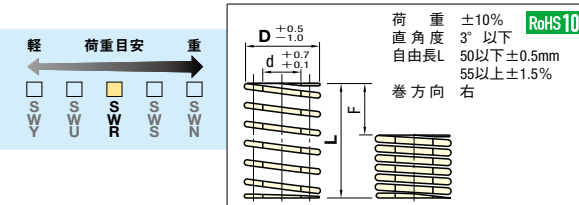


コイルスプリング

—高タワミ用 SWR—



F(許容タワミ量)は常温(40℃)での測定によるものです。高温(150℃・200℃)での許容最大タワミはP.1140の表をご覧ください。

D	d	L	ばね定数		型式
			N/mm{kgf/mm}	Fmm 荷重 N{kgf}	
10.5	6.0	15	10.46{1.07}	7.5	SWR10.5-15 20 25 30 35 40 45 50 55 60 65 70 75 80
		20	7.85{0.80}	10.0	
		25	6.28{0.64}	12.5	
		30	5.23{0.53}	15.0	
		35	4.48{0.46}	17.5	
		40	3.92{0.40}	20.0	
		45	3.49{0.36}	22.5	
		50	3.14{0.32}	25.0	
		55	2.85{0.29}	27.5	
		60	2.62{0.27}	30.0	
		65	2.41{0.25}	32.5	
		70	2.24{0.23}	35.0	
75	2.09{0.21}	37.5			
80	1.96{0.20}	40.0			
12.5	7.0	15	11.77{1.20}	7.5	SWR12.5-15 20 25 30 35 40 45 50 55 60 65 70 75 80 90 100
		20	8.83{0.90}	10.0	
		25	7.06{0.72}	12.5	
		30	5.88{0.60}	15.0	
		35	5.04{0.51}	17.5	
		40	4.41{0.45}	20.0	
		45	3.92{0.40}	22.5	
		50	3.53{0.36}	25.0	
		55	3.21{0.33}	27.5	
		60	2.94{0.30}	30.0	
		65	2.72{0.28}	32.5	
		70	2.52{0.26}	35.0	
75	2.35{0.24}	37.5			
80	2.21{0.23}	40.0			
90	1.96{0.20}	45.0			
100	1.77{0.18}	50.0			
14.5	8.5	15	17.00{1.73}	7.5	SWR14.5-15 20 25 30 35 40 45 50 55 60 65 70 75 80 90 100 125 150
		20	12.75{1.30}	10.0	
		25	10.20{1.04}	12.5	
		30	8.50{0.87}	15.0	
		35	7.28{0.74}	17.5	
		40	6.37{0.65}	20.0	
		45	5.67{0.58}	22.5	
		50	5.10{0.52}	25.0	
		55	4.64{0.47}	27.5	
		60	4.25{0.43}	30.0	
		65	3.92{0.40}	32.5	
		70	3.64{0.37}	35.0	
75	3.40{0.35}	37.5			
80	3.19{0.33}	40.0			
90	2.83{0.29}	45.0			
100	2.55{0.26}	50.0			
125	2.04{0.21}	62.5			
150	1.70{0.17}	75.0			

D	d	L	ばね定数		型式
			N/mm{kgf/mm}	Fmm 荷重 N{kgf}	
17	10.5	20	19.61{2.00}	10.0	SWR17-20 25 30 35 40 45 50 55 60 65 70 75 80 90 100 125 150 175
		25	15.69{1.60}	12.5	
		30	13.08{1.33}	15.0	
		35	11.21{1.14}	17.5	
		40	9.81{1.00}	20.0	
		45	8.72{0.89}	22.5	
		50	7.85{0.80}	25.0	
		55	7.13{0.73}	27.5	
		60	6.54{0.67}	30.0	
		65	6.03{0.62}	32.5	
		70	5.60{0.57}	35.0	
		75	5.23{0.53}	37.5	
80	4.90{0.50}	40.0			
90	4.36{0.44}	45.0			
100	3.92{0.40}	50.0			
125	3.14{0.32}	62.5			
150	2.62{0.27}	75.0			
175	2.24{0.23}	87.5			
21	13.5	25	23.54{2.40}	12.5	SWR21-25 30 35 40 45 50 55 60 65 70 75 80 90 100 125 150 175 200
		30	19.61{2.00}	15.0	
		35	16.81{1.71}	17.5	
		40	14.71{1.50}	20.0	
		45	13.08{1.33}	22.5	
		50	11.77{1.20}	25.0	
		55	10.70{1.09}	27.5	
		60	9.81{1.00}	30.0	
		65	9.05{0.92}	32.5	
		70	8.41{0.86}	35.0	
		75	7.85{0.80}	37.5	
		80	7.35{0.75}	40.0	
90	6.54{0.67}	45.0			
100	5.88{0.60}	50.0			
110	5.35{0.55}	55.0			
120	4.90{0.50}	60.0			
125	4.71{0.48}	62.5			
130	4.53{0.46}	65.0			
140	4.20{0.43}	70.0			
150	3.92{0.40}	75.0			
175	3.36{0.34}	87.5			
200	2.94{0.30}	100.0			
26	16.5	25	31.38{3.20}	12.5	SWR26-25 30 35 40 45 50 55 60 65 70 75 80 90 100 110 120 125 130 140 150 175 200 225 250 275
		30	26.15{2.67}	15.0	
		35	22.42{2.29}	17.5	
		40	19.61{2.00}	20.0	
		45	17.43{1.78}	22.5	
		50	15.69{1.60}	25.0	
		55	14.26{1.45}	27.5	
		60	13.08{1.33}	30.0	
		65	12.07{1.23}	32.5	
		70	11.21{1.14}	35.0	
		75	10.46{1.07}	37.5	
		80	9.81{1.00}	40.0	
90	8.72{0.89}	45.0			
100	7.85{0.80}	50.0			
110	7.13{0.73}	55.0			
120	6.54{0.67}	60.0			
125	6.28{0.64}	62.5			
130	6.03{0.62}	65.0			
140	5.60{0.57}	70.0			
150	5.23{0.53}	75.0			
175	4.48{0.46}	87.5			
200	3.92{0.40}	100.0			
225	3.49{0.36}	112.5			
250	3.14{0.32}	125.0			

D	d	L	ばね定数		型式
			N/mm{kgf/mm}	Fmm 荷重 N{kgf}	
31	21	35	28.02{2.86}	17.5	SWR31-35 40 45 50 55 60 65 70 75 80 90 100 110 120 125 130 140 150 160 170 175 180 190 200 250 300
		40	24.52{2.50}	20.0	
		45	21.79{2.22}	22.5	
		50	19.61{2.00}	25.0	
		55	17.83{1.82}	27.5	
		60	16.34{1.67}	30.0	
		65	15.09{1.54}	32.5	
		70	14.01{1.43}	35.0	
		75	13.08{1.33}	37.5	
		80	12.26{1.25}	40.0	
		90	10.90{1.11}	45.0	
		100	9.81{1.00}	50.0	
110	8.92{0.91}	55.0			
120	8.17{0.83}	60.0			
125	7.85{0.80}	62.5			
130	7.54{0.77}	65.0			
140	7.00{0.71}	70.0			
150	6.54{0.67}	75.0			
160	6.13{0.63}	80.0			
170	5.77{0.59}	85.0			
175	5.60{0.57}	87.5			
180	5.45{0.56}	90.0			
190	5.16{0.53}	95.0			
200	4.90{0.50}	100.0			
250	3.92{0.40}	125.0			
300	3.27{0.33}	150.0			
37	26	35	33.62{3.43}	17.5	SWR37-35 40 45 50 55 60 65 70 75 80 90 100 110 120 125 130 140 150 160 170 175 180 190 200 250 300
		40	29.42{3.00}	20.0	
		45	26.15{2.67}	22.5	
		50	23.54{2.40}	25.0	
		55	21.40{2.18}	27.5	
		60	19.61{2.00}	30.0	
		65	18.10{1.85}	32.5	
		70	16.81{1.71}	35.0	
		75	15.69{1.60}	37.5	
		80	14.71{1.50}	40.0	
		90	13.08{1.33}	45.0	
		100	11.77{1.20}	50.0	
110	10.70{1.09}	55.0			
120	9.81{1.00}	60.0			
125	9.41{0.96}	62.5			
130	9.05{0.92}	65.0			
140	8.41{0.86}	70.0			
150	7.85{0.80}	75.0			
160	7.35{0.75}	80.0			
170	6.92{0.71}	85.0			
175	6.72{0.69}	87.5			
180	6.54{0.67}	90.0			
190	6.19{0.63}	95.0			
200	5.88{0.60}	100.0			
250	4.71{0.48}	125.0			
300	3.92{0.40}	150.0			

D	d	L	ばね定数		型式
			N/mm{kgf/mm}	Fmm 荷重 N{kgf}	
43	31	50	33.34{3.40}	25.0	SWR43-50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 225 250 275 300
		60	27.79{2.83}	30.0	
		70	23.82{2.43}	35.0	
		80	20.84{2.13}	40.0	
		90	18.52{1.89}	45.0	
		100	16.67{1.70}	50.0	
		110	15.16{1.55}	55.0	
		120	13.89{1.42}	60.0	
		130	12.82{1.31}	65.0	
		140	11.91{1.21}	70.0	
		150	11.11{1.13}	75.0	
		160	10.42{1.06}	80.0	
170	9.81{1.00}	85.0			
180	9.26{0.94}	90.0			
190	8.77{0.89}	95.0			
200	8.34{0.85}	100.0			
225	7.41{0.76}	112.5			
250	6.67{0.68}	125.0			
275	6.06{0.62}	137.5			
300	5.56{0.57}	150.0			
46	36	50	43.15{4.40}	25.0	SWR46-50 60 70 80 90 100 110 120 125 130 140 150 175 200 225 250 275 300
		60	35.96{3.67}	30.0	
		70	30.82{3.14}	35.0	
		80	26.97{2.75}	40.0	
		90	23.97{2.44}	45.0	
		100	21.57{2.20}	50.0	
		110	19.61{2.00}	55.0	
		120	17.98{1.83}	60.0	
		125	17.26{1.76}	62.5	
		130	16.60{1.69}	65.0	
		140	15.41{1.57}	70.0	
		150	14.38{1.47}	75.0	
175	12.33{1.26}	87.5			
200	10.79{1.10}	100.0			
225	9.59{0.98}	112.5			
250	8.63{0.88}	125.0			
275	7.85{0.80}	137.5			
300	7.19{0.73}	150.0			
50	36	50	52.96{5.40}	25.0	SWR50-50 60 70 80 90 100 110 120 130 140 150 175 200 225 250 275 300 350 400
		60	44.13{4.50}	30.0	
		70	37.83{3.86}	35.0	
		80	33.10{3.38}	40.0	
		90	29.42{3.00}	45.0	
		100	26.48{2.70}	50.0	
		110	24.07{2.45}	55.0	
		120	22.06{2.25}	60.0	
		130	20.37{2.08}	65.0	
		140	18.91{1.93}	70.0	
		150	17.65{1.80}	75.0	
		175	15.13{1.54}	87.5	
200	13.24{1.35}	100.0			
225	11.77{1.20}	112.5			
250	10.59{1.08}	125.0			
275	9.63{0.98}	137.5			
300	8.83{0.90}	150.0			
350	7.57{0.77}	175.0			
400	6.62{0.68}	200.0			

- 材質 ばね用オイルテンパー線
- 荷重の算出方法: 荷重=ばね定数×タワミ量 (国際単位) N=N/mm×Fmm (kgf=kgf/mm×Fmm (kgf=N×0.101972))
- ④使用回数: 100万回(L×55%は30万回)
- ④製品概要 P.1139
- ④荷重グラフ P.1141
- ④コイルスプリングの使用方法和注意点 P.1142
- ④D寸と座グリ穴について、d寸とシャフトについて P.1142

Order 注文例 **型式 SWR37-40**

Delivery 出荷日 **在庫品**

Alterations 追加加工

(NT) - 型式 NT - SWR31-60

5 日目出荷

追加加工	記号	詳細
塗装なし	NT	塗装剥離処理 P.1147 コイルスプリングにショットピーニングをかけて塗装をはがします。 ④塗装剥離処理したスプリングは大変錆びやすい為、取り扱いには十分ご注意ください。 スプリングに錆びが発生すると早期破損の原因となります。 ④ロットにより通常塗装品に比べ荷重等がばらつく場合があります。