

كانون ابزار

تلفن:

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Wire Die Springs

to ISO 10243

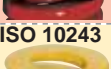
to JIS Standard B5012






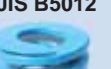

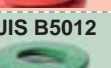
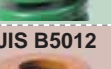
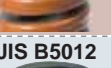

公制 ISO 10243 标准模具弹簧

日本 JIS B5012 标准模具弹簧



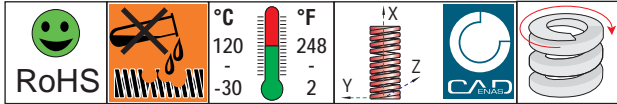
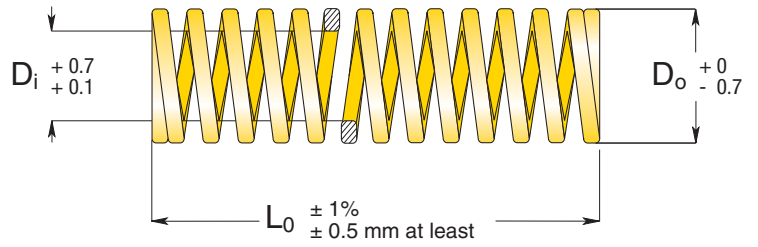
范围总结 range summary

| 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 |


L₀ = Free length 自由长度

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 | 8 | 20.2 | 22.5 | 26.1 | 50 | | |
| SF 10 - 050 | | | 50 | 0.40 | 20.0 | (78.5) | 22.5 | 25.0 | 29.0 | 25 | | |
| SF 10 - 055 | | | 55 | 0.36 | 22.0 | | 24.7 | 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 | 11 | 20.2 | 22.5 | 26.1 | 50 | | |
| SF 12 - 050 | | | 50 | 0.56 | 20.0 | (107.9) | 22.5 | 25.0 | 29.0 | 25 | | |
| SF 12 - 055 | | | 55 | 0.51 | 22.0 | | 24.7 | 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 | 14.5 | 22.5 | 25.0 | 29.0 | 25 | | |
| SF 14 - 055 | | | 55 | 0.65 | 22.0 | (142.2) | 24.7 | 27.5 | 31.9 | 25 | | |
| SF 14 - 060 | | | 60 | 0.60 | 24.0 | | 27.0 | 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 | 17 | 24.7 | 27.5 | 31.9 | 25 | | |
| SF 16 - 060 | | | 60 | 0.70 | 24.0 | (166.7) | 27.0 | 30.0 | 34.8 | 25 | | |
| SF 16 - 065 | | | 65 | 0.65 | 26.0 | | 29.2 | 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 | 29.2 | 54 | 32.5 | 60 | 37.7 | 20 |
| SF 27 - 070 | | | 70 | 1.71 | 28.0 | (471) | 31.5 | (530) | 35.0 | (588) | 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 | 29.2 | 65 | 32.5 | 72 | 37.7 | 20 |
| SF 30 - 070 | | | 70 | 2.05 | 28.0 | (569) | 31.5 | (637) | 35.0 | (706) | 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 | 33.75 | 88.2 | 37.5 | 98 | 43.5 | 10 |
| SFR 35 - 080 | | | 80 | 2.45 | 32.0 | (768.3) | 36.0 | (864.4) | 40.0 | (961) | 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 | 33.8 | 115 | 37.5 | 128 | 43.5 | 10 |
| SF 40 - 080 | 80 | 3.20 | | | 32.0 | (1,000) | 36.0 | (1,128) | 40.0 | (1,255) | 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 |

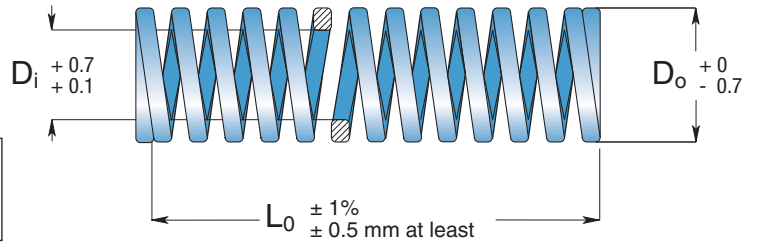
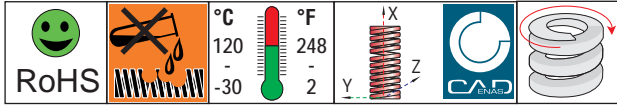


| Code 型号 | D _o Outside Diameter 外径 | D _i Inside Diameter 内径 | L ₀ Free Length 自由长度 | R Spring Constant 弹簧定数 ± 10% | A 40% L ₀ 1.000.000 cycles | B 45% L ₀ 500.000 cycles | C 50% L ₀ 300.000 cycles | E do not use approx. | Pcs | | |
|--------------|--|---|---------------------------------------|---------------------------------------|---|---|---|----------------------------|------|--------------------|----|
| | 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 | 148.8 (1,458.2) | 56.25 | 167.4 (1,640.5) | 62.5 | 186 (1,822.8) | 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 | | 7.2 | | 8.0 | | 9.6 | 50 |
| SL 10 - 025 | | | 25 | 1.45 | 8.0 | | 9.0 | | 10.0 | | 12.0 | 50 |
| SL 10 - 030 | | | 30 | 1.21 | 9.6 | | 10.8 | | 12.0 | | 14.4 | 50 |
| SL 10 - 035 | | | 35 | 1.03 | 11.2 | | 12.6 | | 14.0 | | 16.8 | 50 |
| SL 10 - 040 | | | 40 | 0.90 | 12.8 | | 14.4 | | 16.0 | | 19.2 | 50 |
| SL 10 - 045 | | | 45 | 0.80 | 14.4 | | 16.2 | | 18.0 | | 21.6 | 50 |
| SL 10 - 050 | | | 50 | 0.73 | 16.0 | 11.5 (112.8) | 18.0 | 13 (127.5) | 20.0 | 14.5 (142.2) | 24.0 | 25 |
| SL 10 - 055 | | | 55 | 0.66 | 17.6 | | 19.8 | | 22.0 | | 26.4 | 25 |
| SL 10 - 060 | | | 60 | 0.60 | 19.2 | | 21.6 | | 24.0 | | 28.8 | 25 |
| SL 10 - 065 | | | 65 | 0.55 | 20.8 | | 23.4 | | 26.0 | | 31.2 | 25 |
| SL 10 - 070 | 70 | 0.51 | 22.4 | | 25.2 | | 28.0 | | 33.6 | 25 | | |
| SL 10 - 075 | 75 | 0.48 | 24.0 | | 27.0 | | 30.0 | | 36.0 | 25 | | |
| SL 10 - 080 | 80 | 0.45 | 25.6 | | 28.8 | | 32.0 | | 38.4 | 25 | | |
| SL 12 - 020 | 12 | 6 | 20 | 2.63 | 6.4 | | 7.2 | | 8.0 | | 9.6 | 50 |
| SL 12 - 025 | | | 25 | 2.10 | 8.0 | | 9.0 | | 10.0 | | 12.0 | 50 |
| SL 12 - 030 | | | 30 | 1.75 | 9.6 | | 10.8 | | 12.0 | | 14.4 | 50 |
| SL 12 - 035 | | | 35 | 1.50 | 11.2 | | 12.6 | | 14.0 | | 16.8 | 50 |
| SL 12 - 040 | | | 40 | 1.32 | 12.8 | | 14.4 | | 16.0 | | 19.2 | 50 |
| SL 12 - 045 | | | 45 | 1.17 | 14.4 | | 16.2 | | 18.0 | | 21.6 | 50 |
| SL 12 - 050 | | | 50 | 1.05 | 16.0 | 17 (166.7) | 18.0 | 19 (186.3) | 20.0 | 21 (206) | 24.0 | 25 |
| SL 12 - 055 | | | 55 | 0.96 | 17.6 | | 19.8 | | 22.0 | | 26.4 | 25 |
| SL 12 - 060 | | | 60 | 0.88 | 19.2 | | 21.6 | | 24.0 | | 28.8 | 25 |
| SL 12 - 065 | | | 65 | 0.81 | 20.8 | | 23.4 | | 26.0 | | 31.2 | 25 |
| SL 12 - 070 | 70 | 0.75 | 22.4 | | 25.2 | | 28.0 | | 33.6 | 25 | | |
| SL 12 - 075 | 75 | 0.70 | 24.0 | | 27.0 | | 30.0 | | 36.0 | 25 | | |
| SL 12 - 080 | 80 | 0.66 | 25.6 | | 28.8 | | 32.0 | | 38.4 | 25 | | |
| SL 14 - 025 | 14 | 7 | 25 | 2.80 | 8.0 | | 9.0 | | 10.0 | | 12.0 | 50 |
| SL 14 - 030 | | | 30 | 2.34 | 9.6 | | 10.8 | | 12.0 | | 14.4 | 50 |
| SL 14 - 035 | | | 35 | 2.00 | 11.2 | | 12.6 | | 14.0 | | 16.8 | 50 |
| SL 14 - 040 | | | 40 | 1.75 | 12.8 | | 14.4 | | 16.0 | | 19.2 | 50 |
| SL 14 - 045 | | | 45 | 1.56 | 14.4 | | 16.2 | | 18.0 | | 21.6 | 25 |
| SL 14 - 050 | | | 50 | 1.40 | 16.0 | | 18.0 | | 20.0 | | 24.0 | 25 |
| SL 14 - 055 | | | 55 | 1.27 | 17.6 | 22 (216) | 19.8 | 25 (245) | 22.0 | 28 (275) | 26.4 | 25 |
| SL 14 - 060 | | | 60 | 1.17 | 19.2 | | 21.6 | | 24.0 | | 28.8 | 25 |
| SL 14 - 065 | | | 65 | 1.08 | 20.8 | | 23.4 | | 26.0 | | 31.2 | 25 |
| SL 14 - 070 | | | 70 | 1.00 | 22.4 | | 25.2 | | 28.0 | | 33.6 | 25 |
| SL 14 - 075 | 75 | 0.93 | 24.0 | | 27.0 | | 30.0 | | 36.0 | 25 | | |
| SL 14 - 080 | 80 | 0.87 | 25.6 | | 28.8 | | 32.0 | | 38.4 | 20 | | |
| SL 14 - 090 | 90 | 0.77 | 28.8 | | 32.4 | | 36.0 | | 43.2 | 20 | | |
| SL 16 - 025 | 16 | 8 | 25 | 3.50 | 8.0 | | 9.0 | | 10.0 | | 12.0 | 50 |
| SL 16 - 030 | | | 30 | 2.92 | 9.6 | | 10.8 | | 12.0 | | 14.4 | 50 |
| SL 16 - 035 | | | 35 | 2.50 | 11.2 | | 12.6 | | 14.0 | | 16.8 | 50 |
| SL 16 - 040 | | | 40 | 2.19 | 12.8 | | 14.4 | | 16.0 | | 19.2 | 25 |
| SL 16 - 045 | | | 45 | 1.95 | 14.4 | | 16.2 | | 18.0 | | 21.6 | 25 |
| SL 16 - 050 | | | 50 | 1.75 | 16.0 | | 18.0 | | 20.0 | | 24.0 | 25 |
| SL 16 - 055 | | | 55 | 1.60 | 17.6 | 28 (275) | 19.8 | 32 (314) | 22.0 | 35 (343) | 26.4 | 25 |
| SL 16 - 060 | | | 60 | 1.46 | 19.2 | | 21.6 | | 24.0 | | 28.8 | 25 |
| SL 16 - 065 | | | 65 | 1.35 | 20.8 | | 23.4 | | 26.0 | | 31.2 | 25 |
| SL 16 - 070 | | | 70 | 1.25 | 22.4 | | 25.2 | | 28.0 | | 33.6 | 20 |
| SL 16 - 075 | 75 | 1.17 | 24.0 | | 27.0 | | 30.0 | | 36.0 | 20 | | |
| SL 16 - 080 | 80 | 1.10 | 25.6 | | 28.8 | | 32.0 | | 38.4 | 20 | | |
| SL 16 - 090 | 90 | 0.98 | 28.8 | | 32.4 | | 36.0 | | 43.2 | 20 | | |
| SL 16 - 100 | 100 | 0.88 | 32.0 | | 36.0 | | 40.0 | | 48.0 | 20 | | |
| SL 18 - 025 | 18 | 9 | 25 | 4.30 | 8.0 | | 9.0 | | 10.0 | | 12.0 | 50 |
| SL 18 - 030 | | | 30 | 3.58 | 9.6 | | 10.8 | | 12.0 | | 14.4 | 50 |
| SL 18 - 035 | | | 35 | 3.07 | 11.2 | | 12.6 | | 14.0 | | 16.8 | 25 |
| SL 18 - 040 | | | 40 | 2.69 | 12.8 | 34 (333) | 14.4 | 39 (382) | 16.0 | 43 (422) | 19.2 | 25 |
| SL 18 - 045 | | | 45 | 2.39 | 14.4 | | 16.2 | | 18.0 | | 21.6 | 25 |
| SL 18 - 050 | | | 50 | 2.15 | 16.0 | | 18.0 | | 20.0 | | 24.0 | 25 |
| SL 18 - 055 | 55 | 1.96 | 17.6 | | 19.8 | | 22.0 | | 26.4 | 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 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 | 91.2 (893.8) | 25.2 (1,005.5) | 28.0 (1,117.2) | 114 | 12.0 | 20 | | | |
| SLR 30 - 030 | | | 30 | 10.08 | 9.6 | | | | | 9.0 | 10.8 | 12.0 | 14.4 | 20 |
| SLR 30 - 035 | | | 35 | 8.65 | 11.2 | | | | | 12.6 | 14.4 | 16.0 | 16.8 | 20 |
| SLR 30 - 040 | | | 40 | 7.56 | 12.8 | | | | | 14.4 | 16.2 | 18.0 | 19.2 | 20 |
| SLR 30 - 045 | | | 45 | 6.73 | 14.4 | | | | | 16.2 | 18.0 | 20.0 | 21.6 | 20 |
| SLR 30 - 050 | | | 50 | 6.05 | 16.0 | | | | | 18.0 | 19.8 | 22.0 | 24.0 | 20 |
| SLR 30 - 055 | | | 55 | 5.50 | 17.6 | | | | | 19.8 | 21.6 | 24.0 | 26.4 | 20 |
| SLR 30 - 060 | | | 60 | 5.04 | 19.2 | | | | | 21.6 | 23.4 | 26.0 | 28.8 | 20 |
| SLR 30 - 065 | | | 65 | 4.65 | 20.8 | | | | | 23.4 | 25.2 | 28.0 | 31.2 | 20 |
| SLR 30 - 070 | | | 70 | 4.32 | 22.4 | | | | | 25.2 | 27.0 | 30.0 | 33.6 | 20 |
| SLR 30 - 075 | | | 75 | 4.03 | 24.0 | | | | | 27.0 | 28.8 | 32.0 | 36.0 | 20 |
| SLR 30 - 080 | | | 80 | 3.78 | 25.6 | | | | | 28.8 | 32.4 | 36.0 | 38.4 | 10 |
| SLR 30 - 090 | | | 90 | 3.36 | 28.8 | | | | | 32.4 | 36.0 | 40.0 | 43.2 | 10 |
| SLR 30 - 100 | | | 100 | 3.02 | 32.0 | | | | | 36.0 | 45.0 | 50.0 | 48.0 | 10 |
| SLR 30 - 125 | | | 125 | 2.42 | 40.0 | | | | | 45.0 | 54.0 | 60.0 | 60.0 | 10 |
| SLR 30 - 150 | | | 150 | 2.01 | 48.0 | | | | | 54.0 | 63.0 | 70.0 | 72.0 | 10 |
| SLR 30 - 175 | 175 | 1.72 | 56.0 | 63.0 | 70.0 | 84.0 | 84.0 | 5 | | | | | | |
| SLR 30 - 200 | 200 | 1.51 | 64.0 | 72.0 | 80.0 | 96.0 | 96.0 | 5 | | | | | | |
| SL 35 - 040 | 35 | 17.5 | 40 | 10.31 | 12.8 | 132 (1,295) | 27.0 (1,461) | 30.0 (1,618) | 165 | 19.2 | 20 | | | |
| SL 35 - 045 | | | 45 | 9.17 | 14.4 | | | | | 14.4 | 16.2 | 18.0 | 21.6 | 20 |
| SL 35 - 050 | | | 50 | 8.25 | 16.0 | | | | | 16.0 | 18.0 | 20.0 | 24.0 | 20 |
| SL 35 - 055 | | | 55 | 7.50 | 17.6 | | | | | 17.6 | 19.8 | 22.0 | 26.4 | 10 |
| SL 35 - 060 | | | 60 | 6.87 | 19.2 | | | | | 19.2 | 21.6 | 24.0 | 28.8 | 10 |
| SL 35 - 065 | | | 65 | 6.35 | 20.8 | | | | | 20.8 | 23.4 | 26.0 | 31.2 | 10 |
| SL 35 - 070 | | | 70 | 5.89 | 22.4 | | | | | 22.4 | 25.2 | 28.0 | 33.6 | 10 |
| SL 35 - 075 | | | 75 | 5.50 | 24.0 | | | | | 24.0 | 27.0 | 30.0 | 36.0 | 10 |
| SL 35 - 080 | | | 80 | 5.15 | 25.6 | | | | | 25.6 | 28.8 | 32.0 | 38.4 | 10 |
| SL 35 - 090 | | | 90 | 4.58 | 28.8 | | | | | 28.8 | 32.4 | 36.0 | 43.2 | 10 |
| SL 35 - 100 | | | 100 | 4.12 | 32.0 | | | | | 32.0 | 36.0 | 40.0 | 48.0 | 10 |
| SL 35 - 125 | | | 125 | 3.30 | 40.0 | | | | | 40.0 | 45.0 | 50.0 | 60.0 | 5 |
| SL 35 - 150 | | | 150 | 2.75 | 48.0 | | | | | 48.0 | 54.0 | 60.0 | 72.0 | 5 |
| SL 35 - 175 | | | 175 | 2.35 | 56.0 | | | | | 56.0 | 63.0 | 70.0 | 84.0 | 5 |
| SL 35 - 200 | 200 | 2.06 | 64.0 | 64.0 | 72.0 | 80.0 | 96.0 | 5 | | | | | | |
| SLR 35 - 040 | 35 | 20.5 | 40 | 9.15 | 12.8 | 114.6 (1,123.1) | 27.0 (1,263.2) | 30.0 (1,403.4) | 143.2 | 19.2 | 20 | | | |
| SLR 35 - 045 | | | 45 | 8.42 | 14.4 | | | | | 14.4 | 16.2 | 18.0 | 21.6 | 20 |
| SLR 35 - 050 | | | 50 | 7.85 | 16.0 | | | | | 16.0 | 18.0 | 20.0 | 24.0 | 20 |
| SLR 35 - 055 | | | 55 | 7.42 | 17.6 | | | | | 17.6 | 19.8 | 22.0 | 26.4 | 10 |
| SLR 35 - 060 | | | 60 | 6.70 | 19.2 | | | | | 19.2 | 21.6 | 24.0 | 28.8 | 10 |
| SLR 35 - 065 | | | 65 | 6.25 | 20.8 | | | | | 20.8 | 23.4 | 26.0 | 31.2 | 10 |
| SLR 35 - 070 | | | 70 | 5.45 | 22.4 | | | | | 22.4 | 25.2 | 28.0 | 33.6 | 10 |
| SLR 35 - 075 | | | 75 | 5.28 | 24.0 | | | | | 24.0 | 27.0 | 30.0 | 36.0 | 10 |
| SLR 35 - 080 | | | 80 | 4.90 | 25.6 | | | | | 25.6 | 28.8 | 32.0 | 38.4 | 10 |
| SLR 35 - 090 | | | 90 | 4.20 | 28.8 | | | | | 28.8 | 32.4 | 36.0 | 43.2 | 10 |
| SLR 35 - 100 | | | 100 | 3.75 | 32.0 | | | | | 32.0 | 36.0 | 40.0 | 48.0 | 10 |
| SLR 35 - 125 | | | 125 | 3.00 | 40.0 | | | | | 40.0 | 45.0 | 50.0 | 60.0 | 5 |
| SLR 35 - 150 | | | 150 | 2.40 | 48.0 | | | | | 48.0 | 54.0 | 60.0 | 72.0 | 5 |
| SLR 35 - 175 | | | 175 | 2.20 | 56.0 | | | | | 56.0 | 63.0 | 70.0 | 84.0 | 5 |
| SLR 35 - 200 | 200 | 1.80 | 64.0 | 64.0 | 72.0 | 80.0 | 96.0 | 5 | | | | | | |
| SL 40 - 040 | 40 | 20 | 40 | 13.50 | 12.8 | 173 (1,697) | 27.0 (1,903) | 30.0 (2,120) | 216 | 19.2 | 20 | | | |
| SL 40 - 045 | | | 45 | 12.00 | 14.4 | | | | | 14.4 | 16.2 | 18.0 | 21.6 | 20 |
| SL 40 - 050 | | | 50 | 10.80 | 16.0 | | | | | 16.0 | 18.0 | 20.0 | 24.0 | 20 |
| SL 40 - 055 | | | 55 | 9.80 | 17.6 | | | | | 17.6 | 19.8 | 22.0 | 26.4 | 20 |
| SL 40 - 060 | | | 60 | 9.00 | 19.2 | | | | | 19.2 | 21.6 | 24.0 | 28.8 | 10 |
| SL 40 - 065 | | | 65 | 8.29 | 20.8 | | | | | 20.8 | 23.4 | 26.0 | 31.2 | 10 |
| SL 40 - 070 | | | 70 | 7.71 | 22.4 | | | | | 22.4 | 25.2 | 28.0 | 33.6 | 10 |
| SL 40 - 075 | | | 75 | 7.19 | 24.0 | | | | | 24.0 | 27.0 | 30.0 | 36.0 | 10 |
| SL 40 - 080 | | | 80 | 6.75 | 25.6 | | | | | 25.6 | 28.8 | 32.0 | 38.4 | 10 |
| SL 40 - 090 | | | 90 | 6.00 | 28.8 | | | | | 28.8 | 32.4 | 36.0 | 43.2 | 10 |
| SL 40 - 100 | | | 100 | 5.40 | 32.0 | | | | | 32.0 | 36.0 | 40.0 | 48.0 | 10 |
| SL 40 - 125 | | | 125 | 4.32 | 40.0 | | | | | 40.0 | 45.0 | 50.0 | 60.0 | 5 |
| SL 40 - 150 | | | 150 | 3.60 | 48.0 | | | | | 48.0 | 54.0 | 60.0 | 72.0 | 5 |
| SL 40 - 175 | | | 175 | 3.08 | 56.0 | | | | | 56.0 | 63.0 | 70.0 | 84.0 | 5 |
| SL 40 - 200 | | | 200 | 2.70 | 64.0 | | | | | 64.0 | 72.0 | 80.0 | 96.0 | 5 |
| SL 40 - 250 | | | 250 | 2.16 | 80.0 | | | | | 80.0 | 90.0 | 100.0 | 120.0 | 2 |

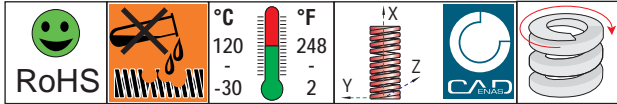
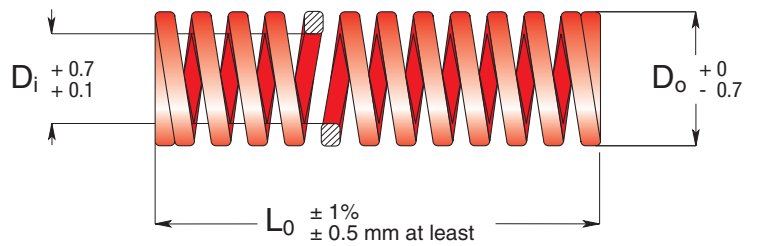


| Code 型号 | D _o Outside Diameter 外径 | D _i Inside Diameter 内径 | L ₀ Free Length 自由长度 | R Spring Constant 弹簧定数 ± 10% | A 32% L ₀ 1.000.000 cycles | B 36% L ₀ 500.000 cycles | C 40% L ₀ 300.000 cycles | E do not use approx. |  | | | | | |
|--------------|--|---|---------------------------------------|---------------------------------------|---|---|---|-----------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

SL
JIS



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
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| 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 | mm | mm | Kgf/mm | 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 | 18.7 | 20.8 | 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 | 18.7 | 20.8 | 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 | 18.7 | 20.8 | 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 | | |

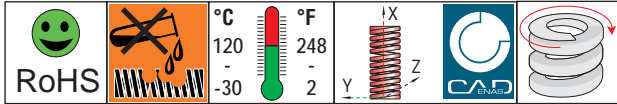
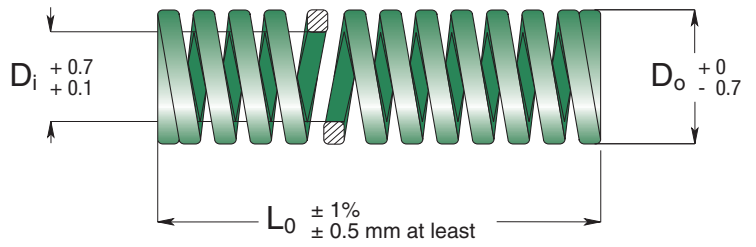


| Code 型号 | D _o Outside Diameter 孔径 | D _i Inside Diameter 棒径 | L ₀ Free Length 自由长度 | R Spring Constant 弹簧定数 ± 10% | A 25.6% L ₀ 1.000.000 cycles | B 28.8% L ₀ 500.000 cycles | C 32% L ₀ 300.000 cycles | E do not use approx. | Pcs | | |
|-------------|--|---|---------------------------------------|---------------------------------------|---|---|---|----------------------------|------|-------|----|
| | 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 | 18.4 | 20.4 | 23.4 | 20 | | | | | |
| SH 16 - 025 | 16 | 8 | 25 | 12.83 | 17.3 | 5.4 | 6.0 | 7.0 | 50 | | | |
| SH 16 - 030 | | | 30 | 10.69 | 4.8 | 6.5 | 7.2 | 8.4 | 50 | | | |
| SH 16 - 035 | | | 35 | 9.16 | 5.8 | 7.5 | 8.4 | 9.8 | 50 | | | |
| SH 16 - 040 | | | 40 | 8.02 | 6.7 | 8.6 | 9.6 | 11.2 | 25 | | | |
| SH 16 - 045 | | | 45 | 7.12 | 7.7 | 9.7 | 10.8 | 12.6 | 25 | | | |
| SH 16 - 050 | | | 50 | 6.41 | 8.6 | 10.8 | 12.0 | 14.0 | 25 | | | |
| SH 16 - 055 | 55 | 5.83 | 9.6 | 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) | | mm |
| 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 |



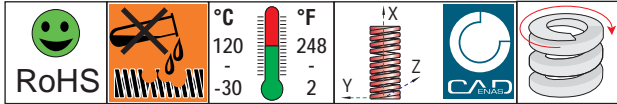
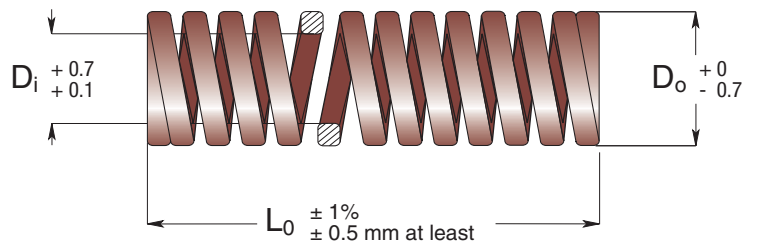
| Code 型号 | D _o Outside Diameter 外径 | D _i Inside Diameter 内径 | L ₀ Free Length 自由长度 | R Spring Constant 弹簧定数 ± 10% | A 19.2% L ₀ 1.000.000 cycles | | B 21.6% L ₀ 500.000 cycles | | C 24% L ₀ 300.000 cycles | | E do not use approx. Pcs |
|-------------|--|---|---------------------------------------|---------------------------------------|---|----------------|---|----------------|---|---------|-----------------------------------|
| | | | | | 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 | Kgf (N) | mm | Kgf (N) | mm | Kgf (N) | | |
| 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) |
| 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 | 56.25 | 10.6 | | | | 15.4 | 5 | | |
| SH 50 - 060 | | | 60 | 52.08 | 11.5 | | | | 16.8 | 5 | | |
| SH 50 - 065 | | | 65 | 48.38 | 12.5 | | | | 18.2 | 5 | | |
| SH 50 - 070 | | | 70 | 44.64 | 13.4 | | | | 19.6 | 5 | | |
| SH 50 - 075 | | | 75 | 40.91 | 14.4 | | | | 21.0 | 5 | | |
| SH 50 - 080 | | | 80 | 39.06 | 15.4 | | | | 22.4 | 5 | | |
| SH 50 - 090 | | | 90 | 34.72 | 17.3 | | | | 25.2 | 5 | | |
| SH 50 - 100 | | | 100 | 31.25 | 19.2 | | | | 28.0 | 5 | | |
| SH 50 - 125 | | | 125 | 25.00 | 24.0 | | | | 35.0 | 5 | | |
| SH 50 - 150 | | | 150 | 20.83 | 28.8 | | | | 42.0 | 2 | | |
| SH 50 - 175 | | | 175 | 17.85 | 33.6 | | | | 49.0 | 2 | | |
| SH 50 - 200 | | | 200 | 15.62 | 38.4 | | | | 56.0 | 2 | | |
| SH 50 - 250 | | | 250 | 12.50 | 48.0 | | | | 70.0 | 2 | | |
| SH 50 - 300 | | | 300 | 10.41 | 57.6 | | | | 84.0 | 2 | | |
| SH 60 - 060 | | | 60 | 30 | 60 | | | | 75.00 | 11.5 | 864 (8,470) | 973 (9,540) |
| 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 $\pm 10\%$ | 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 | 4.5 | 5.0 | 6.0 | 50 | | | |
| SB 25 - 030 | | | 30 | 40.80 | 4.8 | 5.4 | 6.0 | 7.2 | 25 | | | |
| SB 25 - 035 | | | 35 | 35.00 | 5.6 | 6.3 | 7.0 | 8.4 | 25 | | | |
| SB 25 - 040 | | | 40 | 30.60 | 6.4 | 7.2 | 8.0 | 9.6 | 25 | | | |
| SB 25 - 045 | | | 45 | 27.20 | 7.2 | 8.1 | 9.0 | 10.8 | 25 | | | |
| SB 25 - 050 | | | 50 | 24.50 | 8.0 | 9.0 | 10.0 | 12.0 | 25 | | | |
| SB 25 - 055 | | | 55 | 22.30 | 8.8 | 9.9 | 11.0 | 13.2 | 25 | | | |
| SB 25 - 060 | | | 60 | 20.40 | 9.6 | 10.8 | 12.0 | 14.4 | 25 | | | |
| SB 25 - 065 | | | 65 | 18.80 | 10.4 | 11.7 | 13.0 | 15.6 | 25 | | | |
| SB 25 - 070 | | | 70 | 17.50 | 11.2 | 12.6 | 14.0 | 16.8 | 20 | | | |
| SB 25 - 075 | | | 75 | 16.30 | 12.0 | 13.5 | 15.0 | 18.0 | 20 | | | |
| SB 25 - 080 | | | 80 | 15.30 | 12.8 | 14.4 | 16.0 | 19.2 | 20 | | | |
| SB 25 - 090 | | | 90 | 13.60 | 14.4 | 16.2 | 18.0 | 21.6 | 20 | | | |
| SB 25 - 100 | | | 100 | 12.30 | 16.0 | 18.0 | 20.0 | 24.0 | 20 | | | |
| SB 25 - 125 | | | 125 | 9.80 | 20.0 | 22.5 | 25.0 | 30.0 | 10 | | | |
| SB 25 - 150 | 150 | 8.17 | 24.0 | 27.0 | 30.0 | 36.0 | 10 | | | | | |
| SB 25 - 175 | 175 | 7.00 | 28.0 | 31.5 | 35.0 | 42.0 | 10 | | | | | |
| SB 27 - 025 | 27 | 13.5 | 25 | 58.00 | 4.0 | 4.5 | 5.0 | 6.0 | 20 | | | |
| SB 27 - 030 | | | 30 | 48.33 | 4.8 | 5.4 | 6.0 | 7.2 | 20 | | | |
| SB 27 - 035 | | | 35 | 41.43 | 5.6 | 6.3 | 7.0 | 8.4 | 20 | | | |
| SB 27 - 040 | | | 40 | 36.25 | 6.4 | 7.2 | 8.0 | 9.6 | 20 | | | |
| SB 27 - 045 | | | 45 | 32.22 | 7.2 | 8.1 | 9.0 | 10.8 | 20 | | | |
| SB 27 - 050 | | | 50 | 29.00 | 8.0 | 9.0 | 10.0 | 12.0 | 20 | | | |
| SB 27 - 055 | | | 55 | 26.36 | 8.8 | 9.9 | 11.0 | 13.2 | 20 | | | |
| SB 27 - 060 | | | 60 | 24.17 | 9.6 | 10.8 | 12.0 | 14.4 | 20 | | | |
| SB 27 - 065 | | | 65 | 22.31 | 10.4 | 11.7 | 13.0 | 15.6 | 20 | | | |
| SB 27 - 070 | | | 70 | 20.71 | 11.2 | 12.6 | 14.0 | 16.8 | 20 | | | |
| SB 27 - 075 | | | 75 | 19.33 | 12.0 | 13.5 | 15.0 | 18.0 | 20 | | | |
| SB 27 - 080 | | | 80 | 18.13 | 12.8 | 14.4 | 16.0 | 19.2 | 10 | | | |
| SB 27 - 090 | | | 90 | 16.11 | 14.4 | 16.2 | 18.0 | 21.6 | 10 | | | |
| SB 27 - 100 | | | 100 | 14.50 | 16.0 | 18.0 | 20.0 | 24.0 | 10 | | | |
| SB 27 - 125 | | | 125 | 11.60 | 20.0 | 22.5 | 25.0 | 30.0 | 10 | | | |
| SB 27 - 150 | 150 | 9.67 | 24.0 | 27.0 | 30.0 | 36.0 | 10 | | | | | |
| SB 27 - 175 | 175 | 8.28 | 28.0 | 31.5 | 35.0 | 42.0 | 5 | | | | | |
| SB 30 - 025 | 30 | 15 | 25 | 72.00 | 4.0 | 4.5 | 5.0 | 6.0 | 20 | | | |
| SB 30 - 030 | | | 30 | 60.00 | 4.8 | 5.4 | 6.0 | 7.2 | 20 | | | |
| SB 30 - 035 | | | 35 | 51.43 | 5.6 | 6.3 | 7.0 | 8.4 | 20 | | | |
| SB 30 - 040 | | | 40 | 45.00 | 6.4 | 7.2 | 8.0 | 9.6 | 20 | | | |
| SB 30 - 045 | | | 45 | 40.00 | 7.2 | 8.1 | 9.0 | 10.8 | 20 | | | |
| SB 30 - 050 | | | 50 | 36.00 | 8.0 | 9.0 | 10.0 | 12.0 | 20 | | | |
| SB 30 - 055 | | | 55 | 32.72 | 8.8 | 9.9 | 11.0 | 13.2 | 20 | | | |
| SB 30 - 060 | | | 60 | 30.00 | 9.6 | 10.8 | 12.0 | 14.4 | 20 | | | |
| SB 30 - 065 | | | 65 | 27.69 | 10.4 | 11.7 | 13.0 | 15.6 | 20 | | | |
| SB 30 - 070 | | | 70 | 25.71 | 11.2 | 12.6 | 14.0 | 16.8 | 20 | | | |
| SB 30 - 075 | | | 75 | 24.00 | 12.0 | 13.5 | 15.0 | 18.0 | 20 | | | |
| SB 30 - 080 | | | 80 | 22.50 | 12.8 | 14.4 | 16.0 | 19.2 | 10 | | | |
| SB 30 - 090 | | | 90 | 20.00 | 14.4 | 16.2 | 18.0 | 21.6 | 10 | | | |
| SB 30 - 100 | | | 100 | 18.00 | 16.0 | 18.0 | 20.0 | 24.0 | 10 | | | |
| SB 30 - 125 | | | 125 | 14.40 | 20.0 | 22.5 | 25.0 | 30.0 | 10 | | | |
| SB 30 - 150 | 150 | 12.00 | 24.0 | 27.0 | 30.0 | 36.0 | 10 | | | | | |
| SB 30 - 175 | 175 | 10.28 | 28.0 | 31.5 | 35.0 | 42.0 | 5 | | | | | |
| SB 30 - 200 | 200 | 9.00 | 32.0 | 36.0 | 40.0 | 48.0 | 5 | | | | | |
| SB 35 - 040 | 35 | 17.5 | 40 | 61.25 | 6.4 | 7.2 | 8.0 | 9.6 | 20 | | | |
| SB 35 - 045 | | | 45 | 54.44 | 7.2 | 8.1 | 9.0 | 10.8 | 20 | | | |
| SB 35 - 050 | | | 50 | 49.00 | 8.0 | 9.0 | 10.0 | 12.0 | 20 | | | |
| SB 35 - 055 | | | 55 | 44.54 | 8.8 | 9.9 | 11.0 | 13.2 | 10 | | | |
| SB 35 - 060 | | | 60 | 40.83 | 9.6 | 10.8 | 12.0 | 14.4 | 10 | | | |
| SB 35 - 065 | | | 65 | 37.69 | 10.4 | 11.7 | 13.0 | 15.6 | 10 | | | |
| SB 35 - 070 | | | 70 | 35.00 | 11.2 | 12.6 | 14.0 | 16.8 | 10 | | | |
| SB 35 - 075 | | | 75 | 32.67 | 12.0 | 13.5 | 15.0 | 18.0 | 10 | | | |
| SB 35 - 080 | | | 80 | 30.62 | 12.8 | 14.4 | 16.0 | 19.2 | 10 | | | |
| SB 35 - 090 | | | 90 | 27.22 | 14.4 | 16.2 | 18.0 | 21.6 | 10 | | | |
| SB 35 - 100 | | | 100 | 24.50 | 16.0 | 18.0 | 20.0 | 24.0 | 10 | | | |
| SB 35 - 125 | | | 125 | 19.60 | 20.0 | 22.5 | 25.0 | 30.0 | 5 | | | |
| SB 35 - 150 | | | 150 | 16.33 | 24.0 | 27.0 | 30.0 | 36.0 | 5 | | | |
| SB 35 - 175 | | | 175 | 14.00 | 28.0 | 31.5 | 35.0 | 42.0 | 5 | | | |
| SB 35 - 200 | | | 200 | 12.25 | 32.0 | 36.0 | 40.0 | 48.0 | 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 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 |



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