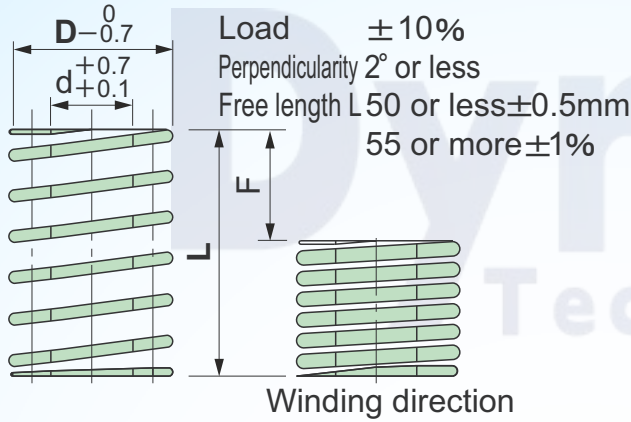


ROUND WIRE COIL SPRINGS DX-SWH

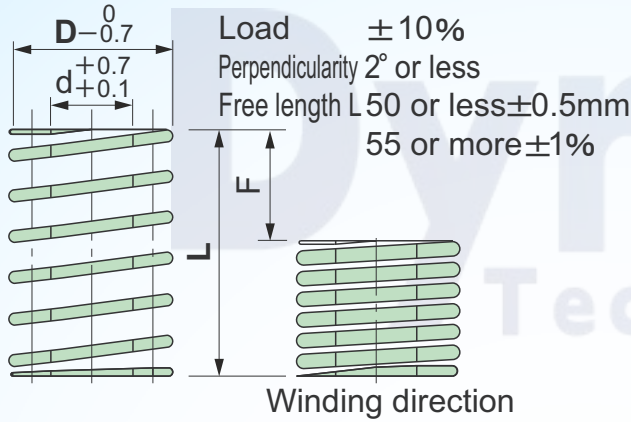


Part Number	D	d	L	Spring Constant		F = L x 19.2%		F = L x 21.6%							
				N/mm (kgf/mm)	Fmm	Load N(Kgf)	Fmm	Load N(Kgf)							
Type D - L	Operation Count			1000000	500000										
DX - SWH8 - 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80	8	4	10	85.8 (8.8)	1.9	2.2	165 (17)	185 (19)							
			15	57.2 (5.8)	2.9	3.2									
			20	42.9 (4.4)	3.8	4.3									
			25	34.3 (3.5)	4.8	5.4									
			30	28.6 (2.9)	5.8	6.5									
			35	24.5 (2.5)	6.7	7.5									
			40	21.5 (2.2)	7.7	8.6									
			45	19.1 (1.9)	8.6	9.7									
			50	17.2 (1.8)	9.6	10.8									
			55	15.6 (1.6)	10.6	11.8									
			60	14.3 (1.5)	11.5	13									
			65	13.2 (1.3)	12.5	14									
			70	12.3 (1.3)	13.4	15.1									
			75	11.4 (1.2)	14.4	16.2									
			80	10.7 (1.1)	15.4	17.3									
			DX - SWH10 - 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 90	10	5	10				123.0 (12.5)	1.9	2.2	235 (24)	265 (27)	
15	81.7 (8.3)	2.9				3.2									
20	61.3 (6.3)	3.8				4.3									
25	49.0 (5.0)	4.8				5.4									
30	40.8 (4.2)	5.8				6.5									
35	35.0 (3.6)	6.7				7.5									
40	30.6 (3.1)	7.7				8.6									
45	27.2 (2.8)	8.6				9.7									
50	24.5 (2.5)	9.6				10.8									
55	22.3 (2.3)	10.6				11.8									
60	20.4 (2.1)	11.5				13									
65	18.8 (1.9)	12.5				14									
70	17.5 (1.8)	13.4				15.1									
75	16.3 (1.7)	14.4				16.2									
80	15.3 (1.6)	15.4				17.3									
90	13.6 (1.4)	17.3				19.4									
DX - SWH12 - 20 25 30 35 40 45 50 55 60 65 70 75 80 90	12	6	20	87.7 (8.9)	3.8	4.3	337 (34)	379 (38)							
			25	70.2 (7.2)	4.8	5.4									
			30	58.5 (6.0)	5.8	6.5									
			35	50.1 (5.1)	6.7	7.5									
			40	43.9 (4.5)	7.7	8.6									
			45	39.0 (4.0)	8.6	9.7									
			50	35.1 (3.6)	9.6	10.8									
			55	31.9 (3.3)	10.6	11.8									
			60	29.2 (3.0)	11.5	13									
			65	27.0 (2.8)	12.5	14									
			70	25.1 (2.6)	13.4	15.1									
			75	23.4 (2.4)	14.4	16.2									
			80	21.9 (2.2)	15.4	17.3									
			90	19.5 (2.0)	17.3	19.4									
			DX - SWH14 - 20 25 30 35 40 45 50 55 60 65 70 75 80 90 100	14	7	20				120.0 (12.3)	3.8	4.3	462 (47)	520 (53)	
						25				96.3 (9.8)	4.8	5.4			
30	80.3 (8.2)	5.8				6.5									
35	68.8 (7.0)	6.7				7.5									
40	60.2 (6.1)	7.7				8.6									
45	53.5 (5.5)	8.6				9.7									
50	48.2 (4.9)	9.6				10.8									
55	43.8 (4.5)	10.6				11.8									
60	40.1 (4.1)	11.5				13									
65	37.1 (3.8)	12.5				14									
70	34.4 (3.5)	13.4				15.1									
75	32.1 (3.3)	14.4				16.2									
80	30.1 (3.1)	15.4				17.3									
90	26.8 (2.7)	17.3				19.4									
100	24.1 (2.5)	19.2				21.6									

Part Number	D	d	L	Spring Constant		F = L x 19.2%		F = L x 21.6%	
				N/mm (kgf/mm)	Fmm	Load N(Kgf)	Fmm	Load N(Kgf)	
Type D - L	Operation Count			1000000	500000				
DX - SWH16 - 20 25 30 35 40 45 50 55 60 65 70 75 80 90 100	16	8	20	157.0 (16.0)	3.8	4.3	604 (62)	680 (69)	
			25	126.0 (12.8)	4.8	5.4			
			30	105.0 (10.7)	5.8	6.5			
			35	89.9 (9.2)	6.7	7.5			
			40	78.6 (8.0)	7.7	8.6			
			45	69.9 (7.1)	8.6	9.7			
			50	62.9 (6.4)	9.6	10.8			
			55	57.2 (5.8)	10.6	11.8			
			60	52.4 (5.3)	11.5	13			
			65	48.4 (4.9)	12.5	14			
			70	44.9 (4.6)	13.4	15.1			
			75	41.9 (4.3)	14.4	16.2			
			80	39.3 (4.0)	15.4	17.3			
			90	35.0 (3.6)	17.3	19.4			
			100	31.5 (3.2)	19.2	21.6			
			DX - SWH18 - 20 25 30 35 40 45 50 55 60 65 70 75 80 90 100	18	9	20			
25	159.0 (16.2)	4.8				5.4			
30	132.0 (13.5)	5.8				6.5			
35	113.0 (11.5)	6.7				7.5			
40	99.1 (10.1)	7.7				8.6			
45	88.1 (9.0)	8.6				9.7			
50	79.3 (8.1)	9.6				10.8			
55	72.0 (7.3)	10.6				11.8			
60	66.0 (6.7)	11.5				13			
65	61.0 (6.2)	12.5				14			
70	56.6 (5.8)	13.4				15.1			
75	52.8 (5.4)	14.4				16.2			
80	49.5 (5.1)	15.4				17.3			
90	44.0 (4.5)	17.3				19.4			
100	39.6 (4.0)	19.2				21.6			
DX - SWH20 - 20 25 30 35 40 45 50 55 60 65 70 75 80 90 100 125 150	20	10				20	245.0 (25.0)	3.8	4.3
			25	196.0 (20.0)	4.8	5.4			
			30	163.0 (16.7)	5.8	6.5			
			35	140.0 (14.3)	6.7	7.5			
			40	123.0 (12.5)	7.7	8.6			
			45	109.0 (11.1)	8.6	9.7			
			50	98.0 (10.0)	9.6	10.8			
			55	89.1 (9.1)	10.6	11.8			
			60	81.7 (8.3)	11.5	13			
			65	75.4 (7.7)	12.5	14			
			70	70.0 (7.1)	13.4	15.1			
			75	65.3 (6.7)	14.4	16.2			
			80	61.3 (6.2)	15.4	17.3			
			90	54.4 (5.6)	17.3	19.4			
			100	49.0 (5.0)	19.2	21.6			
			125	39.2 (4.0)	24	27			
150	32.7 (3.3)	28.8	32.4						
DX - SWH22 - 25 30 35 40 45 50 55 60 65 70 75 80 90 100 125 150	22	11	25	237.0 (24.2)	4.8	5.4	1137 (116)	1279 (130)	
			30	197.0 (20.1)	5.8	6.5			
			35	169.0 (17.3)	6.7	7.6			
			40	148.0 (15.1)	7.7	8.6			
			45	132.0 (13.4)	8.6	9.7			
			50	118.0 (12.1)	9.6	10.8			
			55	108.0 (11.0)	10.6	11.9			
			60	98.7 (10.1)	11.5	13			
			65	91.1 (9.3)	12.5	14			
			70	84.6 (8.6)	13.4	15.1			
			75	78.9 (8.1)	14.4	16.2			
			80	74.0 (7.5)	15.4	17.3			
			90	65.8 (6.7)	17.3	19.4			
			100	59.2 (6.0)	19.2	21.6			
			125	47.4 (4.8)	24	27			
			150	39.5 (4.0)	28.8	32.4			



ROUND WIRE COIL SPRINGS DX-SWH



Part Number	D	d	L	Spring Constant N/mm {kgf/mm}	F = L x 19.2%		F = L x 21.6%	
					Fmm	Load N(Kgf)	Fmm	Load N(Kgf)
Type D - L	Operation Count			1000000	500000			
DX - SWH25 - 25 30 35 40 45 50 55 60 65 70 75 80 90 100 125 150 175	25	12.5	25	306.0 (31.2)	4.8	5.4	1466 (150)	1650 (168)
			30	255.0 (26.0)	5.8	6.5		
			35	218.0 (22.3)	6.7	7.6		
			40	191.0 (19.5)	7.7	8.6		
			45	170.0 (17.3)	8.6	9.7		
			50	153.0 (15.6)	9.6	10.8		
			55	139.0 (14.2)	10.6	11.9		
			60	127.0 (13.0)	11.5	13.0		
			65	118.0 (12.0)	12.5	14.0		
			70	109.0 (11.1)	13.4	15.1		
			75	102.0 (10.4)	14.4	16.2		
			80	95.5 (9.7)	15.4	17.3		
			90	84.9 (8.7)	17.3	19.4		
			100	76.4 (7.8)	19.2	21.6		
			125	61.1 (6.2)	24.0	27.0		
			150	50.9 (5.2)	28.8	32.4		
			175	43.6 (4.5)	33.6	37.8		
DX - SWH27 - 30 35 40 45 50 55 60 65 70 75 80 90 100 125 150 175	27	13.5	30	298.0 (30.4)	5.8	6.5	1717 (175)	1931 (197)
			35	255.0 (26.1)	6.7	7.6		
			40	224.0 (22.8)	7.7	8.6		
			45	199.0 (20.3)	8.6	9.7		
			50	179.0 (18.2)	9.6	10.8		
			55	163.0 (16.6)	10.6	11.9		
			60	149.0 (15.2)	11.5	13.0		
			65	138.0 (14.0)	12.5	14.0		
			70	128.0 (13.0)	13.4	15.1		
			75	119.0 (12.2)	14.4	16.2		
			80	112.0 (11.4)	15.4	17.3		
			90	99.4 (10.1)	17.3	19.4		
			100	89.4 (9.10)	19.2	21.6		
			125	71.5 (7.30)	24.0	27.0		
			150	59.6 (6.10)	28.8	32.4		
			175	51.1 (5.20)	33.6	37.8		
			DX - SWH30 - 25 30 35 40 45 50 55 60 65 70 75 80 90 100 125 150 175 200	30	15	25		
30	368.0 (37.5)	5.8				6.5		
35	315.0 (32.1)	6.7				7.6		
40	276.0 (28.1)	7.7				8.6		
45	245.0 (25.0)	8.6				9.7		
50	221.0 (22.5)	9.6				10.8		
55	200.0 (20.4)	10.6				11.9		
60	184.0 (18.7)	11.5				13.0		
65	170.0 (17.3)	12.5				14.0		
70	158.0 (16.1)	13.4				15.1		
75	147.0 (15.0)	14.4				16.2		
80	138.0 (14.1)	15.4				17.3		
90	123.0 (12.5)	17.3				19.4		
100	110.0 (11.2)	19.2				21.6		
125	88.2 (9.0)	24.0				27.0		
150	73.5 (7.5)	28.8				32.4		
175	63.0 (6.4)	33.6				37.8		
200	55.1 (5.6)	38.4	43.2					
DX - SWH35 - 40 45 50 55 60 65 70 75 80 90 100 125 150 175 200	35	17.5	40	375.0 (38.2)	7.7	8.6	2878 (293)	3237 (330)
			45	333.0 (34.0)	8.6	9.7		
			50	300.0 (30.6)	9.6	10.8		
			55	273.0 (27.8)	10.6	11.9		
			60	250.0 (25.5)	11.5	13.0		
			65	231.0 (23.5)	12.5	14.0		
			70	214.0 (21.8)	13.4	15.1		
			75	200.0 (20.4)	14.4	16.2		
			80	187.0 (19.1)	15.4	17.3		
			90	167.0 (17.0)	17.3	19.4		
			100	150.0 (15.3)	19.2	21.6		
			125	120.0 (12.2)	24.0	27.0		
			150	99.9 (10.2)	28.8	32.4		
			175	85.6 (8.7)	33.6	37.8		
			200	74.9 (7.6)	38.4	43.2		

Part Number	D	d	L	Spring Constant N/mm {kgf/mm}	F = L x 19.2%		F = L x 21.6%	
					Fmm	Load N(Kgf)	Fmm	Load N(Kgf)
Type D - L	Operation Count			1000000	500000			
DX - SWH40 - 40 45 50 55 60 65 70 75 80 90 100 125 150 175 200 225 250 275 300	40	20	40	490.0 (50.0)	7.7	8.6	3763 (384)	4234 (432)
			45	436.0 (44.4)	8.6	9.7		
			50	392.0 (40.0)	9.6	10.8		
			55	356.0 (36.3)	10.6	11.9		
			60	327.0 (33.3)	11.5	13.0		
			65	302.0 (30.7)	12.5	14.0		
			70	280.0 (28.6)	13.4	15.1		
			75	261.0 (26.6)	14.4	16.2		
			80	245.0 (25.0)	15.4	17.3		
			90	218.0 (22.2)	17.3	19.4		
			100	196.0 (20.0)	19.2	21.6		
			125	157.0 (16.0)	24.0	27.0		
			150	131.0 (13.3)	28.8	32.4		
			175	112.0 (11.4)	33.6	37.8		
			200	98.0 (10.0)	38.4	43.2		
			225	87.1 (8.9)	43.2	48.6		
			250	78.4 (8.0)	48.0	54.0		
275	71.3 (7.3)	52.8	59.4					
300	65.3 (6.7)	57.6	64.8					
DX - SWH50 - 50 55 60 65 70 75 80 90 100 125 150 175 200 225 250 275 300 350	50	25	50	613.0 (62.5)	9.6	10.8	5880 (600)	6615 (675)
			55	557.0 (56.8)	10.6	11.9		
			60	510.0 (52.0)	11.5	13.0		
			65	471.0 (48.0)	12.5	14.0		
			70	438.0 (44.6)	13.4	15.1		
			75	408.0 (41.6)	14.4	16.2		
			80	383.0 (39.0)	15.4	17.3		
			90	340.0 (34.7)	17.3	19.4		
			100	306.0 (31.2)	19.2	21.6		
			125	245.0 (25.0)	24.0	27.0		
			150	204.0 (20.8)	28.8	32.4		
			175	175.0 (17.8)	33.6	37.8		
			200	153.0 (15.6)	38.4	43.2		
			225	136.0 (13.9)	43.2	48.6		
			250	123.0 (12.5)	48.0	54.0		
			275	111.0 (11.4)	52.8	59.4		
			300	102.0 (10.4)	57.6	64.8		
350	87.5 (8.9)	67.2	75.6					
DX - SWH60 - 60 70 80 90 100 125 150 175 200 225 250 275 300 350	60	30	60	735.0 (74.9)	11.5	13.0	8467 (863)	9526 (971)
			70	630.0 (64.2)	13.4	15.1		
			80	551.0 (56.2)	15.4	17.3		
			90	490.0 (50.0)	17.3	19.4		
			100	441.0 (45.0)	19.2	21.6		
			125	353.0 (36.0)	24.0	27.0		
			150	294.0 (30.0)	28.8	32.4		
			175	252.0 (25.7)	33.6	37.8		
			200	221.0 (22.5)	38.4	43.2		
			225	196.0 (20.0)	43.2	48.6		
			250	176.0 (18.0)	48.0	54.0		
			275	160.0 (16.4)	52.8	59.4		
			300	147.0 (15.0)	57.6	64.8		
			350	126.0 (12.8)	67.2	75.6		

● Load calculation method: Load = Spring constant × Deflection

(SI units) N = N/mm × Fmm

kgf = kgf/mm × Fmm

(kgf = N × 0.101972)

