COIL SPRING

内径 (mm)	ばね定数 N／mm (kgf／mm)	自由長 ×40% 100万回 たわみ (mm)	荷重 N {kgf}	自由長 ×45% 50万回 たわみ (mm)	荷重 N {kgf}	自由長 ×50% 30万回 たわみ (mm)	荷重 N {kgf}	Catalog No.	外径 D (mm)	自由長 L (mm)
	15.24 {1.55}	4.0		4.5		5.0				10
	10.16 {1.04}	6.0		6.8		7.5				15
	7.62 {0.78}	8.0		9.0		10.0				20
	6.10 {0.62}	10.0		11.3		12.5				25
	5.08 {0.52}	12.0		13.5		15.0				30
	4.36 {0.44}	14.0		15.8		17.5				35
	3.81 {0.39}	16.0	58.8 {6.0}	18.0	68.6 {7.0}	20.0	78.5 {8.0}			40
4	3.39 {0.35}	18.0		20.3		22.5			8	45
	3.05 {0.31}	20.0		22.5		25.0				50
	2.77 {0.28}	22.0		24.8		27.5				55
	2.54 {0.26}	24.0		27.0		30.0				60
	2.35 {0.24}	26.0		29.3		32.5				65
	2.18 {0.22}	28.0		31.5		35.0				70
	2.03 {0.21}	30.0		33.8		37.5				75
	1.91 {0.19}	32.0		36.0		40.0				80
	9.81 {1.00}	8.0		9.0		10.0				20
	7.85 {0.80}	10.0		11.3		12.5				25
	6.54 {0.67}	12.0		13.5		15.0				30
	5.61 {0.57}	14.0		15.8		17.5				35
	4.91 {0.50}	16.0		18.0		20.0				40
	4.36 {0.44}	18.0		20.3		22.5				45
	3.92 {0.40}	20.0	78.5 {8.0}	22.5	88.3 {9.0}	25.0	98.1 {10.0}			50
5	3.57 {0.36}	22.0		24.8		27.5		TF	10	55
	3.27 {0.33}	24.0		27.0		30.0				60
	3.02 {0.31}	26.0		29.3		32.5				65
	2.80 {0.29}	28.0		31.5		35.0				70
	2.62 {0.27}	30.0		33.8		37.5				75
	2.45 {0.25}	32.0		36.0		40.0				80
	2.18 {0.22}	36.0		40.5		45.0				90
	13.62 {1.39}	8.0		9.0		10.0				20
	10.90 {1.11}	10.0		11.3		12.5				25
	9.08 {0.93}	12.0		13.5		15.0				30
	7.78 {0.79}	14.0		15.8		17.5				35
	6.81 {0.69}	16.0		18.0		20.0				40
	6.05 {0.62}	18.0		20.3		22.5				45
6	5.45 {0.56}	20.0	107.9 {11.0}	22.5	122.6 {12.5}	25.0	137.3 {14.0}		12	50
	4.95 {0.51}	22.0		24.8		27.5				55
	4.54 {0.46}	24.0		27.0		30.0				60
	4.19 {0.43}	26.0		29.3		32.5				65
	3.89 {0.40}	28.0		31.5		35.0				70
	3.63 {0.37}	30.0		33.8		37.5				75
	3.41 {0.35}	32.0		36.0		40.0				80
	3.03 {0.31}	36.0		40.5		45.0				90

⚠ 自由長 ×50%を超えるたわみでは使用しないでください。　荷重(N)＝ばね定数(N／mm)× たわみ(mm)

Order

Catalog No.	D	–	L
TF	10	–	50

内径 (mm)	ばね定数 N／mm (kgf／mm)	自由長 ×40% 100万回 たわみ (mm)	荷重 N {kgf}	自由長 ×45% 50万回 たわみ (mm)	荷重 N {kgf}	自由長 ×50% 30万回 たわみ (mm)	荷重 N {kgf}	Catalog No.	外径 D (mm)	自由長 L (mm)
	13.95 {1.42}	10.0		11.3		12.5				25
	11.62 {1.19}	12.0		13.5		15.0				30
	9.96 {1.02}	14.0		15.8		17.5				35
	8.72 {0.89}	16.0		18.0		20.0				40
	7.75 {0.79}	18.0		20.3		22.5				45
	6.97 {0.71}	20.0		22.5		25.0				50
	6.34 {0.65}	22.0	142.2 {14.5}	24.8	156.9 {16.0}	27.5	176.5 {18.0}			55
7	5.81 {0.59}	24.0		27.0		30.0			14	60
	5.36 {0.55}	26.0		29.3		32.5				65
	4.98 {0.51}	28.0		31.5		35.0				70
	4.65 {0.47}	30.0		33.8		37.5				75
	4.36 {0.44}	32.0		36.0		40.0				80
	3.87 {0.40}	36.0		40.5		45.0				90
	3.49 {0.36}	40.0		45.0		50.0				100
	16.56 {1.69}	10.0		11.3		12.5				25
	13.80 {1.41}	12.0		13.5		15.0				30
	11.83 {1.21}	14.0		15.8		17.5				35
	10.35 {1.06}	16.0		18.0		20.0				40
	9.20 {0.94}	18.0		20.3		22.5				45
	8.28 {0.84}	20.0		22.5		25.0				50
	7.53 {0.77}	22.0		24.8		27.5				55
	6.90 {0.70}	24.0	166.7 {17.0}	27.0	186.3 {19.0}	30.0	206 {21.0}			60
8	6.37 {0.65}	26.0		29.3		32.5		TF	16	65
	5.91 {0.60}	28.0		31.5		35.0				70
	5.52 {0.56}	30.0		33.8		37.5				75
	5.18 {0.53}	32.0		36.0		40.0				80
	4.60 {0.47}	36.0		40.5		45.0				90
	4.14 {0.42}	40.0		45.0		50.0				100
	3.31 {0.34}	50.0		56.3		62.5				125
	20.09 {2.05}	10.0		11.3		12.5				25
	16.74 {1.71}	12.0		13.5		15.0				30
	14.35 {1.46}	14.0		15.8		17.5				35
	12.56 {1.28}	16.0		18.0		20.0				40
	11.16 {1.14}	18.0		20.3		22.5				45
	10.04 {1.02}	20.0		22.5		25.0				50
	9.13 {0.93}	22.0	206 {21.0}	24.8	226 {23.0}	27.5	255 {26.0}			55
9	8.37 {0.85}	24.0		27.0		30.0			18	60
	7.73 {0.79}	26.0		29.3		32.5				65
	7.17 {0.73}	28.0		31.5		35.0				70
	6.70 {0.68}	30.0		33.8		37.5				75
	6.28 {0.64}	32.0		36.0		40.0				80
	5.58 {0.57}	36.0		40.5		45.0				90
	5.02 {0.51}	40.0		45.0		50.0				100
	4.02 {0.41}	50.0		56.3		62.5				125

⚠ 自由長 ×50%を超えるたわみでは使用しないでください。　荷重(N)＝ばね定数(N／mm)× たわみ(mm)

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COIL SPRING

内径 (mm)	ばね定数 N／mm (kgf／mm)	自由長 ×40% 100万回 たわみ (mm)	荷重 N {kgf}	自由長 ×45% 50万回 たわみ (mm)	荷重 N {kgf}	自由長 ×50% 30万回 たわみ (mm)	荷重 N {kgf}	Catalog No.	外径 D (mm)	自由長 L (mm)
	25.24 {2.57}	10.0		11.3		12.5				25
	21.04 {2.15}	12.0		13.5		15.0				30
	18.03 {1.84}	14.0		15.8		17.5				35
	15.78 {1.61}	16.0		18.0		20.0				40
	14.02 {1.43}	18.0		20.3		22.5				45
	12.62 {1.29}	20.0		22.5		25.0				50
	11.47 {1.17}	22.0	255 {26.0}	24.8	284 {29.0}	27.5	314 {32.0}			55
11	10.52 {1.07}	24.0		27.0		30.0			20	60
	9.71 {0.99}	26.0		29.3		32.5				65
	9.02 {0.92}	28.0		31.5		35.0				70
	8.41 {0.86}	30.0		33.8		37.5				75
	7.89 {0.80}	32.0		36.0		40.0				80
	7.01 {0.72}	36.0		40.5		45.0				90
	6.31 {0.64}	40.0		45.0		50.0				100
	5.05 {0.51}	50.0		56.3		62.5				125
	4.21 {0.43}	60.0		67.5		75.0		TF		150
	31.38 {3.20}	10.0		11.3		12.5				25
	26.15 {2.67}	12.0		13.5		15.0				30
	22.41 {2.29}	14.0		15.8		17.5				35
	19.61 {2.00}	16.0		18.0		20.0				40
	17.43 {1.78}	18.0		20.3		22.5				45
	15.69 {1.60}	20.0		22.5		25.0				50
	14.26 {1.45}	22.0	314 {32.0}	24.8	353 {36.0}	27.5	392 {40.0}			55
11	13.07 {1.33}	24.0		27.0		30.0			22	60
	12.07 {1.23}	26.0		29.3		32.5				65
	11.21 {1.14}	28.0		31.5		35.0				70
	10.46 {1.07}	30.0		33.8		37.5				75
	9.81 {1.00}	32.0		36.0		40.0				80
	8.72 {0.89}	36.0		40.5		45.0				90
	7.84 {0.80}	40.0		45.0		50.0				100
	6.28 {0.64}	50.0		56.3		62.5				125
	5.23 {0.53}	60.0		67.5		75.0				150

⚠ 自由長 ×50%を超えるたわみでは使用しないでください。　荷重（N）＝ばね定数（N／mm）× たわみ（mm）

Order

Catalog No.	D	–	L
TF	20	–	80

内径 (mm)	ばね定数 N／mm (kgf／mm)	自由長 ×40% 100万回 たわみ (mm)	荷重 N {kgf}	自由長 ×45% 50万回 たわみ (mm)	荷重 N {kgf}	自由長 ×50% 30万回 たわみ (mm)	荷重 N {kgf}	Catalog No.	外径 D (mm)	自由長 L (mm)
	39.20 {4.00}	10.0		11.3		12.5				25
	32.67 {3.33}	12.0		13.5		15.0				30
	28.00 {2.86}	14.0		15.8		17.5				35
	24.50 {2.50}	16.0		18.0		20.0				40
	21.78 {2.22}	18.0		20.3		22.5				45
	19.60 {2.00}	20.0		22.5		25.0				50
	17.82 {1.82}	22.0		24.8		27.5				55
	16.33 {1.67}	24.0	392 {40.0}	27.0	441 {45.0}	30.0	490 {50.0}			60
13.5	15.08 {1.54}	26.0		29.3		32.5			25	65
	14.00 {1.43}	28.0		31.5		35.0				70
	13.07 {1.33}	30.0		33.8		37.5				75
	12.25 {1.25}	32.0		36.0		40.0				80
	10.89 {1.11}	36.0		40.5		45.0				90
	9.80 {1.00}	40.0		45.0		50.0				100
	7.84 {0.80}	50.0		56.3		62.5				125
	6.53 {0.67}	60.0		67.5		75.0				150
	5.60 {0.57}	70.0		78.8		87.5				175
	4.90 {0.50}	80.0		90.0		100.0				200
	47.11 {4.80}	10.0		11.3		12.5		TF		25
	39.26 {4.00}	12.0		13.5		15.0				30
	33.65 {3.43}	14.0		15.8		17.5				35
	29.44 {3.00}	16.0		18.0		20.0				40
	26.17 {2.67}	18.0		20.3		22.5				45
	23.56 {2.40}	20.0		22.5		25.0				50
	21.41 {2.18}	22.0		24.8		27.5				55
	19.63 {2.00}	24.0	471 {48.0}	27.0	530 {54.0}	30.0	588 {60.0}			60
13.5	18.12 {1.85}	26.0		29.3		32.5			27	65
	16.83 {1.72}	28.0		31.5		35.0				70
	15.70 {1.60}	30.0		33.8		37.5				75
	14.72 {1.50}	32.0		36.0		40.0				80
	13.09 {1.33}	36.0		40.5		45.0				90
	11.78 {1.20}	40.0		45.0		50.0				100
	9.42 {0.96}	50.0		56.3		62.5				125
	7.85 {0.80}	60.0		67.5		75.0				150
	6.73 {0.69}	70.0		78.8		87.5				175
	5.89 {0.60}	80.0		90.0		100.0				200

⚠ 自由長 ×50%を超えるたわみでは使用しないでください。　荷重（N）＝ばね定数（N／mm）× たわみ（mm）

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COIL SPRING

内径 (mm)	ばね定数 N／mm(kgf／mm)	自由長 ×40% 100 万回 たわみ (mm)	荷重 N {kgf}	自由長 ×45% 50 万回 たわみ (mm)	荷重 N {kgf}	自由長 ×50% 30 万回 たわみ (mm)	荷重 N {kgf}	Catalog No.	外径 D (mm)	自由長 L (mm)
	56.62 {5.77}	10.0		11.3		12.5				25
	47.19 {4.81}	12.0		13.5		15.0				30
	40.44 {4.12}	14.0		15.8		17.5				35
	35.39 {3.61}	16.0		18.0		20.0				40
	31.46 {3.21}	18.0		20.3		22.5				45
	28.31 {2.89}	20.0		22.5		25.0				50
	25.74 {2.62}	22.0		24.8		27.5				55
	23.59 {2.41}	24.0		27.0		30.0				60
16	21.78 {2.22}	26.0	569 {58.0}	29.3	637 {65.0}	32.5	706 {72.0}		30	65
	20.22 {2.06}	28.0		31.5		35.0				70
	18.87 {1.92}	30.0		33.8		37.5				75
	17.69 {1.80}	32.0		36.0		40.0				80
	15.73 {1.60}	36.0		40.5		45.0				90
	14.16 {1.44}	40.0		45.0		50.0				100
	11.32 {1.15}	50.0		56.3		62.5				125
	9.44 {0.96}	60.0		67.5		75.0				150
	8.09 {0.82}	70.0		78.8		87.5		TF		175
	7.08 {0.72}	80.0		90.0		100.0				200
	47.94 {4.89}	16.0		18.0		20.0				40
	42.62 {4.35}	18.0		20.3		22.5				45
	38.36 {3.91}	20.0		22.5		25.0				50
	34.87 {3.56}	22.0		24.8		27.5				55
	31.96 {3.26}	24.0		27.0		30.0				60
	29.50 {3.01}	26.0		29.3		32.5				65
19	27.40 {2.79}	28.0	765 {78.0}	31.5	863 {88.0}	35.0	961 {98.0}		35	70
	25.57 {2.61}	30.0		33.8		37.5				75
	23.97 {2.44}	32.0		36.0		40.0				80
	21.31 {2.17}	36.0		40.5		45.0				90
	19.18 {1.96}	40.0		45.0		50.0				100
	15.34 {1.56}	50.0		56.3		62.5				125
	12.79 {1.30}	60.0		67.5		75.0				150
	10.96 {1.12}	70.0		78.8		87.5				175
	9.59 {0.98}	80.0		90.0		100.0				200

⚠ 自由長 ×50%を超えるたわみでは使用しないでください。　荷重（N）＝ばね定数（N／mm）× たわみ（mm）

Order

Catalog No.	D	–	L
TF	30	–	50

内径 (mm)	ばね定数 N／mm(kgf／mm)	自由長 ×40% 100 万回 たわみ (mm)	荷重 N {kgf}	自由長 ×45% 50 万回 たわみ (mm)	荷重 N {kgf}	自由長 ×50% 30 万回 たわみ (mm)	荷重 N {kgf}	Catalog No.	外径 D (mm)	自由長 L (mm)
	62.67 {6.39}	16.0		18.0		20.0				40
	55.70 {5.68}	18.0		20.3		22.5				45
	50.13 {5.11}	20.0		22.5		25.0				50
	45.58 {4.65}	22.0		24.8		27.5				55
	41.78 {4.26}	24.0		27.0		30.0				60
	38.56 {3.93}	26.0		29.3		32.5				65
	35.81 {3.65}	28.0		31.5		35.0				70
	33.42 {3.41}	30.0		33.8		37.5				75
	31.33 {3.20}	32.0		36.0		40.0				80
22	27.85 {2.84}	36.0	1,000 {102.0}	40.5	1,128 {115.0}	45.0	1,255 {128.0}		40	90
	25.07 {2.56}	40.0		45.0		50.0				100
	20.05 {2.04}	50.0		56.3		62.5				125
	16.71 {1.70}	60.0		67.5		75.0				150
	14.32 {1.46}	70.0		78.8		87.5				175
	12.53 {1.28}	80.0		90.0		100.0				200
	11.14 {1.14}	90.0		101.3		112.5				225
	10.03 {1.02}	100.0		112.5		125.0				250
	9.12 {0.93}	110.0		123.8		137.5				275
	8.36 {0.85}	120.0		135.0		150.0				300
	78.44 {8.00}	20.0		22.5		25.0				50
	71.31 {7.27}	22.0		24.8		27.5		TF		55
	65.37 {6.67}	24.0		27.0		30.0				60
	60.34 {6.15}	26.0		29.3		32.5				65
	56.03 {5.71}	28.0		31.5		35.0				70
	52.30 {5.33}	30.0		33.8		37.5				75
	49.03 {5.00}	32.0		36.0		40.0				80
	43.58 {4.44}	36.0		40.5		45.0				90
	39.22 {4.00}	40.0		45.0		50.0				100
	31.38 {3.20}	50.0		56.3		62.5				125
27.5	26.15 {2.67}	60.0	1,569 {160.0}	67.5	1,765 {180.0}	75.0	1,961 {200.0}		50	150
	22.41 {2.29}	70.0		78.8		87.5				175
	19.61 {2.00}	80.0		90.0		100.0				200
	17.43 {1.78}	90.0		101.3		112.5				225
	15.69 {1.60}	100.0		112.5		125.0				250
	14.26 {1.45}	110.0		123.8		137.5				275
	13.07 {1.33}	120.0		135.0		150.0				300
	11.21 {1.14}	140.0		157.5		175.0				350
	9.81 {1.00}	160.0		180.0		200.0				400
	8.72 {0.89}	180.0		202.5		225.0				450
	7.84 {0.80}	200.0		225.0		250.0				500

⚠ 自由長 ×50%を超えるたわみでは使用しないでください。　荷重（N）＝ばね定数（N／mm）× たわみ（mm）

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軽小荷重
TF MINIMAL LOADS

COIL SPRING

内径 (mm)	ばね定数 N／mm(kgf／mm)	自由長 ×40% 100 万回 たわみ (mm)	荷 重 N {kgf}	自由長 ×45% 50 万回 たわみ (mm)	荷 重 N {kgf}	自由長 ×50% 30 万回 たわみ (mm)	荷 重 N {kgf}	Catalog No.	外径 D (mm)	自由長 L (mm)
	94.07 {9.59}	24.0		27.0		30.0				60
	80.63 {8.22}	28.0		31.5		35.0				70
	70.56 {7.19}	32.0		36.0		40.0				80
	62.72 {6.40}	36.0		40.5		45.0				90
	56.44 {5.76}	40.0		45.0		50.0				100
	45.16 {4.60}	50.0		56.3		62.5				125
	37.63 {3.84}	60.0		67.5		75.0				150
	32.25 {3.29}	70.0	2,260 {230.5}	78.8	2,540 {259.0}	87.5	2,820 {287.6}			175
33	28.22 {2.88}	80.0		90.0		100.0			60	200
	25.09 {2.56}	90.0		101.3		112.5				225
	22.58 {2.30}	100.0		112.5		125.0				250
	20.53 {2.09}	110.0		123.8		137.5				275
	18.81 {1.92}	120.0		135.0		150.0				300
	16.13 {1.64}	140.0		157.5		175.0				350
	14.11 {1.44}	160.0		180.0		200.0				400
	12.54 {1.28}	180.0		202.5		225.0		TF		450
	11.29 {1.15}	200.0		225.0		250.0				500
	114.29 {11.65}	28.0		31.5		35.0				70
	100.00 {10.20}	32.0		36.0		40.0				80
	88.89 {9.06}	36.0		40.5		45.0				90
	80.00 {8.16}	40.0		45.0		50.0				100
	64.00 {6.53}	50.0		56.3		62.5				125
	53.33 {5.44}	60.0		67.5		75.0				150
38.5	45.71 {4.66}	70.0	3,200 {326.3}	78.8	3,600 {367.0}	87.5	4,000 {407.9}		70	175
	40.00 {4.08}	80.0		90.0		100.0				200
	35.56 {3.63}	90.0		101.3		112.5				225
	32.00 {3.26}	100.0		112.5		125.0				250
	29.09 {2.97}	110.0		123.8		137.5				275
	26.67 {2.72}	120.0		135.0		150.0				300
	22.86 {2.33}	140.0		157.5		175.0				350

⚠ 自由長 ×50%を超えるたわみでは使用しないでください。　荷重（N）＝ばね定数（N／mm）× たわみ（mm）

Order

Catalog No.	D	–	L
TF	60	–	100

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