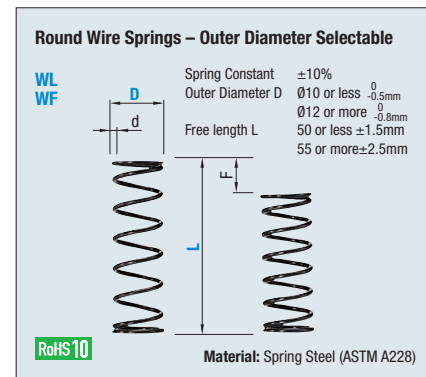


Round Wire Springs

WF / WL Outer Diameter Selectable



WL: Fmax. (Allowable Deflection) = L x 40%

d	Solid Length	F Max.	Load N (kgf) max.	Part Number	
				Type	D - L
0.2	1.7	2	0.98 (0.1)	WL	2 - 5*
0.26	5.2	4	2.0 (0.2)		10*
0.26	5.2	6	2.9 (0.3)		15*
0.29	9	8	3.9 (0.4)		20*
0.29	9	10	4.9 (0.5)		25*
0.3	10.8	12	5.9 (0.6)		30*
0.3	2.1	2	2.0 (0.2)	WL	3 - 5*
0.35	3.9	4	3.9 (0.4)		10*
0.4	6.5	6	5.9 (0.6)		15*
0.4	6.5	8	7.8 (0.8)		20*
0.45	13	10	9.8 (1.0)		25*
0.45	13	12	11.8 (1.2)		30*
0.45	13	14	13.7 (1.4)		35*
0.5	21	16	15.7 (1.6)		40*
0.35	2.1	2	2.0 (0.2)	WL	4 - 5*
0.45	5	4	3.9 (0.4)		10*
0.45	5	6	5.9 (0.6)		15*
0.5	9	8	7.8 (0.8)		20
0.5	9	10	9.8 (1.0)		25
0.55	13.9	12	11.8 (1.2)		30
0.55	13.9	14	13.7 (1.4)		35
0.6	21.6	16	15.7 (1.6)		40
0.6	21.6	18	17.7 (1.8)		45
0.6	21.6	20	19.6 (2.0)		50
0.6	21.6	22	21.6 (2.2)		55
0.65	33	24	23.5 (2.4)		60
0.4	2.3	2	2.0 (0.2)	WL	5*
0.45	3.4	4	3.9 (0.4)		10*
0.5	5	6	5.9 (0.6)		15*
0.55	7.7	8	7.8 (0.8)		20
0.6	10.8	10	9.8 (1.0)		25
0.6	10.8	12	11.8 (1.2)		30
0.65	15.6	14	13.7 (1.4)		35
0.65	15.6	16	15.7 (1.6)		40
0.7	20	18	17.7 (1.8)		45
0.7	20	20	19.6 (2.0)		50
0.7	23.1	22	21.6 (2.2)		55
0.75	33	24	23.5 (2.4)		60
0.75	32.3	26	25.5 (2.6)		65
0.75	32.3	28	27.5 (2.8)		70
0.45	2.5	2	2.0 (0.2)	WL	6 - 5*
0.55	4.7	4	3.9 (0.4)		10
0.55	4.7	6	5.9 (0.6)		15
0.65	9	8	7.8 (0.8)		20
0.65	9	10	9.8 (1.0)		25
0.7	13.7	12	11.8 (1.2)		30
0.7	13.7	14	13.7 (1.4)		35
0.7	13.7	16	15.7 (1.6)		40
0.75	18.9	18	17.7 (1.8)		45
0.75	18.9	20	19.6 (2.0)		50
0.75	18.9	22	21.6 (2.2)		55
0.8	26.4	24	23.5 (2.4)		60
0.8	26.4	26	25.5 (2.6)		65
0.85	30.6	28	27.5 (2.8)		70
0.85	34.9	32	31.4 (3.2)		80

Load Calculation Method: Load = Spring Constant x Deflection
 (Int'l Unit) N = N/mm x Fmm
 kgf = kgf/mm x Fmm
 (kgf = N x 0.101972)

- Ⓛ Both ends of WY Type springs are not ground.
- Ⓛ The values of solid length are for reference only. There may be some variations depending on the lot.
- Ⓛ Operation frequency: One million times
- Ⓛ Product Overview P.2512
- Ⓛ How to use coil springs and precautions P.2513

Spring Constant N/mm(kgf/mm)

Type	WY	WR	WF	WL	WT	WM	WH	WB
2				0.5(0.05)				
3					1.5 (0.15)	2.0 (0.2)		3.9(0.4)
4	0.1 (0.01)						2.9(0.3)	4.9(0.5)
5								
6								
8		0.3 (0.03)	0.5 (0.05)	1.0 (0.1)			5.9 (0.6)	9.8 (1.0)
10					2.0 (0.2)	2.9 (0.3)		
12								
13	0.2 (0.02)						9.8 (1.0)	19.6 (2.0)
14								
16								
18								
20							14.7 (1.5)	29.4(3.0)
22		0.5 (0.05)	1.0 (0.1)	2.9 (0.3)	3.9 (0.4)	4.9 (0.5)		29.4 (3.0)
27								

Ⓛ D12 and 14 for WY Type and D12,14 and 20 for WT Type are not available.

d	Solid Length	F Max.	Load N (kgf) max.	Part Number	
				Type	D - L
0.65	4.7	4	3.9(0.4)	WL	8 - 10
0.75	8.5	6	5.9(0.6)		15
0.75	8.5	8	7.8(0.8)		20
0.75	8.5	10	9.8(1.0)		25
0.8	11.2	12	11.8(1.2)		30
0.8	11.2	14	13.7(1.4)		35
0.8	11.2	16	15.7(1.6)		40
0.85	15.3	18	17.7(1.8)		45
0.85	15.3	20	19.6(2.0)		50
0.85	15.3	22	21.6(2.2)		55
0.9	19.4	24	23.5(2.4)		60
0.9	19.4	26	25.5(2.6)		65
1.0	31	28	27.5(2.8)		70
1.0	31	32	31.4(3.2)		80
0.75	5.3	4	3.9(0.4)	WL	10 - 10
0.8	6.4	6	5.9(0.6)		15
0.8	6.4	8	7.8(0.8)		20
0.9	10.8	10	9.8(1.0)		25
0.9	10.8	12	11.8(1.2)		30
0.9	10.8	14	13.7(1.4)		35
0.9	10.8	16	15.7(1.6)		40
1.0	17	18	17.7(1.8)		45
1.0	17	20	19.6(2.0)		50
1.0	17	22	21.6(2.2)		55
1.0	17	24	23.5(2.4)		60
1.1	24	26	25.5(2.6)		65
1.1	24	28	27.5(2.8)		70
1.1	24.2	32	31.4(3.2)		80
0.8	4.8	4	4.0(0.4)	WL	12 - 10
0.9	7.2	6	5.9(0.6)		15
0.9	7.2	8	7.8(0.8)		20
0.9	7.2	10	9.8(1.0)		25
1.0	10.5	12	11.8(1.2)		30
1.0	10.5	14	13.7(1.4)		35
1.0	10.5	16	15.7(1.6)		40
1.1	15.4	18	17.7(1.8)		45
1.1	15.4	20	19.6(2.0)		50
1.1	15.4	22	21.6(2.2)		55
1.2	22.8	24	23.5(2.4)		60
1.2	22.8	26	25.5(2.6)		65
1.2	22.8	28	27.5(2.8)		70
1.3	34.5	32	31.4(3.2)		80
0.85	5.1	4	4.0(0.4)	WL	13 - 10
0.9	6.3	6	5.9(0.6)		15
1.0	8.7	8	7.8(0.8)		20
1.0	8.7	10	9.8(1.0)		25
1.1	13.2	12	11.8(1.2)		30
1.1	13.2	14	13.7(1.4)		35
1.1	13.2	16	15.7(1.6)		40
1.1	13.2	18	17.7(1.8)		45
1.1	13.2	20	19.6(2.0)		50
1.1	13.2	22	21.6(2.2)		55
1.1	13.2	24	23.5(2.4)		60
1.2	18.6	26	25.5(2.6)		65
1.2	18.6	28	27.5(2.8)		70
1.4	37.8	32	31.4(3.2)		80
1.4	37.8	36	35.3(3.6)		90
1.0	7.5	6	5.9(0.6)	WL	14 - 15
1.0	7.5	8	7.8(0.8)		20
1.0	7.5	10	9.8(1.0)		25
1.1	11	12	11.8(1.2)		30
1.1	11	14	13.7(1.4)		35
1.1	11	16	15.7(1.6)		40
1.2	15.6	18	17.7(1.8)		45
1.2	15.6	20	19.6(2.0)		50
1.2	15.6	22	21.6(2.2)		55
1.2	15.6	24	23.5(2.4)		60
1.3	22.1	26	25.5(2.6)		65
1.3	22.1	28	27.5(2.8)		70
1.3	22.1	32	31.4(3.2)		80
1.5	43.5	36	35.3(3.6)		90

d	Solid Length	F Max.	Load N (kgf) max.	Part Number	
				Type	D - L
1.1	8.2	6	5.9(0.6)	WL	16 - 15
1.1	8.2	8	7.8(0.8)		20
1.2	10	10	9.8(1.0)		25
1.2	10	12	11.8(1.2)		30
1.2	10	14	13.7(1.4)		35
1.2	10	16	15.7(1.6)		40
1.4	21	18	17.7(1.8)		45
1.4	21	20	19.6(2.0)		50
1.4	21	22	21.6(2.2)		55
1.4	21	24	23.5(2.4)		60
1.5	29.7	26	25.5(2.6)		65
1.5	29.7	28	27.5(2.8)		70
1.5	29.7	32	31.4(3.2)		80
1.6	40	36	35.3(3.6)		90
1.5	10	8	23.5(2.4)	WL	18 - 20
1.6	12	10	29.4(3.0)		25
1.6	12	12	35.3(3.6)		30
1.7	16.2	14	41.2(4.2)		35
1.7	16.2	16	47.1(4.8)		40
1.8	19.8	18	53.0(5.4)		45
1.8	19.8	20	58.8(6.0)		50
1.8	19.8	22	64.7(6.6)		55
1.8	19.8	24	70.6(7.2)		60
2.0	32	26	76.5(7.8)		65
2.0	32	28	82.4(8.4)		70
2.0	32	32	94.1(9.6)		80
2.2	43	36	105.9(10.8)		90
2.2	43	40	117.7(12.0)		100
1.6	10.4	8	23.5(2.4)	WL	20 - 20
1.6	10.4	10	29.4(3.0)		25
1.7	12.8	12	35.3(3.6)		30
1.7	12.8	14	41.2(4.2)		35
1.8	15.8	16	47.1(4.8)		40
1.8	15.8	18	53.0(5.4)		45
1.8	15.8	20	58.8(6.0)		50
1.8	15.8	22	64.7(6.6)		55
2.0	24	24	70.6(7.2)		60
2.0	24	26	76.5(7.8)		65
2.0	24	28	82.4(8.4)		70
2.2	37.4	32	94.1(9.6)		80
2.2	37.4	36	105.9(10.8)		90
2.2	37.4	40	117.7(12.0)		100
1.7	10.8	8	23.5(2.4)	WL	22 - 20
1.8	13.3	10	29.4(3.0)		25
1.8	13.3	12	35.3(3.6)		30
1.8	13.3	14	41.2(4.2)		35
2.0	20	16	47.1(4.8)		40
2.0	20	18	53.0(5.4)		45
2.0	20	20	58.8(6.0)		50
2.0	20	22	64.7(6.6)		55
2.2	28.6	24	70.6(7.2)		60
2.2	28.6	26	76.5(7.8)		65
2.2	28.6	28	82.4(8.4)		70
2.2	28.6	32	94.1(9.6)		80
2.3	34.5	36	105.9(10.8)		90
2.3	34.5	40	117.7(12.0)		100
2.1	14	12	35.3(3.6)	WL	27 - 30
2.1	14	14	41.2(4.2)		35
2.3	19	16	47.1(4.8)		40
2.3	19	18	53.0(5.4)		45
2.3	19	20	58.8(6.0)		50
2.3	19	22	64.7(6.6)		55
2.5	28	24	70.6(7.2)		60
2.5	28	26	76.5(7.8)		65
2.6	34.5	28	82.4(8.4)		70
2.6	34.5	32	94.1(9.6)		80
2.8	46.7	36	105.9(10.8)		90
2.8	46.7	40	117.7(12.0)		100