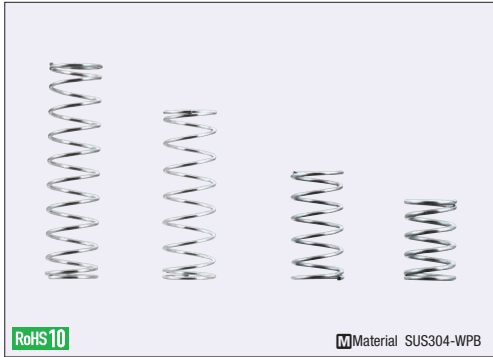


# Round Coil Springs

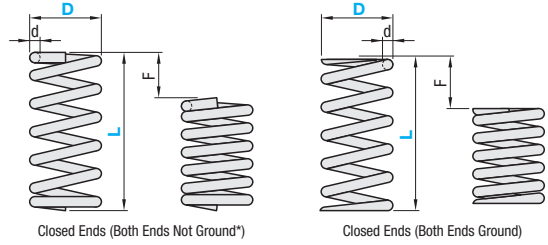
## O.D. Referenced Stainless Steel



RoHS 10

Material SUS304-WPB

### UBB



Spring Constant=10% O.D. D Ø10 or Less  $\begin{matrix} 0 \\ -0.5mm \end{matrix}$  Free Length L 50 or Less  $\pm 1.5mm$   
 Ø12 or More  $\begin{matrix} 0 \\ -0.8mm \end{matrix}$  55 or More  $\pm 2.5mm$

### UBB: Fmax. (Allowable Deflection)=LxFa%

Part Number Type D-L	d	Solid Length	F max.	N{kgf} max.	Fa%	Unit Price
<b>UBB4-5*</b>						
10	0.55	3.3	1.25	6.1 (0.63)	25	
15	0.7	10.3	3.75	18.4 (1.9)		
20	0.75	14.4	5	24.5 (2.5)		
25	0.8	19.4	5	24.5 (2.5)	20	
<b>UBB5-5</b>						
10	0.6	2.9	1.25	6.1 (0.63)	25	
15	0.75	6.9	2.5	12.3 (1.3)		
20	0.8	9.8	3.75	18.4 (1.9)		
25	0.85	13.4	5	24.5 (2.5)	20	
30	0.9	17.8	6.25	30.6 (3.1)	15	
35	0.9	21.8	7.5	36.8 (3.8)	10	
<b>UBB6-5</b>						
10	0.8	3.6	1.25	12.3 (1.3)	25	
15	0.9	6.8	2.5	24.5 (2.5)		
20	1.1	10.5	3.75	36.8 (3.8)		
25	1.1	14.6	5	49.0 (5.0)	20	
30	1.1	17.9	6.25	61.3 (6.3)	15	
35	1.2	23.1	6	58.8 (6.0)	10	
40	1.2	27.3	7	68.6 (7.0)	5	
45	1.3	31.2	8	78.5 (8.0)	0	
50	1.3	34.8	9	88.3 (9.0)	0	
60	1.3	38.4	10	98.1 (10.0)	0	
70	1.3	44.2	9	88.3 (9.0)	0	
80	1.4	58.5	10.5	103 (10.5)	0	
<b>UBB8-10</b>						
15	1.1	6.9	2.5	24.5 (2.5)	25	
20	1.2	9.9	3.75	36.8 (3.8)		
25	1.3	14.0	5	49.0 (5.0)		
30	1.3	14.5	6.25	61.3 (6.3)	20	
35	1.4	21.4	7.5	73.5 (7.5)	15	
40	1.4	22.0	8.75	85.8 (8.8)	10	
45	1.5	28.9	10	98.1 (10.0)	5	
50	1.5	32.6	11.25	110 (11.3)	0	
<b>UBB10-10</b>						
15	1.3	7.2	2.5	24.5 (2.5)	25	
20	1.4	10.2	3.75	36.8 (3.8)		
25	1.5	13.9	5	49.0 (5.0)		
30	1.5	13.9	5	49.0 (5.0)	20	
35	1.5	16.1	6.25	61.3 (6.3)	15	
40	1.6	20.4	7.5	73.5 (7.5)	10	
45	1.6	22.8	8.75	85.8 (8.8)	5	
50	1.7	27.2	10	98.1 (10.0)	0	
60	1.7	30.6	11.25	110 (11.3)	0	
70	1.8	36.5	12.5	123 (12.5)	0	
80	1.8	41.4	15	147 (15.0)	0	
<b>UBB12-15</b>						
20	1.5	9.4	3.75	36.8 (3.8)	25	
25	1.6	12.4	5	49.0 (5.0)		
30	1.7	16.2	6.25	61.3 (6.3)		
35	1.8	20.3	7.5	73.5 (7.5)	20	
40	1.9	28.0	10	98.1 (10.0)	15	
50	2	35.5	12.5	123 (12.5)	10	
60	2.1	43.6	15	147 (15.0)	5	
70	2.1	48.8	17.5	172 (17.5)	0	
80	2.2	58.5	20	196 (20.0)	0	

Part Number Type D-L	d	Solid Length	F max.	N{kgf} max.	Fa%	Unit Price
<b>UBB13-15</b>						
20	1.8	9.5	3.75	73.5 (7.5)	25	
25	1.9	12.9	5	98.1 (10.0)		
30	2.1	20.5	7.5	147 (15.0)		
35	2.3	28.2	10	196 (20.0)	20	
40	2.3	32.2	11.25	221 (22.5)	15	
45	2.4	36.0	12.5	245 (25.0)	10	
50	2.5	44.4	12	235 (24.0)	5	
60	2.6	54.0	14	275 (28.0)	0	
<b>UBB14-15</b>						
20	1.9	10.0	3.75	73.5 (7.5)	25	
25	2	13.5	5	98.1 (10.0)		
30	2.1	20.5	7.5	147 (15.0)		
35	2.3	24.7	8.75	172 (17.5)	20	
40	2.4	28.2	10	196 (20.0)	15	
45	2.6	43.6	15	294 (30.0)	10	
50	2.7	61.4	16	314 (32.0)	5	

Part Number Type D-L	d	Solid Length	F max.	N{kgf} max.	Fa%	Unit Price
<b>UBB16-15</b>						
20	2	10.0	3.75	73.5 (7.5)	25	
25	2.1	12.1	5	98.1 (10.0)		
30	2.3	17.3	6.25	123 (12.5)		
35	2.4	21.0	7.5	147 (15.0)	20	
40	2.5	24.4	8.75	172 (17.5)	15	
45	2.6	28.0	10	196 (20.0)	10	
50	2.7	31.7	11.25	221 (22.5)	5	
60	2.7	35.8	12.5	245 (25.0)	0	
70	2.9	43.5	15	294 (30.0)	0	
80	2.9	49.4	17.5	343 (35.0)	0	
<b>UBB20-25</b>						
30	3	59.3	16	314 (32.0)	20	
35	2.9	16.7	6.25	184 (18.8)	25	
40	3	20.3	7.5	221 (22.5)		
45	3	22.7	8.75	257 (26.3)		
50	3.2	27.2	10	294 (30.0)	20	
55	3.2	29.6	9	265 (27.0)	15	
60	3.4	38.3	10	294 (30.0)	10	
65	3.5	44.6	12	353 (36.0)	5	

kgf (Load)=N/mm (Spring Constant) x 0.101972 x F (Deflection)  
 (kgf)=N x 0.101972

- For Types marked with \*, both ends are not ground.
- The values of solid length are for reference only.
- There may be some variations depending on the lot.
- Usage Count: 1 Million Times

### Spring Constant

ⓂD12 is applicable to UY, UR, UF, UL and UBB Types only. D14 is applicable to UBB Type only.

D	Type	UV	UY	UR	UF	UL	UTT	UM	UH	UBB
2			0.05(0.005)	0.2(0.02)	0.3(0.03)	0.5(0.05)				
3										
4	N/mm 0.05 (kgf/mm) {0.005}	N/mm 0.098 (kgf/mm) {0.01}					N/mm 1.5 (kgf/mm) {0.15}	2.0(0.2)	2.9(0.3)	4.9(0.5)
5										
6			N/mm 0.29 (kgf/mm) {0.03}	N/mm 0.49 (kgf/mm) {0.05}	N/mm 0.98 (kgf/mm) {0.1}			N/mm 5.9 (kgf/mm) {0.6}	N/mm 9.8 (kgf/mm) {1.0}	
8										
10							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}
12			N/mm 0.2 (kgf/mm) {0.02}							
13										
14										
16										
20			0.3(0.03)	0.5(0.05)	0.98(0.1)	2.9(0.3)	3.9(0.4)	4.9(0.5)	14.7(1.5)	28.4(3.0)
Fmax.	F=Lx70%	F=LxFa%	F=LxFa%	F=Lx45%	F=Lx40%	F=LxFa%	F=LxFa%	F=LxFa%	F=LxFa%	F=LxFa%



Ordering Example

Part Number  
**UBB16-80**