

# COIL SPRING

## 強力ばね TF：軽小荷重

### ●規格仕様

外径 (mm)	内径 (mm)	自由長 (mm)	ばね定数		自由長×40.0% 100万回		自由長×45.0% 50万回		自由長×50.0% 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	15.24	{1.55}	4.0	58.8 {6.0}	4.5	68.6 {7.0}	5.0	78.5 {8.0}	TF 8 × 10					
		15	10.16	{1.04}	6.0		6.8		7.5		15					
		20	7.62	{0.78}	8.0		9.0		10.0		20					
		25	6.10	{0.62}	10.0		11.3		12.5		25					
		30	5.08	{0.52}	12.0		13.5		15.0		30					
		35	4.36	{0.44}	14.0		15.8		17.5		35					
		40	3.81	{0.39}	16.0		18.0		20.0		40					
		45	3.39	{0.35}	18.0		20.3		22.5		45					
		50	3.05	{0.31}	20.0		22.5		25.0		50					
		55	2.77	{0.28}	22.0		24.8		27.5		55					
		60	2.54	{0.26}	24.0		27.0		30.0		60					
		65	2.35	{0.24}	26.0		29.3		32.5		65					
		70	2.18	{0.22}	28.0		31.5		35.0		70					
		75	2.03	{0.21}	30.0		33.8		37.5		75					
		80	1.91	{0.19}	32.0		36.0		40.0		80					
		10	5	20	9.81		{1.00}		8.0		78.5 {8.0}	9.0	88.3 {9.0}	10.0	98.1 {10.0}	TF 10 × 20
25	7.85			{0.80}	10.0	11.3	12.5	25								
30	6.54			{0.67}	12.0	13.5	15.0	30								
35	5.61			{0.57}	14.0	15.8	17.5	35								
40	4.91			{0.50}	16.0	18.0	20.0	40								
45	4.36			{0.44}	18.0	20.3	22.5	45								
50	3.92			{0.40}	20.0	22.5	25.0	50								
55	3.57			{0.36}	22.0	24.8	27.5	55								
60	3.27			{0.33}	24.0	27.0	30.0	60								
65	3.02			{0.31}	26.0	29.3	32.5	65								
70	2.80			{0.29}	28.0	31.5	35.0	70								
75	2.62			{0.27}	30.0	33.8	37.5	75								
80	2.45			{0.25}	32.0	36.0	40.0	80								
90	2.18			{0.22}	36.0	40.5	45.0	90								
12	6			20	13.62	{1.39}	8.0	107.9 {11.0}	9.0	122.6 {12.5}		10.0		137.3 {14.0}		TF 12 × 20
				25	10.90	{1.11}	10.0		11.3			12.5				25
		30	9.08	{0.93}	12.0	13.5	15.0		30							
		35	7.78	{0.79}	14.0	15.8	17.5		35							
		40	6.81	{0.69}	16.0	18.0	20.0		40							
		45	6.05	{0.62}	18.0	20.3	22.5		45							
		50	5.45	{0.56}	20.0	22.5	25.0		50							
		55	4.95	{0.51}	22.0	24.8	27.5		55							
		60	4.54	{0.46}	24.0	27.0	30.0		60							
		65	4.19	{0.43}	26.0	29.3	32.5		65							
		70	3.89	{0.40}	28.0	31.5	35.0		70							
		75	3.63	{0.37}	30.0	33.8	37.5		75							
		80	3.41	{0.35}	32.0	36.0	40.0		80							
		90	3.03	{0.31}	36.0	40.5	45.0		90							
		14	7	25	13.95	{1.42}	10.0		142.2 {14.5}		11.3	156.9 {16.0}	12.5		176.5 {18.0}	TF 14 × 25
				30	11.62	{1.19}	12.0				13.5		15.0			30
35	9.96			{1.02}	14.0	15.8	17.5	35								
40	8.72			{0.89}	16.0	18.0	20.0	40								
45	7.75			{0.79}	18.0	20.3	22.5	45								
50	6.97			{0.71}	20.0	22.5	25.0	50								
55	6.34			{0.65}	22.0	24.8	27.5	55								
60	5.81			{0.59}	24.0	27.0	30.0	60								
65	5.36			{0.55}	26.0	29.3	32.5	65								
70	4.98			{0.51}	28.0	31.5	35.0	70								
75	4.65			{0.47}	30.0	33.8	37.5	75								
80	4.36			{0.44}	32.0	36.0	40.0	80								
90	3.87			{0.40}	36.0	40.5	45.0	90								
100	3.49			{0.36}	40.0	45.0	50.0	100								

①：自由長×50.0%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×40.0% 100万回		自由長×45.0% 50万回		自由長×50.0% 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	16.56	{1.69}	10.0	166.7 (17.0)	11.3	186.3 {19.0}	12.5	206 {21.0}	TF 16 × 25
		30	13.80	{1.41}	12.0		13.5		15.0		30
		35	11.83	{1.21}	14.0		15.8		17.5		35
		40	10.35	{1.06}	16.0		18.0		20.0		40
		45	9.20	{0.94}	18.0		20.3		22.5		45
		50	8.28	{0.84}	20.0		22.5		25.0		50
		55	7.53	{0.77}	22.0		24.8		27.5		55
		60	6.90	{0.70}	24.0		27.0		30.0		60
		65	6.37	{0.65}	26.0		29.3		32.5		65
		70	5.91	{0.60}	28.0		31.5		35.0		70
		75	5.52	{0.56}	30.0		33.8		37.5		75
		80	5.18	{0.53}	32.0		36.0		40.0		80
		90	4.60	{0.47}	36.0		40.5		45.0		90
		100	4.14	{0.42}	40.0		45.0		50.0		100
		125	3.31	{0.34}	50.0		56.3		62.5		125
18	9	25	20.09	{2.05}	10.0	206 {21.0}	11.3	226 {23.0}	12.5	255 {26.0}	TF 18 × 25
		30	16.74	{1.71}	12.0		13.5		15.0		30
		35	14.35	{1.46}	14.0		15.8		17.5		35
		40	12.56	{1.28}	16.0		18.0		20.0		40
		45	11.16	{1.14}	18.0		20.3		22.5		45
		50	10.04	{1.02}	20.0		22.5		25.0		50
		55	9.13	{0.93}	22.0		24.8		27.5		55
		60	8.37	{0.85}	24.0		27.0		30.0		60
		65	7.73	{0.79}	26.0		29.3		32.5		65
		70	7.17	{0.73}	28.0		31.5		35.0		70
		75	6.70	{0.68}	30.0		33.8		37.5		75
		80	6.28	{0.64}	32.0		36.0		40.0		80
		90	5.58	{0.57}	36.0		40.5		45.0		90
		100	5.02	{0.51}	40.0		45.0		50.0		100
		125	4.02	{0.41}	50.0		56.3		62.5		125
20	11	25	25.24	{2.57}	10.0	255 {26.0}	11.3	284 {29.0}	12.5	314 {32.0}	TF 20 × 25
		30	21.04	{2.15}	12.0		13.5		15.0		30
		35	18.03	{1.84}	14.0		15.8		17.5		35
		40	15.78	{1.61}	16.0		18.0		20.0		40
		45	14.02	{1.43}	18.0		20.3		22.5		45
		50	12.62	{1.29}	20.0		22.5		25.0		50
		55	11.47	{1.17}	22.0		24.8		27.5		55
		60	10.52	{1.07}	24.0		27.0		30.0		60
		65	9.71	{0.99}	26.0		29.3		32.5		65
		70	9.02	{0.92}	28.0		31.5		35.0		70
		75	8.41	{0.86}	30.0		33.8		37.5		75
		80	7.89	{0.80}	32.0		36.0		40.0		80
		90	7.01	{0.72}	36.0		40.5		45.0		90
		100	6.31	{0.64}	40.0		45.0		50.0		100
		125	5.05	{0.51}	50.0		56.3		62.5		125
150	4.21	{0.43}	60.0	67.5	75.0	150					
22	11	25	31.38	{3.20}	10.0	314 {32.0}	11.3	353 {36.0}	12.5	392 {40.0}	TF 22 × 25
		30	26.15	{2.67}	12.0		13.5		15.0		30
		35	22.41	{2.29}	14.0		15.8		17.5		35
		40	19.61	{2.00}	16.0		18.0		20.0		40
		45	17.43	{1.78}	18.0		20.3		22.5		45
		50	15.69	{1.60}	20.0		22.5		25.0		50
		55	14.26	{1.45}	22.0		24.8		27.5		55
		60	13.07	{1.33}	24.0		27.0		30.0		60
		65	12.07	{1.23}	26.0		29.3		32.5		65
		70	11.21	{1.14}	28.0		31.5		35.0		70
		75	10.46	{1.07}	30.0		33.8		37.5		75
		80	9.81	{1.00}	32.0		36.0		40.0		80
		90	8.72	{0.89}	36.0		40.5		45.0		90
		100	7.84	{0.80}	40.0		45.0		50.0		100
		125	6.28	{0.64}	50.0		56.3		62.5		125
150	5.23	{0.53}	60.0	67.5	75.0	150					
25	13.5	25	39.20	{4.00}	10.0	392 {40.0}	11.3	441 {45.0}	12.5	490 {50.0}	TF 25 × 25
		30	32.67	{3.33}	12.0		13.5		15.0		30
		35	28.00	{2.86}	14.0		15.8		17.5		35
		40	24.50	{2.50}	16.0		18.0		20.0		40
		45	21.78	{2.22}	18.0		20.3		22.5		45
		50	19.60	{2.00}	20.0		22.5		25.0		50
		55	17.82	{1.82}	22.0		24.8		27.5		55
		60	16.33	{1.67}	24.0		27.0		30.0		60
		65	15.08	{1.54}	26.0		29.3		32.5		65
		70	14.00	{1.43}	28.0		31.5		35.0		70
		75	13.07	{1.33}	30.0		33.8		37.5		75
		80	12.25	{1.25}	32.0		36.0		40.0		80
		90	10.89	{1.11}	36.0		40.5		45.0		90
		100	9.80	{1.00}	40.0		45.0		50.0		100
		125	7.84	{0.80}	50.0		56.3		62.5		125
150	6.53	{0.67}	60.0	67.5	75.0	150					
175	5.60	{0.57}	70.0	78.8	87.5	175					
200	4.90	{0.50}	80.0	90.0	100.0	200					

①：自由長×50.0%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)

# COILSPRING

## 強力ばね TF：軽小荷重

### ●規格仕様

外径 (mm)	内径 (mm)	自由長 (mm)	ばね定数		自由長×40.0% 100万回		自由長×45.0% 50万回		自由長×50.0% 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]						
27	13.5	25	47.11	{4.80}	10.0	471 {48.0}	11.3	530 {54.0}	12.5	588 {60.0}	TF 27 × 25					
		30	39.26	{4.00}	12.0		13.5		15.0							
		35	33.65	{3.43}	14.0		15.8		17.5							
		40	29.44	{3.00}	16.0		18.0		20.0							
		45	26.17	{2.67}	18.0		20.3		22.5							
		50	23.56	{2.40}	20.0		22.5		25.0							
		55	21.41	{2.18}	22.0		24.8		27.5							
		60	19.63	{2.00}	24.0		27.0		30.0							
		65	18.12	{1.85}	26.0		29.3		32.5							
		70	16.83	{1.72}	28.0		31.5		35.0							
		75	15.70	{1.60}	30.0		33.8		37.5							
		80	14.72	{1.50}	32.0		36.0		40.0							
		90	13.09	{1.33}	36.0		40.5		45.0							
		100	11.78	{1.20}	40.0		45.0		50.0							
		125	9.42	{0.96}	50.0		56.3		62.5							
		150	7.85	{0.80}	60.0		67.5		75.0							
		175	6.73	{0.69}	70.0		78.8		87.5							
200	5.89	{0.60}	80.0	90.0	100.0											
30	16	25	56.62	{5.77}	10.0	569 {58.0}	11.3	637 {65.0}	12.5	706 {72.0}	TF 30 × 25					
		30	47.19	{4.81}	12.0		13.5		15.0							
		35	40.44	{4.12}	14.0		15.8		17.5							
		40	35.39	{3.61}	16.0		18.0		20.0							
		45	31.46	{3.21}	18.0		20.3		22.5							
		50	28.31	{2.89}	20.0		22.5		25.0							
		55	25.74	{2.62}	22.0		24.8		27.5							
		60	23.59	{2.41}	24.0		27.0		30.0							
		65	21.78	{2.22}	26.0		29.3		32.5							
		70	20.22	{2.06}	28.0		31.5		35.0							
		75	18.87	{1.92}	30.0		33.8		37.5							
		80	17.69	{1.80}	32.0		36.0		40.0							
		90	15.73	{1.60}	36.0		40.5		45.0							
		100	14.16	{1.44}	40.0		45.0		50.0							
		125	11.32	{1.15}	50.0		56.3		62.5							
		150	9.44	{0.96}	60.0		67.5		75.0							
		175	8.09	{0.82}	70.0		78.8		87.5							
200	7.08	{0.72}	80.0	90.0	100.0											
35	19	40	47.94	{4.89}	16.0	765 {78.0}	18.0	863 {88.0}	20.0	961 {98.0}	TF 35 × 40					
		45	42.62	{4.35}	18.0		20.3		22.5							
		50	38.36	{3.91}	20.0		22.5		25.0							
		55	34.87	{3.56}	22.0		24.8		27.5							
		60	31.96	{3.26}	24.0		27.0		30.0							
		65	29.50	{3.01}	26.0		29.3		32.5							
		70	27.40	{2.79}	28.0		31.5		35.0							
		75	25.57	{2.61}	30.0		33.8		37.5							
		80	23.97	{2.44}	32.0		36.0		40.0							
		90	21.31	{2.17}	36.0		40.5		45.0							
		100	19.18	{1.96}	40.0		45.0		50.0							
		125	15.34	{1.56}	50.0		56.3		62.5							
		150	12.79	{1.30}	60.0		67.5		75.0							
		175	10.96	{1.12}	70.0		78.8		87.5							
		200	9.59	{0.98}	80.0		90.0		100.0							
		40	22	40	62.67		{6.39}		16.0		1,000 {102.0}	18.0	1,128 {115.0}	20.0	1,255 {128.0}	TF 40 × 40
				45	55.70		{5.68}		18.0			20.3		22.5		
50	50.13			{5.11}	20.0	22.5	25.0									
55	45.58			{4.65}	22.0	24.8	27.5									
60	41.78			{4.26}	24.0	27.0	30.0									
65	38.56			{3.93}	26.0	29.3	32.5									
70	35.81			{3.65}	28.0	31.5	35.0									
75	33.42			{3.41}	30.0	33.8	37.5									
80	31.33			{3.20}	32.0	36.0	40.0									
90	27.85			{2.84}	36.0	40.5	45.0									
100	25.07			{2.56}	40.0	45.0	50.0									
125	20.05			{2.04}	50.0	56.3	62.5									
150	16.71			{1.70}	60.0	67.5	75.0									
175	14.32			{1.46}	70.0	78.8	87.5									
200	12.53			{1.28}	80.0	90.0	100.0									
225	11.14			{1.14}	90.0	101.3	112.5									
250	10.03			{1.02}	100.0	112.5	125.0									
275	9.12	{0.93}	110.0	123.8	137.5											
300	8.36	{0.85}	120.0	135.0	150.0											

①：自由長×50.0%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×40.0% 100万回		自由長×45.0% 50万回		自由長×50.0% 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)	
50	27.5	50	78.44	{8.00}	20.0	1,569 {160.0}	22.5	1,765 {180.0}	25.0	1,961 {200.0}	TF 50 × 50
		55	71.31	{7.27}	22.0		24.8		27.5		
		60	65.37	{6.67}	24.0		27.0		30.0		
		65	60.34	{6.15}	26.0		29.3		32.5		
		70	56.03	{5.71}	28.0		31.5		35.0		
		75	52.30	{5.33}	30.0		33.8		37.5		
		80	49.03	{5.00}	32.0		36.0		40.0		
		90	43.58	{4.44}	36.0		40.5		45.0		
		100	39.22	{4.00}	40.0		45.0		50.0		
		125	31.38	{3.20}	50.0		56.3		62.5		
		150	26.15	{2.67}	60.0		67.5		75.0		
		175	22.41	{2.29}	70.0		78.8		87.5		
		200	19.61	{2.00}	80.0		90.0		100.0		
		225	17.43	{1.78}	90.0		101.3		112.5		
		250	15.69	{1.60}	100.0		112.5		125.0		
		275	14.26	{1.45}	110.0		123.8		137.5		
		300	13.07	{1.33}	120.0		135.0		150.0		
		350	11.21	{1.14}	140.0		157.5		175.0		
		400	9.81	{1.00}	160.0		180.0		200.0		
		450	8.72	{0.89}	180.0		202.5		225.0		
500	7.84	{0.80}	200.0	225.0	250.0						
60	33	60	94.07	{9.59}	24.0	2,260 {230.5}	27.0	2,540 {259.0}	30.0	2,820 {287.6}	TF 60 × 60
		70	80.63	{8.22}	28.0		31.5		35.0		
		80	70.56	{7.19}	32.0		36.0		40.0		
		90	62.72	{6.40}	36.0		40.5		45.0		
		100	56.44	{5.76}	40.0		45.0		50.0		
		125	45.16	{4.60}	50.0		56.3		62.5		
		150	37.63	{3.84}	60.0		67.5		75.0		
		175	32.25	{3.29}	70.0		78.8		87.5		
		200	28.22	{2.88}	80.0		90.0		100.0		
		225	25.09	{2.56}	90.0		101.3		112.5		
		250	22.58	{2.30}	100.0		112.5		125.0		
		275	20.53	{2.09}	110.0		123.8		137.5		
		300	18.81	{1.92}	120.0		135.0		150.0		
		350	16.13	{1.64}	140.0		157.5		175.0		
		400	14.11	{1.44}	160.0		180.0		200.0		
		450	12.54	{1.28}	180.0		202.5		225.0		
70	38.5	70	114.29	{11.65}	28.0	3,200 {326.3}	31.5	3,600 {367.0}	35.0	4,000 {407.9}	TF 70 × 70
		80	100.00	{10.20}	32.0		36.0		40.0		
		90	88.89	{9.06}	36.0		40.5		45.0		
		100	80.00	{8.16}	40.0		45.0		50.0		
		125	64.00	{6.53}	50.0		56.3		62.5		
		150	53.33	{5.44}	60.0		67.5		75.0		
		175	45.71	{4.66}	70.0		78.8		87.5		
		200	40.00	{4.08}	80.0		90.0		100.0		
		225	35.56	{3.63}	90.0		101.3		112.5		
		250	32.00	{3.26}	100.0		112.5		125.0		
		275	29.09	{2.97}	110.0		123.8		137.5		
		300	26.67	{2.72}	120.0		135.0		150.0		
350	22.86	{2.33}	140.0	157.5	175.0						


①：自由長×50.0%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)

 <b>Order 注文例</b>	<b>形式</b>
	例 TF8 × 10

 <b>Delivery 納期</b>	2日目着 (在庫)
	(又は2日目発送)