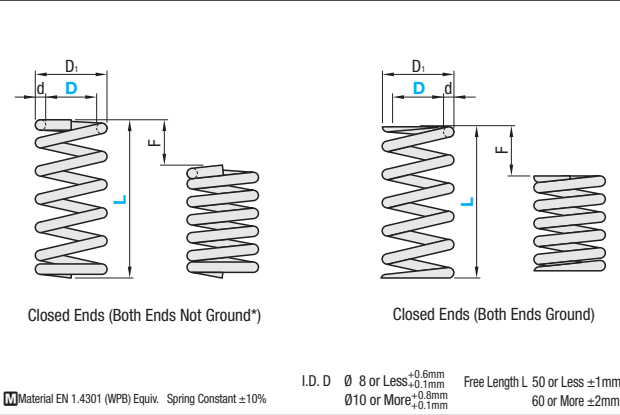
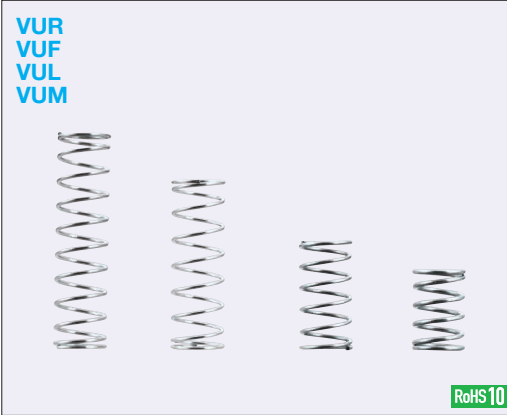


# Round Coil Springs

I.D. Referenced



RoHS 10 Material EN 1.4301 (WPB) Equiv. Spring Constant  $\pm 10\%$   
 I.D.  $\varnothing$  8 or Less  $+0.6mm$  Free Length L 50 or Less  $\pm 1mm$   
 $\varnothing 10$  or More  $+0.8mm$  60 or More  $\pm 2mm$

■VUR:Fmax. (Allowable Deflection) = Lx60% Spring Constant 0.29N/mm {0.03kgf/mm}

Part Number	O.D.	Wire Dia.	F	N(kgf)	Reference	Unit Price	Volume	Discount Rate	
Type D - L	D1	d	max.	max.	Pitch Solid Length Total Coils	1-3 pcs	4-9	10-19	20-100
VUR 5 - 15	5.9	0.45	9	2.65(0.27)	1.7	5.0	10		
20	12	3.53(0.36)	2.2	5.0	10				
25	15	4.41(0.45)	1.9	7.5	14				
30	18	5.29(0.54)	2.3	9.6	16.5				
35	21	6.17(0.63)	2.3	13.8	22				
40	24	7.06(0.72)	2.6						
45	27	7.94(0.81)	2.1						
50	30	8.82(0.90)	2.4						
VUR 6 - 15	7.0	0.50	9	2.65(0.27)	1.9	5.0	9		
20	12	3.53(0.36)	2.0	6.6	11				
25	15	4.41(0.45)	2.5	9.0	14				
30	18	5.29(0.54)	3.0	13.3	19.5				
35	21	6.17(0.63)	2.7	18.2	25				
40	24	7.06(0.72)	3.0						
45	27	7.94(0.81)	2.4						
50	30	8.82(0.90)	2.7						
55	33	9.70(0.99)	2.3						
60	36	10.58(1.08)	2.5						
VUR 8 - 20	9.3	0.65	12	3.53(0.36)	2.4	6.8	9.5		
25	15	4.41(0.45)	2.9	9.1	12				
30	18	5.29(0.54)	2.7	16.8	20				
35	21	6.17(0.63)	3.2	28.8	31				
40	24	7.06(0.72)	3.6						
45	27	7.94(0.81)	2.6						
50	30	8.82(0.90)	2.9						
55	33	9.70(0.99)	2.9						
60	36	10.58(1.08)	3.2						
65	39	11.47(1.17)	2.2						
70	42	12.36(1.26)	2.3						
80	48	14.12(1.44)	2.7						
VUR 10 - 20	11.4	0.70	12	3.53(0.36)	3.3	5.6	7		
25	15	4.41(0.45)	3.1	7.5	9				
30	18	5.29(0.54)	2.7	10.4	12				
35	21	6.17(0.63)	3.2	16.2	17				
40	24	7.06(0.72)	3.6						
45	27	7.94(0.81)	2.8						
50	30	8.82(0.90)	3.1						
55	33	9.70(0.99)	3.4						
60	36	10.58(1.08)	3.8						
65	39	11.47(1.17)	4.1						
70	42	12.36(1.26)	2.9						
80	48	14.12(1.44)	3.3						
VUR 12 - 25	13.6	0.80	15	4.41(0.45)	3.6	7.2	8		
30	18	5.29(0.54)	4.3	11.3	11.5				
35	21	6.17(0.63)	3.3	17.0	16				
40	24	7.06(0.72)	3.8	25.3	22				
45	27	7.94(0.81)	4.3						
50	30	8.82(0.90)	3.3						
55	33	9.70(0.99)	3.7						
60	36	10.58(1.08)	4.0						
65	39	11.47(1.17)	4.3						
70	42	12.35(1.26)	3.3						
80	48	14.11(1.44)	3.8						
90	54	15.88(1.62)	4.3						
VUR 16 - 35	18.0	1.00	21	6.17(0.63)	4.7	9.5	8.5		
40	24	7.06(0.72)	5.3	13.2	11				
45	27	7.94(0.81)	4.5						
50	30	8.82(0.90)	5.0						
55	33	9.70(0.99)	5.5						
60	36	10.58(1.08)	6.0						
65	39	11.47(1.17)	5.0						
70	42	12.35(1.26)	5.4						
80	48	14.11(1.44)	6.2						
90	54	15.88(1.62)	6.9						
100	60	17.64(1.80)	7.7						

■VUF:Fmax. (Allowable Deflection) = Lx45% Spring Constant 0.49N/mm {0.05kgf/mm}

Part Number	O.D.	Wire Dia.	F	N(kgf)	Reference	Unit Price	Volume	Discount Rate	
Type D - L	D1	d	max.	max.	Pitch Solid Length Total Coils	1-3 pcs	4-9	10-19	20-100
VUF 5 - 15*	6.0	0.50	6.8	3.33(0.34)	2.3	4.3	7.5		
20*	9.0	4.41(0.45)	3.1	8.4	13				
25	11.3	5.49(0.56)	2.1	16.1	22				
30	13.5	6.57(0.67)	2.5	22.5	29				
35	15.8	7.64(0.78)	2.9	31.36(3.20)	3.6				
40	18.0	8.82(0.90)	1.9						
45	20.3	9.90(1.01)	2.1						
50	22.5	10.98(1.12)	2.4						
VUF 6 - 15	7.2	0.60	6.8	3.33(0.34)	1.9	6.0	9		
20	9.0	4.41(0.45)	2.5	10.5	14				
25	11.3	5.49(0.56)	3.1	18.4	22				
30	13.5	6.57(0.67)	3.8	27.0	32				
35	15.8	7.64(0.78)	2.7						
40	18.0	8.82(0.90)	3.1						
45	20.3	9.90(1.01)	3.5						
50	22.5	10.98(1.12)	2.4						
55	24.8	12.05(1.23)	2.6						
60	27.0	13.23(1.35)	2.9						
VUF 8 - 20	9.4	0.70	9.0	4.41(0.45)	3.1	6.0	7.5		
25	11.3	5.49(0.56)	3.8	10.0	11.5				
30	13.5	6.57(0.67)	4.6	24.0	23				
35	15.8	7.64(0.78)	3.3						
40	18.0	8.82(0.90)	3.8						
45	20.3	9.90(1.01)	4.3						
50	22.5	10.98(1.12)	4.8						
55	24.8	12.05(1.23)	2.5						
60	27.0	13.23(1.35)	2.7						
65	29.3	14.31(1.46)	3.0						
70	31.5	15.39(1.57)	3.2						
80	36.0	17.64(1.80)	3.6						
VUF 10 - 20	11.6	0.80	9.0	4.41(0.45)	3.3	6.4	7		
25	13.5	6.57(0.67)	5.0	9.9	10				
30	15.8	7.64(0.78)	3.9	21.5	18.5				
35	18.0	8.82(0.90)	4.4						
40	20.3	9.90(1.01)	5.0						
45	22.5	10.98(1.12)	5.6						
50	24.8	12.05(1.23)	3.1						
55	27.0	13.23(1.35)	3.4						
60	29.3	14.31(1.46)	3.7						
65	31.5	15.39(1.57)	4.0						
70	36.0	17.64(1.80)	4.6						
VUF 12 - 25	14.0	1.00	11.3	5.49(0.56)	3.1	10.0	9		
30	13.5	6.57(0.67)	3.8	14.9	12.5				
35	15.8	7.64(0.78)	4.4	21.6	17				
40	18.0	8.82(0.90)	5.0						
45	20.3	9.90(1.01)	5.6						
50	22.5	10.98(1.12)	4.3						
55	24.8	12.05(1.23)	4.8						
60	27.0	13.23(1.35)	5.2						
65	29.3	14.31(1.46)	5.7						
70	31.5	15.39(1.57)	4.4						
80	36.0	17.64(1.80)	5.0						
90	40.5	19.80(2.02)	5.6						
VUF 16 - 35	18.4	1.20	15.8	7.64(0.78)	4.7	11.4	8.5		
40	18.0	8.82(0.90)	5.3	16.3	11.5				
45	20.3	9.90(1.01)	6.0	21.0	14				
50	22.5	10.98(1.12)	6.7						
55	24.8	12.05(1.23)	5.2						
60	27.0	13.23(1.35)	5.7						
65	29.3	14.31(1.46)	6.2						
70	31.5	15.39(1.57)	5.4						
80	36.0	17.64(1.80)	6.2						
90	40.5	19.80(2.02)	6.9						
100	45.0	22.05(2.25)	7.7						

■VUL:Fmax. (Allowable Deflection) = Lx40% Spring Constant 0.98N/mm{0.10kgf/mm}

Part Number	O.D.	Wire Dia.	F	N(kgf)	Reference	Unit Price	Volume	Discount Rate	
Type D - L	D1	d	max.	max.	Pitch Solid Length Total Coils	1-3 pcs	4-9	10-19	20-100
VUL 5 - 15	6.2	0.60	6	5.88(0.60)	2.5	4.8	7		
20	8	7.84(0.80)	3.3	9.1	12				
25	10	9.80(1.00)	2.3	16.0	19				
30	12	11.76(1.20)	2.7						
35	14	13.72(1.40)	3.2						
40	16	15.68(1.60)	2.2						
45	18	17.64(1.80)	2.5						
50	20	19.60(2.00)	2.8						
VUL 6 - 15	7.4	0.70	6	5.88(0.60)	2.1	6.3	8		
20	8	7.84(0.80)	2.9	10.4	12				
25	10	9.80(1.00)	2.3	16.2	17				
30	12	11.76(1.20)	2.7						
35	14	13.72(1.40)	3.2						
40	16	15.68(1.60)	2.5						
45	18	17.64(1.80)	2.8						
50	20	19.60(2.00)	3.1						
55	22	21.56(2.20)	3.4						
60	24	23.52(2.40)	3.8						
VUL 8 - 20	9.8	0.90	8	7.84(0.80)	2.4	9.5	9.5		
25	10	9.80(1.00)	2.9	14.0	13				
30	12	11.76(1.20)	2.5	28.8	23				
35	14	13.72(1.40)	2.9						
40	16	15.68(1.60)	3.3						
45	18	17.64(1.80)	3.8						
50	20	19.60(2.00)	4.2						
55	22	21.56(2.20)	4.6						
60	24	23.52(2.40)	2.7						
65	26	25.48(2.60)	3.0						
70	28	27.44(2.80)	3.2						
80	32	31.36(3.20)	3.6						
VUL 10 - 20	12.0	1.00	8	7.84(0.80)	3.1	8.5	7.5		
25	10	9.80(1.00)	3.8	12.0	10.0				
30	12	11.76(1.20)	3.2	25.4	18.5				
35	14	13.72(1.40)	3.7						
40	16	15.68(1.60)	4.2						
45	18	17.64(1.80)	4.7						
50	20	19.60(2.00)	5.3						
55	22	21.56(2.20)	3.1						
60	24	23.52							