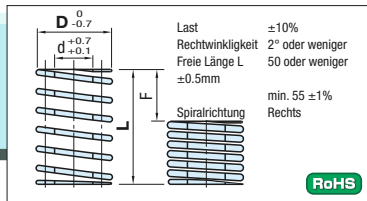


Schraubenfeder

Für geringe Last SWL



D	d	L	Federkonstante N/mm(kgf/mm)	F = L x 32% Fmm Last N(kgf)	F = L x 36% Fmm Last N(kgf)	F = Lx40% Fmm Last N(kgf)	Teilenummer Ausführung D-L	Stückpreis
6	3	15	13.1(1.33)	4.8	5.4	6.0	SWL 6- 15	
		20	9.8(1.00)	6.4	7.2	8.0	20	
		25	7.8(0.80)	8.0	9.0	10.0	25	
		30	6.5(0.67)	9.6	10.8	12.0	30	
		35	5.6(0.57)	11.2	12.6	14.0	35	
		40	4.9(0.50)	12.8	14.4	16.0	40	
8	4	10	24.5(2.50)	3.2	3.6	4.0	SWL 8- 10	
		15	16.3(1.67)	4.8	5.4	6.0	15	
		20	12.3(1.25)	6.4	7.2	8.0	20	
		25	9.8(1.00)	8.0	9.0	10.0	25	
		30	8.2(0.83)	9.6	10.8	12.0	30	
		35	7.0(0.71)	11.2	12.6	14.0	35	
		40	6.1(0.63)	12.8	14.4	16.0	40	
		45	5.4(0.56)	14.4	16.2	18.0	45	
		50	4.9(0.50)	16.0	18.0	20.0	50	
		55	4.5(0.45)	17.6	19.8	22.0	55	
		60	4.1(0.42)	19.2	21.6	24.0	60	
		65	3.8(0.38)	20.8	23.4	26.0	65	
		70	3.5(0.36)	22.4	25.2	28.0	70	
		75	3.3(0.33)	24.0	27.0	30.0	75	
10	5	80	3.1(0.31)	25.6	28.8	32.0	80	
		10	34.3(3.50)	3.2	3.6	4.0	SWL 10- 10	
		15	22.9(2.33)	4.8	5.4	6.0	15	
		20	17.2(1.75)	6.4	7.2	8.0	20	
		25	13.7(1.40)	8.0	9.0	10.0	25	
		30	11.4(1.17)	9.6	10.8	12.0	30	
		35	9.8(1.00)	11.2	12.6	14.0	35	
		40	8.6(0.88)	12.8	14.4	16.0	40	
		45	7.6(0.78)	14.4	16.2	18.0	45	
		50	6.9(0.70)	16.0	18.0	20.0	50	
		55	6.2(0.64)	17.6	19.8	22.0	55	
		60	5.7(0.58)	19.2	21.6	24.0	60	
		65	5.3(0.54)	20.8	23.4	26.0	65	
		70	4.9(0.50)	22.4	25.2	28.0	70	
12	6	75	4.6(0.47)	24.0	27.0	30.0	75	
		80	4.3(0.44)	25.6	28.8	32.0	80	
		90	3.8(0.39)	28.8	32.4	36.0	90	
		15	34.3(3.50)	4.8	5.4	6.0	SWL 12- 15	
		20	25.7(2.63)	6.4	7.2	8.0	20	
		25	20.6(2.10)	8.0	9.0	10.0	25	
		30	17.2(1.75)	9.6	10.8	12.0	30	
		35	14.7(1.50)	11.2	12.6	14.0	35	
		40	12.9(1.31)	12.8	14.4	16.0	40	
		45	11.4(1.17)	14.4	16.2	18.0	45	
		50	10.3(1.05)	16.0	18.0	20.0	50	
		55	9.4(0.95)	17.6	19.8	22.0	55	
		60	8.6(0.88)	19.2	21.6	24.0	60	
		65	7.9(0.81)	20.8	23.4	26.0	65	
14	7	70	7.4(0.75)	22.4	25.2	28.0	70	
		75	6.9(0.70)	24.0	27.0	30.0	75	
		80	6.4(0.66)	25.6	28.8	32.0	80	
		90	5.7(0.58)	28.8	32.4	36.0	90	
		20	34.3(3.50)	6.4	7.2	8.0	SWL 14- 20	
		25	27.5(2.80)	8.0	9.0	10.0	25	
		30	22.9(2.33)	9.6	10.8	12.0	30	
		35	19.6(2.00)	11.2	12.6	14.0	35	
		40	17.2(1.75)	12.8	14.4	16.0	40	
		45	15.3(1.56)	14.4	16.2	18.0	45	
		50	13.7(1.40)	16.0	18.0	20.0	50	
		55	12.5(1.27)	17.6	19.8	22.0	55	
		60	11.4(1.17)	19.2	21.6	24.0	60	
		65	10.6(1.08)	20.8	23.4	26.0	65	

Gebrauchshäufigkeit Eine Million Mal 500.000 Mal 300.000 Mal

Ordering Example

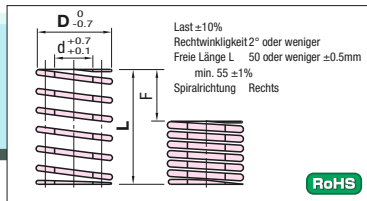
Teilenummer
SWL22-100
SWH20-80

• Methode der Traglastberechnung = Federkonstante x Auslenkung
(Intern. Einheit) N=N/mm x Fmm
kgf = kgf/mm x Fmm
(kgf = N x 0.101972)

Werkstoff: Ölgehärteter Draht für Federn

Schraubenfeder

Für mittlere Last SWM



D	d	L	Federkonstante N/mm(kgf/mm)	F = L x 25.6% Fmm Last N(kgf)	F = L x 28.8% Fmm Last N(kgf)	F = L x 32% Fmm Last N(kgf)	Teilenummer Ausführung D-L	Stückpreis
6	3	15	20.4(2.08)	3.8	4.3	4.8	SWM 6- 15	
		20	15.3(1.56)	5.1	5.8	6.4	20	
		25	12.3(1.25)	6.4	7.2	8.0	25	
		30	10.2(1.04)	7.7	8.6	9.6	30	
		35	8.8(0.89)	9.0	10.1	11.2	35	
		40	7.7(0.78)	10.2	11.5	12.8	40	
		45	6.8(0.69)	11.5	13.0	14.4	45	
		50	6.1(0.63)	12.8	14.4	16.0	50	
		55	5.6(0.57)	14.1	15.8	17.6	55	
		60	5.1(0.52)	15.4	17.3	19.2	60	
		10	42.9(4.37)	2.6	2.9	3.2	SWM 8- 10	
		15	28.6(2.91)	3.8	4.3	4.8	15	
		20	21.5(2.18)	5.1	5.8	6.4	20	
		25	17.2(1.75)	6.4	7.2	8.0	25	
8	4	30	14.3(1.46)	7.7	8.6	9.6	30	
		35	12.2(1.25)	9.0	10.1	11.2	35	
		40	10.7(1.09)	10.2	11.5	12.8	40	
		45	9.5(0.97)	11.5	13.0	14.4	45	
		50	8.6(0.87)	12.8	14.4	16.0	50	
		55	7.8(0.79)	14.1	15.8	17.6	55	
		60	7.1(0.73)	15.4	17.3	19.2	60	
		65	6.6(0.67)	16.6	18.7	20.8	65	
		70	6.1(0.62)	17.9	20.2	22.4	70	
		75	5.7(0.58)	19.2	21.6	24.0	75	
		80	5.4(0.55)	20.5	23.0	25.6	80	
		10	61.3(6.25)	2.6	2.9	3.2	SWM 10- 10	
		15	40.9(4.17)	3.8	4.3	4.8	15	
		20	30.6(3.13)	5.1	5.8	6.4	20	
10	5	25	24.5(2.50)	6.4	7.2	8.0	25	
		30	20.4(2.08)	7.7	8.6	9.6	30	
		35	17.5(1.79)	9.0	10.1	11.2	35	
		40	15.3(1.56)	10.2	11.5	12.8	40	
		45	13.6(1.39)	11.5	13.0	14.4	45	
		50	12.3(1.25)	12.8	14.4	16.0	50	
		55	11.1(1.14)	14.1	15.8	17.6	55	
		60	10.2(1.04)	15.4	17.3	19.2	60	
		65	9.4(0.96)	16.6	18.7	20.8	65	
		70	8.8(0.89)	17.9	20.2	22.4	70	
		75	8.2(0.83)	19.2	21.6	24.0	75	
		80	7.7(0.78)	20.5	23.0	25.6	80	
		90	6.8(0.69)	23.0	25.9	28.8	90	
		15	59.2(6.04)	3.8	4.3	4.8	SWM 12- 15	
12	6	20	44.4(4.53)	5.1	5.8	6.4	20	
		25	35.5(3.63)	6.4	7.2	8.0	25	
		30	29.6(3.02)	7.7	8.6	9.6	30	
		35	25.4(2.59)	9.0	10.1	11.2	35	
		40	22.2(2.27)	10.2	11.5	12.8	40	
		45	19.7(2.01)	11.5	13.0	14.4	45	
		50	17.8(1.81)	12.8	14.4	16.0	50	
		55	16.2(1.65)	14.1	15.8	17.6	55	
		60	14.8(1.51)	15.4	17.3	19.2	60	
		65	13.7(1.39)	16.6	18.7	20.8	65	
		70	12.7(1.29)	17.9	20.2	22.4	70	
		75	11.8(1.21)	19.2	21.6	24.0	75	
		80	11.1(1.13)	20.5	23.0	25.6	80	
		90	9.9(1.01)	23.0	25.9	28.8	90	
14	7	20	59.8(6.09)	5.1	5.8	6.4	SWM 14- 20	
		25	47.9(4.88)	6.4	7.2	8.0	25	
		30	39.9(4.08)	7.7	8.6	9.6	30	
		35	34.2(3.48)	9.0	10.1	11.2	35	
		40	29.9(3.05)	10.2	11.5	12.8	40	
		45	26.6(2.71)	11.5	13.0	14.4	45	
		50	23.9(2.44)	12.8	14.4	16.0	50	
		55	21.8(2.22)	14.1	15.8	17.6	55	
		60	19.9(2.03)	15.4	17.3	19.2	60	
		65	18.4(1.88)	16.6	18.7	20.8	65	
		70	17.1(1.74)	17.9	20.2	22.4	70	
		75	16.0(1.63)	19.2	21.6	24.0	75	
		80	15.0(1.52)	20.5	23.0	25.6	80	
		90	13.3(1.35)	23.0	25.9	28.8	90	

Gebrauchshäufigkeit Eine Million Mal 500.000 Mal 300.000 Mal

Verwendung von Schraubenfedern und Vorsichtsmaßnahmen S.328

• Maß und nach hinten gerichtete Bohrung sowie D-Maß und Welle siehe S.1881.

• Ausführungen größer als D25 sind in „Presswerkzeuge und Formteile“ aufgeführt.

D	d	L	Federkonstante N/mm(kgf/mm)	F = L x 25.6% Fmm Last N(kgf)	F = L x 28.8% Fmm Last N(kgf)	F = L x 32% Fmm Last N(kgf)	Teilenummer Ausführung D-L	Stückpreis	
16	8	20	78.1(7.97)	5.1	5.8	6.4	SWM 16- 500 {51}	20	
		25	62.5(6.38)	6.4	7.2	8.0		25	
		30	52.1(5.31)	7.7	8.6	9.6		30	
		35	44.7(4.55)	9.0	10.1	11.2		35	
		40	39.1(3.98)	10.2	11.5	12.8		40	
		45	34.7(3.54)	11.5	13.0	14.4		45	
		50	31.3(3.19)	12.8	14.4	16.0		50	
		55	28.4(2.90)	14.1	15.8	17.6		55	
		60	26.0(2.66)	15.4	17.3	19.2		60	
		65	24.0(2.45)	16.6	18.7	20.8		65	
		70	22.3(2.28)	17.9	20.2	22.4		70	
18	9	20	99.6(10.2)	5.1	5.8	6.4	SWM 18- 637 {65}	20	
		25	79.7(8.13)	6.4	7.2	8.0		25	
		30	66.4(6.77)	7.7	8.6	9.6		30	
		35	56.9(5.80)	9.0	10.1	11.2		35	
		40	49.8(5.08)	10.2	11.5	12.8		40	
		45	44.3(4.51)	11.5	13.0	14.4		45	
		50	39.8(4.06)	12.8	14.4	16.0		50	
		55	36.2(3.69)	14.1	15.8	17.6		55	
		60	33.2(3.39)	15.4	17.3	19.2		60	
		65	30.6(3.13)	16.6	18.7	20.8		65	
		70	28.5(2.90)	17.9	20.2	22.4		70	
20	10	20	123(12.5)	5.1	5.8	6.4	SWM 20- 784 {80}	20	
		25	98.0(10.0)	6.4	7.2	8.0		25	
		30	81.7(8.33)	7.7	8.6	9.6		30	
		35	70.0(7.14)	9.0	10.1	11.2		35	
		40	61.3(6.25)	10.2	11.5	12.8		40	
		45	54.4(5.55)	11.5	13.0	14.4		45	
		50	49.0(5.00)	12.8	14.4	16.0		50	
		55	44.5(4.55)	14.1	15.8	17.6		55	
		60	40.8(4.17)	15.4	17.3	19.2		60	
		65	37.7(3.85)	16.6	18.7	20.8		65	
		22	11	20	119(12.1)	6.4		7.2	8.0
25	99.1(10.1)			7.7	8.6	9.6	30		
35	84.9(8.66)			9.0	10.1	11.2	35		
40	74.3(7.58)			10.2	11.5	12.8	40		
45	66.1(6.74)			11.5	13.0	14.4	45		
50	59.5(6.06)			12.8	14.4	16.0	50		
55	54.0(5.51)			14.1	15.8	17.6	55		
60	49.5(5.05)			15.4	17.3	19.2	60		
65	45.4(4.66)			16.6	18.7	20.8	65		
70	42.5(4.33)			17.9	20.2	22.4	70		
25	12.5			20	139(14.0)	19.2	21.6	24.0	SWM 25- 1225 {125}
		25	112(11.2)	20.5	23.0	25.6	80		
		30	93.0(9.37)	23.0	25.9	28.8	90		
		40	79.7(8.03)	25.6	28.8	32.0	100		
		50	68.0(6.83)	32.0	36.0	40.0	125		
		60	60.0(6.00)	38.4	43.2	48.0	150		
		75	51.0(5.21)	19.2	21.6	24.0	70		
		80	47.9(4.88)	20.5	23.0	25.6	80		
		90	42.5(4.34)	23.0	25.9	28.8	90		
		100	38.3(3.91)	25.6	28.8	32.0	100		
		125	30.6(3.13)	32.0	36.0	40.0	125		
Gebrauchshäufigkeit			Eine Million Mal			500.000 Mal			