

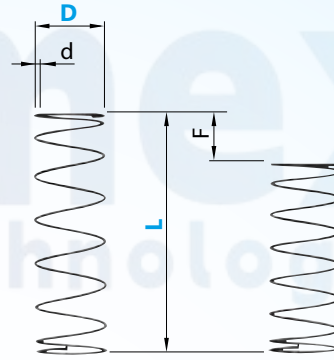
# ROUND WIRE COIL SPRINGS

## DWY (75% Deflection)

### Spring constant

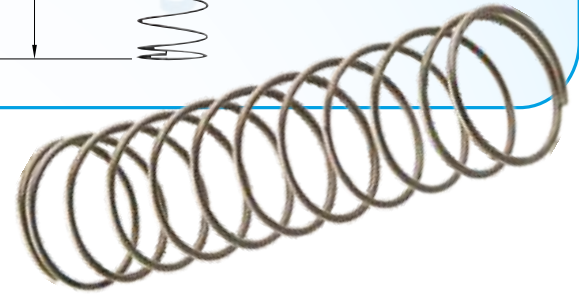
D12 and D14 are not available for DWY type.

D	Type	DWY	DWR	DWF	DWL	DWT	DWM	DWH	DWB
2					0.5 (0.05)	1.5 (0.15)	2.0 (0.2)	2.9 (0.3)	3.9 (0.4)
3									4.9 (0.5)
4		N/mm 0.21 {kgf/mm} {0.01}							
5			N/mm 2.9 {kgf/mm} {0.3}	N/mm 0.5 {kgf/mm} {0.05}	N/mm 1.0 {kgf/mm} {0.1}	N/mm 4.9 {kgf/mm} {0.5}	N/mm 4.9 {kgf/mm} {0.5}	N/mm 5.9 {kgf/mm} {0.6}	N/mm 9.8 {kgf/mm} {1.0}
6									
8									
10		N/mm 0.2 {kgf/mm} {0.02}							
12									
13									N/mm 19.6 {kgf/mm} {3.0}
14									
16									
18									
20									
22			N/mm 0.5 {kgf/mm} {0.05}	N/mm 1.0 {kgf/mm} {0.1}	N/mm 2.9 {kgf/mm} {0.3}	N/mm 3.9 {kgf/mm} {0.4}	N/mm 4.9 {kgf/mm} {0.5}	N/mm 14.7 {kgf/mm} {1.5}	N/mm 29.4 {kgf/mm} {3.0}
27									
Fmax.		F = Lx75%	F = Lx60%	F = Lx45%	F = Lx40%	F = Lx40%	F = Lx35%	F = Lx30%	F = Lx25%



Spring constant  $\pm 10\%$   
 Outer dia. D  $\phi$  10 or less  $^{0}_{-0.5\text{mm}}$   
 $\phi$  13 or more  $^{0}_{-0.8\text{mm}}$   
 Free length L 50 or less  $\pm 1.5\text{mm}$   
 55 or more  $\pm 2.5\text{mm}$

M~SWP~A



### ● DWY : Fmax. ( Maximum Allowable Deflection ) = L x 75%

Part No. Type D-L	d	Height Solid	F max.	Load N(kgf) max.
DWY3	5	0.16	1.0	3.75
	10	0.2	2.0	7.5
	15	0.23	3.6	11.2
	20	0.23	3.6	15
	25	0.25	5.5	18.7
	30	0.26	6.5	22.5
DWY4	5	0.2	1.1	3.75
	10	0.23	1.9	7.5
	15	0.23	1.9	11.2
	20	0.25	2.7	15.0
	25	0.29	5	18.7
	30	0.29	5	22.5
	35	0.32	7.7	26.2
	40	0.32	7.7	30.0
DWY5	10	0.25	1.7	7.5
	15	0.25	1.7	11.2
	20	0.3	3.2	15
	25	0.3	3.2	18.7
	30	0.35	6.3	22.5
	35	0.35	6.3	26.2
	40	0.38	9.2	30
	45	0.38	9.2	33.7
DWY6	10	0.3	2.1	7.5
	15	0.32	2.8	11.2
	20	0.32	2.8	15
	25	0.35	4.1	18.7
	30	0.38	5.6	22.5
	35	0.38	5.6	26.2
	40	0.4	7.2	30.0
	45	0.4	7.2	33.7
	50	0.4	7.2	37.5
	55	0.45	12.2	41.2

Part No. Type D-L	d	Height Solid	F max.	Load N(kgf) max.
DWY8	10	0.35	2.1	7.5
	15	0.38	3	11.2
	20	0.4	3.5	15
	25	0.4	3.5	18.7
	30	0.45	5.7	22.5
	35	0.45	5.7	26.2
	40	0.45	5.7	30
	45	0.45	5.7	33.7
	50	0.5	9	37.5
	55	0.5	9	41.2
DWY10	15	0.5	3	11.2
	20	0.55	4.6	15
	25	0.55	4.6	18.7
	30	0.6	6.6	22.5
	35	0.6	6.6	26.2
	40	0.65	9.1	30
	45	0.65	9.1	33.7
	50	0.65	9.1	37.5
	55	0.7	12.6	41.2
	60	0.7	12.6	45

Part No. Type D-L	d	Height Solid	F max.	Load N(kgf) max.
DWY13	20	0.6	3.9	15
	25	0.65	5.1	18.7
	30	0.65	5.1	22.5
	35	0.7	6.7	26.2
	40	0.75	8.7	30
	45	0.75	8.7	33.7
	50	0.8	11.6	37.5
	55	0.8	11.6	41.2
	60	0.8	11.6	45
	65	0.85	15.3	48.7
DWY16	20	0.65	3.6	15
	25	0.7	4.6	18.7
	30	0.75	5.7	22.5
	35	0.8	7	26.2
	40	0.85	9	30
	45	0.85	9	33.7
	50	0.9	11.3	37.5
	55	0.9	11.3	41.2
	60	0.9	11.3	45
	65	0.9	11.3	48.7

### ● Load calculation method: Load = Spring constant x Deflection

(SI units)  $N = N/\text{mm} \times F\text{mm}$   
 $\text{kgf} = \text{kgf}/\text{mm} \times F\text{mm}$   
 $(\text{kgf} = N \times 0.101972)$

Neither end is ground for all WY type springs.  
 The solid height values are for reference only.  
 There may be some variation between lots.  
 Operation count: 1 million  
 Instructions and precautions for the use of coil springs

