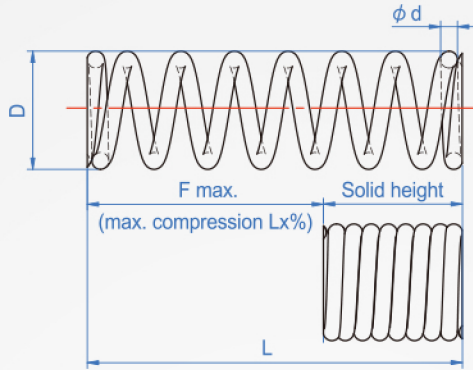


60% Compression

# CB133

3/9

- ◆ D Tolerance : Below  $\phi 16$   $\begin{matrix} +0 \\ -0.5\text{mm} \end{matrix}$
- ◆ L : 50以下 $\pm 1.5\text{mm}$
- ◆ End grinding : **No grinding**
- ◆ Frequency of use : About 100 million times.



Material	Heat resistance	Curl direction
SWP Piano wire JIS G 3522	80°	Right



### How to order

1 2 3  
 CB133 - 3 - 20 - 0.30  
 TYPE    D    L    d

			Unit : mm				
D	L	d	Solid height	max. compression L x %	F max.	Load N/max	Modulus $\pm 10\%$
3	5	0.23	1.8	60%	3	0.9	0.3 N/mm
	10	0.25	2.5	60%	6	1.8	
	15	0.30	5.4	60%	9	2.6	
	20	0.30	5.4	60%	12	3.5	
	25	0.32	7.4	60%	15	4.4	
	30	0.32	8.3	60%	18	5.3	
	35	0.35	11.7	60%	21	6.2	
40	0.35	13.5	60%	24	7.1		
4	5	0.26	1.6	60%	3	0.9	0.3 N/mm
	10	0.29	2.2	60%	6	1.8	
	15	0.32	3.2	60%	9	2.6	
	20	0.38	4.9	60%	12	3.5	
	25	0.38	8.4	60%	15	4.4	
	30	0.40	9.0	60%	18	5.3	
	35	0.40	9.0	60%	21	6.2	
	40	0.45	16.0	60%	24	7.1	
	45	0.45	16.0	60%	27	7.9	
	50	0.45	16.0	60%	30	8.8	
55	0.45	16.6	60%	33	9.7		
60	0.50	23.5	60%	36	10.6		
65	0.50	25.0	60%	39	11.5		
70	0.50	25.0	60%	42	12.4		
5	5	0.30	1.6	60%	3	0.9	0.3 N/mm
	10	0.35	2.8	60%	6	1.8	
	15	0.35	2.8	60%	9	2.6	
	20	0.40	4.8	60%	12	3.5	
	25	0.45	8.0	60%	15	4.4	
	30	0.45	8.0	60%	18	5.3	
	35	0.50	12.5	60%	21	6.2	
	40	0.50	12.5	60%	24	7.1	
	45	0.55	17.6	60%	27	7.9	
	50	0.55	18.0	60%	30	8.8	
55	0.55	20.0	60%	33	9.7		
60	0.55	21.6	60%	36	10.6		
65	0.55	21.6	60%	39	11.5		
70	0.55	21.6	60%	42	12.4		
6	5	0.32	1.6	60%	3	0.9	0.3 N/mm
	10	0.40	3.2	60%	6	1.8	
	15	0.40	3.2	60%	9	2.6	
	20	0.50	7.5	60%	12	3.5	
	25	0.50	7.5	60%	15	4.4	
	30	0.50	7.5	60%	18	5.3	
	35	0.55	12.3	60%	21	6.2	
	40	0.55	12.3	60%	24	7.1	
	45	0.60	17.4	60%	27	7.9	
	50	0.60	17.4	60%	30	8.8	
	55	0.60	18.7	60%	33	9.7	
	60	0.60	18.7	60%	36	10.6	
	65	0.60	18.7	60%	39	11.5	
70	0.60	18.7	60%	42	12.4		
80	0.65	28.1	60%	48	14.1		
8	10	0.45	2.7	60%	6	1.8	0.3 N/mm
	15	0.50	4.0	60%	9	2.6	
	20	0.50	4.0	60%	12	3.5	
	25	0.55	5.8	60%	15	4.4	
	30	0.60	8.4	60%	18	5.3	
	35	0.60	8.4	60%	21	6.2	
	40	0.60	8.4	60%	24	7.1	
	45	0.70	16.8	60%	27	7.9	
	50	0.70	16.8	60%	30	8.8	
	55	0.70	16.8	60%	33	9.7	
60	0.70	16.8	60%	36	10.6		
65	0.70	16.8	60%	39	11.5		
70	0.70	16.8	60%	42	12.4		
80	0.75	23.4	60%	48	14.1		
10	10	0.55	3.6	60%	6	1.8	0.3 N/mm
	15	0.60	4.8	60%	9	2.6	
	20	0.65	6.5	60%	12	3.5	
	25	0.65	6.5	60%	15	4.4	

			Unit : mm				
D	L	d	Solid height	max. compression L x %	F max.	Load N/max	Modulus $\pm 10\%$
10	30	0.70	9.1	60%	18	5.3	0.3 N/mm
	35	0.70	9.1	60%	21	6.2	
	40	0.70	9.1	60%	24	7.1	
	45	0.80	16.6	60%	27	7.9	
	50	0.80	16.6	60%	30	8.8	
	55	0.80	16.6	60%	33	9.7	
	60	0.85	22.1	60%	36	10.6	
	65	0.85	22.1	60%	39	11.5	
70	0.85	22.1	60%	42	12.4		
80	0.90	29.1	60%	48	14.1		
12	10	0.60	3.6	60%	6	1.8	0.3 N/mm
	15	0.65	4.6	60%	9	2.6	
	20	0.65	4.6	60%	12	3.5	
	25	0.70	6.0	60%	15	4.4	
	30	0.70	6.0	60%	18	5.3	
	35	0.70	6.0	60%	21	6.2	
	40	0.80	10.4	60%	24	7.1	
	45	0.80	10.4	60%	27	7.9	
	50	0.90	17.1	60%	30	8.8	
	55	0.90	17.1	60%	33	9.7	
60	0.90	17.1	60%	36	10.6		
65	0.90	17.1	60%	39	11.5		
70	0.90	17.1	60%	42	12.4		
80	1.00	28.0	60%	48	14.1		
13	10	0.60	3.2	60%	6	1.8	0.3 N/mm
	15	0.70	4.9	60%	9	2.6	
	20	0.70	4.9	60%	12	3.5	
	25	0.80	8.4	60%	15	4.4	
	30	0.80	8.4	60%	18	5.3	
	35	0.80	8.4	60%	21	6.2	
	40	0.90	13.5	60%	24	7.1	
	45	0.90	13.5	60%	27	7.9	
	50	0.90	13.5	60%	30	8.8	
	55	0.90	13.5	60%	33	9.7	
60	1.00	22.0	60%	36	10.6		
65	1.00	22.0	60%	39	11.5		
70	1.00	22.0	60%	42	12.4		
80	1.00	22.0	60%	48	14.1		
90	1.00	22.0	60%	54	15.9		
14	15	0.70	4.6	60%	9	2.6	0.3 N/mm
	20	0.75	5.6	60%	12	3.5	
	25	0.80	7.2	60%	15	4.4	
	30	0.80	7.2	60%	18	5.3	
	35	0.80	7.2	60%	21	6.2	
	40	0.90	11.3	60%	24	7.1	
	45	0.90	11.3	60%	27	7.9	
	50	0.90	11.3	60%	30	8.8	
	55	1.00	18.0	60%	33	9.7	
	60	1.00	18.0	60%	36	10.6	
	65	1.00	18.0	60%	39	11.5	
	70	1.00	18.0	60%	42	12.4	
	80	1.10	28.6	60%	48	14.1	
90	1.10	28.6	60%	54	15.9		
16	15	0.75	4.5	60%	9	2.6	0.3 N/mm
	20	0.80	5.6	60%	12	3.5	
	25	0.90	8.0	60%	15	4.4	
	30	0.90	8.0	60%	18	5.3	
	35	0.90	8.0	60%	21	6.2	
	40	1.00	13.0	60%	24	7.1	
	45	1.00	13.0	60%	27	7.9	
	50	1.00	13.0	60%	30	8.8	
	55	1.00	13.0	60%	33	9.7	
	60	1.10	20.0	60%	36	10.6	
65	1.10	20.0	60%	39	11.5		
70	1.10	20.0	60%	42	12.4		
80	1.10	20.0	60%	48	14.1		
90	1.20	28.8	60%	54	15.9		

Example : CB133-5-30-0.45

Length 30 (ex. Tensile 5mm) to load 25

Load=Modulus x Extension

1.5N=0.3N/mm x 5mm

※Load calculation formula : Load(N) = Modulus x Compression

※Conversion : kgf=N x 0.102

※Solid height is the reference value, there will be little difference in the production.