

COIL SPRING

強力ばね TB : 極重荷重

●規格仕様

外径 (mm)	内径 (mm)	自由長 (mm)	ばね定数		自由長×16.0% 100万回		自由長×18.0% 50万回		自由長×20.0% 30万回		カタログ No.
			(N/mm)	(kgf/mm)	たわみ (mm)	荷重 N[kgf]	たわみ (mm)	荷重 N[kgf]	たわみ (mm)	荷重 N[kgf]	
8	4	10	166.11	{16.94}	1.6	255 {26.0}	1.8	299 {30.5}	2.0	343 {35.0}	TB 8 × 10
		15	110.74	{11.29}	2.4		2.7		3.0		
		20	83.06	{8.47}	3.2		3.6		4.0		
		25	66.44	{6.78}	4.0		4.5		5.0		
		30	55.37	{5.65}	4.8		5.4		6.0		
		35	47.46	{4.84}	5.6		6.3		7.0		
		40	41.53	{4.23}	6.4		7.2		8.0		
		45	36.91	{3.76}	7.2		8.1		9.0		
		50	33.22	{3.39}	8.0		9.0		10.0		
		55	30.20	{3.08}	8.8		9.9		11.0		
		60	27.69	{2.82}	9.6		10.8		12.0		
		65	25.56	{2.61}	10.4		11.7		13.0		
		70	23.73	{2.42}	11.2		12.6		14.0		
		75	22.15	{2.26}	12.0		13.5		15.0		
		80	20.76	{2.12}	12.8		14.4		16.0		
10	5	20	111.67	{11.39}	3.2	353 {36.0}	3.6	402 {41.0}	4.0	441 {45.0}	TB 10 × 20
		25	89.33	{9.11}	4.0		4.5		5.0		
		30	74.44	{7.59}	4.8		5.4		6.0		
		35	63.81	{6.51}	5.6		6.3		7.0		
		40	55.83	{5.69}	6.4		7.2		8.0		
		45	49.63	{5.06}	7.2		8.1		9.0		
		50	44.67	{4.55}	8.0		9.0		10.0		
		55	40.61	{4.14}	8.8		9.9		11.0		
		60	37.22	{3.80}	9.6		10.8		12.0		
		65	34.36	{3.50}	10.4		11.7		13.0		
		70	31.90	{3.25}	11.2		12.6		14.0		
		75	29.78	{3.04}	12.0		13.5		15.0		
		80	27.92	{2.85}	12.8		14.4		16.0		
		90	24.81	{2.53}	14.4		16.2		18.0		
		20	141.67	{14.45}	3.2		3.6		4.0		
25	113.33	{11.56}	4.0	4.5	5.0						
30	94.44	{9.63}	4.8	5.4	6.0						
35	80.95	{8.25}	5.6	6.3	7.0						
40	70.83	{7.22}	6.4	7.2	8.0						
45	62.96	{6.42}	7.2	8.1	9.0						
50	56.67	{5.78}	8.0	9.0	10.0						
55	51.52	{5.25}	8.8	9.9	11.0						
60	47.22	{4.82}	9.6	10.8	12.0						
65	43.59	{4.44}	10.4	11.7	13.0						
70	40.48	{4.13}	11.2	12.6	14.0						
75	37.78	{3.85}	12.0	13.5	15.0						
80	35.42	{3.61}	12.8	14.4	16.0						
90	31.48	{3.21}	14.4	16.2	18.0						
12	6	20	141.67	{14.45}	3.2	451 {46.0}	3.6	510 {52.0}	4.0	569 {58.0}	TB 12 × 20
		25	113.33	{11.56}	4.0		4.5		5.0		
		30	94.44	{9.63}	4.8		5.4		6.0		
		35	80.95	{8.25}	5.6		6.3		7.0		
		40	70.83	{7.22}	6.4		7.2		8.0		
		45	62.96	{6.42}	7.2		8.1		9.0		
		50	56.67	{5.78}	8.0		9.0		10.0		
		55	51.52	{5.25}	8.8		9.9		11.0		
		60	47.22	{4.82}	9.6		10.8		12.0		
		65	43.59	{4.44}	10.4		11.7		13.0		
		70	40.48	{4.13}	11.2		12.6		14.0		
		75	37.78	{3.85}	12.0		13.5		15.0		
		80	35.42	{3.61}	12.8		14.4		16.0		
		90	31.48	{3.21}	14.4		16.2		18.0		
		25	148.22	{15.11}	4.0		4.5		5.0		
30	123.52	{12.60}	4.8	5.4	6.0						
35	105.87	{10.80}	5.6	6.3	7.0						
40	92.64	{9.45}	6.4	7.2	8.0						
45	82.35	{8.40}	7.2	8.1	9.0						
50	74.11	{7.56}	8.0	9.0	10.0						
55	67.37	{6.87}	8.8	9.9	11.0						
60	61.76	{6.30}	9.6	10.8	12.0						
65	57.01	{5.81}	10.4	11.7	13.0						
70	52.94	{5.40}	11.2	12.6	14.0						
75	49.41	{5.04}	12.0	13.5	15.0						
80	46.32	{4.72}	12.8	14.4	16.0						
90	41.17	{4.20}	14.4	16.2	18.0						
100	37.06	{3.78}	16.0	18.0	20.0						
14	7	25	148.22	{15.11}	4.0	588 {60.0}	4.5	667 {68.0}	5.0	736 {75.1}	TB 14 × 25
		30	123.52	{12.60}	4.8		5.4		6.0		
		35	105.87	{10.80}	5.6		6.3		7.0		
		40	92.64	{9.45}	6.4		7.2		8.0		
		45	82.35	{8.40}	7.2		8.1		9.0		
		50	74.11	{7.56}	8.0		9.0		10.0		
		55	67.37	{6.87}	8.8		9.9		11.0		
		60	61.76	{6.30}	9.6		10.8		12.0		
		65	57.01	{5.81}	10.4		11.7		13.0		
		70	52.94	{5.40}	11.2		12.6		14.0		
		75	49.41	{5.04}	12.0		13.5		15.0		
		80	46.32	{4.72}	12.8		14.4		16.0		
		90	41.17	{4.20}	14.4		16.2		18.0		
		100	37.06	{3.78}	16.0		18.0		20.0		

① : 自由長×20.0%を超えるたわみでは使用しないでください。

② : 設置の際には、初期圧を掛けてください。

N (ニュートン) = Kgf (キログラム) × 9.80665

荷重 (N) = ばね定数 (N/mm) × たわみ (mm)

●規格仕様

外径 (mm)	内径 (mm)	自由長 (mm)	ばね定数		自由長×16.0% 100万回		自由長×18.0% 50万回		自由長×20.0% 30万回		カタログ No.
			(N/mm)	(kgf/mm)	たわみ (mm)	荷重 N(kgf)	たわみ (mm)	荷重 N(kgf)	たわみ (mm)	荷重 N(kgf)	
16	8	25	196.22	{20.01}	4.0	785 {80.0}	4.5	883 {90.0}	5.0	981 {100.0}	TB 16 × 25
		30	163.52	{16.67}	4.8		5.4		6.0		
		35	140.16	{14.29}	5.6		6.3		7.0		
		40	122.64	{12.51}	6.4		7.2		8.0		
		45	109.01	{11.12}	7.2		8.1		9.0		
		50	98.11	{10.00}	8.0		9.0		10.0		
		55	89.19	{9.10}	8.8		9.9		11.0		
		60	81.76	{8.34}	9.6		10.8		12.0		
		65	75.47	{7.70}	10.4		11.7		13.0		
		70	70.08	{7.15}	11.2		12.6		14.0		
		75	65.41	{6.67}	12.0		13.5		15.0		
		80	61.32	{6.25}	12.8		14.4		16.0		
		90	54.51	{5.56}	14.4		16.2		18.0		
		100	49.06	{5.00}	16.0		18.0		20.0		
		125	39.24	{4.00}	20.0		22.5		25.0		
18	9	25	246.22	{25.11}	4.0	981 {100.0}	4.5	1,108 {113.0}	5.0	1,226 {125.0}	TB 18 × 25
		30	205.19	{20.92}	4.8		5.4		6.0		
		35	175.87	{17.93}	5.6		6.3		7.0		
		40	153.89	{15.69}	6.4		7.2		8.0		
		45	136.79	{13.95}	7.2		8.1		9.0		
		50	123.11	{12.55}	8.0		9.0		10.0		
		55	111.92	{11.41}	8.8		9.9		11.0		
		60	102.59	{10.46}	9.6		10.8		12.0		
		65	94.70	{9.66}	10.4		11.7		13.0		
		70	87.94	{8.97}	11.2		12.6		14.0		
		75	82.07	{8.37}	12.0		13.5		15.0		
		80	76.94	{7.85}	12.8		14.4		16.0		
		90	68.40	{6.97}	14.4		16.2		18.0		
		100	61.56	{6.28}	16.0		18.0		20.0		
		125	49.24	{5.02}	20.0		22.5		25.0		
20	10	25	313.78	{32.00}	4.0	1,255 {128.0}	4.5	1,412 {144.0}	5.0	1,569 {160.0}	TB 20 × 25
		30	261.48	{26.66}	4.8		5.4		6.0		
		35	224.13	{22.85}	5.6		6.3		7.0		
		40	196.11	{20.00}	6.4		7.2		8.0		
		45	174.32	{17.78}	7.2		8.1		9.0		
		50	156.89	{16.00}	8.0		9.0		10.0		
		55	142.63	{14.54}	8.8		9.9		11.0		
		60	130.74	{13.33}	9.6		10.8		12.0		
		65	120.68	{12.31}	10.4		11.7		13.0		
		70	112.06	{11.43}	11.2		12.6		14.0		
		75	104.59	{10.67}	12.0		13.5		15.0		
		80	98.06	{10.00}	12.8		14.4		16.0		
		90	87.16	{8.89}	14.4		16.2		18.0		
		100	78.44	{8.00}	16.0		18.0		20.0		
		125	62.76	{6.40}	20.0		22.5		25.0		
150	52.30	{5.33}	24.0	27.0	30.0						
22	11	25	383.56	{39.11}	4.0	1,530 {156.0}	4.5	1,726 {176.0}	5.0	1,912 {195.0}	TB 22 × 25
		30	319.63	{32.59}	4.8		5.4		6.0		
		35	273.97	{27.94}	5.6		6.3		7.0		
		40	239.72	{24.44}	6.4		7.2		8.0		
		45	213.09	{21.73}	7.2		8.1		9.0		
		50	191.78	{19.56}	8.0		9.0		10.0		
		55	174.34	{17.78}	8.8		9.9		11.0		
		60	159.81	{16.30}	9.6		10.8		12.0		
		65	147.52	{15.04}	10.4		11.7		13.0		
		70	136.98	{13.97}	11.2		12.6		14.0		
		75	127.85	{13.04}	12.0		13.5		15.0		
		80	119.86	{12.22}	12.8		14.4		16.0		
		90	106.54	{10.86}	14.4		16.2		18.0		
		100	95.89	{9.78}	16.0		18.0		20.0		
		125	76.71	{7.82}	20.0		22.5		25.0		
150	63.93	{6.52}	24.0	27.0	30.0						

- ①：自由長×20.0%を超えるたわみでは使用しないでください。
- ②：設置の際には、初期圧を掛けてください。

N (ニュートン) = Kgf (キログラム) × 9.80665
 荷重 (N) = ばね定数 (N/mm) × たわみ (mm)

COIL SPRING

強力ばね TB : 極重荷重

●規格仕様

外径 (mm)	内径 (mm)	自由長 (mm)	ばね定数		自由長×16.0% 100万回		自由長×18.0% 50万回		自由長×20.0% 30万回		カタログ No.
			(N/mm)	(kgf/mm)	たわみ (mm)	荷重 N{kgf}	たわみ (mm)	荷重 N{kgf}	たわみ (mm)	荷重 N{kgf}	
25	12.5	25	482.22	{49.17}	4.0	1,922 {196.0}	4.5	2,170 {221.3}	5.0	2,400 {244.7}	TB 25 × 25
		30	401.85	{40.98}	4.8		5.4		6.0		
		35	344.44	{35.12}	5.6		6.3		7.0		
		40	301.39	{30.73}	6.4		7.2		8.0		
		45	267.90	{27.32}	7.2		8.1		9.0		
		50	241.11	{24.59}	8.0		9.0		10.0		
		55	219.19	{22.35}	8.8		9.9		11.0		
		60	200.93	{20.49}	9.6		10.8		12.0		
		65	185.47	{18.91}	10.4		11.7		13.0		
		70	172.22	{17.56}	11.2		12.6		14.0		
		75	160.74	{16.39}	12.0		13.5		15.0		
		80	150.69	{15.37}	12.8		14.4		16.0		
		90	133.95	{13.66}	14.4		16.2		18.0		
		100	120.56	{12.29}	16.0		18.0		20.0		
		125	96.44	{9.83}	20.0		22.5		25.0		
		150	80.37	{8.20}	24.0		27.0		30.0		
		175	68.89	{7.02}	28.0		31.5		35.0		
200	60.28	{6.15}	32.0	36.0	40.0						
27	13.5	25	568.89	{58.01}	4.0	2,280 {232.5}	4.5	2,560 {261.1}	5.0	2,840 {289.6}	TB 27 × 25
		30	474.07	{48.34}	4.8		5.4		6.0		
		35	406.35	{41.44}	5.6		6.3		7.0		
		40	355.56	{36.26}	6.4		7.2		8.0		
		45	316.05	{32.23}	7.2		8.1		9.0		
		50	284.44	{29.01}	8.0		9.0		10.0		
		55	258.59	{26.37}	8.8		9.9		11.0		
		60	237.04	{24.17}	9.6		10.8		12.0		
		65	218.80	{22.31}	10.4		11.7		13.0		
		70	203.17	{20.72}	11.2		12.6		14.0		
		75	189.63	{19.34}	12.0		13.5		15.0		
		80	177.78	{18.13}	12.8		14.4		16.0		
		90	158.02	{16.11}	14.4		16.2		18.0		
		100	142.22	{14.50}	16.0		18.0		20.0		
		125	113.78	{11.60}	20.0		22.5		25.0		
		150	94.81	{9.67}	24.0		27.0		30.0		
		175	81.27	{8.29}	28.0		31.5		35.0		
200	71.11	{7.25}	32.0	36.0	40.0						
30	15	25	706.67	{72.06}	4.0	2,820 {287.6}	4.5	3,180 {324.3}	5.0	3,530 {360.0}	TB 30 × 25
		30	588.89	{60.05}	4.8		5.4		6.0		
		35	504.76	{51.47}	5.6		6.3		7.0		
		40	441.67	{45.04}	6.4		7.2		8.0		
		45	392.59	{40.03}	7.2		8.1		9.0		
		50	353.33	{36.03}	8.0		9.0		10.0		
		55	321.21	{32.75}	8.8		9.9		11.0		
		60	294.44	{30.02}	9.6		10.8		12.0		
		65	271.79	{27.72}	10.4		11.7		13.0		
		70	252.38	{25.74}	11.2		12.6		14.0		
		75	235.56	{24.02}	12.0		13.5		15.0		
		80	220.83	{22.52}	12.8		14.4		16.0		
		90	196.30	{20.02}	14.4		16.2		18.0		
		100	176.67	{18.01}	16.0		18.0		20.0		
		125	141.33	{14.41}	20.0		22.5		25.0		
		150	117.78	{12.01}	24.0		27.0		30.0		
		175	100.95	{10.29}	28.0		31.5		35.0		
200	88.33	{9.01}	32.0	36.0	40.0						
35	17.5	40	600.00	{61.18}	6.4	3,840 {391.6}	7.2	4,320 {440.5}	8.0	4,810 {490.5}	TB 35 × 40
		45	533.33	{54.38}	7.2		8.1		9.0		
		50	480.00	{48.95}	8.0		9.0		10.0		
		55	436.36	{44.50}	8.8		9.9		11.0		
		60	400.00	{40.79}	9.6		10.8		12.0		
		65	369.23	{37.65}	10.4		11.7		13.0		
		70	342.86	{34.96}	11.2		12.6		14.0		
		75	320.00	{32.63}	12.0		13.5		15.0		
		80	300.00	{30.59}	12.8		14.4		16.0		
		90	266.67	{27.19}	14.4		16.2		18.0		
		100	240.00	{24.47}	16.0		18.0		20.0		
		125	192.00	{19.58}	20.0		22.5		25.0		
		150	160.00	{16.32}	24.0		27.0		30.0		
		175	137.14	{13.98}	28.0		31.5		35.0		
		200	120.00	{12.24}	32.0		36.0		40.0		

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②：設置の際には、初期圧を掛けてください。

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荷重 (N) = ばね定数 (N/mm) × たわみ (mm)

●規格仕様

外径 (mm)	内径 (mm)	自由長 (mm)	ばね定数		自由長×16.0% 100万回		自由長×18.0% 50万回		自由長×20.0% 30万回		カタログ No.					
			(N/mm)	(kgf/mm)	たわみ (mm)	荷重 N(kgf)	たわみ (mm)	荷重 N(kgf)	たわみ (mm)	荷重 N(kgf)						
40	20	40	784.72	{80.02}	6.4	5,020 {511.9}	7.2	5,650 {576.1}	8.0	6,280 {640.4}	TB 40 × 40					
		45	697.53	{71.13}	7.2		8.1		9.0		45					
		50	627.78	{64.02}	8.0		9.0		10.0		50					
		55	570.71	{58.20}	8.8		9.9		11.0		55					
		60	523.15	{53.35}	9.6		10.8		12.0		60					
		65	482.91	{49.24}	10.4		11.7		13.0		65					
		70	448.41	{45.73}	11.2		12.6		14.0		70					
		75	418.52	{42.68}	12.0		13.5		15.0		75					
		80	392.36	{40.01}	12.8		14.4		16.0		80					
		90	348.77	{35.56}	14.4		16.2		18.0		90					
		100	313.89	{32.01}	16.0		18.0		20.0		100					
		125	251.11	{25.61}	20.0		22.5		25.0		125					
		150	209.26	{21.34}	24.0		27.0		30.0		150					
		175	179.37	{18.29}	28.0		31.5		35.0		175					
		200	156.94	{16.00}	32.0		36.0		40.0		200					
		225	139.51	{14.23}	36.0		40.5		45.0		225					
		250	125.56	{12.80}	40.0		45.0		50.0		250					
		275	114.14	{11.64}	44.0		49.5		55.0		275					
		300	104.63	{10.67}	48.0		54.0		60.0		300					
		50	25	50	981.11		{100.0}		8.0		7,850 {800.5}	9.0	8,830 {900.4}	10.0	9,810 {1000}	TB 50 × 50
55	891.92			{90.95}	8.8	9.9	11.0	55								
60	817.59			{83.37}	9.6	10.8	12.0	60								
65	754.70			{76.96}	10.4	11.7	13.0	65								
70	700.79			{71.46}	11.2	12.6	14.0	70								
75	654.07			{66.70}	12.0	13.5	15.0	75								
80	613.19			{62.53}	12.8	14.4	16.0	80								
90	545.06			{55.58}	14.4	16.2	18.0	90								
100	490.56			{50.02}	16.0	18.0	20.0	100								
125	392.44			{40.02}	20.0	22.5	25.0	125								
150	327.04			{33.35}	24.0	27.0	30.0	150								
175	280.32			{28.58}	28.0	31.5	35.0	175								
200	245.28			{25.01}	32.0	36.0	40.0	200								
225	218.02			{22.23}	36.0	40.5	45.0	225								
250	196.22			{20.01}	40.0	45.0	50.0	250								
275	178.38			{18.19}	44.0	49.5	55.0	275								
300	163.52			{16.67}	48.0	54.0	60.0	300								
350	140.16			{14.29}	56.0	63.0	70.0	350								
60	30			60	1,176.85	{120.0}	9.6	11,300 {1152}	10.8	12,710 {1296}		12.0		14,120 {1440}		TB 60 × 60
				70	1,008.73	{102.9}	11.2		12.6			14.0				70
		80	882.64	{90.00}	12.8	14.4	16.0		80							
		90	784.57	{80.00}	14.4	16.2	18.0		90							
		100	706.11	{72.00}	16.0	18.0	20.0		100							
		125	564.89	{57.60}	20.0	22.5	25.0		125							
		150	470.74	{48.00}	24.0	27.0	30.0		150							
		175	403.49	{41.14}	28.0	31.5	35.0		175							
		200	353.06	{36.00}	32.0	36.0	40.0		200							
		225	313.83	{32.00}	36.0	40.5	45.0		225							
		250	282.44	{28.80}	40.0	45.0	50.0		250							
		275	256.77	{26.18}	44.0	49.5	55.0		275							
		300	235.37	{24.00}	48.0	54.0	60.0		300							
		350	201.75	{20.57}	56.0	63.0	70.0		350							
		70	38.5	70	1285.71	{131.11}	11.2		14,400 {1468.4}		12.6	16,200 {1651.9}	14.0		18,000 {1835.5}	TB70 × 70
				80	1125.00	{114.72}	12.8				14.4		16.0			80
				90	1000.00	{101.97}	14.4				16.2		18.0			90
				100	900.00	{91.77}	16.0				18.0		20.0			100
				125	720.00	{73.42}	20.0				22.5		25.0			125
				150	600.00	{61.18}	24.0				27.0		30.0			150
175	514.29			{52.44}	28.0	31.5	35.0	175								
200	450.00			{45.89}	32.0	36.0	40.0	200								
225	400.00			{40.79}	36.0	40.5	45.0	225								
250	360.00			{36.71}	40.0	45.0	50.0	250								
275	327.27			{33.37}	44.0	49.5	55.0	275								
300	300.00			{30.59}	48.0	54.0	60.0	300								
350	257.14			{26.22}	56.0	63.0	70.0	350								

①：自由長×20.0%を超えるたわみでは使用しないでください。

②：設置の際には、初期圧を掛けてください。

N (ニュートン) = Kgf (キログラム) × 9.80665

荷重 (N) = ばね定数 (N/mm) × たわみ (mm)

 Order 注文例	形式
	例 TB8 × 10

 Delivery 納期	2日目着 (在庫)
	(又は2日目発送)