

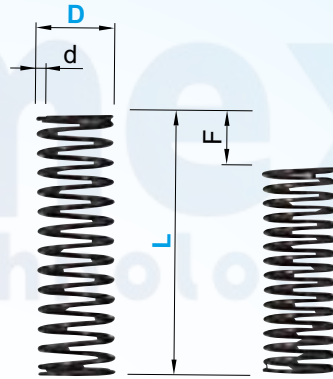
ROUND WIRE COIL SPRINGS

DWT (40% Deflection)

Spring constant

D12, D14 and D20 are not available for DWT 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									
5		N/mm 0.1 {kgf/mm} {0.01}						N/mm 5.9 {kgf/mm} {0.6}	N/mm 9.8 {kgf/mm} {1.0}
6									
8			N/mm 0.3 {kgf/mm} {0.03}	N/mm 0.5 {kgf/mm} {0.05}	N/mm 1.0 {kgf/mm} {0.1}	N/mm 2.0 {kgf/mm} {0.2}	N/mm 2.9 {kgf/mm} {0.3}	N/mm 9.8 {kgf/mm} {1.0}	N/mm 19.6 {kgf/mm} {2.0}
10		N/mm 0.2 {kgf/mm} {0.02}							
12									
13									
14									
16									29.4 (3.0)
18									
20			N/mm 0.5 {kgf/mm} {0.05}	N/mm 1.0 {kgf/mm} {0.1}	N/mm 2.0 {kgf/mm} {0.2}	N/mm 3.0 {kgf/mm} {0.3}	N/mm 4.9 {kgf/mm} {0.5}	N/mm 14.7 {kgf/mm} {1.5}	N/mm 29.4 {kgf/mm} {3.0}
22									
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 $^{0}_{-0.5\text{mm}}$
 $\phi 12$ or more $^{0}_{-0.8\text{mm}}$
 Free length L 50 or less $\pm 1.5\text{mm}$
 55 or more $\pm 2\text{mm}$

M~SWP~A



● DWT : Fmax. (Maximum Allowable Deflection) = L x 40% (L x 35 %)

Part No. Type D-L	d	Height Solid	F max.	Load N(kgf) max.
DWT3	5*	0.3	1.73	2
	10*	0.4	5	4
	15*	0.45	8.78	6
	20*	0.45	8.78	8
	25*	0.5	14.5	10
DWT4	5*	0.4	2.7	2
	10*	0.4	2.7	4
	15*	0.5	6.5	6
	20	0.55	9.63	8
	25	0.55	9.63	10
	30	0.6	15	12
	35	0.6	15	14
	40	0.65	22.1	16
DWT5	5*	0.45	2.36	2
	10*	0.5	3.25	4
	15	0.6	6.3	6
	20	0.6	6.3	8
	25	0.7	12.6	10
	30	0.7	12.6	12
	35	0.75	17.3	14
	(40)	0.75	17.3	14
	(45)	0.8	24	15.8
	(50)	0.8	24	17.5
	(55)	0.85	32.3	19.3
	(60)	0.85	32.3	21
	(65)	0.85	34	22.7
	(70)	0.9	44.6	24.5
DWT6	5*	0.5	2.38	2
	10	0.6	4.35	4
	15	0.6	4.35	6
	20	0.7	7.7	8
	25	0.7	7.7	10
	30	0.8	14	12
	35	0.8	14	14
	40	0.85	18.7	16
	45	0.85	18.7	18
	50	0.9	24.8	20
	(55)	0.9	24.8	19
(60)	0.9	24.8	21	
(65)	0.9	26.1	22.7	
(70)	1	43	24.5	
(80)	1	43	28	

Part No. Type D-L	d	Height Solid	F max.	Load N(kgf) max.
DWT8	10	0.7	4.38	4
	15	0.8	6.8	6
	20	0.8	6.8	8
	25	0.8	6.8	10
	30	0.9	10.8	12
	35	0.9	10.8	14
	40	1	17.5	16
	45	1	17.5	18
	50	1	17.5	20
	55	1.1	27.5	22
DWT10	10	0.85	5.53	4
	15	0.9	6.75	6
	20	0.9	6.75	8
	25	1	10	10
	30	1	10	12
	35	1	10	14
	40	1	10	16
	45	1.1	14.3	18
	50	1.1	14.3	20
	55	1.2	21.6	22
	60	1.2	21.6	24
	65	1.2	21.6	26
	70	1.3	32.5	28
	80	1.3	32.5	32
DWT13	15	1	6	6
	20	1.1	8.25	8
	25	1.1	8.25	10
	30	1.2	11.1	12
	35	1.2	11.1	14
	40	1.2	11.1	16
	45	1.2	11.1	18
	50	1.3	15.6	20
	55	1.3	15.6	22
	60	1.3	15.6	24
DWT16	15	1.2	7.5	6
	20	1.3	9.43	8
	25	1.4	12.6	10
	30	1.4	12.6	12
	35	1.4	12.6	14
	40	1.4	12.6	16
	45	1.6	22.4	18
	50	1.6	22.4	20
	55	1.6	22.4	22
	60	1.7	28.9	24

Part No. Type D-L	d	Height Solid	F max.	Load N(kgf) max.
DWT18	20	1.6	10.8	8
	25	1.7	13.6	10
	30	1.7	13.6	12
	35	1.7	13.6	14
	40	1.8	16.7	16
	45	1.9	20.5	18
	50	1.9	20.5	20
	55	2	26	22
	60	2	26	24
	65	2	26	26
DWT12	20	1.8	11.3	8
	25	1.8	11.3	10
	30	1.9	13.3	12
	35	1.9	13.3	14
	40	2	16	16
	45	2.1	19.5	18
	50	2.1	19.5	20
	55	2.3	28.2	22
	60	2.3	28.2	24
	65	2.3	28.2	26
DWT27	30	2.1	13.2	12
	35	2.3	17.9	14
	40	2.3	17.9	16
	45	2.4	20.4	18
	50	2.6	28.6	20
	55	2.6	28.6	22
	60	2.6	28.6	24
	65	2.6	28.6	26

Load calculation method: Load = Spring constant x Deflection

(SI units) N = N/mm x Fmm
 kgf = kgf/mm x Fmm
 (kgf = N x 0.101972)

Maximum allowable deflection for size (L)

- WT5 - 40 Fmax = L x 35%
- WT5 - 45 Fmax = L x 35%
- WT5 - 50 Fmax = L x 35%
- WT5 - 55 Fmax = L x 35%
- WT5 - 60 Fmax = L x 35%
- WT5 - 65 Fmax = L x 35%
- WT5 - 70 Fmax = L x 35%
- WT6 - 55 Fmax = L x 35%
- WT6 - 60 Fmax = L x 35%
- WT6 - 65 Fmax = L x 35%
- WT6 - 70 Fmax = L x 35%
- WT6 - 80 Fmax = L x 35%

No grinding on either end of WT types marked* with.

The solid height values are for reference only.
 There may be some variation between lots.
 Operation count: 1 million
 Instruction and precautions for the use of coil springs

