



Wire Die Springs

to ISO 10243

to JIS Standard B5012

公制 ISO 10243 标准模具弹簧

日本 JIS B5012 标准模具弹簧





EN Ongoing research and development, along with strict quality assurance procedures in compliance with ISO 9001, ensure very high levels of dimensional accuracy, durability and reliability.

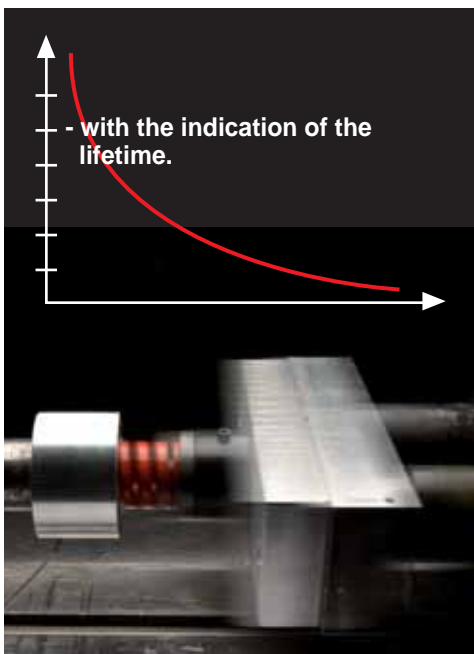
CN 持续的研究与开发，符合ISO 9001标准的严格的质量保证程序，确保高水平尺寸的准确性，耐久性和可靠性。

EN CAD SPRINGS, the first and revolutionary integrated software to calculate, select and generate Special Springs' die springs, available also on CADenas Partserver library.

CN CAD SPRINGS 是首个创新的集成软件，用来计算、选择及产生适合的 SPECIAL SPRINGS 模具弹簧，计算机辅助设计图档也可在 CADenas Partserver 资料库获得。图档资料同样可在CADenas Partserver下载得到。



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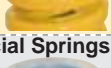

EN Ongoing in-house reliability tests allow Special Springs to provide a service life values of springs in compliance of working deflections and recommendations.






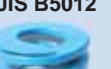

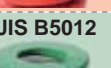
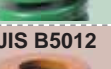
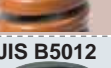

The stated service life values are not guaranteed due to the impossibility to consider all variables on the real working conditions of the springs.

CN 公司内部进行持续可靠性的产品测试，允许 SPECIAL SPRINGS 提供符合工作压缩量及使用建议的弹簧工作寿命数据。

指示的使用寿命数据是没办法保证的，因为在弹簧实际工作环境中，不可能考虑到所有不同的变数。

范围总结 range summary

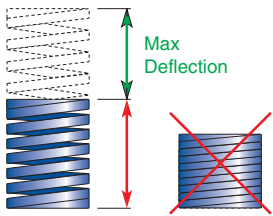
Series 系列	Standard 标准	Color 颜色	Load 荷载	 + 3.000.000 cycles	 ~1.500.000 cycles	 300-500.000 cycles	 100-200.000 cycles
VL	Special Springs Std 	Light green 浅绿色 (RAL6019)	Extra-light 特轻型	30 % L ₀	40 % L ₀	45 % L ₀	50 % L ₀
V	ISO 10243 	Green 绿色 (RAL 6002)	Light 轻型	25 % L ₀	30 % L ₀	35 % L ₀	40 % L ₀
B	ISO 10243 	Blue 蓝色 (RAL 5003)	Medium 中型	25 % L ₀	30 % L ₀	33,75 % L ₀	37,75 % L ₀
R	ISO 10243 	Red 红色 (RAL 3000)	Heavy 重型	20 % L ₀	25 % L ₀	27,5 % L ₀	30 % L ₀
G	ISO 10243 	Yellow 黄色 (RAL 1004)	Extra-Heavy 特重型	17 % L ₀	20 % L ₀	22,5 % L ₀	25 % L ₀
A	Special Springs Std 	Silver 银色 (RAL 9006)	Ultra-Heavy 超重型	10 % L ₀	12 % L ₀	13,5 % L ₀	15 % L ₀
W	Special Springs Std 	White	Hyper strong 超强承载弹簧	5 % L ₀	6,5 % L ₀	7,5 % L ₀	8,4 - 14 % L ₀
TV	Special Springs Std 	Green 绿色 (RAL 6002)	Light 轻型	25 % L ₀	30 % L ₀	35 % L ₀	40 % L ₀
TB	Special Springs Std 	Blue 蓝色 (RAL 5003)	Medium 中型	25 % L ₀	30 % L ₀	33,75 % L ₀	37,5 % L ₀
TR	Special Springs Std 	Red 红色 (RAL 3000)	Heavy 重型	20 % L ₀	25 % L ₀	27,5 % L ₀	30 % L ₀

Series 系列	Standard 标准	Color 颜色	Load 荷载	 1.000.000 cycles	 500.000 cycles	 300.000 cycles	 Solid deflections Do not use!
SF	JIS B5012 	Yellow 黄色 (RAL 1004)	Extra-light 特轻型	40 % L ₀	45 % L ₀	50 % L ₀	58 % L ₀
SL	JIS B5012 	Blue 蓝色 (RAL 5012)	Light 轻型	32 % L ₀	36 % L ₀	40 % L ₀	48 % L ₀
SM	JIS B5012 	Red 红色 (RAL 3000)	Medium 中型	25,6 % L ₀	28,8 % L ₀	32 % L ₀	38 % L ₀
SH	JIS B5012 	Green 绿色 (RAL 6002)	Heavy 重型	19,2 % L ₀	21,6 % L ₀	24 % L ₀	28 % L ₀
SB	JIS B5012 	Brown 棕色 (RAL 8003)	Extra-Heavy 特重型	16 % L ₀	18 % L ₀	20 % L ₀	24 % L ₀
L	JIS B5012 	Not painted, oiled 没喷漆, 上油	-	-	-	-	-
SR	JIS B5012 	Ivory 象牙色 (RAL 1014)	-	-	50 % L ₀	-	60 % L ₀

use recommendations 使用建议

EN The correct use of Special Springs' die springs assure performance levels well above the lifetime values indicated. Before using the springs, carefully read all the recommendations. Incorrect use can significantly reduce the expected lifetime and may cause damages or injury.

CN 正确使用Special Springs模具弹簧可保证工作水平远高于所指示的工作寿命。在使用弹簧前，请详阅所有使用建议。不正确使用会明显减低预期寿命及引致损坏或伤害。

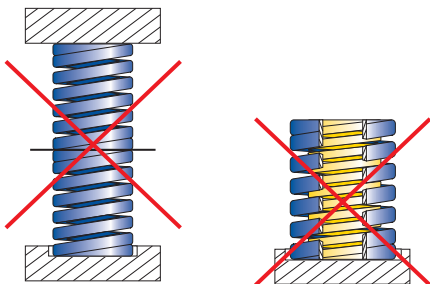
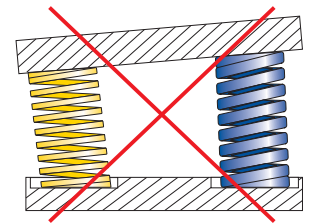
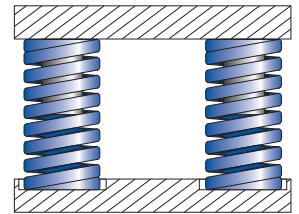


EN Do not exceed the maximum deflection as indicated in the tabs (column D) as it may cause sudden failure of the springs and damages on the tool. Do not store springs in compressed state for long time as it may cause abnormal fatigue to the springs.

CN 不要超过弹簧的最大压缩量如标签（D栏）所示，因为这样会造成弹簧突然衰竭导致模具损坏。不要长时间在压缩的状态下贮存弹簧，会导致弹簧异常疲劳。

EN When using different type of springs in parallel simultaneously ensure that overall deflection and force guarantee a balanced load. When setting the springs ensure the best perpendicularity to the working surface to avoid early failure of the springs.

CN 当使用不同类型的弹簧同时并列时，确保整体弹簧压缩和弹力均衡负荷下。当安装弹簧时，确保垂直于工作面以避免弹簧提早衰竭。

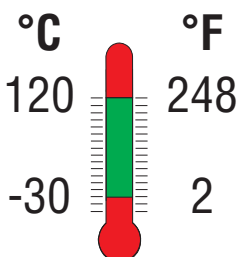
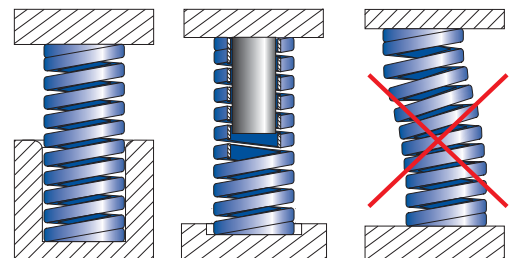


EN Avoid to using springs in vertical group not fully guided or using springs inserted in each other as it may cause serious damage or injury.

CN 避免在没有导向的情况下串联弹簧或弹簧互相插入使用，这会造成严重的损坏或伤害。

EN The bigger the guide the longer the lifetime. It is essential to guide all springs with a free length /diameter ratio exceeding 3.5.

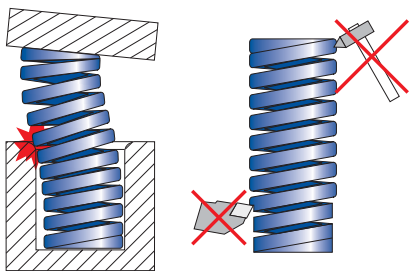
CN 良好的导向，更长寿命。所有弹簧是需要导向，长度不超于自由长度/直径比率3.5倍。



EN Best working temperature – 30°C + 120°C. Over 120°C and up to 250°C should be considered an average loss of 1% on springs rate for every 40°C.

CN 最佳工作温度为-30°C~120°C。在120°C~250°C温度下工作时应考虑每升40°C平均损耗减少1%弹力。

使用建议 use recommendations

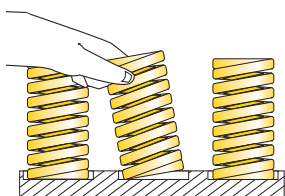
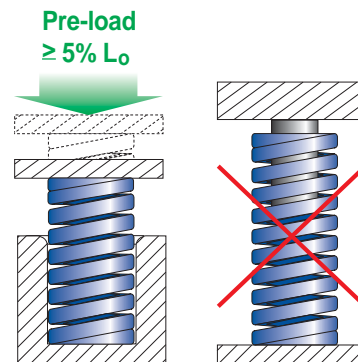


EN Any alteration on the surface of the springs (cutting, grinding, scratches, etc.) may significantly reduce the expected lifetime. Always replace the damaged springs with new ones.

CN 在弹簧表面有任何改变（切割、研磨、擦伤等）可能明显地减少预期寿命。要经常更换损坏弹簧。

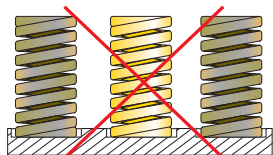
EN The bigger the pre-load the longer the lifetime of the springs for the same total deflection (% of L_0). Thus longer springs with bigger pre-load will assure longer lifetime. It is recommended to apply a minimum pre-load of 5% of the free length.

CN 在相同的总压缩量（%自由长度）情况下，弹簧的预载量越大，寿命会越长。因此，越长的弹簧，越多的预载量确保更长的寿命。建议最少应用5%自由长度的预载量。



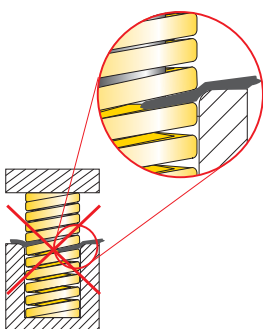
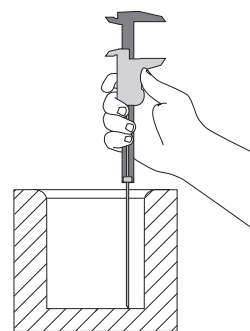
EN If one spring collapses, an imbalanced load will occur, possibly damaging the other springs. Replace all springs. An advance planned maintenance according to the indicated lifetime of the springs will benefit in avoiding damages and saving of money.

CN 如果一个弹簧报废，会使产品受力不平衡，可能会损害其他弹簧。在这种情况下需更换所有弹簧。根据标示的弹簧寿命可进行预先计划维护，将有利于避免损坏和节约开支。



EN Tool maintenance can vary the original working deflection of the springs. Please always check the real working stroke of the springs to avoid early failure of the springs or damages in the tool.

CN 在模具维护时可能会改变弹簧原来的工作压缩量。请经常测量弹簧实际工作行程，以防止弹簧提前衰竭或损坏模具。



EN The presence of scraps or any solid piece between coils causes a reduction of springs deflection with overloads and early failure of the springs with damage in the tool. Take care to avoid that.

CN 当有刮伤或硬物插在弹簧线圈间隙时会导致弹簧超载从而减低压缩量和弹簧提前衰竭造成模具损坏。

springs selection 弹簧的选择

EN The following selecting guide-line is essential for an easy and fast selection of the springs. Please specify the following working parameters: expected lifetime (ex.: 3.000.000 cycles), hole diameter (ex.: 16 mm), total spring force (ex.: 380 N) and total spring working deflection including pre-load (ex.: 5 mm).

CN 以下选择指南是提供如何方便快捷的选择弹簧，请选定以下工作参数：预期寿命（如：3.000.000回次），孔径（如：16mm），总弹力（如：380N）和弹簧总工作行程包括预载（如：5mm）。

EN Through the tabs on pages 7 and 8 cross the expected lifetime section (ex.: 3.000.000 cycles) with the hole diameter required (ex.: 16 mm).

CN 通过在第7和8页的表格，利用要求的孔径尺寸（如：16mm）选出预期寿命部分（如：3.000.000回次）。

RECTANGULAR WIRE SECTION

Estimated Life	Hole diameter (mm)								Series	
	10	12,5	16	20	25	32	40	50		63
	Load (N)									
	-	-	-	220	410	485	745	1560	-	VL
	70	130	185	315	560	830	1130	2320	3250	V
	110	190	330	525	845	1520	2030	3050	5310	B
	125	200	380	935	1560	2530	3270	4860	8440	R
	145	230	455	1090	1760	2800	4770	6820	11890	G
	-	-	-	-	4090	6350	7700	12280	-	A

EN The intersection of the expected lifetime with the hole diameter shows different forces. Select the one closest to your need.

CN 预期寿命与孔径的交叉部分表示不同弹力。选一项最接近你的要求。

RECTANGULAR WIRE SECTION

Estimated Life	Hole diameter (mm)								Series	
	10	12,5	16	20	25	32	40	50		63
	Load (N)									
	-	-	-	220	410	485	745	1560	-	VL
	70	130	185	315	560	830	1130	2320	3250	V
	110	190	330	525	845	1520	2030	3050	5310	B
	125	200	380	935	1560	2530	3270	4860	8440	R
	145	230	455	1090	1760	2800	4770	6820	11890	G
	-	-	-	-	4090	6350	7700	12280	-	A

EN After selecting the proper force box (ex.: 380 N) look to the corresponding load range of springs (ex.: R - heavy load).

CN 选到适合的弹力格（如：380N）后，查出相对的荷载弹簧系列（如：R - 重荷载）。

RECTANGULAR WIRE SECTION

Estimated Life	Hole diameter (mm)								Series	
	10	12,5	16	20	25	32	40	50		63
	Load (N)									
	-	-	-	220	410	485	745	1560	-	VL
	70	130	185	315	560	830	1130	2320	3250	V
	110	190	330	525	845	1520	2030	3050	5310	B
	125	200	380	935	1560	2530	3270	4860	8440	R
	145	230	455	1090	1760	2800	4770	6820	11890	G
	-	-	-	-	4090	6350	7700	12280	-	A

EN Then go to the standard tabs on the column A corresponding to the expected lifetime of 3.000.000 cycles and select the required total spring deflection.

CN 跟着转到标准表格列表相对预期寿命3.000.000回次的专栏A上。选择需要的总弹簧压缩量。

Code	D ₁	D ₂	L ₀	R	A	B	C	D	E			
				20% L	25% L	27.5% L	30% L	do not use				
				3.000.000	1.500.000	300-500.000	100-200.000	do not use				
R 16 - 025	25	75.7	5.0	379	6.3	477	6.9	520	7.5	568	8.4	50
R 16 - 032	32	52.8	6.4	338	8.0	422	8.8	465	9.6	507	10.5	30
R 16 - 038	38	48.5	7.6	369	9.5	411	10.5	507	11.4	553	13.6	25
R 16 - 044	44	42.8	8.8	377	11.0	471	12.1	518	13.2	565	15.9	25
R 16 - 051	51	37.1	10.2	378	12.8	475	14.0	520	15.3	568	18.9	25
R 16 - 064	64	30.3	12.8	368	16.0	485	17.6	533	19.2	582	24.9	25
R 16 - 076	76	25.7	15.2	391	19.0	488	20.9	537	22.8	586	29.2	20
R 16 - 089	89	21.7	17.6	386	22.3	484	24.5	531	26.7	579	34.3	20
R 16 - 102	102	19.3	20.4	394	25.5	492	28.1	541	30.6	591	39.1	20
R 16 - 115	115	15.7	23.0	361	28.8	452	31.6	497	34.5	542	44.0	10
R 16 - 305	3.1 x 2.5	305	7.1	61.0	433	76.3	547	83.9	91.5	650	103.6	10
RHL 37 - 100	25	22.1	5.0	111	6.3	139	6.9	152	7.5	166	9.2	50

EN Once selected the total springs deflection (ex.: 5 mm) select the corresponding spring code (ex.: R 16 - 025). The bigger the pre-load the longer the lifetime of springs for the same total deflection (% of L₀).

CN 一旦选妥弹簧压缩量（如：5mm），再选其相对的弹簧编码（如：R 16 - 025）。在相同的总压缩量（%自由长度）情况下，弹簧的预载量越大，寿命会越长。

Code	D ₁	D ₂	L ₀	R	A	B	C	D	E			
				20% L	25% L	27.5% L	30% L	do not use				
				3.000.000	1.500.000	300-500.000	100-200.000	do not use				
R 16 - 025	25	75.7	5.0	379	6.3	477	6.9	520	7.5	568	8.4	50
R 16 - 032	32	52.8	6.4	338	8.0	422	8.8	465	9.6	507	10.5	30
R 16 - 038	38	48.5	7.6	369	9.5	411	10.5	507	11.4	553	13.6	25
R 16 - 044	44	42.8	8.8	377	11.0	471	12.1	518	13.2	565	15.9	25
R 16 - 051	51	37.1	10.2	378	12.8	475	14.0	520	15.3	568	18.9	25
R 16 - 064	64	30.3	12.8	368	16.0	485	17.6	533	19.2	582	24.9	25
R 16 - 076	76	25.7	15.2	391	19.0	488	20.9	537	22.8	586	29.2	20
R 16 - 089	89	21.7	17.6	386	22.3	484	24.5	531	26.7	579	34.3	20
R 16 - 102	102	19.3	20.4	394	25.5	492	28.1	541	30.6	591	39.1	20
R 16 - 115	115	15.7	23.0	361	28.8	452	31.6	497	34.5	542	44.0	10
R 16 - 305	3.1 x 2.5	305	7.1	61.0	433	76.3	547	83.9	91.5	650	103.6	10
RHL 37 - 100	25	22.1	5.0	111	6.3	139	6.9	152	7.5	166	9.2	50

弹簧的选择 springs selection

RECTANGULAR WIRE SECTION 矩形钢线横切面

Estimated Life 预期寿命	孔径 Hole diameter (mm)									Series 系列
	10	12.5	16	20	25	32	40	50	63	
+ 3.000.000 cycles 回次	荷载 Load (N)									
	-	-	-	220	410	485	745	1560	-	VL
	70	130	185	315	560	830	1130	2320	3250	V
	110	190	330	525	845	1520	2030	3050	5310	B
	125	200	380	935	1560	2530	3270	4860	8440	R
	145	230	455	1090	1760	2800	4770	6820	11890	G
	-	-	-	-	4090	6350	7700	12280	-	A
~ 1.500.000 cycles 回次	荷载 Load (N)									
	-	-	-	290	540	650	1000	2120	-	VL
	80	150	220	380	675	990	1360	2780	3900	V
	130	230	400	625	1010	1830	2430	3660	6370	B
	155	250	480	1170	1950	3170	4090	6070	10560	R
	170	270	535	1280	2070	3290	5610	8030	13990	G
	-	-	-	-	4910	7620	9240	14730	-	A
300 -500.000 cycles 回次	荷载 Load (N)									
	-	-	-	330	610	730	1120	2380	-	VL
	95	180	260	440	780	1160	1590	3240	4540	V
	150	255	450	705	1140	2060	2730	4120	7170	B
	170	275	525	1290	2140	3480	4490	6670	11610	R
	195	305	605	1440	2320	3700	6300	9020	15740	G
	-	-	-	-	5530	8570	10400	16580	-	A
100 -200.000 cycles 回次	荷载 Load (N)									
	-	-	-	365	680	810	1250	2650	-	VL
	110	200	300	500	890	1320	1810	3710	5190	V
	170	280	500	780	1260	2280	3040	4580	7960	B
	185	300	570	1400	2340	3800	4900	7280	12660	R
	215	340	670	1605	2585	4120	7010	10040	17330	G
	-	-	-	-	6140	9520	11550	18420	-	A



EN The stated service life values are obtained from in-house reliability tests and are not guaranteed due to the impossibility to consider all variables on the real working conditions of the springs.
The selecting guide-line is an approximate method of spring selection, it is always recommended to refer to the standard tabs before using the spring.

CN 指示的使用寿命数据是没办法保证的，因为在弹簧实际工作环境中，不可能考虑到所有不同的变数。
选择指南是一种近似的弹簧选择方法。

springs selection 弹簧的选择

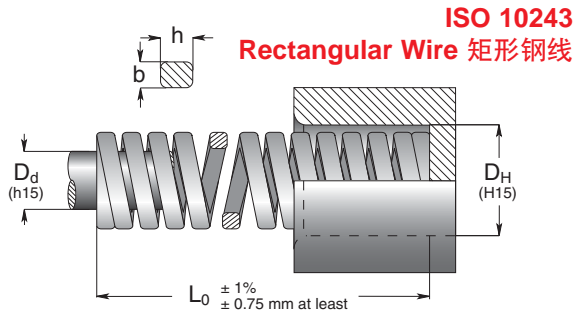
ROUND WIRE SECTION

Estimated Life 预期寿命	孔径 Hole diameter (mm)									Series 系列
	10	12.5	16	20	25	32	40	50	63	
+ 3,000,000 cycles 回次	荷载 Load (N)									
	25	50	100	-	-	-	-	-	-	TV
	70	130	175	-	-	-	-	-	-	TB
~ 1,500,000 cycles 回次	荷载 Load (N)									
	30	60	115	-	-	-	-	-	-	TV
	90	150	210	-	-	-	-	-	-	TB
300,000 - 500,000 cycles 回次	荷载 Load (N)									
	120	220	450	-	-	-	-	-	-	TR
	35	70	135	-	-	-	-	-	-	TV
100,000 - 200,000 cycles 回次	荷载 Load (N)									
	100	170	240	-	-	-	-	-	-	TB
	135	240	500	-	-	-	-	-	-	TR
100,000 - 200,000 cycles 回次	荷载 Load (N)									
	40	80	150	-	-	-	-	-	-	TV
	110	190	290	-	-	-	-	-	-	TB
100,000 - 200,000 cycles 回次	荷载 Load (N)									
	150	260	545	-	-	-	-	-	-	TR

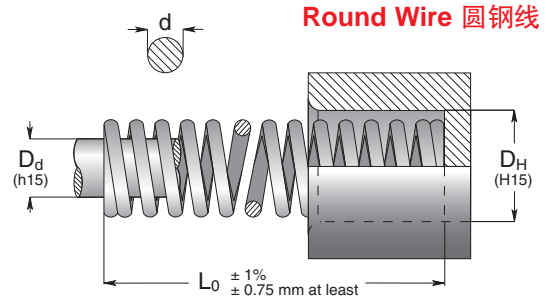
JIS B5012 - RECTANGULAR WIRE SECTION

Estimated Life 预期寿命	孔径 Outside diameter (mm)													Series 系列	
	10	12	14	16	18	20	22	25	27	30	35	40	50		60
1,000,000 cycles 回次	荷载 Load (N)														
	78.5	107.9	142.2	166.7	206	255	314	392	471	569	768.3	1000	1569	2260	SF
	112.8	166.7	216	275	333	422	530	657	785	893	1295	1697	2650	3810	SL
	156.9	226	304	402	510	628	765	981	1147	1412	1912	2510	3920	5640	SM
	235	333	461	608	765	941	1138	1471	1716	2120	2870	3770	5880	8470	SH
500,000 cycles 回次	荷载 Load (N)														
	353	451	588	785	981	1255	1530	1922	2280	2820	3840	5020	7850	11300	SB
	88.3	122.6	156.9	186.3	225	284	353	441	530	637	864.4	1128	1765	2540	SF
	127.5	186.3	245	314	382	481	588	745	883	1005	1461	1903	2980	4290	SL
	176.5	255	343	451	569	706	853	1098	1285	1579	2160	2820	4410	6350	SM
300,000 cycles 回次	荷载 Load (N)														
	265	373	520	677	853	1059	1275	1657	1932	2380	3240	4240	6620	9540	SH
	402	510	667	883	883	1108	1412	1726	2170	2560	3180	4320	5650	8830	SB
	98.1	137.3	176.5	206	255	314	392	490	588	706	961	1255	1961	2820	SF
	142.2	206	275	343	422	530	657	824	981	1117	1618	2120	3310	4770	SL
300,000 cycles 回次	荷载 Load (N)														
	196.1	284	383	500	637	785	951	1226	1432	1785	2400	3140	4900	7060	SM
	294	422	579	755	951	1177	1422	1834	2150	2550	3600	4710	7360	10590	SH
300,000 cycles 回次	荷载 Load (N)														
	441	569	736	981	1226	1569	1912	2400	2840	3530	4810	6280	9810	14120	SB

怎么样阅读目录how to read



ISO 10243
Rectangular Wire 矩形钢线



Round Wire 圆钢线

Code 型号	D _H Hole Diameter 孔径	D _d Rod Diameter 棒径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数	A % L ₀	B % L ₀	C % L ₀	D % L ₀	E approx. do not use	Pcs
	b x h, d			± 10%	+ 3.000.000	~ 1.500.000	300 - 500.000	100 - 200.000		
	mm	mm	mm	N/mm	N	mm	N	mm	N	mm

D_H hole diameter
孔径

D_d rod diameter
棒径

b x h cross wire section
d 横切面

L₀ spring free length
弹簧自由长度

R spring rate (load required for 1mm deflection)
弹簧定数 (压缩1mm所需的力)

A advised working deflection for + 3.000.000 cycles
建议工作压缩量供3.000.000回次

B advised working deflection for ~ 1.500.000 cycles
建议工作压缩量供1.500.000回次

C advised working deflection for 300.000 - 500.000 cycles
建议工作压缩量供300.000-500.000回次

D advised working deflection for 100.000 - 200.000 cycles
建议工作压缩量供100.00-200.000回次

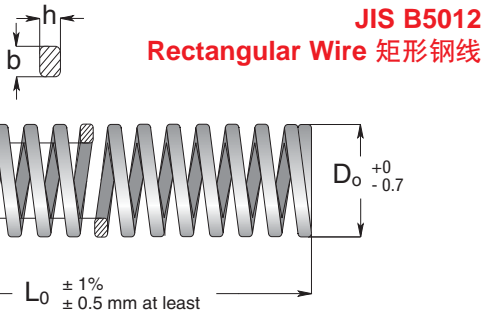
E solid deflection (approximate value)
最大压缩量 (近似值)



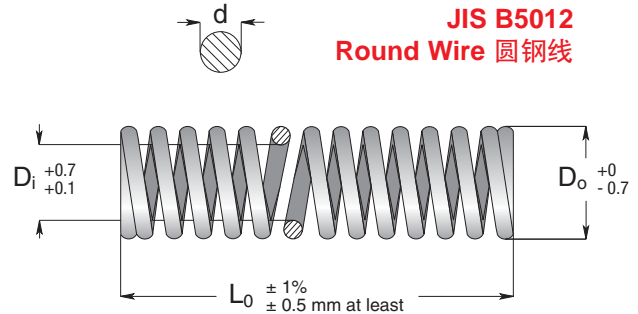
approx.



quantity for standard packaging
标准包装数量



JIS B5012
Rectangular Wire 矩形钢线



JIS B5012
Round Wire 圆钢线

Code 型号	D _o Outside Diameter 孔径	D _i Inside Diameter 棒径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数	A % L ₀	B % L ₀	C % L ₀	E approx. do not use	Pcs
				± 10%	1.000.000 cycles	500.000 cycles	300.000 cycles		
	mm	mm	mm	N/mm	N	mm	N	mm	mm

D_o spring outside diameter
弹簧外径

D_i spring inside diameter
弹簧内径

L₀ spring free length
弹簧自由长度

R spring rate (load required for 1mm deflection)
弹簧定数 (压缩 1mm) 所需的力)

A advised working deflection for 1.000.000 cycles
建议工作压缩量供1.000.000回次

B advised working deflection for 500.000 cycles
建议工作压缩量供500.000回次

C advised working deflection for 300.000 cycles
建议工作压缩量供300.000回次

E solid deflection (approximate value)
最大压缩量 (近似值)

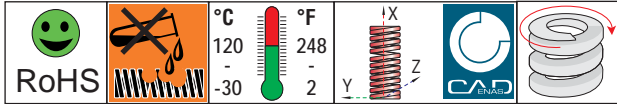
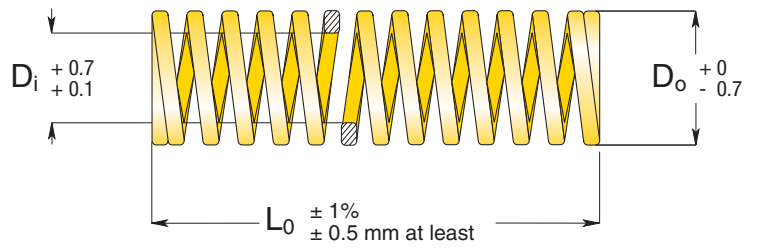


approx.




quantity for standard packaging
标准包装数量

EN Lightest load springs
CN 最轻型荷载弹簧



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 40% L ₀ 1.000.000 cycles		B 45% L ₀ 500.000 cycles		C 50% L ₀ 300.000 cycles		E do not use approx.	Pcs
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)	mm	
SF 10 - 020	10	5	20	1.00	8.0		9.0		10.0		11.6	50
SF 10 - 025			25	0.80	10.0		11.2		12.5		14.5	50
SF 10 - 030			30	0.67	12.0		13.5		15.0		17.4	50
SF 10 - 035			35	0.57	14.0		15.7		17.5		20.3	50
SF 10 - 040			40	0.50	16.0		18.0		20.0		23.2	50
SF 10 - 045			45	0.44	18.0		20.2	8	22.5	10	26.1	50
SF 10 - 050			50	0.40	20.0	(78.5)	22.5	9	25.0	(98.1)	29.0	25
SF 10 - 055			55	0.36	22.0		24.7	(88.3)	27.5		31.9	25
SF 10 - 060			60	0.33	24.0		27.0		30.0		34.8	25
SF 10 - 065			65	0.31	26.0		29.2		32.5		37.7	25
SF 10 - 070	70	0.29	28.0		31.5		35.0		40.6	25		
SF 10 - 075	75	0.27	30.0		33.7		37.5		43.5	25		
SF 10 - 080	80	0.25	32.0		36.0		40.0		46.4	25		
SF 12 - 020	12	6	20	1.40	8.0		9.0		10.0		11.6	50
SF 12 - 025			25	1.12	10.0		11.2		12.5		14.5	50
SF 12 - 030			30	0.93	12.0		13.5		15.0		17.4	50
SF 12 - 035			35	0.80	14.0		15.7		17.5		20.3	50
SF 12 - 040			40	0.70	16.0		18.0		20.0		23.2	50
SF 12 - 045			45	0.62	18.0		20.2	11	22.5	14	26.1	50
SF 12 - 050			50	0.56	20.0	(107.9)	22.5	12.5	25.0	(137.3)	29.0	25
SF 12 - 055			55	0.51	22.0		24.7	(122.6)	27.5		31.9	25
SF 12 - 060			60	0.47	24.0		27.0		30.0		34.8	25
SF 12 - 065			65	0.43	26.0		29.2		32.5		37.7	25
SF 12 - 070	70	0.40	28.0		31.5		35.0		40.6	25		
SF 12 - 075	75	0.37	30.0		33.7		37.5		43.5	25		
SF 12 - 080	80	0.35	32.0		36.0		40.0		46.4	25		
SF 14 - 025	14	7	25	1.44	10.0		11.2		12.5		14.5	50
SF 14 - 030			30	1.20	12.0		13.5		15.0		17.4	50
SF 14 - 035			35	1.03	14.0		15.7		17.5		20.3	50
SF 14 - 040			40	0.90	16.0		18.0		20.0		23.2	50
SF 14 - 045			45	0.80	18.0		20.2		22.5		26.1	25
SF 14 - 050			50	0.72	20.0		22.5	14.5	25.0	18	29.0	25
SF 14 - 055			55	0.65	22.0	(142.2)	24.7	16	27.5	(176.5)	31.9	25
SF 14 - 060			60	0.60	24.0		27.0	(156.9)	30.0		34.8	25
SF 14 - 065			65	0.55	26.0		29.2		32.5		37.7	25
SF 14 - 070			70	0.51	28.0		31.5		35.0		40.6	25
SF 14 - 075	75	0.48	30.0		33.7		37.5		43.5	25		
SF 14 - 080	80	0.45	32.0		36.0		40.0		46.4	20		
SF 14 - 090	90	0.40	36.0		40.5		45.0		52.2	20		
SF 16 - 025	16	8	25	1.68	10.0		11.2		12.5		14.5	50
SF 16 - 030			30	1.40	12.0		13.5		15.0		17.4	50
SF 16 - 035			35	1.20	14.0		15.7		17.5		20.3	50
SF 16 - 040			40	1.05	16.0		18.0		20.0		23.2	25
SF 16 - 045			45	0.94	18.0		20.2		22.5		26.1	25
SF 16 - 050			50	0.84	20.0		22.5		25.0		29.0	25
SF 16 - 055			55	0.77	22.0		24.7	17	27.5	21	31.9	25
SF 16 - 060			60	0.70	24.0	(166.7)	27.0	19	30.0	(206)	34.8	25
SF 16 - 065			65	0.65	26.0		29.2	(186.3)	32.5		37.7	25
SF 16 - 070			70	0.60	28.0		31.5		35.0		40.6	20
SF 16 - 075	75	0.56	30.0		33.7		37.5		43.5	20		
SF 16 - 080	80	0.53	32.0		36.0		40.0		46.4	20		
SF 16 - 090	90	0.47	36.0		40.5		45.0		52.2	20		
SF 16 - 100	100	0.42	40.0		45.0		50.0		58.0	20		



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 40% L ₀ 1.000.000 cycles	B 45% L ₀ 500.000 cycles	C 50% L ₀ 300.000 cycles	E do not use approx.	
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm	Pcs
SF 18 - 025	18	9	25	2.08	10.0	11.2	12.5	14.5	50
SF 18 - 030			30	1.74	12.0	13.5	15.0	17.4	50
SF 18 - 035			35	1.49	14.0	15.7	17.5	20.3	25
SF 18 - 040			40	1.30	16.0	18.0	20.0	23.2	25
SF 18 - 045			45	1.16	18.0	20.2	22.5	26.1	25
SF 18 - 050			50	1.04	20.0	22.5	25.0	29.0	25
SF 18 - 055			55	0.95	22.0	24.7	27.5	31.9	25
SF 18 - 060			60	0.87	24.0	27.0	30.0	34.8	25
SF 18 - 065			65	0.80	26.0	29.2	32.5	37.7	25
SF 18 - 070			70	0.74	28.0	31.5	35.0	40.6	25
SF 18 - 075			75	0.70	30.0	33.7	37.5	43.5	25
SF 18 - 080			80	0.65	32.0	36.0	40.0	46.4	20
SF 18 - 090			90	0.58	36.0	40.5	45.0	52.2	20
SF 18 - 100			100	0.52	40.0	45.0	50.0	58.0	20
SF 20 - 025	20	11	25	2.56	10.0	11.2	12.5	14.5	50
SF 20 - 030			30	2.13	12.0	13.5	15.0	17.4	50
SF 20 - 035			35	1.83	14.0	15.7	17.5	20.3	25
SF 20 - 040			40	1.60	16.0	18.0	20.0	23.2	25
SF 20 - 045			45	1.42	18.0	20.2	22.5	26.1	25
SF 20 - 050			50	1.28	20.0	22.5	25.0	29.0	25
SF 20 - 055			55	1.16	22.0	24.7	27.5	31.9	25
SF 20 - 060			60	1.07	24.0	27.0	30.0	34.8	25
SF 20 - 065			65	0.98	26.0	29.2	32.5	37.7	25
SF 20 - 070			70	0.91	28.0	31.5	35.0	40.6	25
SF 20 - 075			75	0.85	30.0	33.7	37.5	43.5	25
SF 20 - 080			80	0.80	32.0	36.0	40.0	46.4	20
SF 20 - 090			90	0.71	36.0	40.5	45.0	52.2	20
SF 20 - 100			100	0.64	40.0	45.0	50.0	58.0	20
SF 20 - 125	125	0.51	50.0	56.2	62.5	72.5	10		
SF 20 - 150	150	0.43	60.0	67.5	75.0	87.0	10		
SF 22 - 025	22	11	25	3.20	10.0	11.2	12.5	14.5	50
SF 22 - 030			30	2.67	12.0	13.5	15.0	17.4	25
SF 22 - 035			35	2.29	14.0	15.7	17.5	20.3	25
SF 22 - 040			40	2.00	16.0	18.0	20.0	23.2	25
SF 22 - 045			45	1.78	18.0	20.2	22.5	26.1	25
SF 22 - 050			50	1.60	20.0	22.5	25.0	29.0	25
SF 22 - 055			55	1.46	22.0	24.7	27.5	31.9	25
SF 22 - 060			60	1.33	24.0	27.0	30.0	34.8	25
SF 22 - 065			65	1.23	26.0	29.2	32.5	37.7	25
SF 22 - 070			70	1.14	28.0	31.5	35.0	40.6	20
SF 22 - 075			75	1.07	30.0	33.7	37.5	43.5	20
SF 22 - 080			80	1.00	32.0	36.0	40.0	46.4	20
SF 22 - 090			90	0.89	36.0	40.5	45.0	52.2	20
SF 22 - 100			100	0.80	40.0	45.0	50.0	58.0	20
SF 22 - 125	125	0.64	50.0	56.2	62.5	72.5	10		
SF 22 - 150	150	0.53	60.0	67.5	75.0	87.0	10		
SF 25 - 025	25	13.5	25	4.00	10.0	11.2	12.5	14.5	50
SF 25 - 030			30	3.33	12.0	13.5	15.0	17.4	25
SF 25 - 035			35	2.85	14.0	15.7	17.5	20.3	25
SF 25 - 040			40	2.50	16.0	18.0	20.0	23.2	25
SF 25 - 045			45	2.22	18.0	20.2	22.5	26.1	25
SF 25 - 050			50	2.00	20.0	22.5	25.0	29.0	25
SF 25 - 055			55	1.82	22.0	24.7	27.5	31.9	25
SF 25 - 060			60	1.67	24.0	27.0	30.0	34.8	25
SF 25 - 065			65	1.54	26.0	29.2	32.5	37.7	25
SF 25 - 070			70	1.43	28.0	31.5	35.0	40.6	20
SF 25 - 075			75	1.33	30.0	33.7	37.5	43.5	20
SF 25 - 080			80	1.25	32.0	36.0	40.0	46.4	20
SF 25 - 090			90	1.11	36.0	40.5	45.0	52.2	20
SF 25 - 100			100	1.00	40.0	45.0	50.0	58.0	20
SF 25 - 125	125	0.80	50.0	56.2	62.5	72.5	10		
SF 25 - 150	150	0.67	60.0	67.5	75.0	87.0	10		
SF 25 - 175	175	0.57	70.0	78.7	87.5	101.5	10		

SF
JIS



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 40% L ₀ 1.000.000 cycles		B 45% L ₀ 500.000 cycles		C 50% L ₀ 300.000 cycles		E approx. do not use	Pcs
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)		
SF 27 - 025	27	13.5	25	4.80	10.0		11.2		12.5		14.5	20
SF 27 - 030			30	4.00	12.0		13.5		15.0		17.4	20
SF 27 - 035			35	3.43	14.0		15.7		17.5		20.3	20
SF 27 - 040			40	3.00	16.0		18.0		20.0		23.2	20
SF 27 - 045			45	2.67	18.0		20.2		22.5		26.1	20
SF 27 - 050			50	2.40	20.0		22.5		25.0		29.0	20
SF 27 - 055			55	2.18	22.0		24.7		27.5		31.9	20
SF 27 - 060			60	2.00	24.0		27.0		30.0		34.8	20
SF 27 - 065			65	1.85	26.0	48 (471)	29.2	54 (530)	32.5	60 (588)	37.7	20
SF 27 - 070			70	1.71	28.0		31.5		35.0		40.6	20
SF 27 - 075			75	1.60	30.0		33.7		37.5		43.5	20
SF 27 - 080			80	1.50	32.0		36.0		40.0		46.4	10
SF 27 - 090			90	1.33	36.0		40.5		45.0		52.2	10
SF 27 - 100			100	1.20	40.0		45.0		50.0		58.0	10
SF 27 - 125			125	0.96	50.0		56.2		62.5		72.5	10
SF 27 - 150			150	0.80	60.0		67.5		75.0		87.0	10
SF 27 - 175	175	0.69	70.0		78.7		87.5		101.5	5		
SF 30 - 025	30	16	25	5.80	10.0		11.2		12.5		14.5	20
SF 30 - 030			30	4.80	12.0		13.5		15.0		17.4	20
SF 30 - 035			35	4.13	14.0		15.7		17.5		20.3	20
SF 30 - 040			40	3.60	16.0		18.0		20.0		23.2	20
SF 30 - 045			45	3.21	18.0		20.2		22.5		26.1	20
SF 30 - 050			50	2.88	20.0		22.5		25.0		29.0	20
SF 30 - 055			55	2.63	22.0		24.7		27.5		31.9	20
SF 30 - 060			60	2.40	24.0		27.0		30.0		34.8	20
SF 30 - 065			65	2.22	26.0	58 (569)	29.2	65 (637)	32.5	72 (706)	37.7	20
SF 30 - 070			70	2.05	28.0		31.5		35.0		40.6	20
SF 30 - 075			75	1.93	30.0		33.7		37.5		43.5	20
SF 30 - 080			80	1.80	32.0		36.0		40.0		46.4	10
SF 30 - 090			90	1.60	36.0		40.5		45.0		52.2	10
SF 30 - 100			100	1.44	40.0		45.0		50.0		58.0	10
SF 30 - 125			125	1.15	50.0		56.2		62.5		72.5	10
SF 30 - 150			150	0.96	60.0		67.5		75.0		87.0	10
SF 30 - 175	175	0.82	70.0		78.7		87.5		101.5	5		
SF 30 - 200	200	0.72	80.0		90.0		100.0		116.0	5		
SFR 35 - 040	35	21	40	4.90	16.0		18.0		20.0		23.2	20
SFR 35 - 045			45	4.36	18.0		20.25		22.5		26.1	20
SFR 35 - 050			50	3.92	20.0		22.5		25.0		29.0	20
SFR 35 - 055			55	3.56	22.0		24.75		27.5		31.9	10
SFR 35 - 060			60	3.26	24.0		27.0		30.0		34.8	10
SFR 35 - 065			65	3.02	26.0		29.25		32.5		37.7	10
SFR 35 - 070			70	2.80	28.0		31.5		35.0		40.6	10
SFR 35 - 075			75	2.61	30.0	78.4 (768.3)	33.75	88.2 (864.4)	37.5	98 (961)	43.5	10
SFR 35 - 080			80	2.45	32.0		36.0		40.0		46.4	10
SFR 35 - 090			90	2.17	36.0		40.5		45.0		52.2	10
SFR 35 - 100			100	1.96	40.0		45.0		50.0		58.0	10
SFR 35 - 125			125	1.57	50.0		56.25		62.5		72.5	5
SFR 35 - 150			150	1.30	60.0		67.5		75.0		87.0	5
SFR 35 - 175			175	1.12	70.0		78.75		87.5		101.5	5
SFR 35 - 200			200	0.98	80.0		90.0		100.0		116.0	5
SF 40 - 040			40	22	40	6.38	16.0		18.0		20.0	
SF 40 - 045	45	5.68			18.0		20.3		22.5		26.1	20
SF 40 - 050	50	5.12			20.0		22.5		25.0		29.0	20
SF 40 - 055	55	4.65			22.0		24.8		27.5		31.9	20
SF 40 - 060	60	4.26			24.0		27.0		30.0		34.8	10
SF 40 - 065	66	3.93			26.0		29.3		32.5		37.7	10
SF 40 - 070	70	3.65			28.0		31.5		35.0		40.6	10
SF 40 - 075	75	3.41			30.0	102 (1,000)	33.8	115 (1,128)	37.5	128 (1,255)	43.5	10
SF 40 - 080	80	3.20			32.0		36.0		40.0		46.4	10
SF 40 - 090	90	2.84			36.0		40.5		45.0		52.2	10
SF 40 - 100	100	2.56			40.0		45.0		50.0		58.0	10
SF 40 - 125	125	2.04			50.0		56.2		62.5		72.5	5
SF 40 - 150	150	1.70			60.0		67.5		75.0		87.0	5
SF 40 - 175	175	1.46			70.0		78.7		87.5		101.5	5
SF 40 - 200	200	1.28			80.0		90.0		100.0		116.0	5
SF 40 - 250	250	1.02			100.0		112.5		125.0		145.0	2

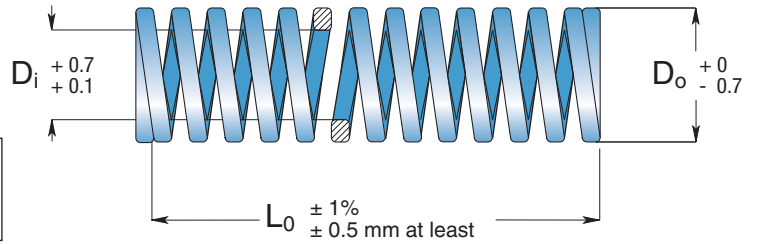
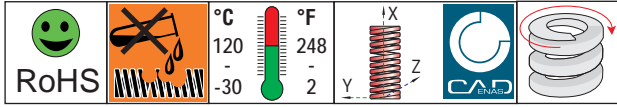


Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 40% L ₀ 1.000.000 cycles	B 45% L ₀ 500.000 cycles	C 50% L ₀ 300.000 cycles	E do not use approx.	Pcs		
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm			
SFR 40 - 040	40	26	40	4.00	16.0	18.0	20.0	23.2	20		
SFR 40 - 050			50	3.20	20.0	22.5	25.0	29.0	20		
SFR 40 - 060			60	2.60	24.0	27.0	30.0	34.8	10		
SFR 40 - 070			70	2.35	28.0	31.5	35.0	40.6	10		
SFR 40 - 080			80	2.05	32.0	36.0	40.0	46.4	10		
SFR 40 - 090			90	1.80	36.0	52 (509.6)	40.5	58.5 (573.3)	45.0	65 (637)	10
SFR 40 - 100			100	1.50	40.0	45.0	50.0	58.0	10		
SFR 40 - 125			125	1.15	50.0	56.25	62.5	72.5	5		
SFR 40 - 150			150	0.90	60.0	67.5	75.0	87.0	5		
SFR 40 - 175			175	0.75	70.0	78.75	87.5	101.5	5		
SFR 40 - 200			200	0.60	80.0	90.0	100.0	116.0	5		
SFR 40 - 250			250	0.40	100.0	112.5	125.0	145.0	2		
SF 50 - 050	50	27.5	50	8.00	20.0	22.5	25.0	29.0	5		
SF 50 - 055			55	7.27	22.0	24.8	27.5	31.9	5		
SF 50 - 060			60	6.66	24.0	27.0	30.0	34.8	5		
SF 50 - 065			65	6.15	26.0	29.3	32.5	37.7	5		
SF 50 - 070			70	5.71	28.0	31.5	35.0	40.6	5		
SF 50 - 075			75	5.33	30.0	33.8	37.5	43.5	5		
SF 50 - 080			80	5.00	32.0	36.0	40.0	46.4	5		
SF 50 - 090			90	4.44	36.0	160 (1,569)	40.5	180 (1,765)	45.0	200 (1,961)	5
SF 50 - 100			100	4.00	40.0	45.0	50.0	58.0	5		
SF 50 - 125			125	3.20	50.0	56.2	62.5	72.5	5		
SF 50 - 150			150	2.66	60.0	67.5	75.0	87.0	2		
SF 50 - 175			175	2.28	70.0	78.7	87.5	101.5	2		
SF 50 - 200			200	2.00	80.0	90.0	100.0	116.0	2		
SF 50 - 250			250	1.60	100.0	112.5	125.0	145.0	2		
SF 50 - 300	300	1.33	120.0	135.0	150.0	174.0	2				
SFR 50 - 050	50	31	50	5.40	20.0	22.5	25.0	29.0	5		
SFR 50 - 060			60	4.50	24.0	27.0	30.0	34.8	5		
SFR 50 - 070			70	3.60	28.0	31.5	35.0	40.6	5		
SFR 50 - 080			80	3.00	32.0	36.0	40.0	46.4	5		
SFR 50 - 090			90	2.65	36.0	40.5	45.0	52.2	5		
SFR 50 - 100			100	2.40	40.0	99 (970.2)	45.0	111.4 (1,091.4)	50.0	123.3 (1,212.3)	5
SFR 50 - 125			125	1.90	50.0	56.25	62.5	72.5	5		
SFR 50 - 150			150	1.55	60.0	67.5	75.0	87.0	2		
SFR 50 - 175			175	1.30	70.0	78.75	87.5	101.5	2		
SFR 50 - 200			200	1.10	80.0	90.0	100.0	116.0	2		
SFR 50 - 250			250	0.90	100.0	112.5	125.0	145.0	2		
SFR 50 - 300			300	0.75	120.0	135.0	150.0	174.0	2		
SF 60 - 060	60	33	60	9.59	24.0	27.0	30.0	34.8	5		
SF 60 - 070			70	8.22	28.0	31.5	35.0	40.6	5		
SF 60 - 080			80	7.19	32.0	36.0	40.0	46.4	5		
SF 60 - 090			90	6.40	36.0	40.5	45.0	52.2	5		
SF 60 - 100			100	5.76	40.0	45.0	50.0	58.0	5		
SF 60 - 125			125	4.60	50.0	56.2	62.5	72.5	2		
SF 60 - 150			150	3.84	60.0	67.5	75.0	87.0	2		
SF 60 - 175			175	3.29	70.0	78.7	87.5	101.5	2		
SF 60 - 200			200	2.88	80.0	90.0	100.0	116.0	2		
SF 60 - 250			250	2.30	100.0	112.5	125.0	145.0	2		
SF 60 - 300	300	1.92	120.0	135.0	150.0	174.0	2				
SFR 60 - 060	60	36	60	7.40	24.0	27.0	30.0	34.8	5		
SFR 60 - 070			70	6.30	28.0	31.5	35.0	40.6	5		
SFR 60 - 080			80	5.30	32.0	36.0	40.0	46.4	5		
SFR 60 - 090			90	4.20	36.0	40.5	45.0	52.2	5		
SFR 60 - 100			100	3.10	40.0	45.0	50.0	58.0	5		
SFR 60 - 125			125	2.35	50.0	56.25	62.5	72.5	2		
SFR 60 - 150			150	2.10	60.0	67.5	75.0	87.0	2		
SFR 60 - 175			175	1.90	70.0	78.75	87.5	101.5	2		
SFR 60 - 200			200	1.60	80.0	90.0	100.0	116.0	2		
SFR 60 - 250			250	1.30	100.0	112.5	125.0	145.0	2		
SFR 60 - 300	300	1.00	120.0	135.0	150.0	174.0	2				






SF
JIS



EN Light load springs
CN 轻型荷载弹簧



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 32% L ₀ 1.000.000 cycles		B 36% L ₀ 500.000 cycles		C 40% L ₀ 300.000 cycles		E do not use approx.	Pcs			
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)	mm				
SL 10 - 020	10	5	20	1.81	6.4 11.5 (112.8)	7.2	13 (127.5)	8.0	14.5 (142.2)	9.6	50				
SL 10 - 025			25	1.45								8.0	9.0	10.0	12.0
SL 10 - 030			30	1.21								9.6	10.8	12.0	14.4
SL 10 - 035			35	1.03								11.2	12.6	14.0	16.8
SL 10 - 040			40	0.90								12.8	14.4	16.0	19.2
SL 10 - 045			45	0.80								14.4	16.2	18.0	21.6
SL 10 - 050			50	0.73								16.0	18.0	20.0	24.0
SL 10 - 055			55	0.66								17.6	19.8	22.0	26.4
SL 10 - 060			60	0.60								19.2	21.6	24.0	28.8
SL 10 - 065			65	0.55								20.8	23.4	26.0	31.2
SL 10 - 070	70	0.51	22.4	25.2	28.0	33.6									
SL 10 - 075	75	0.48	24.0	27.0	30.0	36.0									
SL 10 - 080	80	0.45	25.6	28.8	32.0	38.4									
SL 12 - 020	12	6	20	2.63	6.4 17 (166.7)	7.2	19 (186.3)	8.0	21 (206)	9.6	50				
SL 12 - 025			25	2.10								8.0	9.0	10.0	12.0
SL 12 - 030			30	1.75								9.6	10.8	12.0	14.4
SL 12 - 035			35	1.50								11.2	12.6	14.0	16.8
SL 12 - 040			40	1.32								12.8	14.4	16.0	19.2
SL 12 - 045			45	1.17								14.4	16.2	18.0	21.6
SL 12 - 050			50	1.05								16.0	18.0	20.0	24.0
SL 12 - 055			55	0.96								17.6	19.8	22.0	26.4
SL 12 - 060			60	0.88								19.2	21.6	24.0	28.8
SL 12 - 065			65	0.81								20.8	23.4	26.0	31.2
SL 12 - 070	70	0.75	22.4	25.2	28.0	33.6									
SL 12 - 075	75	0.70	24.0	27.0	30.0	36.0									
SL 12 - 080	80	0.66	25.6	28.8	32.0	38.4									
SL 14 - 025	14	7	25	2.80	8.0 22 (216)	9.0	25 (245)	10.0	28 (275)	12.0	50				
SL 14 - 030			30	2.34								9.6	10.8	12.0	14.4
SL 14 - 035			35	2.00								11.2	12.6	14.0	16.8
SL 14 - 040			40	1.75								12.8	14.4	16.0	19.2
SL 14 - 045			45	1.56								14.4	16.2	18.0	21.6
SL 14 - 050			50	1.40								16.0	18.0	20.0	24.0
SL 14 - 055			55	1.27								17.6	19.8	22.0	26.4
SL 14 - 060			60	1.17								19.2	21.6	24.0	28.8
SL 14 - 065			65	1.08								20.8	23.4	26.0	31.2
SL 14 - 070			70	1.00								22.4	25.2	28.0	33.6
SL 14 - 075	75	0.93	24.0	27.0	30.0	36.0									
SL 14 - 080	80	0.87	25.6	28.8	32.0	38.4									
SL 14 - 090	90	0.77	28.8	32.4	36.0	43.2									
SL 16 - 025	16	8	25	3.50	8.0 28 (275)	9.0	32 (314)	10.0	35 (343)	12.0	50				
SL 16 - 030			30	2.92								9.6	10.8	12.0	14.4
SL 16 - 035			35	2.50								11.2	12.6	14.0	16.8
SL 16 - 040			40	2.19								12.8	14.4	16.0	19.2
SL 16 - 045			45	1.95								14.4	16.2	18.0	21.6
SL 16 - 050			50	1.75								16.0	18.0	20.0	24.0
SL 16 - 055			55	1.60								17.6	19.8	22.0	26.4
SL 16 - 060			60	1.46								19.2	21.6	24.0	28.8
SL 16 - 065			65	1.35								20.8	23.4	26.0	31.2
SL 16 - 070			70	1.25								22.4	25.2	28.0	33.6
SL 16 - 075	75	1.17	24.0	27.0	30.0	36.0									
SL 16 - 080	80	1.10	25.6	28.8	32.0	38.4									
SL 16 - 090	90	0.98	28.8	32.4	36.0	43.2									
SL 16 - 100	100	0.88	32.0	36.0	40.0	48.0									
SL 18 - 025	18	9	25	4.30	8.0 34 (333)	9.0	39 (382)	10.0	43 (422)	12.0	50				
SL 18 - 030			30	3.58								9.6	10.8	12.0	14.4
SL 18 - 035			35	3.07								11.2	12.6	14.0	16.8
SL 18 - 040			40	2.69								12.8	14.4	16.0	19.2
SL 18 - 045			45	2.39								14.4	16.2	18.0	21.6
SL 18 - 050			50	2.15								16.0	18.0	20.0	24.0
SL 18 - 055	55	1.96	17.6	19.8	22.0	26.4									


Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 32% L ₀  1.000.000 cycles		B 36% L ₀  500.000 cycles		C 40% L ₀  300.000 cycles		E  do not use approx.	 Pcs
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)		
SL 18 - 060	18	9	60	1.79	19.2	34 (333)	21.6	39 (382)	24.0	43 (422)	28.8	25
SL 18 - 065			65	1.66	20.8		23.4		26.0		31.2	25
SL 18 - 070			70	1.54	22.4		25.2		28.0		33.6	25
SL 18 - 075			75	1.44	24.0		27.0		30.0		36.0	25
SL 18 - 080			80	1.35	25.6		28.8		32.0		38.4	20
SL 18 - 090			90	1.20	28.8		32.4		36.0		43.2	20
SL 18 - 100			100	1.07	32.0		36.0		40.0		48.0	20
SL 20 - 025	20	10	25	5.40	8.0	43 (422)	9.0	49 (481)	10.0	54 (530)	12.0	50
SL 20 - 030			30	4.50	9.6		10.8		12.0		14.4	50
SL 20 - 035			35	3.86	11.2		12.6		14.0		16.8	25
SL 20 - 040			40	3.38	12.8		14.4		16.0		19.2	25
SL 20 - 045			45	3.00	14.4		16.2		18.0		21.6	25
SL 20 - 050			50	2.70	16.0		18.0		20.0		24.0	25
SL 20 - 055			55	2.45	17.6		19.8		22.0		26.4	25
SL 20 - 060			60	2.25	19.2		21.6		24.0		28.8	25
SL 20 - 065			65	2.08	20.8		23.4		26.0		31.2	25
SL 20 - 070			70	1.93	22.4		25.2		28.0		33.6	25
SL 20 - 075			75	1.80	24.0		27.0		30.0		36.0	25
SL 20 - 080			80	1.69	25.6		28.8		32.0		38.4	20
SL 20 - 090			90	1.50	28.8		32.4		36.0		43.2	20
SL 20 - 100			100	1.35	32.0		36.0		40.0		48.0	20
SL 20 - 125	125	1.08	40.0	45.0	50.0	60.0	10					
SL 20 - 150	150	0.90	48.0	54.0	60.0	72.0	10					
SL 22 - 025	22	11	25	6.70	8.0	54 (530)	9.0	60 (588)	10.0	67 (657)	12.0	50
SL 22 - 030			30	5.60	9.6		10.8		12.0		14.4	25
SL 22 - 035			35	4.80	11.2		12.6		14.0		16.8	25
SL 22 - 040			40	4.20	12.8		14.4		16.0		19.2	25
SL 22 - 045			45	3.72	14.4		16.2		18.0		21.6	25
SL 22 - 050			50	3.35	16.0		18.0		20.0		24.0	25
SL 22 - 055			55	3.05	17.6		19.8		22.0		26.4	25
SL 22 - 060			60	2.80	19.2		21.6		24.0		28.8	25
SL 22 - 065			65	2.58	20.8		23.4		26.0		31.2	25
SL 22 - 070			70	2.40	22.4		25.2		28.0		33.6	20
SL 22 - 075			75	2.23	24.0		27.0		30.0		36.0	20
SL 22 - 080			80	2.10	25.6		28.8		32.0		38.4	20
SL 22 - 090			90	1.86	28.8		32.4		36.0		43.2	20
SL 22 - 100			100	1.68	32.0		36.0		40.0		48.0	20
SL 22 - 125	125	1.34	40.0	45.0	50.0	60.0	10					
SL 22 - 150	150	1.12	48.0	54.0	60.0	72.0	10					
SL 25 - 025	25	12.5	25	8.40	8.0	67 (657)	9.0	76 (745)	10.0	84 (824)	12.0	50
SL 25 - 030			30	7.00	9.6		10.8		12.0		14.4	25
SL 25 - 035			35	6.00	11.2		12.6		14.0		16.8	25
SL 25 - 040			40	5.25	12.8		14.4		16.0		19.2	25
SL 25 - 045			45	4.67	14.4		16.2		18.0		21.6	25
SL 25 - 050			50	4.20	16.0		18.0		20.0		24.0	25
SL 25 - 055			55	3.82	17.6		19.8		22.0		26.4	25
SL 25 - 060			60	3.50	19.2		21.6		24.0		28.8	25
SL 25 - 065			65	3.23	20.8		23.4		26.0		31.2	25
SL 25 - 070			70	3.00	22.4		25.2		28.0		33.6	20
SL 25 - 075			75	2.80	24.0		27.0		30.0		36.0	20
SL 25 - 080			80	2.63	25.6		28.8		32.0		38.4	20
SL 25 - 090			90	2.33	28.8		32.4		36.0		43.2	20
SL 25 - 100			100	2.10	32.0		36.0		40.0		48.0	20
SL 25 - 125	125	1.68	40.0	45.0	50.0	60.0	10					
SL 25 - 150	150	1.40	48.0	54.0	60.0	72.0	10					
SL 25 - 175	175	1.20	56.0	63.0	70.0	84.0	10					
SL 27 - 025	27	13.5	25	10.00	8.0	80 (785)	9.0	90 (883)	10.0	100 (981)	12.0	20
SL 27 - 030			30	8.33	9.6		10.8		12.0		14.4	20
SL 27 - 035			35	7.14	11.2		12.6		14.0		16.8	20
SL 27 - 040			40	6.25	12.8		14.4		16.0		19.2	20
SL 27 - 045			45	5.56	14.4		16.2		18.0		21.6	20
SL 27 - 050			50	5.00	16.0		18.0		20.0		24.0	20
SL 27 - 055			55	4.55	17.6		19.8		22.0		26.4	20
SL 27 - 060			60	4.17	19.2		21.6		24.0		28.8	20
SL 27 - 065			65	3.85	20.8		23.4		26.0		31.2	20
SL 27 - 070			70	3.57	22.4		25.2		28.0		33.6	20
SL 27 - 075			75	3.33	24.0		27.0		30.0		36.0	20
SL 27 - 080			80	3.13	25.6		28.8		32.0		38.4	10
SL 27 - 090			90	2.78	28.8		32.4		36.0		43.2	10
SL 27 - 100			100	2.50	32.0		36.0		40.0		48.0	10
SL 27 - 125	125	2.00	40.0	45.0	50.0	60.0	10					
SL 27 - 150	150	1.67	48.0	54.0	60.0	72.0	10					
SL 27 - 175	175	1.43	56.0	63.0	70.0	84.0	5					

SL
JIS



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 32% L ₀ 1.000.000 cycles		B 36% L ₀ 500.000 cycles		C 40% L ₀ 300.000 cycles		E do not use approx. Pcs	
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)		mm
SLR 30 - 025	30	16	25	12.11	8.0		9.0		10.0		12.0	20
SLR 30 - 030			30	10.08	9.6		10.8		12.0		14.4	20
SLR 30 - 035			35	8.65	11.2		12.6		14.0		16.8	20
SLR 30 - 040			40	7.56	12.8		14.4		16.0		19.2	20
SLR 30 - 045			45	6.73	14.4		16.2		18.0		21.6	20
SLR 30 - 050			50	6.05	16.0		18.0		20.0		24.0	20
SLR 30 - 055			55	5.50	17.6		19.8		22.0		26.4	20
SLR 30 - 060			60	5.04	19.2		21.6		24.0		28.8	20
SLR 30 - 065			65	4.65	20.8	91.2	23.4	102.6	26.0	114	31.2	20
SLR 30 - 070			70	4.32	22.4	(893.8)	25.2	(1,005.5)	28.0	(1,117.2)	33.6	20
SLR 30 - 075			75	4.03	24.0		27.0		30.0		36.0	20
SLR 30 - 080			80	3.78	25.6		28.8		32.0		38.4	10
SLR 30 - 090			90	3.36	28.8		32.4		36.0		43.2	10
SLR 30 - 100			100	3.02	32.0		36.0		40.0		48.0	10
SLR 30 - 125			125	2.42	40.0		45.0		50.0		60.0	10
SLR 30 - 150			150	2.01	48.0		54.0		60.0		72.0	10
SLR 30 - 175	175	1.72	56.0		63.0		70.0		84.0	5		
SLR 30 - 200	200	1.51	64.0		72.0		80.0		96.0	5		
SL 35 - 040	35	17.5	40	10.31	12.8		14.4		16.0		19.2	20
SL 35 - 045			45	9.17	14.4		16.2		18.0		21.6	20
SL 35 - 050			50	8.25	16.0		18.0		20.0		24.0	20
SL 35 - 055			55	7.50	17.6		19.8		22.0		26.4	10
SL 35 - 060			60	6.87	19.2		21.6		24.0		28.8	10
SL 35 - 065			65	6.35	20.8		23.4		26.0		31.2	10
SL 35 - 070			70	5.89	22.4		25.2		28.0		33.6	10
SL 35 - 075			75	5.50	24.0	132	27.0	149	30.0	165	36.0	10
SL 35 - 080			80	5.15	25.6	(1,295)	28.8	(1,461)	32.0	(1,618)	38.4	10
SL 35 - 090			90	4.58	28.8		32.4		36.0		43.2	10
SL 35 - 100			100	4.12	32.0		36.0		40.0		48.0	10
SL 35 - 125			125	3.30	40.0		45.0		50.0		60.0	5
SL 35 - 150			150	2.75	48.0		54.0		60.0		72.0	5
SL 35 - 175			175	2.35	56.0		63.0		70.0		84.0	5
SL 35 - 200	200	2.06	64.0		72.0		80.0		96.0	5		
SLR 35 - 040	35	20.5	40	9.15	12.8		14.4		16.0		19.2	20
SLR 35 - 045			45	8.42	14.4		16.2		18.0		21.6	20
SLR 35 - 050			50	7.85	16.0		18.0		20.0		24.0	20
SLR 35 - 055			55	7.42	17.6		19.8		22.0		26.4	10
SLR 35 - 060			60	6.70	19.2		21.6		24.0		28.8	10
SLR 35 - 065			65	6.25	20.8		23.4		26.0		31.2	10
SLR 35 - 070			70	5.45	22.4		25.2		28.0		33.6	10
SLR 35 - 075			75	5.28	24.0	114.6	27.0	128.9	30.0	143.2	36.0	10
SLR 35 - 080			80	4.90	25.6	(1,123.1)	28.8	(1,263.2)	32.0	(1,403.4)	38.4	10
SLR 35 - 090			90	4.20	28.8		32.4		36.0		43.2	10
SLR 35 - 100			100	3.75	32.0		36.0		40.0		48.0	10
SLR 35 - 125			125	3.00	40.0		45.0		50.0		60.0	5
SLR 35 - 150			150	2.40	48.0		54.0		60.0		72.0	5
SLR 35 - 175			175	2.20	56.0		63.0		70.0		84.0	5
SLR 35 - 200	200	1.80	64.0		72.0		80.0		96.0	5		
SL 40 - 040	40	20	40	13.50	12.8		14.4		16.0		19.2	20
SL 40 - 045			45	12.00	14.4		16.2		18.0		21.6	20
SL 40 - 050			50	10.80	16.0		18.0		20.0		24.0	20
SL 40 - 055			55	9.80	17.6		19.8		22.0		26.4	20
SL 40 - 060			60	9.00	19.2		21.6		24.0		28.8	10
SL 40 - 065			65	8.29	20.8		23.4		26.0		31.2	10
SL 40 - 070			70	7.71	22.4		25.2		28.0		33.6	10
SL 40 - 075			75	7.19	24.0	173	27.0	194	30.0	216	36.0	10
SL 40 - 080			80	6.75	25.6	(1,697)	28.8	(1,903)	32.0	(2,120)	38.4	10
SL 40 - 090			90	6.00	28.8		32.4		36.0		43.2	10
SL 40 - 100			100	5.40	32.0		36.0		40.0		48.0	10
SL 40 - 125			125	4.32	40.0		45.0		50.0		60.0	5
SL 40 - 150			150	3.60	48.0		54.0		60.0		72.0	5
SL 40 - 175			175	3.08	56.0		63.0		70.0		84.0	5
SL 40 - 200			200	2.70	64.0		72.0		80.0		96.0	5
SL 40 - 250			250	2.16	80.0		90.0		100.0		120.0	2

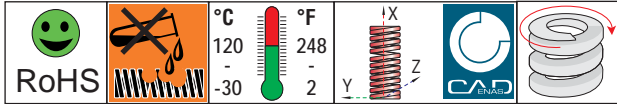
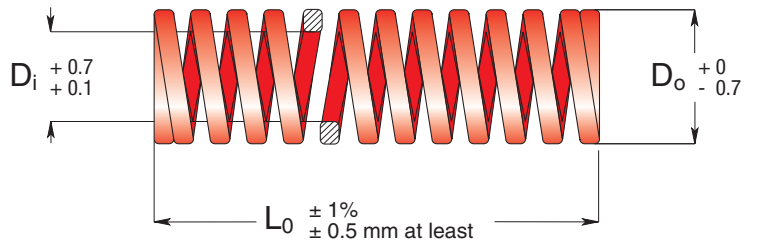


Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 32% L ₀ 1.000.000 cycles	B 36% L ₀ 500.000 cycles	C 40% L ₀ 300.000 cycles	E do not use approx.					
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm	Pcs				
SLR 40 - 040	40	25.5	40	9.30	12.8	111.5 (1,092.7)	125.5 (1,229.9)	139.4 (1,366.1)	19.2	20			
SLR 40 - 050			50	7.75	16.0				14.4	18.0	20.0	24.0	20
SLR 40 - 060			60	6.20	19.2				18.0	21.6	24.0	28.8	10
SLR 40 - 070			70	5.00	22.4				21.6	25.2	28.0	33.6	10
SLR 40 - 080			80	4.35	25.6				25.2	28.8	32.0	38.4	10
SLR 40 - 090			90	3.85	28.8				28.8	32.4	36.0	43.2	10
SLR 40 - 100			100	3.50	32.0				32.4	36.0	40.0	48.0	10
SLR 40 - 125			125	2.80	40.0				45.0	50.0	60.0	60.0	5
SLR 40 - 150			150	2.25	48.0				54.0	60.0	72.0	72.0	5
SLR 40 - 175			175	1.95	56.0				63.0	70.0	84.0	84.0	5
SLR 40 - 200			200	1.65	64.0				72.0	80.0	96.0	96.0	5
SLR 40 - 250			250	1.50	80.0				90.0	100.0	120.0	120.0	2
SL 50 - 050	50	25	50	16.89	16.0	270 (2,650)	304 (2,980)	338 (3,310)	24.0	5			
SL 50 - 055			55	15.35	17.6				18.0	19.8	22.0	26.4	5
SL 50 - 060			60	14.08	19.2				21.6	23.4	26.0	28.8	5
SL 50 - 065			65	12.99	20.8				23.4	25.2	28.0	31.2	5
SL 50 - 070			70	12.07	22.4				25.2	27.0	30.0	33.6	5
SL 50 - 075			75	11.25	24.0				27.0	28.8	32.0	36.0	5
SL 50 - 080			80	10.56	25.6				28.8	32.4	36.0	38.4	5
SL 50 - 090			90	9.38	28.8				32.4	36.0	40.0	43.2	5
SL 50 - 100			100	8.45	32.0				36.0	40.0	48.0	48.0	5
SL 50 - 125			125	6.76	40.0				45.0	50.0	60.0	60.0	5
SL 50 - 150			150	5.63	48.0				54.0	60.0	72.0	72.0	2
SL 50 - 175			175	4.82	56.0				63.0	70.0	84.0	84.0	2
SL 50 - 200			200	4.22	64.0				72.0	80.0	96.0	96.0	2
SL 50 - 250			250	3.38	80.0				90.0	100.0	120.0	120.0	2
SL 50 - 300	300	2.81	96.0	108.0	120.0	144.0	144.0	2					
SLR 50 - 050	50	30.5	50	11.90	16.0	200.8 (1,967.8)	225.9 (2,213.8)	251 (2,459.8)	24.0	5			
SLR 50 - 060			60	10.60	19.2				18.0	21.6	24.0	28.8	5
SLR 50 - 070			70	9.00	22.4				21.6	25.2	28.0	33.6	5
SLR 50 - 080			80	7.65	25.6				25.2	28.8	32.0	38.4	5
SLR 50 - 090			90	6.75	28.8				32.4	36.0	40.0	43.2	5
SLR 50 - 100			100	5.85	32.0				36.0	40.0	48.0	48.0	5
SLR 50 - 125			125	4.90	40.0				45.0	50.0	60.0	60.0	5
SLR 50 - 150			150	3.55	48.0				54.0	60.0	72.0	72.0	2
SLR 50 - 175			175	3.00	56.0				63.0	70.0	84.0	84.0	2
SLR 50 - 200			200	2.65	64.0				72.0	80.0	96.0	96.0	2
SLR 50 - 250			250	2.40	80.0				90.0	100.0	120.0	120.0	2
SLR 50 - 300			300	2.20	96.0				108.0	120.0	144.0	144.0	2
SL 60 - 060	60	30	60	20.25	19.2	389 (3,810)	437 (4,290)	486 (4,770)	28.8	5			
SL 60 - 070			70	17.35	22.4				21.6	25.2	28.0	33.6	5
SL 60 - 080			80	15.18	25.6				25.2	28.8	32.0	38.4	5
SL 60 - 090			90	13.50	28.8				32.4	36.0	40.0	43.2	5
SL 60 - 100			100	12.15	32.0				36.0	40.0	48.0	48.0	5
SL 60 - 125			125	9.72	40.0				45.0	50.0	60.0	60.0	2
SL 60 - 150			150	8.10	48.0				54.0	60.0	72.0	72.0	2
SL 60 - 175			175	6.94	56.0				63.0	70.0	84.0	84.0	2
SL 60 - 200			200	6.07	64.0				72.0	80.0	96.0	96.0	2
SL 60 - 250			250	4.86	80.0				90.0	100.0	120.0	120.0	2
SL 60 - 300			300	4.05	96.0				108.0	120.0	144.0	144.0	2
SLR 60 - 060	60	35.5	60	16.80	19.2	310.1 (3,039)	384.8 (3,771)	387.6 (3,798.5)	28.8	5			
SLR 60 - 070			70	14.40	22.4				21.6	25.2	28.0	33.6	5
SLR 60 - 080			80	12.10	25.6				25.2	28.8	32.0	38.4	5
SLR 60 - 090			90	10.65	28.8				32.4	36.0	40.0	43.2	5
SLR 60 - 100			100	9.80	32.0				36.0	40.0	48.0	48.0	5
SLR 60 - 125			125	8.50	40.0				45.0	50.0	60.0	60.0	2
SLR 60 - 150			150	6.80	48.0				54.0	60.0	72.0	72.0	2
SLR 60 - 175			175	6.00	56.0				63.0	70.0	84.0	84.0	2
SLR 60 - 200			200	5.20	64.0				72.0	80.0	96.0	96.0	2
SLR 60 - 250			250	3.90	80.0				90.0	100.0	120.0	120.0	2
SLR 60 - 300			300	3.10	96.0				108.0	120.0	144.0	144.0	2

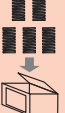
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EN Medium load springs
CN 中型荷载弹簧



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 25.6% L ₀ 1.000.000 cycles		B 28.8% L ₀ 500.000 cycles		C 32% L ₀ 300.000 cycles		E approx. do not use	Pcs
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)	mm	
SM 10 - 020	10	5	20	3.13	5.1		5.8		6.4		7.6	50
SM 10 - 025			25	2.50	6.4		7.2		8.0		9.5	50
SM 10 - 030			30	2.08	7.7		8.6		9.6		11.4	50
SM 10 - 035			35	1.78	9.0		10.1		11.2		13.3	50
SM 10 - 040			40	1.56	10.2		11.5		12.8		15.2	50
SM 10 - 045			45	1.38	11.5		13.0		14.4		17.1	50
SM 10 - 050			50	1.25	12.8	16 (156.9)	14.4	18 (176.5)	16.0	20 (196.1)	19.0	25
SM 10 - 055			55	1.13	14.1		15.8		17.6		20.9	25
SM 10 - 060			60	1.04	15.4		17.3		19.2		22.8	25
SM 10 - 065			65	0.96	16.6		18.7		20.8		24.7	25
SM 10 - 070			70	0.89	17.9		20.2		22.4		26.6	25
SM 10 - 075	75	0.83	19.2		21.6		24.0		28.5	25		
SM 10 - 080	80	0.78	20.5		23.0		25.6		30.4	25		
SM 12 - 020	12	6	20	4.53	5.1		5.8		6.4		7.6	50
SM 12 - 025			25	3.62	6.4		7.2		8.0		9.5	50
SM 12 - 030			30	3.02	7.7		8.6		9.6		11.4	50
SM 12 - 035			35	2.58	9.0		10.1		11.2		13.3	50
SM 12 - 040			40	2.27	10.2		11.5		12.8		15.2	50
SM 12 - 045			45	2.01	11.5		13.0		14.4		17.1	50
SM 12 - 050			50	1.81	12.8	23 (226)	14.4	26 (255)	16.0	29 (284)	19.0	25
SM 12 - 055			55	1.64	14.1		15.8		17.6		20.9	25
SM 12 - 060			60	1.51	15.4		17.3		19.2		22.8	25
SM 12 - 065			65	1.39	16.6		18.7		20.8		24.7	25
SM 12 - 070			70	1.29	17.9		20.2		22.4		26.6	25
SM 12 - 075	75	1.20	19.2		21.6		24.0		28.5	25		
SM 12 - 080	80	1.13	20.5		23.0		25.6		30.4	25		
SM 14 - 025	14	7	25	4.87	6.4		7.2		8.0		9.5	50
SM 14 - 030			30	4.06	7.7		8.6		9.6		11.4	50
SM 14 - 035			35	3.48	9.0		10.1		11.2		13.3	50
SM 14 - 040			40	3.04	10.2		11.5		12.8		15.2	50
SM 14 - 045			45	2.70	11.5		13.0		14.4		17.1	25
SM 14 - 050			50	2.43	12.8		14.4		16.0		19.0	25
SM 14 - 055			55	2.21	14.1	31 (304)	15.8	35 (343)	17.6	39 (383)	20.9	25
SM 14 - 060			60	2.03	15.4		17.3		19.2		22.8	25
SM 14 - 065			65	1.87	16.6		18.7		20.8		24.7	25
SM 14 - 070			70	1.74	17.9		20.2		22.4		26.6	25
SM 14 - 075			75	1.62	19.2		21.6		24.0		28.5	25
SM 14 - 080	80	1.52	20.5		23.0		25.6		30.4	20		
SM 14 - 090	90	1.35	23.0		25.9		28.8		34.2	20		

Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 25.6% L ₀ 1.000.000 cycles	B 28.8% L ₀ 500.000 cycles	C 32% L ₀ 300.000 cycles	E do not use approx.	
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm	Pcs
SM 16 - 025	16	8	25	6.39	6.4	7.2	8.0	9.5	50
SM 16 - 030			30	5.32	7.7	8.6	9.6	11.4	50
SM 16 - 035			35	4.55	9.0	10.1	11.2	13.3	50
SM 16 - 040			40	3.98	10.2	11.5	12.8	15.2	25
SM 16 - 045			45	3.54	11.5	13.0	14.4	17.1	25
SM 16 - 050			50	3.18	12.8	14.4	16.0	19.0	25
SM 16 - 055			55	2.89	14.1	15.8	17.6	20.9	25
SM 16 - 060			60	2.65	15.4	17.3	19.2	22.8	25
SM 16 - 065			65	2.45	16.6	18.7	20.8	24.7	25
SM 16 - 070			70	2.27	17.9	20.2	22.4	26.6	20
SM 16 - 075			75	2.11	19.2	21.6	24.0	28.5	20
SM 16 - 080			80	1.99	20.5	23.0	25.6	30.4	20
SM 16 - 090			90	1.77	23.0	25.9	28.8	34.2	20
SM 16 - 100			100	1.59	25.6	28.8	32.0	38.0	20
SM 18 - 025	18	9	25	8.12	6.4	7.2	8.0	9.5	50
SM 18 - 030			30	6.77	7.7	8.6	9.6	11.4	50
SM 18 - 035			35	5.80	9.0	10.1	11.2	13.3	25
SM 18 - 040			40	5.07	10.2	11.5	12.8	15.2	25
SM 18 - 045			45	4.51	11.5	13.0	14.4	17.1	25
SM 18 - 050			50	4.06	12.8	14.4	16.0	19.0	25
SM 18 - 055			55	3.69	14.1	15.8	17.6	20.9	25
SM 18 - 060			60	3.38	15.4	17.3	19.2	22.8	25
SM 18 - 065			65	3.12	16.6	18.7	20.8	24.7	25
SM 18 - 070			70	2.90	17.9	20.2	22.4	26.6	25
SM 18 - 075			75	2.70	19.2	21.6	24.0	28.5	25
SM 18 - 080			80	2.53	20.5	23.0	25.6	30.4	20
SM 18 - 090			90	2.25	23.0	25.9	28.8	34.2	20
SM 18 - 100			100	2.02	25.6	28.8	32.0	38.0	20
SM 20 - 025	20	10	25	10.00	6.4	7.2	8.0	9.5	50
SM 20 - 030			30	8.33	7.7	8.6	9.6	11.4	50
SM 20 - 035			35	7.14	9.0	10.1	11.2	13.3	25
SM 20 - 040			40	6.25	10.2	11.5	12.8	15.2	25
SM 20 - 045			45	5.55	11.5	13.0	14.4	17.1	25
SM 20 - 050			50	5.00	12.8	14.4	16.0	19.0	25
SM 20 - 055			55	4.54	14.1	15.8	17.6	20.9	25
SM 20 - 060			60	4.16	15.4	17.3	19.2	22.8	25
SM 20 - 065			65	3.84	16.6	18.7	20.8	24.7	25
SM 20 - 070			70	3.57	17.9	20.2	22.4	26.6	25
SM 20 - 075			75	3.33	19.2	21.6	24.0	28.5	25
SM 20 - 080			80	3.12	20.5	23.0	25.6	30.4	20
SM 20 - 090			90	2.77	23.0	25.9	28.8	34.2	20
SM 20 - 100			100	2.50	25.6	28.8	32.0	38.0	20
SM 20 - 125	125	2.00	32.0	36.0	40.0	47.5	10		
SM 20 - 150	150	1.67	38.4	43.2	48.0	57.0	10		
SM 22 - 025	22	11	25	12.13	6.4	7.2	8.0	9.5	50
SM 22 - 030			30	10.10	7.7	8.6	9.6	11.4	25
SM 22 - 035			35	8.65	9.0	10.1	11.2	13.3	25
SM 22 - 040			40	7.57	10.2	11.5	12.8	15.2	25
SM 22 - 045			45	6.74	11.5	13.0	14.4	17.1	25
SM 22 - 050			50	6.06	12.8	14.4	16.0	19.0	25
SM 22 - 055			55	5.50	14.1	15.8	17.6	20.9	25
SM 22 - 060			60	5.05	15.4	17.3	19.2	22.8	25
SM 22 - 065			65	4.66	16.6	18.7	20.8	24.7	25
SM 22 - 070			70	4.33	17.9	20.2	22.4	26.6	20
SM 22 - 075			75	4.04	19.2	21.6	24.0	28.5	20
SM 22 - 080			80	3.78	20.5	23.0	25.6	30.4	20
SM 22 - 090			90	3.36	23.0	25.9	28.8	34.2	20
SM 22 - 100			100	3.03	25.6	28.8	32.0	38.0	20
SM 22 - 125	125	2.42	32.0	36.0	40.0	47.5	10		
SM 22 - 150	150	2.01	38.4	43.2	48.0	57.0	10		

SM
JIS



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 25.6% L ₀ 1.000.000 cycles		B 28.8% L ₀ 500.000 cycles		C 32% L ₀ 300.000 cycles		E do not use approx. Pcs	
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)		mm
SM 25 - 025	25	12.5	25	15.63	6.4		7.2		8.0		9.5	50
SM 25 - 030			30	13.02	7.7		8.6		9.6		11.4	25
SM 25 - 035			35	11.20	9.0		10.0		11.2		13.3	25
SM 25 - 040			40	9.76	10.2		11.5		12.8		15.2	25
SM 25 - 045			45	8.68	11.5		13.0		14.4		17.1	25
SM 25 - 050			50	7.81	12.8		14.4		16.0		19.0	25
SM 25 - 055			55	7.10	14.1		15.8		17.6		20.9	25
SM 25 - 060			60	6.51	15.4		17.3		19.2		22.8	25
SM 25 - 065			65	6.00	16.6	100 (981)	18.7	112 (1,098)	20.8	125 (1,226)	24.7	25
SM 25 - 070			70	5.58	17.9		20.2		22.4		26.6	20
SM 25 - 075			75	5.21	19.2		21.6		24.0		28.5	20
SM 25 - 080			80	4.88	20.5		23.0		25.6		30.4	20
SM 25 - 090			90	4.34	23.0		25.9		28.8		34.2	20
SM 25 - 100			100	3.90	25.6		28.8		32.0		38.0	20
SM 25 - 125			125	3.12	32.0		36.0		40.0		47.5	10
SM 25 - 150			150	2.60	38.4		43.2		48.0		57.0	10
SM 25 - 175	175	2.23	44.8		50.4		56.0		66.5	10		
SM 27 - 025	27	13.5	25	18.25	6.4		7.2		8.0		9.5	20
SM 27 - 030			30	15.20	7.7		8.6		9.6		11.4	20
SM 27 - 035			35	13.04	9.0		10.0		11.2		13.3	20
SM 27 - 040			40	11.40	10.2		11.5		12.8		15.2	20
SM 27 - 045			45	10.14	11.5		13.0		14.4		17.1	20
SM 27 - 050			50	9.12	12.8		14.4		16.0		19.0	20
SM 27 - 055			55	8.30	14.1		15.8		17.6		20.9	20
SM 27 - 060			60	7.60	15.4		17.3		19.2		22.8	20
SM 27 - 065			65	7.00	16.6	117 (1,147)	18.7	131 (1,285)	20.8	146 (1,432)	24.7	20
SM 27 - 070			70	6.51	17.9		20.2		22.4		26.6	20
SM 27 - 075			75	6.08	19.2		21.6		24.0		28.5	20
SM 27 - 080			80	5.70	20.5		23.0		25.6		30.4	10
SM 27 - 090			90	5.06	23.0		25.9		28.8		34.2	10
SM 27 - 100			100	4.56	25.6		28.8		32.0		38.0	10
SM 27 - 125			125	3.65	32.0		36.0		40.0		47.5	10
SM 27 - 150			150	3.04	38.4		43.2		48.0		57.0	10
SM 27 - 175	175	2.61	44.8		50.4		56.0		66.5	5		
SM 30 - 025	30	15	25	22.50	6.4		7.2		8.0		9.5	20
SM 30 - 030			30	18.75	7.7		8.6		9.6		11.4	20
SM 30 - 035			35	16.10	9.0		10.0		11.2		13.3	20
SM 30 - 040			40	14.06	10.2		11.5		12.8		15.2	20
SM 30 - 045			45	12.50	11.5		13.0		14.4		17.1	20
SM 30 - 050			50	11.25	12.8		14.4		16.0		19.0	20
SM 30 - 055			55	10.23	14.1		15.8		17.6		20.9	20
SM 30 - 060			60	9.37	15.4		17.3		19.2		22.8	20
SM 30 - 065			65	8.65	16.6	144 (1,412)	18.7	161 (1,579)	20.8	180 (1,785)	24.7	20
SM 30 - 070			70	8.03	17.9		20.2		22.4		26.6	20
SM 30 - 075			75	7.50	19.2		21.6		24.0		28.5	20
SM 30 - 080			80	7.03	20.5		23.0		25.6		30.4	10
SM 30 - 090			90	6.25	23.0		25.9		28.8		34.2	10
SM 30 - 100			100	5.62	25.6		28.8		32.0		38.0	10
SM 30 - 125			125	4.50	32.0		36.0		40.0		47.5	10
SM 30 - 150			150	3.75	38.4		43.2		48.0		57.0	10
SM 30 - 175	175	3.21	44.8		50.4		56.0		66.5	5		
SM 30 - 200	200	2.81	51.2		57.6		64.0		76.0	5		

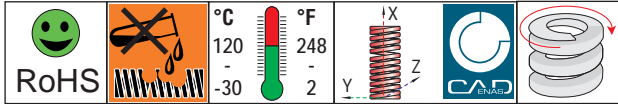
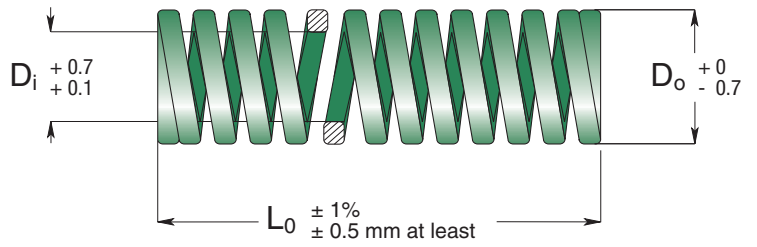


Code 型号	D _o Outside Diameter 孔径	D _i Inside Diameter 棒径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 25.6% L ₀ 1.000.000 cycles	B 28.8% L ₀ 500.000 cycles	C 32% L ₀ 300.000 cycles	E do not use approx.	Pcs		
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm			
SM 35 - 040	35	17.5	40	19.14	10.2	195 (1,912)	220 (2,160)	245 (2,400)	15.2	20	
SM 35 - 045			45	17.01	11.5				13.0	17.1	20
SM 35 - 050			50	15.31	12.8				14.4	19.0	20
SM 35 - 055			55	13.92	14.0				15.8	20.9	10
SM 35 - 060			60	12.76	15.4				17.3	22.8	10
SM 35 - 065			65	11.77	16.6				18.7	24.7	10
SM 35 - 070			70	10.93	17.9				20.2	26.6	10
SM 35 - 075			75	10.20	19.2				21.6	28.5	10
SM 35 - 080			80	9.57	20.5				23.0	30.4	10
SM 35 - 090			90	8.50	23.0				25.9	34.2	10
SM 35 - 100			100	7.65	25.6				28.8	38.0	10
SM 35 - 125			125	6.12	32.0				36.0	47.5	5
SM 35 - 150			150	5.10	38.4				43.2	57.0	5
SM 35 - 175			175	4.37	44.8				50.4	66.5	5
SM 35 - 200	200	3.82	51.2	57.6	76.0	5					
SM 40 - 040	40	20	40	25.02	10.2	256 (2,510)	288 (2,820)	320 (3,140)	15.2	20	
SM 40 - 045			45	22.19	11.5				13.0	17.1	20
SM 40 - 050			50	20.00	12.8				14.4	19.0	20
SM 40 - 055			55	18.15	14.1				15.8	20.9	20
SM 40 - 060			60	16.60	15.4				17.3	22.8	10
SM 40 - 065			65	15.36	16.6				18.7	24.7	10
SM 40 - 070			70	14.28	17.9				20.2	26.6	10
SM 40 - 075			75	13.31	19.2				21.6	28.5	10
SM 40 - 080			80	12.50	20.5				23.0	30.4	10
SM 40 - 090			90	11.11	23.0				25.9	34.2	10
SM 40 - 100			100	10.00	25.6				28.8	38.0	10
SM 40 - 125			125	8.00	32.0				36.0	47.5	5
SM 40 - 150			150	6.66	38.4				43.2	57.0	5
SM 40 - 175			175	5.71	44.8				50.4	66.5	5
SM 40 - 200	200	5.00	51.2	57.6	76.0	5					
SM 40 - 250	250	4.00	64.0	72.0	95.0	2					
SM 50 - 050	50	25	50	31.25	12.8	400 (3,920)	450 (4,410)	500 (4,900)	19.0	5	
SM 50 - 055			55	28.39	14.1				15.8	20.9	5
SM 50 - 060			60	26.04	15.4				17.3	22.8	5
SM 50 - 065			65	24.02	16.6				18.7	24.7	5
SM 50 - 070			70	22.32	17.9				20.2	26.6	5
SM 50 - 075			75	20.82	19.2				21.6	28.5	5
SM 50 - 080			80	19.53	20.5				23.0	30.4	5
SM 50 - 090			90	17.36	23.0				25.9	34.2	5
SM 50 - 100			100	15.62	25.6				28.8	38.0	5
SM 50 - 125			125	12.50	32.0				36.0	47.5	5
SM 50 - 150			150	10.41	38.4				43.2	57.0	2
SM 50 - 175			175	8.92	44.8				50.4	66.5	2
SM 50 - 200			200	7.81	51.2				57.6	76.0	2
SM 50 - 250			250	6.25	64.0				72.0	95.0	2
SM 50 - 300	300	5.20	76.8	86.4	114.0	2					
SM 60 - 060	60	30	60	37.40	15.4	575 (5,640)	648 (6,350)	720 (7,060)	22.8	5	
SM 60 - 070			70	32.10	17.9				20.2	26.6	5
SM 60 - 080			80	28.12	20.5				23.0	30.4	5
SM 60 - 090			90	25.00	23.0				25.9	34.2	5
SM 60 - 100			100	22.50	25.6				28.8	38.0	5
SM 60 - 125			125	18.00	32.0				36.0	47.5	2
SM 60 - 150			150	15.00	38.4				43.2	57.0	2
SM 60 - 175			175	12.85	44.8				50.4	66.5	2
SM 60 - 200			200	11.25	51.2				57.6	76.0	2
SM 60 - 250			250	9.00	64.0				72.0	95.0	2
SM 60 - 300			300	7.50	76.8				86.4	114.0	2

SM
JIS



EN Heavy load springs
CN 重型荷载弹簧



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 19.2% L ₀ 1.000.000 cycles		B 21.6% L ₀ 500.000 cycles		C 24% L ₀ 300.000 cycles		E do not use approx.	Pcs
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)	mm	
SH 10 - 020	10	5	20	6.25	3.8	4.3	4.8	5.6	50			
SH 10 - 025			25	5.00	4.8	5.4	6.0	7.0	50			
SH 10 - 030			30	4.16	5.8	6.5	7.2	8.4	50			
SH 10 - 035			35	3.57	6.7	7.5	8.4	9.8	50			
SH 10 - 040			40	3.15	7.7	8.6	9.6	11.2	50			
SH 10 - 045			45	2.77	8.6	9.7	10.8	12.6	50			
SH 10 - 050			50	2.50	9.6	10.8	12.0	14.0	25			
SH 10 - 055			55	2.27	10.6	11.8	13.2	15.4	25			
SH 10 - 060			60	2.08	11.5	13.0	14.4	16.8	25			
SH 10 - 065			65	1.92	12.5	14.0	15.6	18.2	25			
SH 10 - 070			70	1.79	13.4	15.1	16.8	19.6	25			
SH 10 - 075	75	1.67	14.4	16.2	18.0	21.0	25					
SH 10 - 080	80	1.56	15.4	17.3	19.2	22.4	25					
SH 12 - 020	12	6	20	8.90	3.8	4.3	4.8	5.6	50			
SH 12 - 025			25	7.10	4.8	5.4	6.0	7.0	50			
SH 12 - 030			30	5.97	5.8	6.5	7.2	8.4	50			
SH 12 - 035			35	5.11	6.7	7.5	8.4	9.8	50			
SH 12 - 040			40	4.47	7.7	8.6	9.6	11.2	50			
SH 12 - 045			45	3.98	8.6	9.7	10.8	12.6	50			
SH 12 - 050			50	3.58	9.6	10.8	12.0	14.0	25			
SH 12 - 055			55	3.25	10.6	11.8	13.2	15.4	25			
SH 12 - 060			60	2.98	11.5	13.0	14.4	16.8	25			
SH 12 - 065			65	2.74	12.5	14.0	15.6	18.2	25			
SH 12 - 070			70	2.54	13.4	15.1	16.8	19.6	25			
SH 12 - 075	75	2.37	14.4	16.2	18.0	21.0	25					
SH 12 - 080	80	2.21	15.4	17.3	19.2	22.4	25					
SH 14 - 025	14	7	25	9.83	4.8	5.4	6.0	7.0	50			
SH 14 - 030			30	8.19	5.8	6.5	7.2	8.4	50			
SH 14 - 035			35	7.02	6.7	7.5	8.4	9.8	50			
SH 14 - 040			40	6.14	7.7	8.6	9.6	11.2	50			
SH 14 - 045			45	5.46	8.6	9.7	10.8	12.6	25			
SH 14 - 050			50	4.91	9.6	10.8	12.0	14.0	25			
SH 14 - 055			55	4.46	10.6	11.8	13.2	15.4	25			
SH 14 - 060			60	4.09	11.5	13.0	14.4	16.8	25			
SH 14 - 065			65	3.78	12.5	14.0	15.6	18.2	25			
SH 14 - 070			70	3.51	13.4	15.1	16.8	19.6	25			
SH 14 - 075			75	3.27	14.4	16.2	18.0	21.0	25			
SH 14 - 080	80	3.07	15.4	17.3	19.2	22.4	20					
SH 14 - 090	90	2.72	16.4	19.4	21.6	25.2	20					
SH 16 - 025	16	8	25	12.83	6.7	5.4	6.0	7.0	50			
SH 16 - 030			30	10.69	7.7	6.5	7.2	8.4	50			
SH 16 - 035			35	9.16	8.6	7.5	8.4	9.8	50			
SH 16 - 040			40	8.02	9.6	8.6	9.6	11.2	25			
SH 16 - 045			45	7.12	10.6	9.7	10.8	12.6	25			
SH 16 - 050			50	6.41	11.5	10.8	12.0	14.0	25			
SH 16 - 055	55	5.83	12.5	11.8	13.2	15.4	25					



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 19.2% L ₀ 1.000.000 cycles		B 21.6% L ₀ 500.000 cycles		C 24% L ₀ 300.000 cycles		E do not use approx.	Pcs
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)		
SH 16 - 060	16	8	60	5.34	10.6	62 (608)	13.0	69 (677)	14.4	77 (755)	16.8	25
SH 16 - 065			65	4.93	11.5		14.0		15.6		18.2	25
SH 16 - 070			70	4.58	12.5		15.1		16.8		19.6	20
SH 16 - 075			75	4.28	13.4		16.2		18.0		21.0	20
SH 16 - 080			80	4.01	14.4		17.3		19.2		22.4	20
SH 16 - 090			90	3.57	15.4		19.4		21.6		25.2	20
SH 16 - 100			100	3.21	17.3		21.6		24.0		28.0	20
SH 18 - 025	18	9	25	16.16	4.8	78 (765)	5.4	87 (853)	6.0	97 (951)	7.0	50
SH 18 - 030			30	13.47	5.8		6.5		7.2		8.4	50
SH 18 - 035			35	11.54	6.7		7.5		8.4		9.8	25
SH 18 - 040			40	10.10	7.7		8.6		9.6		11.2	25
SH 18 - 045			45	8.98	8.6		9.7		10.8		12.6	25
SH 18 - 050			50	8.08	9.6		10.8		12.0		14.0	25
SH 18 - 055			55	7.34	10.6		11.8		13.2		15.4	25
SH 18 - 060			60	6.73	11.5		13.0		14.4		16.8	25
SH 18 - 065			65	6.21	12.5		14.0		15.6		18.2	25
SH 18 - 070			70	5.77	13.4		15.1		16.8		19.6	25
SH 18 - 075			75	5.39	14.4		16.2		18.0		21.0	25
SH 18 - 080			80	5.05	15.4		17.3		19.2		22.4	20
SH 18 - 090			90	4.50	17.3		19.4		21.6		25.2	20
SH 18 - 100	100	4.04	19.2	21.6	24.0	28.0	20					
SH 20 - 025	20	10	25	20.00	4.8	96 (941)	5.4	108 (1.059)	6.0	120 (1.177)	7.0	50
SH 20 - 030			30	16.66	5.8		6.5		7.2		8.4	50
SH 20 - 035			35	14.28	6.7		7.5		8.4		9.8	25
SH 20 - 040			40	12.50	7.7		8.6		9.6		11.2	25
SH 20 - 045			45	11.11	8.6		9.7		10.8		12.6	25
SH 20 - 050			50	10.00	9.6		10.8		12.0		14.0	25
SH 20 - 055			55	9.09	10.6		11.8		13.2		15.4	25
SH 20 - 060			60	8.33	11.5		13.0		14.4		16.8	25
SH 20 - 065			65	7.69	12.5		14.0		15.6		18.2	25
SH 20 - 070			70	7.14	13.4		15.1		16.8		19.6	25
SH 20 - 075			75	6.67	14.4		16.2		18.0		21.0	25
SH 20 - 080			80	6.25	15.4		17.3		19.2		22.4	20
SH 20 - 090			90	5.55	17.3		19.4		21.6		25.2	20
SH 20 - 100			100	5.00	19.2		21.6		24.0		28.0	20
SH 20 - 125			125	4.00	24.0		27.0		30.0		35.0	10
SH 20 - 150	150	3.33	28.8	32.4	36.0	42.0	10					
SH 22 - 025	22	11	25	24.16	4.8	116 (1.138)	5.4	130 (1.275)	6.0	145 (1.422)	7.0	50
SH 22 - 030			30	20.13	5.8		6.5		7.2		8.4	25
SH 22 - 035			35	17.30	6.7		7.5		8.4		9.8	25
SH 22 - 040			40	15.10	7.7		8.6		9.6		11.2	25
SH 22 - 045			45	13.40	8.6		9.7		10.8		12.6	25
SH 22 - 050			50	12.08	9.6		10.8		12.0		14.0	25
SH 22 - 055			55	10.94	10.6		11.8		13.2		15.4	25
SH 22 - 060			60	10.06	11.5		13.0		14.4		16.8	25
SH 22 - 065			65	9.28	12.5		14.0		15.6		18.2	25
SH 22 - 070			70	8.63	13.4		15.1		16.8		19.6	20
SH 22 - 075			75	8.04	14.4		16.2		18.0		21.0	20
SH 22 - 080			80	7.55	15.4		17.3		19.2		22.4	20
SH 22 - 090			90	6.71	17.3		19.4		21.6		25.2	20
SH 22 - 100			100	6.04	19.2		21.6		24.0		28.0	20
SH 22 - 125			125	4.83	24.0		27.0		30.0		35.0	10
SH 22 - 150	150	4.02	28.8	32.4	36.0	42.0	10					



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 19.2% L ₀ 1.000.000 cycles		B 21.6% L ₀ 500.000 cycles		C 24% L ₀ 300.000 cycles		E do not use approx. Pcs
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)	
SH 25 - 025	25	12.5	25	31.20	4.8	150 (1,471)	169 (1,657)	187 (1,834)	7.0	50	
SH 25 - 030			30	25.97	5.8					25	
SH 25 - 035			35	22.38	6.7					25	
SH 25 - 040			40	19.47	7.7					25	
SH 25 - 045			45	17.40	8.6					25	
SH 25 - 050			50	15.58	9.6					25	
SH 25 - 055			55	14.20	10.6					25	
SH 25 - 060			60	12.98	11.5					25	
SH 25 - 065			65	12.00	12.5					25	
SH 25 - 070			70	11.13	13.4					20	
SH 25 - 075			75	10.40	14.4					20	
SH 25 - 080			80	9.73	15.4					20	
SH 25 - 090			90	8.65	17.3					20	
SH 25 - 100			100	7.79	19.2					20	
SH 25 - 125			125	6.23	24.0					10	
SH 25 - 150			150	5.20	28.8					10	
SH 25 - 175	175	4.46	33.6	10							
SH 27 - 025	27	13.5	25	36.40	4.8	175 (1,716)	197 (1,932)	219 (2,150)	7.0	20	
SH 27 - 030			30	30.41	5.8					20	
SH 27 - 035			35	26.20	6.7					20	
SH 27 - 040			40	22.81	7.7					20	
SH 27 - 045			45	20.30	8.6					20	
SH 27 - 050			50	18.25	9.6					20	
SH 27 - 055			55	16.50	10.6					20	
SH 27 - 060			60	15.20	11.5					20	
SH 27 - 065			65	14.00	12.5					20	
SH 27 - 070			70	13.03	13.4					20	
SH 27 - 075			75	12.10	14.4					20	
SH 27 - 080			80	11.40	15.4					10	
SH 27 - 090			90	10.13	17.3					10	
SH 27 - 100			100	9.12	19.2					10	
SH 27 - 125			125	7.30	24.0					10	
SH 27 - 150			150	6.08	28.8					10	
SH 27 - 175	175	5.21	33.6	5							
SH 30 - 025	30	15	25	45.00	4.8	216 (2,120)	243 (2,380)	270 (2,550)	7.0	20	
SH 30 - 030			30	37.50	5.8					20	
SH 30 - 035			35	32.26	6.7					20	
SH 30 - 040			40	28.12	7.7					20	
SH 30 - 045			45	25.00	8.6					20	
SH 30 - 050			50	22.50	9.6					20	
SH 30 - 055			55	20.40	10.6					20	
SH 30 - 060			60	18.75	11.5					20	
SH 30 - 065			65	17.30	12.5					20	
SH 30 - 070			70	16.07	13.4					20	
SH 30 - 075			75	15.00	14.4					20	
SH 30 - 080			80	14.06	15.4					10	
SH 30 - 090			90	12.50	17.3					10	
SH 30 - 100			100	11.25	19.2					10	
SH 30 - 125			125	9.00	24.0					10	
SH 30 - 150			150	7.50	28.8					10	
SH 30 - 175	175	6.42	33.6	5							
SH 30 - 200	200	5.62	38.4	5							

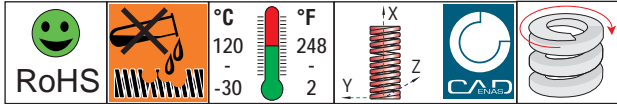
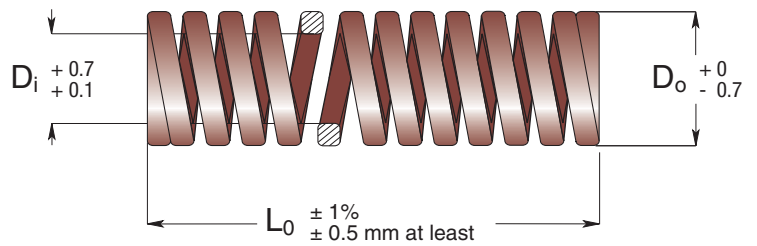
Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 19.2% L ₀ 1.000.000 cycles	B 21.6% L ₀ 500.000 cycles	C 24% L ₀ 300.000 cycles	E do not use approx.	Pcs	
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm		
SH 35 - 040	35	17.5	40	38.22	7.7	293 (2,870)	330 (3,240)	367 (3,600)	11.2	20
SH 35 - 045			45	33.98	8.6				12.6	20
SH 35 - 050			50	30.58	9.6				14.0	20
SH 35 - 055			55	27.80	10.5				15.4	10
SH 35 - 060			60	25.48	11.5				16.8	10
SH 35 - 065			65	23.53	12.5				18.2	10
SH 35 - 070			70	21.84	13.4				19.6	10
SH 35 - 075			75	20.39	14.4				21.0	10
SH 35 - 080			80	19.11	15.4				22.4	10
SH 35 - 090			90	16.99	17.3				25.2	10
SH 35 - 100			100	15.29	19.2				28.0	10
SH 35 - 125			125	12.23	24.0				35.0	5
SH 35 - 150			150	10.19	28.8				42.0	5
SH 35 - 175			175	8.73	33.6				49.0	5
SH 35 - 200			200	7.64	38.4				56.0	5
SH 40 - 040	40	20	40	50.00	7.7	384 (3,770)	432 (4,240)	480 (4,710)	11.2	20
SH 40 - 045			45	44.48	8.6				12.6	20
SH 40 - 050			50	40.00	9.6				14.0	20
SH 40 - 055			55	36.39	10.6				15.4	20
SH 40 - 060			60	33.33	11.5				16.8	10
SH 40 - 065			65	30.39	12.5				18.2	10
SH 40 - 070			70	28.57	13.4				19.6	10
SH 40 - 075			75	26.69	14.4				21.0	10
SH 40 - 080			80	25.00	15.4				22.4	10
SH 40 - 090			90	22.22	17.3				25.2	10
SH 40 - 100			100	20.00	19.2				28.0	10
SH 40 - 125			125	16.00	24.0				35.0	5
SH 40 - 150			150	13.33	28.8				42.0	5
SH 40 - 175			175	11.42	33.6				49.0	5
SH 40 - 200			200	10.00	38.4				56.0	5
SH 40 - 250	250	8.00	48.0	70.0	2					
SH 50 - 050	50	25	50	62.50	9.6	600 (5,880)	675 (6,620)	750 (7,360)	14.0	5
SH 50 - 055			55		10.6				13.2	
SH 50 - 060			60	52.08	11.5				14.4	5
SH 50 - 065			65		12.5				15.6	
SH 50 - 070			70	44.64	13.4				16.8	5
SH 50 - 075			75		14.4				18.0	
SH 50 - 080			80	39.06	15.4				19.2	5
SH 50 - 090			90	34.72	17.3				21.6	5
SH 50 - 100			100	31.25	19.2				24.0	5
SH 50 - 125			125	25.00	24.0				30.0	5
SH 50 - 150			150	20.83	28.8				35.0	5
SH 50 - 175			175	17.85	33.6				42.0	2
SH 50 - 200			200	15.62	38.4				49.0	2
SH 50 - 250			250	12.50	48.0				56.0	2
SH 50 - 300			300	10.41	57.6				70.0	2
SH 60 - 060	60	30	60	75.00	11.5	864 (8,470)	973 (9,540)	1,080 (10,590)	16.8	5
SH 60 - 070			70	64.28	13.4				19.6	5
SH 60 - 080			80	56.25	15.4				22.4	5
SH 60 - 090			90	50.00	17.3				25.2	5
SH 60 - 100			100	45.00	19.2				28.0	5
SH 60 - 125			125	36.00	24.0				35.0	2
SH 60 - 150			150	30.00	28.8				42.0	2
SH 60 - 175			175	25.71	33.6				49.0	2
SH 60 - 200			200	22.50	38.4				56.0	2
SH 60 - 250			250	18.00	48.0				70.0	2
SH 60 - 300	300	15.00	57.6	84.0	2					

SH
JIS



EN Super load springs

CN



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 16% L ₀ 1.000.000 cycles		B 18% L ₀ 500.000 cycles		C 24% L ₀ 300.000 cycles		E do not use approx.	Pcs
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)	mm	
SB 10 - 020	10	5	20	11.25	3.2		3.6		4.0		4.8	50
SB 10 - 025			25	9.00	4.0		4.5		5.0		6.0	50
SB 10 - 030			30	7.50	4.8		5.4		6.0		7.2	50
SB 10 - 035			35	6.43	5.6		6.3		7.0		8.4	50
SB 10 - 040			40	5.63	6.4		7.2		8.0		9.6	50
SB 10 - 045			45	5.00	7.2		8.1		9.0		10.8	50
SB 10 - 050			50	4.50	8.0	36 (353)	9.0	41 (402)	10.0	45 (441)	12.0	25
SB 10 - 055			55	4.09	8.8		9.9		11.0		13.2	25
SB 10 - 060			60	3.75	9.6		10.8		12.0		14.4	25
SB 10 - 065			65	3.47	10.4		11.7		13.0		15.6	25
SB 10 - 070			70	3.21	11.2		12.6		14.0		16.8	25
SB 10 - 075	75	3.00	12.0		13.5		15.0		18.0	25		
SB 10 - 080	80	2.82	12.8		14.4		16.0		19.2	25		
SB 12 - 020	12	6	20	14.50	3.2		3.6		4.0		4.8	50
SB 12 - 025			25	11.60	4.0		4.5		5.0		6.0	50
SB 12 - 030			30	9.67	4.8		5.4		6.0		7.2	50
SB 12 - 035			35	8.29	5.6		6.3		7.0		8.4	50
SB 12 - 040			40	7.25	6.4		7.2		8.0		9.6	50
SB 12 - 045			45	6.44	7.2		8.1		9.0		10.8	50
SB 12 - 050			50	5.80	8.0	46 (451)	9.0	52 (510)	10.0	58 (569)	12.0	25
SB 12 - 055			55	5.27	8.8		9.9		11.0		13.2	25
SB 12 - 060			60	4.83	9.6		10.8		12.0		14.4	25
SB 12 - 065			65	4.44	10.4		11.7		13.0		15.6	25
SB 12 - 070			70	4.13	11.2		12.6		14.0		16.8	25
SB 12 - 075	75	3.85	12.0		13.5		15.0		18.0	25		
SB 12 - 080	80	3.61	12.8		14.4		16.0		19.2	25		
SB 14 - 025	14	7	25	15.00	4.0		4.5		5.0		6.0	50
SB 14 - 030			30	12.50	4.8		5.4		6.0		7.2	50
SB 14 - 035			35	10.72	5.6		6.3		7.0		8.4	50
SB 14 - 040			40	9.38	6.4		7.2		8.0		9.6	50
SB 14 - 045			45	8.34	7.2		8.1		9.0		10.8	25
SB 14 - 050			50	7.50	8.0	60 (588)	9.0	68 (667)	10.0	75 (736)	12.0	25
SB 14 - 055			55	6.82	8.8		9.9		11.0		13.2	25
SB 14 - 060			60	6.25	9.6		10.8		12.0		14.4	25
SB 14 - 065			65	5.77	10.4		11.7		13.0		15.6	25
SB 14 - 070			70	5.36	11.2		12.6		14.0		16.8	25
SB 14 - 075			75	5.00	12.0		13.5		15.0		18.0	25
SB 14 - 080	80	4.69	12.8		14.4		16.0		19.2	20		
SB 14 - 090	90	4.17	14.4		16.2		18.0		21.6	20		
SB 16 - 025	16	8	25	20.00	4.0		4.5		5.0		6.0	50
SB 16 - 030			30	16.67	4.8		5.4		6.0		7.2	50
SB 16 - 035			35	14.29	5.6		6.3		7.0		8.4	50
SB 16 - 040			40	12.50	6.4	80 (785)	7.2	90 (883)	8.0	100 (981)	9.6	25
SB 16 - 045			45	11.11	7.2		8.1		9.0		10.8	25
SB 16 - 050			50	10.00	8.0		9.0		10.0		12.0	25
SB 16 - 055	55	9.09	8.8		9.9		11.0		13.2	25		



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 16% L ₀ 1.000.000 cycles	B 18% L ₀ 500.000 cycles	C 24% L ₀ 300.000 cycles	E do not use approx.						
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm	Pcs					
SB 16 - 060	16	8	60	8.34	9.6	80 (785)	10.8	12.0	14.4	25				
SB 16 - 065			65	7.69	10.4						11.7	13.0	15.6	25
SB 16 - 070			70	7.14	11.2						12.6	14.0	16.8	20
SB 16 - 075			75	6.67	12.0						13.5	15.0	18.0	20
SB 16 - 080			80	6.25	12.8						14.4	16.0	19.2	20
SB 16 - 090			90	5.56	14.4						16.2	18.0	21.6	20
SB 16 - 100			100	5.00	16.0						18.0	20.0	24.0	20
SB 18 - 025	18	9	25	25.00	4.0	100 (981)	4.5	5.0	6.0	50				
SB 18 - 030			30	20.84	4.8						5.4	6.0	7.2	50
SB 18 - 035			35	17.86	5.6						6.3	7.0	8.4	25
SB 18 - 040			40	15.63	6.4						7.2	8.0	9.6	25
SB 18 - 045			45	13.89	7.2						8.1	9.0	10.8	25
SB 18 - 050			50	12.50	8.0						9.0	10.0	12.0	25
SB 18 - 055			55	11.37	8.8						9.9	11.0	13.2	25
SB 18 - 060			60	10.42	9.6						10.8	12.0	14.4	25
SB 18 - 065			65	9.62	10.4						11.7	13.0	15.6	25
SB 18 - 070			70	8.93	11.2						12.6	14.0	16.8	25
SB 18 - 075			75	8.34	12.0						13.5	15.0	18.0	25
SB 18 - 080			80	7.82	12.8						14.4	16.0	19.2	20
SB 18 - 090			90	6.95	14.4						16.2	18.0	21.6	20
SB 18 - 100	100	6.26	16.0	18.0	20.0	24.0	20							
SB 20 - 025	20	10	25	32.00	4.0	128 (1,255)	4.5	5.0	6.0	50				
SB 20 - 030			30	26.67	4.8						5.4	6.0	7.2	50
SB 20 - 035			35	22.86	5.6						6.3	7.0	8.4	25
SB 20 - 040			40	20.00	6.4						7.2	8.0	9.6	25
SB 20 - 045			45	17.78	7.2						8.1	9.0	10.8	25
SB 20 - 050			50	16.00	8.0						9.0	10.0	12.0	25
SB 20 - 055			55	14.55	8.8						9.9	11.0	13.2	25
SB 20 - 060			60	13.33	9.6						10.8	12.0	14.4	25
SB 20 - 065			65	12.31	10.4						11.7	13.0	15.6	25
SB 20 - 070			70	11.43	11.2						12.6	14.0	16.8	25
SB 20 - 075			75	10.67	12.0						13.5	15.0	18.0	25
SB 20 - 080			80	10.00	12.8						14.4	16.0	19.2	20
SB 20 - 090			90	8.89	14.4						16.2	18.0	21.6	20
SB 20 - 100			100	8.00	16.0						18.0	20.0	24.0	20
SB 20 - 125			125	6.40	20.0						22.5	25.0	30.0	10
SB 20 - 150	150	5.33	24.0	27.0	30.0	36.0	10							
SB 22 - 025	22	11	25	39.00	4.0	156 (1,530)	4.5	5.0	6.0	50				
SB 22 - 030			30	32.50	4.8						5.4	6.0	7.2	25
SB 22 - 035			35	27.86	5.6						6.3	7.0	8.4	25
SB 22 - 040			40	24.38	6.4						7.2	8.0	9.6	25
SB 22 - 045			45	21.67	7.2						8.1	9.0	10.8	25
SB 22 - 050			50	19.50	8.0						9.0	10.0	12.0	25
SB 22 - 055			55	17.73	8.8						9.9	11.0	13.2	25
SB 22 - 060			60	16.25	9.6						10.8	12.0	14.4	25
SB 22 - 065			65	15.00	10.4						11.7	13.0	15.6	25
SB 22 - 070			70	13.93	11.2						12.6	14.0	16.8	20
SB 22 - 075			75	13.00	12.0						13.5	15.0	18.0	20
SB 22 - 080			80	12.19	12.8						14.4	16.0	19.2	20
SB 22 - 090			90	10.83	14.4						16.2	18.0	21.6	20
SB 22 - 100			100	9.75	16.0						18.0	20.0	24.0	20
SB 22 - 125			125	7.80	20.0						22.5	25.0	30.0	10
SB 22 - 150			150	6.50	24.0						27.0	30.0	36.0	10



Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 16% L ₀ 1.000.000 cycles		B 18% L ₀ 500.000 cycles		C 24% L ₀ 300.000 cycles		E approx. do not use	Pcs
					mm	Kgf (N)	mm	Kgf (N)	mm	Kgf (N)		
SB 25 - 025	25	12.5	25	49.00	4.0	196 (1,922)	221 (2,170)	245 (2,400)	6.0	50		
SB 25 - 030			30	40.80	4.8							
SB 25 - 035			35	35.00	5.6							
SB 25 - 040			40	30.60	6.4							
SB 25 - 045			45	27.20	7.2							
SB 25 - 050			50	24.50	8.0							
SB 25 - 055			55	22.30	8.8							
SB 25 - 060			60	20.40	9.6							
SB 25 - 065			65	18.80	10.4							
SB 25 - 070			70	17.50	11.2							
SB 25 - 075			75	16.30	12.0							
SB 25 - 080			80	15.30	12.8							
SB 25 - 090			90	13.60	14.4							
SB 25 - 100			100	12.30	16.0							
SB 25 - 125			125	9.80	20.0							
SB 25 - 150	150	8.17	24.0									
SB 25 - 175	175	7.00	28.0									
SB 27 - 025	27	13.5	25	58.00	4.0	232 (2,280)	261 (2,560)	290 (2,840)	6.0	20		
SB 27 - 030			30	48.33	4.8							
SB 27 - 035			35	41.43	5.6							
SB 27 - 040			40	36.25	6.4							
SB 27 - 045			45	32.22	7.2							
SB 27 - 050			50	29.00	8.0							
SB 27 - 055			55	26.36	8.8							
SB 27 - 060			60	24.17	9.6							
SB 27 - 065			65	22.31	10.4							
SB 27 - 070			70	20.71	11.2							
SB 27 - 075			75	19.33	12.0							
SB 27 - 080			80	18.13	12.8							
SB 27 - 090			90	16.11	14.4							
SB 27 - 100			100	14.50	16.0							
SB 27 - 125			125	11.60	20.0							
SB 27 - 150	150	9.67	24.0									
SB 27 - 175	175	8.28	28.0									
SB 30 - 025	30	15	25	72.00	4.0	288 (2,820)	324 (3,180)	360 (3,530)	6.0	20		
SB 30 - 030			30	60.00	4.8							
SB 30 - 035			35	51.43	5.6							
SB 30 - 040			40	45.00	6.4							
SB 30 - 045			45	40.00	7.2							
SB 30 - 050			50	36.00	8.0							
SB 30 - 055			55	32.72	8.8							
SB 30 - 060			60	30.00	9.6							
SB 30 - 065			65	27.69	10.4							
SB 30 - 070			70	25.71	11.2							
SB 30 - 075			75	24.00	12.0							
SB 30 - 080			80	22.50	12.8							
SB 30 - 090			90	20.00	14.4							
SB 30 - 100			100	18.00	16.0							
SB 30 - 125			125	14.40	20.0							
SB 30 - 150	150	12.00	24.0									
SB 30 - 175	175	10.28	28.0									
SB 30 - 200	200	9.00	32.0									
SB 35 - 040	35	17.5	40	61.25	6.4	392 (3,840)	441 (4,320)	490 (4,810)	9.6	20		
SB 35 - 045			45	54.44	7.2							
SB 35 - 050			50	49.00	8.0							
SB 35 - 055			55	44.54	8.8							
SB 35 - 060			60	40.83	9.6							
SB 35 - 065			65	37.69	10.4							
SB 35 - 070			70	35.00	11.2							
SB 35 - 075			75	32.67	12.0							
SB 35 - 080			80	30.62	12.8							
SB 35 - 090			90	27.22	14.4							
SB 35 - 100			100	24.50	16.0							
SB 35 - 125			125	19.60	20.0							
SB 35 - 150			150	16.33	24.0							
SB 35 - 175			175	14.00	28.0							
SB 35 - 200			200	12.25	32.0							

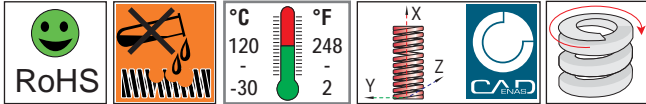
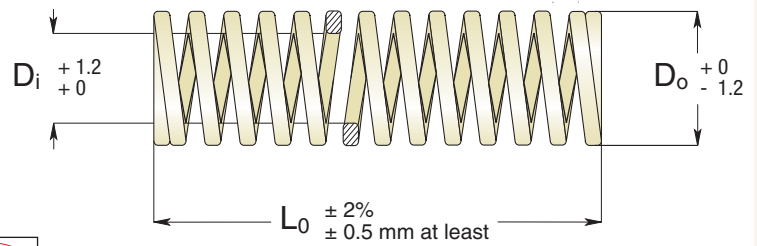
Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数 ± 10%	A 16% L ₀ 1.000.000 cycles	B 18% L ₀ 500.000 cycles	C 24% L ₀ 300.000 cycles	E do not use approx.			
	mm	mm	mm	Kgf/mm	mm Kgf (N)	mm Kgf (N)	mm Kgf (N)	mm	Pcs		
SB 40 - 040	40	20	40	80.00	6.4		7.2	8.0	9.6	20	
SB 40 - 045					45	71.13	7.2	8.1	9.0	10.8	20
SB 40 - 050					50	64.00	8.0	9.0	10.0	12.0	20
SB 40 - 055					55	58.20	8.8	9.9	11.0	13.2	20
SB 40 - 060					60	53.33	9.6	10.8	12.0	14.4	10
SB 40 - 065					65	49.24	10.4	11.7	13.0	15.6	10
SB 40 - 070					70	45.71	11.2	12.6	14.0	16.8	10
SB 40 - 075					75	42.68	12.0	13.5	15.0	18.0	10
SB 40 - 080					80	40.00	12.8	14.4	16.0	19.2	10
SB 40 - 090					90	35.55	14.4	16.2	18.0	21.6	10
SB 40 - 100					100	32.00	16.0	18.0	20.0	24.0	10
SB 40 - 125					125	25.60	20.0	22.5	25.0	30.0	5
SB 40 - 150					150	21.33	24.0	27.0	30.0	36.0	5
SB 40 - 175					175	18.28	28.0	31.5	35.0	42.0	5
SB 40 - 200					200	16.00	32.0	36.0	40.0	48.0	5
SB 40 - 250					250	12.80	40.0	45.0	50.0	60.0	2
SB 50 - 050	50	25	50	100.00	8.0		9.0	10.0	12.0	5	
SB 50 - 055					55	90.95	8.8	9.9	11.0	13.2	5
SB 50 - 060					60	83.33	9.6	10.8	12.0	14.4	5
SB 50 - 065					65	76.96	10.4	11.7	13.0	15.6	5
SB 50 - 070					70	71.42	11.2	12.6	14.0	16.8	5
SB 50 - 075					75	66.70	12.0	13.5	15.0	18.0	5
SB 50 - 080					80	62.50	12.8	14.4	16.0	19.2	5
SB 50 - 090					90	55.55	14.4	16.2	18.0	21.6	5
SB 50 - 100					100	50.00	16.0	18.0	20.0	24.0	5
SB 50 - 125					125	40.00	20.0	22.5	25.0	30.0	5
SB 50 - 150					150	33.33	24.0	27.0	30.0	36.0	2
SB 50 - 175					175	28.57	28.0	31.5	35.0	42.0	2
SB 50 - 200					200	25.00	32.0	36.0	40.0	48.0	2
SB 50 - 250			250	20.00	40.0	45.0	50.0	60.0	2		
SB 50 - 300			300	16.66	48.0	54.0	60.0	72.0	2		
SB 60 - 060	60	30	60	120.00	9.6		10.8	12.0	14.4	5	
SB 60 - 070					70	102.86	11.2	12.6	14.0	16.8	5
SB 60 - 080					80	90.00	12.8	14.4	16.0	19.2	5
SB 60 - 090					90	80.00	14.4	16.2	18.0	21.6	5
SB 60 - 100					100	72.00	16.0	18.0	20.0	24.0	5
SB 60 - 125					125	57.60	20.0	22.5	25.0	30.0	2
SB 60 - 150					150	48.00	24.0	27.0	30.0	36.0	2
SB 60 - 175					175	41.14	28.0	31.5	35.0	42.0	2
SB 60 - 200					200	36.00	32.0	36.0	40.0	48.0	2
SB 60 - 250					250	28.80	40.0	45.0	50.0	60.0	2
SB 60 - 300					300	24.00	48.0	54.0	60.0	72.0	2



塑胶模具弹簧 Plastic mould coil springs

SERIES 系列 SR

EN High deflection springs for mould return pin
CN 大压缩量塑胶模具回针弹簧



Code 型号	D_o Outside Diameter 外径 mm	D_i Inside Diameter 内径 mm	L_0 Free Length 自由长度 mm	R Spring Constant 弹簧定数 mm	A 50% L_0 1.000.000 cycles mm	Solid Length 结实长度 mm
SR 14 - 020	14.5	8.5	20	1.30	10.0	8
SR 14 - 025			25	1.04	12.5	10
SR 14 - 030			30	0.87	15.0	12
SR 14 - 035			35	0.74	17.5	14
SR 14 - 040			40	0.65	20.0	16
SR 14 - 045			45	0.58	22.5	18
SR 14 - 050			50	0.52	25.0	20
SR 14 - 055			55	0.47	27.5	22
SR 14 - 060			60	0.43	30.0	24
SR 14 - 065			65	0.40	32.5	26
SR 14 - 070			70	0.37	35.0	28
SR 14 - 075			75	0.35	37.5	30
SR 14 - 080			80	0.33	40.0	32
SR 14 - 090			90	0.29	45.0	36
SR 14 - 100	100	0.26	50.0	40		
SR 14 - 125	125	0.21	62.5	50		
SR 17 - 025	17	10.5	25	1.60	12.5	10
SR 17 - 030			30	1.33	15.0	12
SR 17 - 035			35	1.14	17.5	14
SR 17 - 040			40	1.00	20.0	16
SR 17 - 045			45	0.89	22.5	18
SR 17 - 050			50	0.80	25.0	20
SR 17 - 055			55	0.73	27.5	22
SR 17 - 060			60	0.67	30.0	24
SR 17 - 065			65	0.62	32.5	26
SR 17 - 070			70	0.57	35.0	28
SR 17 - 075			75	0.53	37.5	30
SR 17 - 080			80	0.50	40.0	32
SR 17 - 090			90	0.44	45.0	36
SR 17 - 100			100	0.40	50.0	40
SR 17 - 125	125	0.32	62.5	50		
SR 17 - 150	150	0.27	75.0	60		
SR 21 - 030	21	13.5	30	2.00	15.0	12
SR 21 - 035			35	1.71	17.5	14
SR 21 - 040			40	1.50	20.0	16
SR 21 - 045			45	1.33	22.5	18
SR 21 - 050			50	1.20	25.0	20
SR 21 - 055			55	1.09	27.5	22
SR 21 - 060			60	1.00	30.0	24
SR 21 - 065			65	0.92	32.5	26
SR 21 - 070			70	0.86	35.0	28
SR 21 - 075			75	0.80	37.5	30
SR 21 - 080			80	0.75	40.0	32
SR 21 - 090			90	0.67	45.0	36
SR 21 - 100			100	0.60	50.0	40
SR 21 - 110			110	0.55	55.0	44
SR 21 - 120			120	0.50	60.0	48
SR 21 - 125			125	0.48	62.5	50
SR 21 - 130	130	0.46	65.0	52		
SR 21 - 140	140	0.43	70.0	56		
SR 21 - 150	150	0.40	75.0	60		

Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数	A 50% L ₀ 1.000.000 cycles	Solid Length 结实长度
	mm	mm	mm	mm	mm	mm
SR 26 - 030	26	16.5	30	2.67	15.0	12
SR 26 - 035			35	2.29	17.5	14
SR 26 - 040			40	2.00	20.0	16
SR 26 - 045			45	1.78	22.5	18
SR 26 - 050			50	1.60	25.0	20
SR 26 - 055			55	1.45	27.5	22
SR 26 - 060			60	1.33	30.0	24
SR 26 - 065			65	1.23	32.5	26
SR 26 - 070			70	1.14	35.0	28
SR 26 - 075			75	1.07	37.5	30
SR 26 - 080			80	1.00	40.0	32
SR 26 - 090			90	0.89	45.0	36
SR 26 - 100			100	0.80	50.0	40
SR 26 - 110			110	0.73	55.0	44
SR 26 - 120			120	0.67	60.0	48
SR 26 - 125			125	0.64	62.5	50
SR 26 - 130			130	0.62	65.0	52
SR 26 - 140			140	0.57	70.0	56
SR 26 - 150			150	0.53	75.0	60
SR 26 - 175			175	0.46	87.5	70
SR 26 - 200	200	0.40	100.0	80		
SR 31 - 040	31	21	40	2.50	2.50	16
SR 31 - 045			45	2.22	2.22	18
SR 31 - 050			50	2.00	2.00	20
SR 31 - 060			60	1.67	1.67	24
SR 31 - 070			70	1.43	1.43	28
SR 31 - 080			80	1.25	1.25	32
SR 31 - 090			90	1.11	1.11	36
SR 31 - 100			100	1.00	1.00	40
SR 31 - 110			110	0.91	0.91	44
SR 31 - 120			120	0.83	0.83	48
SR 31 - 125			125	0.80	0.80	50
SR 31 - 130			130	0.77	0.77	52
SR 31 - 140			140	0.71	0.71	56
SR 31 - 150			150	0.67	0.67	60
SR 31 - 160			160	0.63	0.63	64
SR 31 - 170			170	0.59	0.59	68
SR 31 - 175			175	0.57	0.57	70
SR 31 - 180			180	0.56	0.56	72
SR 31 - 190			190	0.53	0.53	76
SR 31 - 200			200	0.50	0.50	80
SR 31 - 250	250	0.40	0.40	100		
SR 31 - 300	300	0.33	0.33	120		

塑胶模具弹簧 Plastic mould coil springs

SERIES 系列 SR

Code 型号	D _o Outside Diameter 外径	D _i Inside Diameter 内径	L ₀ Free Length 自由长度	R Spring Constant 弹簧定数	A 50% L ₀ 1.000.000 cycles	Solid Length 结实长度
	mm	mm	mm	mm	mm	mm
SR 46 - 050	46	33	50	4.40	25.0	20
SR 46 - 060			60	3.67	30.0	24
SR 46 - 070			70	3.14	35.0	28
SR 46 - 080			80	2.75	40.0	32
SR 46 - 090			90	2.44	45.0	36
SR 46 - 100			100	2.20	50.0	40
SR 46 - 110			110	2.00	55.0	44
SR 46 - 120			120	1.83	60.0	48
SR 46 - 125			125	1.76	62.5	50
SR 46 - 130			130	1.69	65.0	52
SR 46 - 140			140	1.57	70.0	56
SR 46 - 150			150	1.47	75.0	60
SR 46 - 175			175	1.26	87.5	70
SR 46 - 200			200	1.10	100.0	80
SR 46 - 225			225	0.98	112.5	90
SR 46 - 250			250	0.88	125.0	100
SR 46 - 275			275	0.80	137.5	110
SR 46 - 300			300	0.73	150.0	120
SR 37 - 040	37	26	40	3.00	3.00	16
SR 37 - 045			45	2.67	2.67	18
SR 37 - 050			50	2.40	2.40	20
SR 37 - 060			60	2.00	2.00	24
SR 37 - 070			70	1.71	1.71	28
SR 37 - 080			80	1.50	1.50	32
SR 37 - 090			90	1.33	1.33	36
SR 37 - 100			100	1.20	1.20	40
SR 37 - 110			110	1.09	1.09	44
SR 37 - 120			120	1.00	1.00	48
SR 37 - 125			125	0.96	0.96	50
SR 37 - 130			130	0.92	0.92	52
SR 37 - 140			140	0.86	0.86	56
SR 37 - 150			150	0.80	0.80	60
SR 37 - 160			160	0.75	0.75	64
SR 37 - 170			170	0.71	0.71	68
SR 37 - 175			175	0.69	0.69	70
SR 37 - 180			180	0.67	0.67	72
SR 37 - 190			190	0.63	0.63	76
SR 37 - 200			200	0.60	0.60	80
SR 37 - 250	250	0.48	0.48	100		
SR 37 - 300	300	0.40	0.40	120		

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Catalog code

9800A05320012

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