

ROUND WIRE COIL SPRINGS

—WB (25% DEFLECTION)—



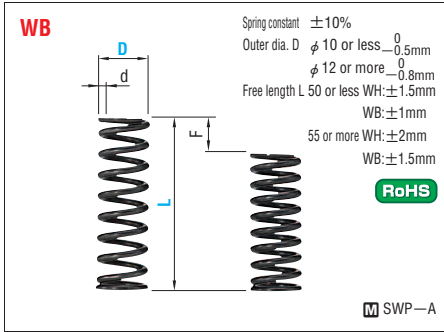
SGP Stock



PRINTED IN RED

The quantity discount rate is also applicable to alteration cost.

All price & lead time are to be quoted.



Spring constant

D	Type	WY	WR	WF	WL	WT	WM	WH	WB
2					0.5 (0.05)				3.9 (0.4)
3									4.9 (0.5)
4		N/mm 0.1 (kgf/mm) (0.01)				1.5 (0.15)	2.0 (0.2)	2.9 (0.3)	N/mm 9.8 (kgf/mm) (1.0)
5			N/mm 0.3 (kgf/mm) (0.03)	N/mm 0.5 (kgf/mm) (0.05)			N/mm 2.9 (kgf/mm) (0.3)		N/mm 19.6 (kgf/mm) (2.0)
6					N/mm 1.0 (kgf/mm) (0.1)				29.4 (3.0)
8									N/mm 29.4 (3.0)
10		N/mm 0.2 (kgf/mm) (0.02)							
12									
13									
14									
16									
18									
20			N/mm 0.5 (kgf/mm) (0.05)	N/mm 1.0 (kgf/mm) (0.1)					
22					N/mm 2.9 (kgf/mm) (0.3)				
27						N/mm 3.9 (kgf/mm) (0.4)	N/mm 4.9 (kgf/mm) (0.5)	N/mm 14.7 (kgf/mm) (1.5)	
Fmax.	F=LX75%	F=LX60%	F=LX45%	F=LX40%	F=LX40%	F=LX35%	F=LX30%	F=LX25%	

WB : Fmax. (maximum allowable deflection) = LX25%

d	Solid height	F max.	Load N (kgf) max.	Catalog No. Type D—L	Base unit price
0.4	3.2	1.3	4.9 (0.5)	WB3—5*	
0.5	6.5	2.5	9.8 (1.0)	10*	
0.55	10.5	3.8	14.7 (1.5)	15*	
0.55	12.7	5	19.6 (2.0)	20*	
0.6	17.4	6.3	24.5 (2.5)	25*	
0.6	21.0	7.5	29.4 (3.0)	30*	
0.65	24.0	8.8	34.3 (3.5)	35*	
0.65	27.0	10.0	39.2 (4.0)	40*	
0.5	3	1.3	5.9 (0.6)	WB4—5*	
0.6	6	2.5	12.3 (1.3)	10	
0.65	9.8	3.8	18.1 (1.9)	15	
0.7	12.6	5	24.5 (2.5)	20	
0.75	16.5	6.3	30.4 (3.1)	25	
0.75	20.3	7.5	36.8 (3.8)	30	
0.8	24	8.8	43.1 (4.4)	35	
0.8	28	10	49.0 (5.0)	40	
0.8	29	11.3	55.4 (5.7)	45	
0.85	34	12.5	61.3 (6.3)	50	
0.65	3.3	1.3	12.7 (1.3)	WB5—5	
0.8	7	2.5	24.5 (2.5)	10	
0.8	7	3.8	37.3 (3.8)	15	
0.9	13	5	49.0 (5.0)	20	
0.9	13	6.3	61.8 (6.3)	25	
1.0	21	7.5	73.5 (7.5)	30	
1.0	25	8.8	86.3 (8.8)	35	
1.0	25	10	98.1 (10.0)	40	
1.1	31	11.3	110.8 (11.3)	45	
1.1	34	12.5	122.6 (12.5)	50	
1.1	39	13.8	135.3 (13.8)	55	
1.1	43	15	147.1 (15.0)	60	
1.1	46	16.3	159.8 (16.3)	65	
1.2	50	17.5	171.6 (17.5)	70	
0.7	3.5	1.3	12.7 (1.3)	WB6—5	
0.9	7	2.5	24.5 (2.5)	10	
0.9	7.5	3.8	37.3 (3.8)	15	
1.0	11.5	5	49.0 (5.0)	20	
1.1	17.5	6.3	61.8 (6.3)	25	
1.1	19.5	7.5	73.5 (7.5)	30	
1.1	20	8.8	86.3 (8.8)	35	
1.2	28	10	98.1 (10.0)	40	
1.2	30	11.3	110.8 (11.3)	45	
1.2	32	12.5	122.6 (12.5)	50	
1.2	32	13.8	135.3 (13.8)	55	
1.3	43	15	147.1 (15.0)	60	
1.3	46	16.3	159.8 (16.3)	65	
1.3	50	17.5	171.6 (17.5)	70	
1.4	57	20	196.2 (20.0)	80	
1.0	6	2.5	24.5 (2.5)	WB8—10	
1.2	10.8	3.8	37.3 (3.8)	15	
1.2	11.5	5	49.0 (5.0)	20	
1.3	17	6.3	61.8 (6.3)	25	
1.3	17	7.5	73.5 (7.5)	30	
1.4	24.5	8.8	86.3 (8.8)	35	
1.4	25.2	10	98.1 (10.0)	40	
1.5	32	11.3	110.8 (11.3)	45	
1.5	33	12.5	122.6 (12.5)	50	
1.5	36.5	13.8	135.3 (13.8)	55	
1.5	36.5	15	147.1 (15.0)	60	
1.6	48	16.3	159.8 (16.3)	65	
1.6	48	17.5	171.6 (17.5)	70	
1.6	55	20	196.2 (20.0)	80	

d	Solid height	F max.	Load N (kgf) max.	Catalog No. Type D—L	Base unit price
1.2	6	2.5	24.5 (2.5)	WB10—10	
1.3	8.5	3.8	37.3 (3.8)	15	
1.4	12	5	49.0 (5.0)	20	
1.5	16.5	6.3	61.8 (6.3)	25	
1.5	17	7.5	73.5 (7.5)	30	
1.6	23	8.8	86.3 (8.8)	35	
1.6	24	10	98.1 (10.0)	40	
1.7	30	11.3	110.8 (11.3)	45	
1.7	31.5	12.5	122.6 (12.5)	50	
1.8	40	13.8	135.3 (13.8)	55	
1.8	40	15	147.1 (15.0)	60	
1.8	43	16.3	159.8 (16.3)	65	
1.8	43	17.5	171.6 (17.5)	70	
1.8	54	20	196.2 (20.0)	80	
1.4	6.5	2.5	24.5 (2.5)	WB12—10	
1.4	7.7	3.8	36.3 (3.7)	15	
1.6	12.5	5	49.0 (5.0)	20	
1.6	13.6	6.3	60.8 (6.2)	25	
1.7	18	7.5	73.5 (7.5)	30	
1.8	22.5	8.8	85.3 (8.7)	35	
1.8	24	10	98.1 (10.0)	40	
1.8	24	11.3	109.8 (11.2)	45	
1.9	34	12.5	122.6 (12.5)	50	
2.0	38	13.8	134.4 (13.7)	55	
2.0	40	15	147.1 (15.0)	60	
2.0	42	16.3	158.9 (16.2)	65	
2.1	48.5	17.5	171.6 (17.5)	70	
2.1	52.5	20	196.2 (20.0)	80	
1.6	6.4	2.5	49.0 (5.0)	WB13—10	
1.8	11	3.8	74.5 (7.6)	15	
1.8	11	5	98.1 (10.0)	20	
2.0	17	6.3	123.6 (12.6)	25	
2.0	18	7.5	147.1 (15.0)	30	
2.1	22	8.8	172.6 (17.6)	35	
2.1	22	10	196.2 (20.0)	40	
2.3	32	11.3	221.6 (22.6)	45	
2.3	32	12.5	245.2 (25.0)	50	
2.4	40	13.8	270.7 (27.6)	55	
2.4	42	15	294.2 (30.0)	60	
2.4	42	16.3	319.7 (32.6)	65	
2.5	50	17.5	343.2 (35.0)	70	
2.5	50	20	392.3 (40.0)	80	
1.8	9	3.8	72.6 (7.4)	WB14—15	
2.0	13	5	98.1 (10.0)	20	
2.0	14	6.3	121.6 (12.4)	25	
2.1	18	7.5	147.1 (15.0)	30	
2.1	23	8.8	170.6 (17.4)	35	
2.3	26.3	10	196.1 (20.0)	40	
2.3	27.6	11.3	219.7 (22.4)	45	
2.4	31	12.5	245.2 (25.0)	50	
2.5	37.5	13.8	268.7 (27.4)	55	
2.5	41	15	294.2 (30.0)	60	
2.5	43.5	16.3	317.7 (32.4)	65	
2.6	48	17.5	343.2 (35.0)	70	
2.6	52	20	392.3 (40.0)	80	

● Load calculation method: Load = Spring constant × Deflection
 (SI units) N = N/mm × Fmm
 kgf = kgf/mm × Fmm
 (kgf = N × 0.101972)

d	Solid height	F max.	Load N (kgf) max.	Catalog No. Type D—L	Base unit price
2.0	10	3.8	74.5 (7.6)	WB16—15	
2.1	12.5	5	98.1 (10.0)	20	
2.3	17	6.3	123.6 (12.6)	25	
2.3	18.5	7.5	147.1 (15.0)	30	
2.4	21.5	8.8	172.6 (17.6)	35	
2.4	21.5	10	196.1 (20.0)	40	
2.5	27.5	11.3	221.6 (22.6)	45	
2.5	27.5	12.5	245.2 (25.0)	50	
2.6	32	13.8	270.7 (27.6)	55	
2.6	32	15	294.2 (30.0)	60	
2.8	46	16.3	319.7 (32.6)	65	
2.8	46	17.5	343.2 (35.0)	70	
2.9	55	20	392.3 (40.0)	80	
2.5	13.5	5	147.1 (15.0)	WB18—20	
2.6	17	6.3	185.3 (18.9)	25	
2.6	17	7.5	220.6 (22.5)	30	
2.8	23.5	8.8	258.9 (26.4)	35	
2.9	27.5	10	294.2 (30.0)	40	
2.9	27.5	11.3	332.4 (33.9)	45	
3.0	33	12.5	367.7 (37.5)	50	
3.0	33	13.8	406.0 (41.4)	55	
3.2	43	15	441.3 (45.0)	60	
3.2	44.5	16.3	479.5 (48.9)	65	
3.2	44.5	17.5	514.8 (52.5)	70	
3.4	58	20	588.4 (60.0)	80	
3.4	61	22.5	661.9 (67.5)	90	
3.5	71	25	735.5 (75.0)	100	
2.8	13.5	5	147.1 (15.0)	WB22—20	
2.9	16	6.3	185.3 (18.9)	25	
3.0	18	7.5	220.6 (22.5)	30	
3.0	18	8.8	258.9 (26.4)	35	
3.2	24	10	294.2 (30.0)	40	
3.2	24	11.3	332.4 (33.9)	45	
3.5	36	12.5	367.7 (37.5)	50	
3.5	36	13.8	406.0 (41.4)	55	
3.5	36	15	441.3 (45.0)	60	
3.6	45	16.3	479.5 (48.9)	65	
3.6	45	17.5	514.8 (52.5)	70	
3.8	57	20	588.4 (60.0)	80	
3.8	57	22.5	661.9 (67.5)	90	
4.0	72	25	735.5 (75.0)	100	
3.5	19	7.5	220.6 (22.5)	WB27—30	
3.6	21	8.8	258.9 (26.4)	35	
3.6	21	10	294.2 (30.0)	40	
3.8	30	11.3	332.4 (33.9)	45	
3.8	30	12.5	367.7 (37.5)	50	
4.0	38	13.8	406.0 (41.4)	55	
4.0	38	15	441.3 (45.0)	60	
4.0	38	16.3	479.5 (48.9)	65	
4.0	38	17.5	514.8 (52.5)	70	
4.3	57	20	588.4 (60.0)	80	
4.5	63	22.5	661.9 (67.5)	90	
4.5	67	25	735.5 (75.0)	100	

⊕ No grinding on either end of WB types marked with *.
 ⊕ The solid height values are for reference only.
 There may be some variation between lots.
 ⊕ Operation count: 1 million



Catalog No.
WB13—60



Delivery

Printed in Red
SGP Stock

Printed in Blue
3 Days

⊕ For area out of Singapore, please refer to P1.

Quantity discount rate

Quantity	1~9	10~19	20~99	100~500
Rate	—	5%	10%	15%

Stocks Availability Subjected to Prior Sales.