 (40)	9907 (1000)
		P.1087		SWZ	Gold	φ 10 (φ 5)	φ 50 (φ 25)	25	200	10.5% (1 million shots) 13% (300,000 shots)	416 (42)	12959 (1321)
		P.1089	Heavy	SWV	Wine red	φ 10 (φ 5)	φ 50 (φ 25)	30	200	10.5% (1 million shots) 13% (300,000 shots)	644 (66)	14904 (1228)
	 <p>High speed type</p>	P.1090	—	SWX	— (no painting)	φ 20 (φ 9.5)	φ 40 (φ 20.5)	25	100	10% (10 million shots)	1275 (130)	5198 (530)
		P.1091	—	SWUF SWUL SWUM SWUH	— (no painting)	φ 10 (φ 5)	φ 30 (φ 15)	20	60	Refer to P.1091		
	 <p>informal helical</p>	P.1091	—	SWUF SWUL SWUM SWUH	— (no painting)	φ 10 (φ 5)	φ 30 (φ 15)	20	60	Refer to P.1091		

● Painting of irregular shaped wire coil springs

Misumi irregular shaped wire coil springs have been painted for identification and rust prevention.
(SWX and SWU are no painting.)

● Spring load calculation method

Load= spring constant× deflection
 $N = N/mm \times Fmm$ (SI unit)
 $kgf = kgf/mm \times Fmm$
 $(kgf = N \times 0.101972)$