

TU

呼称	外径 (mm)	内径 (mm)	自由長 (mm)	バネ定数 (N/mm)	自由長×60% 100万回		自由長×62.5% 50万回		自由長×65% 30万回	
					たわみ (mm)	荷重 (N)	たわみ (mm)	荷重 (N)	たわみ (mm)	荷重 (N)
TU 10.5 ×	20	6	20	5.72	12.0	68.6	12.5	71.5	13.0	74.3
			25	4.57	15.0		15.6		16.3	
			30	3.81	18.0		18.8		19.5	
			35	3.27	21.0		21.9		22.8	
			40	2.86	24.0		25.0		26.0	
			45	2.54	27.0		28.1		29.3	
			50	2.29	30.0		31.3		32.5	
			55	2.08	33.0		34.4		35.8	
			60	1.91	36.0		37.5		39.0	
			65	1.76	39.0		40.6		42.3	
			70	1.63	42.0		43.8		45.5	
			75	1.52	45.0		46.9		48.8	
			80	1.43	48.0		50.0		52.0	
			TU 12.5 ×	15	7		15		8.71	
20	6.53	12.0				12.5	13.0			
25	5.23	15.0				15.6	16.3			
30	4.36	18.0				18.8	19.5			
35	3.73	21.0				21.9	22.8			
40	3.27	24.0				25.0	26.0			
45	2.90	27.0				28.1	29.3			
50	2.61	30.0				31.3	32.5			
55	2.38	33.0				34.4	35.8			
60	2.18	36.0				37.5	39.0			
65	2.01	39.0				40.6	42.3			
70	1.87	42.0				43.8	45.5			
75	1.74	45.0				46.9	48.8			
80	1.63	48.0				50.0	52.0			
90	1.45	54.0				56.3	58.5			
100	1.31	60.0				62.5	65.0			
TU 14.5 ×	20	8.5	20	8.18	12.0	98.1	12.5	102.2	13.0	106.3
			25	6.54	15.0		15.6		16.3	
			30	5.45	18.0		18.8		19.5	
			35	4.67	21.0		21.9		22.8	
			40	4.09	24.0		25.0		26.0	
			45	3.63	27.0		28.1		29.3	
			50	3.27	30.0		31.3		32.5	
			55	2.97	33.0		34.4		35.8	
			60	2.73	36.0		37.5		39.0	
			65	2.52	39.0		40.6		42.3	
			70	2.34	42.0		43.8		45.5	
			75	2.18	45.0		46.9		48.8	
			80	2.04	48.0		50.0		52.0	
			90	1.82	54.0		56.3		58.5	
			100	1.64	60.0		62.5		65.0	
			110	1.49	66.0		68.8		71.5	
			120	1.36	72.0		75.0		78.0	
125	1.31	75.0	78.1	81.3						
150	1.09	90.0	93.8	97.5						

1N=0.102Kgf

荷重(N)=ばね定数(N/mm)×たわみ(mm)

TU

呼称	外径 (mm)	内径 (mm)	自由長 (mm)	ばね定数 (N/mm)	自由長×60% 100万回		自由長×62.5% 50万回		自由長×65% 30万回		
					たわみ (mm)	荷重 (N)	たわみ (mm)	荷重 (N)	たわみ (mm)	荷重 (N)	
TU 17 ×	30	17	10.5	30	8.17	18.0	147	18.8	153.1	19.5	159.3
				35	7.00	21.0	21.9	22.8			
				40	6.13	24.0	25.0	26.0			
				45	5.44	27.0	28.1	29.3			
				50	4.90	30.0	31.3	32.5			
				55	4.45	33.0	34.4	35.8			
				60	4.08	36.0	37.5	39.0			
				65	3.77	39.0	40.6	42.3			
				70	3.50	42.0	43.8	45.5			
				75	3.27	45.0	46.9	48.8			
				80	3.06	48.0	50.0	52.0			
				90	2.72	54.0	56.3	58.5			
				100	2.45	60.0	62.5	65.0			
				110	2.23	66.0	68.8	71.5			
				120	2.04	72.0	75.0	78.0			
				125	1.96	75.0	78.1	81.3			
				150	1.63	90.0	93.8	97.5			
175	1.40	105.0	109.4	113.8							
TU 21 ×	25	21	13.5	25	15.04	15.0	225.6	15.6	235.0	16.3	244.4
				30	12.53	18.0	18.8	19.5			
				35	10.74	21.0	21.9	22.8			
				40	9.40	24.0	25.0	26.0			
				45	8.36	27.0	28.1	29.3			
				50	7.52	30.0	31.3	32.5			
				55	6.84	33.0	34.4	35.8			
				60	6.27	36.0	37.5	39.0			
				65	5.78	39.0	40.6	42.3			
				70	5.37	42.0	43.8	45.5			
				75	5.01	45.0	46.9	48.8			
				80	4.70	48.0	50.0	52.0			
				90	4.18	54.0	56.3	58.5			
				100	3.76	60.0	62.5	65.0			
				110	3.42	66.0	68.8	71.5			
				120	3.13	72.0	75.0	78.0			
				125	3.01	75.0	78.1	81.3			
130	2.89	78.0	81.3	84.5							
140	2.69	84.0	87.5	91.0							
150	2.51	90.0	93.8	97.5							
175	2.15	105.0	109.4	113.8							
200	1.88	120.0	125.0	130.0							

1N=0.102Kgf

荷重(N)=ばね定数(N/mm)×たわみ(mm)

TU

呼称	外径 (mm)	内径 (mm)	自由長 (mm)	バネ定数 (N/mm)	自由長×60% 100万回		自由長×62.5% 50万回		自由長×65% 30万回	
					たわみ (mm)	荷重 (N)	たわみ (mm)	荷重 (N)	たわみ (mm)	荷重 (N)
TU 26 × 30	26	16.5	30	16.34	18.0	294.2	18.8	306.5	19.5	318.7
			35	14.01	21.0		21.9		22.8	
			40	12.26	24.0		25.0		26.0	
			45	10.90	27.0		28.1		29.3	
			50	9.81	30.0		31.3		32.5	
			55	8.92	33.0		34.4		35.8	
			60	8.17	36.0		37.5		39.0	
			65	7.54	39.0		40.6		42.3	
			70	7.00	42.0		43.8		45.5	
			75	6.54	45.0		46.9		48.8	
			80	6.13	48.0		50.0		52.0	
			90	5.45	54.0		56.3		58.5	
			100	4.90	60.0		62.5		65.0	
			110	4.46	66.0		68.8		71.5	
			120	4.09	72.0		75.0		78.0	
			125	3.92	75.0		78.1		81.3	
			130	3.77	78.0		81.3		84.5	
			140	3.50	84.0		87.5		91.0	
			150	3.27	90.0		93.8		97.5	
			175	2.80	105.0		109.4		113.8	
200	2.45	120.0	125.0	130.0						
225	2.18	135.0	140.6	146.3						
250	1.96	150.0	156.3	162.5						
TU 31 × 35	31	21	35	17.75	21.0	372.7	21.9	388.2	22.8	403.8
			40	15.53	24.0		25.0		26.0	
			45	13.80	27.0		28.1		29.3	
			50	12.42	30.0		31.3		32.5	
			55	11.29	33.0		34.4		35.8	
			60	10.35	36.0		37.5		39.0	
			65	9.56	39.0		40.6		42.3	
			70	8.87	42.0		43.8		45.5	
			75	8.28	45.0		46.9		48.8	
			80	7.76	48.0		50.0		52.0	
			90	6.90	54.0		56.3		58.5	
			100	6.21	60.0		62.5		65.0	
			110	5.65	66.0		68.8		71.5	
			120	5.18	72.0		75.0		78.0	
			125	4.97	75.0		78.1		81.3	
			130	4.78	78.0		81.3		84.5	
			140	4.44	84.0		87.5		91.0	
			150	4.14	90.0		93.8		97.5	
			160	3.88	96.0		100.0		104.0	
			170	3.65	102.0		106.3		110.5	
175	3.55	105.0	109.4	113.8						
180	3.45	108.0	112.5	117.0						
190	3.27	114.0	118.8	123.5						
200	3.11	120.0	125.0	130.0						
250	2.48	150.0	156.3	162.5						
300	2.07	180.0	187.5	195.0						

1N=0.102Kgf

荷重(N)=ばね定数(N/mm)×たわみ(mm)

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呼称	外径 (mm)	内径 (mm)	自由長 (mm)	バネ定数 (N/mm)	自由長×60% 100万回		自由長×62.5% 50万回		自由長×65% 30万回	
					たわみ (mm)	荷重 (N)	たわみ (mm)	荷重 (N)	たわみ (mm)	荷重 (N)
TU 37 × 40	37	26	40	19.20	24.0	460.9	25.0	480.1	26.0	499.3
45			17.07	27.0	28.1		29.3			
50			15.36	30.0	31.3		32.5			
55			13.97	33.0	34.4		35.8			
60			12.80	36.0	37.5		39.0			
65			11.82	39.0	40.6		42.3			
70			10.97	42.0	43.8		45.5			
75			10.24	45.0	46.9		48.8			
80			9.60	48.0	50.0		52.0			
90			8.54	54.0	56.3		58.5			
100			7.68	60.0	62.5		65.0			
110			6.98	66.0	68.8		71.5			
120			6.40	72.0	75.0		78.0			
130			5.91	78.0	81.3		84.5			
140			5.49	84.0	87.5		91.0			
150			5.12	90.0	93.8		97.5			
160			4.80	96.0	100.0		104.0			
170			4.52	102.0	106.3		110.5			
180			4.27	108.0	112.5		117.0			
190			4.04	114.0	118.8		123.5			
200			3.84	120.0	125.0		130.0			
225	3.41	135.0	140.6	146.3						
250	3.07	150.0	156.3	162.5						
275	2.79	165.0	171.9	178.8						
300	2.56	180.0	187.5	195.0						
TU 43 × 50	43	31	50	19.61	30.0	588.4	31.3	612.9	32.5	637.4
60			16.34	36.0	37.5		39.0			
70			14.01	42.0	43.8		45.5			
80			12.26	48.0	50.0		52.0			
90			10.90	54.0	56.3		58.5			
100			9.81	60.0	62.5		65.0			
110			8.92	66.0	68.8		71.5			
120			8.17	72.0	75.0		78.0			
130			7.54	78.0	81.3		84.5			
140			7.00	84.0	87.5		91.0			
150			6.54	90.0	93.8		97.5			
160			6.13	96.0	100.0		104.0			
170			5.77	102.0	106.3		110.5			
180			5.45	108.0	112.5		117.0			
190			5.16	114.0	118.8		123.5			
200			4.90	120.0	125.0		130.0			
225			4.36	135.0	140.6		146.3			
250			3.92	150.0	156.3		162.5			
275			3.57	165.0	171.9		178.8			
300			3.27	180.0	187.5		195.0			

1N=0.102Kgf

荷重(N)=ばね定数(N/mm)×たわみ(mm)