

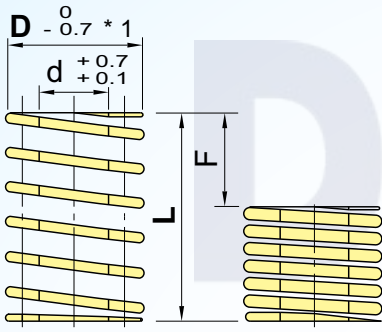
Load $\pm 10\%$
 Perpendicularity 2° or less
 Free length L 50 or less $\pm 0.5\text{mm}$
 55 or more $\pm 1\%$
 Winding Direction : Right

*1 For D70, the D dimension tolerance is $0_{-1.0}$

Part No. Type D-L	D	d	L	Spring Constant N/mm(kgf/mm)	F = L x 40%		F = L x 45%		F = L x 50%		
					Fmm	Load N(kgf)	Fmm	Load N(kgf)	Fmm	Load N(kgf)	
Operation Count											
					1,000,000	500,000	300,000				
DSWF6 - 15	6	3	15	7.8 (0.80)	6.0	6.8	7.5	8.0	47	59	
20			20	5.9 (0.60)	8.0	9.0	10.0	11.3	12.5	(4.8)	(6.0)
25			25	4.7 (0.48)	10.0	11.3	12.5	13.5	15.0		
30			30	3.9 (0.40)	12.0	13.5	15.0	15.8	17.5		
35			35	3.4 (0.34)	14.0	15.8	17.5	18.0	20.0		
40			40	2.9 (0.30)	16.0	18.0	20.0				
DSWF8 - 10	8	4	10	15.7 (1.60)	4.0	4.5	5.0	6.0	63	79	
15			15	10.5 (1.07)	6.0	6.8	7.5	8.0	9.0	(6.4)	(8.0)
20			20	7.8 (0.80)	8.0	9.0	10.0	11.2	12.5		
25			25	6.3 (0.64)	10.0	11.2	12.5	13.5	15.0		
30			30	5.2 (0.53)	12.0	13.5	15.0	15.7	17.5		
35			35	4.5 (0.46)	14.0	15.7	17.5	18.0	20.0		
40			40	3.9 (0.40)	16.0	18.0	20.0	20.2	22.5		
45			45	3.5 (0.36)	18.0	20.2	22.5	22.5	25.0		
50			50	3.1 (0.32)	20.0	22.5	25.0	24.7	27.5		
55			55	2.9 (0.29)	22.0	24.7	27.5	27.0	30.0		
60			60	2.6 (0.27)	24.0	27.0	30.0	29.3	32.5		
65			65	2.4 (0.25)	26.0	29.3	32.5	31.5	35.0		
70	70	2.2 (0.23)	28.0	31.5	35.0	33.8	37.5				
75	75	2.1 (0.21)	30.0	33.8	37.5	36.0	40.0				
80	80	2.0 (0.20)	32.0	36.0	40.0						
DSWF10 - 10	10	5	10	19.6 (2.00)	4.0	4.5	5.0	6.0	78	98	
15			15	13.1 (1.33)	6.0	6.8	7.5	8.0	9.0	(8.0)	(10)
20			20	9.8 (1.00)	8.0	9.0	10.0	11.2	12.5		
25			25	7.8 (0.80)	10.0	11.2	12.5	13.5	15.0		
30			30	6.5 (0.67)	12.0	13.5	15.0	15.7	17.5		
35			35	5.9 (0.57)	14.0	15.7	17.5	18.0	20.0		
40			40	4.9 (0.50)	16.0	18.0	20.0	20.2	22.5		
45			45	4.4 (0.44)	18.0	20.2	22.5	22.5	25.0		
50			50	3.9 (0.40)	20.0	22.5	25.0	24.7	27.5		
55			55	3.6 (0.36)	22.0	24.7	27.5	27.0	30.0		
60			60	3.3 (0.33)	24.0	27.0	30.0	29.2	32.5		
65			65	3.0 (0.31)	26.0	29.2	32.5	31.5	35.0		
70			70	2.8 (0.29)	28.0	31.5	35.0	33.7	37.5		
75			75	2.6 (0.27)	30.0	33.7	37.5	36.0	40.0		
80	80	2.5 (0.25)	32.0	36.0	40.0						
90	90	2.2 (0.22)	36.0	40.5	45.0						
DSWF12 - 15	12	6	15	18.3 (1.87)	6.0	6.8	7.5	8.0	110	134	
20			20	13.7 (1.40)	8.0	9.0	10.0	11.2	12.5	(11)	(14)
25			25	11.0 (1.12)	10.0	11.2	12.5	13.5	15.0		
30			30	9.2 (0.93)	12.0	13.5	15.0	15.7	17.5		
35			35	7.8 (0.80)	14.0	15.7	17.5	18.0	20.0		
40			40	6.9 (0.70)	16.0	18.0	20.0	20.2	22.5		
45			45	6.1 (0.62)	18.0	20.2	22.5	22.5	25.0		
50			50	5.5 (0.56)	20.0	22.5	25.0	24.7	27.5		
55			55	5.0 (0.51)	22.0	24.7	27.5	27.0	30.0		
60			60	4.6 (0.47)	24.0	27.0	30.0	29.2	32.5		
65			65	4.2 (0.43)	26.0	29.2	32.5	31.5	35.0		
70			70	3.9 (0.40)	28.0	31.5	35.0	33.7	37.5		
75			75	3.7 (0.37)	30.0	33.7	37.5	36.0	40.0		
80			80	3.4 (0.35)	32.0	36.0	40.0				
90	90	3.1 (0.31)	36.0	40.5	45.0						
DSWF14 - 20	14	7	20	17.7 (1.80)	8.0	9.0	10.0	11.2	141	177	
25			25	14.1 (1.44)	10.0	11.2	12.5	13.5	15.0	(14)	(18)
30			30	11.8 (1.20)	12.0	13.5	15.0	15.7	17.5		
35			35	10.1 (1.03)	14.0	15.7	17.5	18.0	20.0		
40			40	8.8 (0.90)	16.0	18.0	20.0	20.2	22.5		
45			45	7.8 (0.80)	18.0	20.2	22.5	22.5	25.0		
50			50	7.1 (0.72)	20.0	22.5	25.0	24.7	27.5		
55			55	6.4 (0.65)	22.0	24.7	27.5	27.0	30.0		
60			60	5.9 (0.60)	24.0	27.0	30.0	29.2	32.5		
65			65	5.4 (0.55)	26.0	29.2	32.5	31.5	35.0		
70			70	5.0 (0.51)	28.0	31.5	35.0	33.7	37.5		
75			75	4.7 (0.48)	30.0	33.7	37.5	36.0	40.0		
80			80	4.4 (0.45)	32.0	36.0	40.0				
90			90	3.9 (0.40)	36.0	40.5	45.0				
100	100	3.5 (0.36)	40.0	45.0	50.0						

Part No. Type D-L	D	d	L	Spring Constant N/mm(kgf/mm)	F = L x 40%		F = L x 45%		F = L x 50%		
					Fmm	Load N(kgf)	Fmm	Load N(kgf)	Fmm	Load N(kgf)	
Operation Count											
					1,000,000	500,000	300,000				
DSWF16 - 20	16	8	20	20.6 (2.10)	8.0	9.0	10.0	11.2	165	206	
25			25	16.5 (1.68)	10.0	11.2	12.5	13.5	15.0	(17)	(21)
30			30	13.7 (1.40)	12.0	13.5	15.0	15.7	17.5		
35			35	11.8 (1.20)	14.0	13.5	15.0	18.0	20.0		
40			40	10.3 (1.05)	16.0	18.0	20.0	18.0	20.0		
45			45	9.2 (0.93)	18.0	20.2	22.5	20.2	22.5		
50			50	8.2 (0.84)	20.0	22.5	25.0	22.5	25.0		
55			55	7.5 (0.76)	22.0	24.7	27.5	24.7	27.5		
60			60	6.9 (0.70)	24.0	27.0	30.0	27.0	30.0		
65			65	6.3 (0.65)	26.0	29.2	32.5	29.2	32.5		
70			70	5.9 (0.60)	28.0	31.5	35.0	31.5	35.0		
75			75	5.5 (0.56)	30.0	33.7	37.5	33.7	37.5		
80			80	5.1 (0.53)	32.0	36.0	40.0	36.0	40.0		
90			90	4.6 (0.47)	36.0	40.5	45.0	40.5	45.0		
100	100	4.1 (0.42)	40.0	45.0	50.0	45.0	50.0				
125	125	3.3 (0.34)	50.0	56.3	62.5						
DSWF18 - 20	18	9	20	25.5 (2.60)	8.0	9.0	10.0	11.2	204	255	
25			25	20.4 (2.08)	10.0	11.2	12.5	13.5	15.0	(21)	(26)
30			30	17.0 (1.73)	12.0	13.5	15.0	15.7	17.5		
35			35	14.6 (1.49)	14.0	15.7	17.5	18.0	20.0		
40			40	12.7 (1.30)	16.0	18.0	20.0	18.0	20.0		
45			45	11.3 (1.16)	18.0	20.2	22.5	20.2	22.5		
50			50	10.2 (1.04)	20.0	22.5	25.0	22.5	25.0		
55			55	9.3 (0.95)	22.0	24.7	27.5	24.7	27.5		
60			60	8.5 (0.87)	24.0	27.0	30.0	27.0	30.0		
65			65	7.8 (0.80)	26.0	29.2	32.5	29.2	32.5		
70			70	7.3 (0.74)	28.0	31.5	35.0	31.5	35.0		
75			75	6.8 (0.69)	30.0	33.7	37.5	33.7	37.5		
80			80	6.4 (0.65)	32.0	36.0	40.0	36.0	40.0		
90			90	5.7 (0.58)	36.0	40.5	45.0	40.5	45.0		
100	100	5.1 (0.52)	40.0	45.0	50.0	45.0	50.0				
125	125	4.1 (0.42)	50.0	56.3	62.5						
DSWF20 - 20	20	11	20	31.4 (3.20)	8.0	9.0	10.0	11.2	251	314	
25			25	25.1 (2.56)	10.0	11.2	12.5	13.5	15.0	(26)	(32)
30			30	20.9 (2.13)	12.0	13.5	15.0	15.7	17.5		
35			35	17.9 (1.83)	14.0	15.7	17.5	18.0	20.0		
40			40	15.7 (1.60)	16.0	18.0	20.0	18.0	20.0		
45			45	13.9 (1.42)	18.0	20.2	22.5	20.2	22.5		
50			50	12.6 (1.28)	20.0	22.5	25.0	22.5	25.0		
55			55	11.4 (1.16)	22.0	24.7	27.5	24.7	27.5		
60			60	10.5 (1.07)	24.0	27.0	30.0	27.0	30.0		
65			65	9.7 (0.98)	26.0	29.2	32.5	29.2	32.5		
70			70	9.0 (0.91)	28.0	31.5	35.0	31.5	35.0		
75			75	8.4 (0.85)	30.0	33.7	37.5	33.7	37.5		
80			80	7.8 (0.80)	32.0	36.0	40.0	36.0	40.0		
90			90	7.0 (0.71)	36.0	40.5	45.0	40.5	45.0		
100	100	6.3 (0.64)	40.0	45.0	50.0	45.0	50.0				
125	125	5.0 (0.51)	50.0	56.2	62.5						
150	150	4.2 (0.43)	60.0</								

Coil Springs – DSWF




Load $\pm 10\%$
 Perpendicularity 2° or less
 Free length L 50 or less $\pm 0.5\text{mm}$
 55 or more $\pm 1\%$
 Winding Direction : Right

*1 For D70, the D dimension tolerance is $0_{-1.0}$

Part No. Type D-L	D	d	L	Spring Constant N/mm(kgf/mm)	F = L x 40%		F = L x 45%		F = L x 50%	
					Fmm	Load N(kgf)	Fmm	Load N(kgf)	Fmm	Load N(kgf)
Operation Count										
					1,000,000	500,000			300,000	
DSWF25 - 25	25	13.5	25	39.2 (4.00)	10.0		11.2		12.5	
30			32.7 (3.33)	12.0	13.5	15.0				
35			28.0 (2.86)	14.0	15.7	17.5				
40			24.5 (2.50)	16.0	18.0	20.0				
45			21.8 (2.22)	18.0	20.2	22.5				
50			19.6 (2.00)	20.0	22.5	25.0				
55			17.8 (1.82)	22.0	24.7	27.5				
60			16.3 (1.67)	24.0	27.0	30.0				
65			15.1 (1.54)	26.0	29.2	32.0	392			
70			14.0 (1.43)	28.0	31.5	35.0	(40)			
75			13.1 (1.33)	30.0	33.7	37.5				
80			12.3 (1.25)	32.0	36.0	40.0				
90			10.9 (1.11)	36.0	40.5	45.0				
100			9.8 (1.00)	40.0	45.0	50.0				
125			7.8 (0.80)	50.0	56.2	62.5				
150			6.5 (0.67)	60.0	67.5	75.0				
175	5.6 (0.57)	70.0	78.7	87.5						
200	4.9 (0.50)	80.0	90.0	100.0						
DSWF27 - 25	27	13.5	25	47.1 (4.80)	10.0		11.2		12.5	
30			39.2 (4.00)	12.0	13.5	15.0				
35			33.6 (3.43)	14.0	15.7	17.5				
40			29.4 (3.00)	16.0	18.0	20.0				
45			26.2 (2.67)	18.0	20.2	22.5				
50			23.5 (2.40)	20.0	22.5	25.0				
55			21.4 (2.18)	22.0	24.7	27.5				
60			19.6 (2.00)	24.0	27.0	30.0				
65			18.1 (1.85)	26.0	29.2	32.0	471			
70			16.8 (1.71)	28.0	31.5	35.0	(48)			
75			15.7 (1.60)	30.0	33.7	37.5				
80			14.7 (1.50)	32.0	36.0	40.0				
90			13.1 (1.33)	36.0	40.5	45.0				
100			11.8 (1.20)	40.0	45.0	50.0				
125			9.4 (0.96)	50.0	56.2	62.5				
150			7.8 (0.80)	60.0	67.5	75.0				
175	6.7 (0.69)	70.0	78.7	87.5						
200	5.9 (0.60)	80.0	90.0	100.0						
DSWF30 - 25	30	16	25	56.5 (5.76)	10.0		11.2		12.5	
30			47.1 (4.80)	12.0	13.5	15.0				
35			40.3 (4.11)	14.0	15.7	17.5				
40			35.3 (3.60)	16.0	18.0	20.0				
45			31.4 (3.20)	18.0	20.2	22.5				
50			28.2 (2.88)	20.0	22.5	25.0				
55			25.7 (2.62)	22.0	24.7	27.5				
60			23.5 (2.40)	24.0	27.0	30.0				
65			21.7 (2.22)	26.0	29.2	32.0	565			
70			20.2 (2.06)	28.0	31.5	35.0	(58)			
75			18.8 (1.92)	30.0	33.7	37.5				
80			17.7 (1.80)	32.0	36.0	40.0				
90			15.7 (1.60)	36.0	40.5	45.0				
100			14.1 (1.44)	40.0	45.0	50.0				
125			11.3 (1.15)	50.0	56.2	62.5				
150			9.4 (0.96)	60.0	67.5	75.0				
175	8.1 (0.82)	70.0	78.7	87.5						
200	7.1 (0.72)	80.0	90.0	100.0						
DSWF35 - 40	35	19	40	48.0 (4.89)	16.0		18.0		20.0	
45			42.7 (4.35)	18.0	20.2	22.5				
50			38.4 (3.92)	20.0	22.5	25.0				
55			34.9 (3.56)	22.0	24.7	27.5				
60			32.0 (3.26)	24.0	27.0	30.0				
65			29.5 (3.01)	26.0	29.2	32.5				
70			27.4 (2.80)	28.0	31.5	35.0	768			
75			25.6 (2.61)	30.0	33.7	37.5	(78)			
80			24.0 (2.45)	32.0	36.0	40.0				
90			21.3 (2.18)	36.0	40.5	45.0				
100			19.2 (1.96)	40.0	45.0	50.0				
125			15.4 (1.57)	50.0	56.2	62.5				
150			12.8 (1.31)	60.0	67.5	75.0				
175			11.0 (1.12)	70.0	78.7	87.5				
200			9.6 (0.98)	80.0	90.0	100.0				

Part No. Type D-L	D	d	L	Spring Constant N/mm(kgf/mm)	F = L x 40%		F = L x 45%		F = L x 50%	
					Fmm	Load N(kgf)	Fmm	Load N(kgf)	Fmm	Load N(kgf)
Operation Count										
					1,000,000	500,000			300,000	
DSWF40 - 40	40	22	40	62.7(6.39)	16.0		18.0		20.0	
45			55.7(5.68)	18.0	20.3	22.5				
50			50.2(5.11)	20.0	22.5	25.0				
55			45.6(4.65)	22.0	24.8	27.5				
60			41.8(4.26)	24.0	27.0	30.0				
65			38.6(3.93)	26.0	29.3	32.5				
70			35.8(3.65)	28.0	31.5	35.0				
75			33.4(3.41)	30.0	33.8	37.5				
80			31.4(3.20)	32.0	36.0	40.0	1003			
90			27.9(2.84)	36.0	40.5	45.0	(102)			
100			25.1(2.56)	40.0	45.0	50.0				
125			20.1(2.05)	50.0	56.2	62.5				
150			16.7(1.70)	60.0	67.5	75.0				
175			14.3(1.46)	70.0	78.7	87.5				
200			12.5(1.28)	80.0	90.0	100.0				
225			11.1(1.14)	90.0	101.3	112.5				
250	10.0(1.02)	100.0	112.5	125.0						
275	9.1(0.93)	110.0	123.8	137.5						
300	8.4(0.85)	120.0	135.0	150.0						
DSWF50 - 50	50	27.5	50	78.4(7.99)	20.0		22.5		25.0	
55			71.3(7.27)	22.0	24.8	27.5				
60			65.3(6.66)	24.0	27.0	30.0				
65			60.3(6.15)	26.0	29.3	32.5				
70			56.0(5.71)	28.0	31.5	35.0				
75			52.3(5.33)	30.0	33.8	37.5				
80			49.0(5.00)	32.0	36.0	40.0				
90			43.6(4.44)	36.0	40.5	45.0				
100			39.2(4.00)	40.0	45.0	50.0				
125			31.4(3.20)	50.0	56.2	62.5	1568			
150			26.1(2.66)	60.0	67.5	75.0	(160)			
175			22.4(2.28)	70.0	78.7	87.5				
200			19.6(2.00)	80.0	90.0	100.0				
225			17.4(1.78)	90.0	101.3	112.5				
250			15.7(1.60)	100.0	112.5	125.0				
275			14.3(1.45)	110.0	123.8	137.5				
300	13.1(1.33)	120.0	135.0	150.0						
350	11.2(1.14)	140.0	157.5	175.0						
400	9.8(1.00)	160.0	180.0	200.0						
450	8.7(0.89)	180.0	202.5	225.0						
500	7.8(0.80)	200.0	225.0	250.0						
DSWF60 - 60	60	33	60	94.0(9.59)	24.0		27.0		30.0	
70			80.6(8.22)	28.0	31.5	35.0				
80			70.5(7.19)	32.0	36.0	40.0				
90			62.7(6.39)	36.0	40.0	45.0				
100			56.4(5.75)	40.0	45.0	50.0				
125			45.1(4.60)	50.0	56.2	62.5				
150			37.6(3.83)	60.0	67.5	75.0				
175			32.2(3.29)	70.0	78.7	87.5	2256			
200			28.2(2.88)	80.0	90.0	100.0	(230)			
225			25.1(2.56)	90.0	101.3	112.5				
250			22.6(2.30)	100.0	112.5	125.0				
275			20.5(2.09)	110.0	123.8	137.5				
300			18.8(1.92)	120.0	135.0	150.0				
350			16.1(1.64)	140.0	157.5	175.0				
400			14.1(1.44)	160.0	180.0	200.0				
450			12.5(1.28)	180.0	202.5	225.0				
500	11.3(1.15)	200.0	225.0	250.0						
DSWF70 - 70	70	38.5	70	112(11.4)	28.0		31.5		35.0	
80			98.0(9.99)	32.0	36.0	40.0				
90			87.1(8.88)	36.0	40.5	45.0				
100			78.4(7.99)	40.0	45.0	50.0				
125			62.7(6.40)	50.0	56.3	62.5	3136			
150			52.3(5.33)	60.0	67.5	75.0	(320)			
175			44.8(4.57)	70.0	78.8	87.5				
200			39.2(4.00)	80.0	90.0	100.0				
250			31.4(3.20)	100.0	112.5	125.0				
300			26.1(2.66)	120.0	135.0	150.0				
350			22.4(2.28)	140.0	157.5	175.0				

Alteration	Code	Spec.
 No coating	NT	Coating removal Removal of the coil spring coating by shot peening ⚠ Springs with the coating removed are extremely susceptible to corrosion. Handle them with care. ⚠ Corrosion of the spring will result in early breakage. There may be greater variation in the load capacity and other characteristics between lots than with ordinary coated products.

ORDERING GUIDE



(NT)



NT DSWF 10 - 30

www.dymextech.com

india@dymextech.com