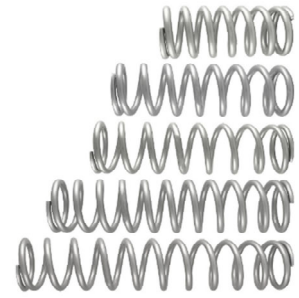
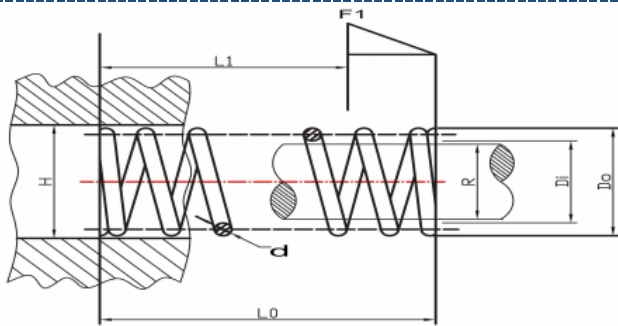


Compression spring

www.simf-parts.com



Technical conditions

- Material: SWPB--JIS G 3522;
Stainless steel--JIS G 4314
- Rotation: Right-handed
- End face form:
d < 1.0mm, the end is closed without grinding
d ≥ 1.0mm, the end is closed and ground flat
- Surface treatment:
SWPB anti-rust oil
Stainless steel -
- Tolerance: GB1239 standard

Number resolution

- | | | | | |
|---|---|-----|------|---|
| H | M | 250 | 1250 | F |
| ① | ② | ③ | ④ | ⑤ |
- ① H: For holes R: For rods
② M: SWPB S: SUS304
③ 250: 25mm, aperture or rod diameter size
④ 1250: free length 125mm
⑤ F: load class F: lighter L: light M: medium H: heavy B: overweight

| Wire Dia. (mm) | Outer Dia. (mm) | Inner Dia. (mm) | Free Length (mm) | Spring Rate kgf/mm | Max.Load (kgf) | Work Height (mm) | Shaft Dia. Reference (mm) | Dore Dia. Reference (mm) | |
|-------------------|--------------------|--------------------|---------------------|-----------------------|-------------------|---------------------|---------------------------------|--------------------------------|-----|
| d | Do | Di | Lo | | P1 | L1 | R | H | |
| 0.20 | 1.2 | 0.8 | 2 | 0.501 | 0.26 | 1.4 | 0.6 | 1.4 | |
| | | | 2.7 | 0.318 | | 1.9 | | | |
| | | | 3.9 | 0.207 | | 2.6 | | | |
| | | | 5.5 | 0.141 | | 3.6 | | | |
| | | | 7.8 | 0.094 | | 5 | | | |
| | 1.4 | 1 | 1 | 2.3 | 0.289 | 0.23 | 1.5 | 0.8 | 1.7 |
| | | | | 3.2 | 0.185 | | 1.9 | | |
| | | | | 4.6 | 0.118 | | 2.7 | | |
| | | | | 6.5 | 0.082 | | 3.7 | | |
| | | | | 9.3 | 0.055 | | 5.1 | | |
| | 1.8 | 1.4 | 1.4 | 3 | 0.122 | 0.18 | 1.5 | 1.1 | 2.1 |
| | | | | 4.4 | 0.079 | | 2 | | |
| 6.4 | | | | 0.05 | 2.8 | | | | |
| 9.2 | | | | 0.035 | 3.8 | | | | |
| 13.1 | | | | 0.023 | 5.3 | | | | |
| 2.2 | 1.8 | 1.8 | 4 | 0.062 | 0.15 | 1.5 | 1.5 | 2.6 | |
| | | | 5.9 | 0.039 | | 2.1 | | | |
| | | | 8.7 | 0.026 | | 2.9 | | | |
| | | | 12.6 | 0.018 | | 4 | | | |
| | | | 18.3 | 0.012 | | 5.6 | | | |
| 2.7 | 2.3 | 2.3 | 5.4 | 0.032 | 0.12 | 1.6 | 2 | 3.1 | |
| | | | 8.2 | 0.02 | | 2.2 | | | |
| | | | 12.4 | 0.013 | | 3.1 | | | |
| | | | 17.9 | 0.008 | | 4.2 | | | |
| | | | 26.2 | 0.006 | | 5.9 | | | |

| Wire Dia. (mm) | Outer Dia. (mm) | Inner Dia. (mm) | Free Length (mm) | Spring Rate | Max.Load (kgf) | Work Height (mm) | Shaft Dia. Reference (mm) | Dore Dia. Reference (mm) | |
|-------------------|--------------------|--------------------|---------------------|-------------|-------------------|---------------------|---------------------------------|--------------------------------|-----|
| d | Do | Di | Lo | kgf/mm | P1 | L1 | R | H | |
| 0.25 | 1.45 | 0.95 | 2.4 | 0.709 | 0.41 | 1.8 | 0.7 | 1.7 | |
| | | | 3.3 | 0.451 | | 2.4 | | | |
| | | | 4.7 | 0.292 | | 3.3 | | | |
| | | | 6.6 | 0.198 | | 4.5 | | | |
| | | | 9.4 | 0.135 | | 6.3 | | | |
| | 1.85 | 1.35 | 1.35 | 3 | 0.299 | 0.34 | 1.8 | 1.1 | 2.1 |
| | | | | 4.3 | 0.19 | | 2.4 | | |
| | | | | 6.2 | 0.122 | | 3.4 | | |
| | | | | 8.7 | 0.085 | | 4.6 | | |
| | 2.25 | 1.75 | 1.75 | 12.5 | 0.056 | 0.28 | 6.5 | 1.5 | 2.6 |
| | | | | 3.7 | 0.153 | | 1.9 | | |
| | | | | 5.5 | 0.097 | | 2.5 | | |
| 8 | | | | 0.062 | 3.5 | | | | |
| 2.75 | 2.25 | 2.25 | 11.4 | 0.043 | 0.023 | 4.7 | 1.9 | 3.1 | |
| | | | 16.6 | 0.03 | | 6.7 | | | |
| | | | 4.9 | 0.079 | | 1.9 | | | |
| | | | 7.3 | 0.05 | | 2.6 | | | |
| 3.45 | 2.95 | 2.95 | 10.9 | 0.032 | 0.18 | 3.6 | 2.5 | 4 | |
| | | | 15.7 | 0.022 | | 5 | | | |
| | | | 22.9 | 0.014 | | 7 | | | |
| | | | 7.1 | 0.037 | | 2 | | | |
| | | | 10.7 | 0.024 | | 2.8 | | | |
| 0.32 | 1.92 | 1.28 | 16.1 | 0.016 | 0.67 | 3.8 | 1 | 2.2 | |
| | | | 23.3 | 0.011 | | 5.3 | | | |
| | | | 34.1 | 0.007 | | 7.5 | | | |
| | | | 3.1 | 0.802 | | 2.3 | | | |
| | | | 4.4 | 0.51 | | 3.1 | | | |
| | 2.32 | 1.68 | 1.68 | 6.3 | 0.33 | 0.57 | 4.2 | 1.4 | 2.6 |
| | | | | 8.7 | 0.224 | | 5.8 | | |
| | | | | 12.5 | 0.152 | | 8.1 | | |
| | | | | 3.7 | 0.41 | | 2.3 | | |
| | 2.82 | 2.18 | 2.18 | 5.3 | 0.262 | 0.47 | 3.1 | 1.9 | 3.1 |
| | | | | 7.7 | 0.169 | | 4.3 | | |
| | | | | 10.9 | 0.115 | | 5.9 | | |
| 15.6 | | | | 0.079 | 8.2 | | | | |
| 3.52 | 2.88 | 2.88 | 4.7 | 0.21 | 0.38 | 2.4 | 2.4 | 4 | |
| | | | 6.8 | 0.134 | | 3.2 | | | |
| | | | 10 | 0.087 | | 4.4 | | | |
| | | | 14.2 | 0.059 | | 6.1 | | | |
| 4.32 | 3.68 | 3.68 | 20.6 | 0.039 | 0.31 | 8.5 | 3.2 | 4.8 | |
| | | | 6.3 | 0.099 | | 2.5 | | | |
| | | | 9.4 | 0.063 | | 3.3 | | | |
| | | | 14 | 0.041 | | 4.6 | | | |
| | | | 20.1 | 0.029 | | 6.3 | | | |
| 4.32 | 3.68 | 3.68 | 29.3 | 0.019 | 0.31 | 8.9 | 3.2 | 4.8 | |
| | | | 8.7 | 0.051 | | 2.6 | | | |
| | | | 13.1 | 0.032 | | 3.5 | | | |
| | | | 19.8 | 0.022 | | 4.9 | | | |
| 4.32 | 3.68 | 3.68 | 28.6 | 0.014 | 0.31 | 6.7 | 3.2 | 4.8 | |
| | | | 41.9 | 0.01 | | 9.5 | | | |

| Wire Dia. (mm) | Outer Dia. (mm) | Inner Dia. (mm) | Free Length (mm) | Spring Rate | Max.Load (kgf) | Work Height (mm) | Shaft Dia. Reference (mm) | Dore Dia. Reference (mm) | |
|-------------------|--------------------|--------------------|---------------------|-------------|-------------------|---------------------|---------------------------------|--------------------------------|-----|
| d | Do | Di | Lo | kgf/mm | P1 | L1 | R | H | |
| 0.40 | 2.4 | 1.6 | 3.5 | 0.95 | 0.76 | 2.7 | 1.3 | 2.8 | |
| | | | 5 | 0.6 | | 3.7 | | | |
| | | | 7 | 0.391 | | 5.1 | | | |
| | | | 10 | 0.266 | | 7 | | | |
| | 2.9 | 2.1 | 2.1 | 14 | 0.18 | 0.73 | 9.9 | 1.8 | 3.3 |
| | | | | 4.3 | 0.487 | | 2.8 | | |
| | | | | 6.3 | 0.31 | | 3.9 | | |
| | | | | 9.1 | 0.2 | | 5.4 | | |
| | 3.6 | 2.8 | 2.8 | 13 | 0.136 | 0.65 | 7.5 | 2.5 | 4 |
| | | | | 18.5 | 0.092 | | 10.6 | | |
| | | | | 5.6 | 0.233 | | 2.8 | | |
| | | | | 8.3 | 0.148 | | 3.9 | | |
| | 4.4 | 3.6 | 3.6 | 12 | 0.096 | 0.53 | 5.4 | 3.2 | 5 |
| | | | | 17.5 | 0.065 | | 7.5 | | |
| | | | | 25.5 | 0.044 | | 10.6 | | |
| | | | | 7.5 | 0.119 | | 3 | | |
| 5.4 | 4.6 | 4.6 | 11 | 0.076 | 0.44 | 4.1 | 4.1 | 6 | |
| | | | 16.5 | 0.049 | | 5.8 | | | |
| | | | 24 | 0.033 | | 8 | | | |
| | | | 35.5 | 0.022 | | 11.4 | | | |
| 0.50 | 3 | 2 | 10.5 | 0.061 | 1.06 | 3.2 | 1.7 | 3.4 | |
| | | | 16 | 0.039 | | 4.5 | | | |
| | | | 24 | 0.026 | | 6.4 | | | |
| | | | 35 | 0.017 | | 9 | | | |
| | 3.7 | 2.7 | 2.7 | 53 | 0.011 | 1.02 | 12.8 | 2.4 | 4.1 |
| | | | | 4.4 | 1.182 | | 3.5 | | |
| | | | | 6.1 | 0.757 | | 4.7 | | |
| | | | | 8.7 | 0.49 | | 6.5 | | |
| | 4.5 | 3.5 | 3.5 | 12 | 0.334 | 0.95 | 9 | 3.2 | 5 |
| | | | | 17.5 | 0.226 | | 12.8 | | |
| | | | | 5.5 | 0.568 | | 3.7 | | |
| | | | | 7.9 | 0.36 | | 5.1 | | |
| | 5.5 | 4.5 | 4.5 | 11.5 | 0.233 | 0.82 | 7.1 | 4 | 6.2 |
| | | | | 16 | 0.159 | | 9.8 | | |
| | | | | 23.5 | 0.107 | | 14 | | |
| | | | | 7 | 0.289 | | 3.7 | | |
| 6.8 | 5.8 | 5.8 | 10 | 0.185 | 0.67 | 5.1 | 5.3 | 7.5 | |
| | | | 15 | 0.119 | | 7.1 | | | |
| | | | 21.5 | 0.081 | | 9.8 | | | |
| | | | 31 | 0.055 | | 14 | | | |
| | | | 9.4 | 0.149 | 0.67 | 3.9 | | | |
| | | | 14 | 0.095 | | 5.4 | | | |
| | | | 20.5 | 0.062 | | 7.6 | | | |
| | | | 30 | 0.042 | | 10.6 | | | |
| | | | 44.5 | 0.028 | | 15.1 | | | |
| | | | 13.5 | 0.074 | | 4.3 | | | |
| | | | 20 | 0.047 | | 6 | | | |
| | | | 30 | 0.031 | | 8.7 | | | |
| | | | 44 | 0.021 | | 12.2 | | | |
| | | | 65 | 0.014 | | 17.4 | | | |

| Wire Dia. (mm) | Outer Dia. (mm) | Inner Dia. (mm) | Free Length (mm) | Spring Rate | Max.Load (kgf) | Work Height (mm) | Shaft Dia. Reference (mm) | Dore Dia. Reference (mm) | |
|-------------------|--------------------|--------------------|---------------------|-------------|-------------------|---------------------|---------------------------------|--------------------------------|-----|
| d | Do | Di | Lo | kgf/mm | P1 | L1 | R | H | |
| 0.63 | 3.83 | 2.57 | 5.5 | 1.431 | 2.14 | 4 | 2.3 | 4.2 | |
| | | | 7.8 | 0.908 | | 5.4 | | | |
| | | | 11 | 0.589 | | 7.5 | | | |
| | | | 15 | 0.401 | | 10.3 | | | |
| | | | 22.5 | 0.27 | | 14.7 | | | |
| | 4.63 | 3.37 | 3.37 | 6.7 | 0.731 | 1.75 | 4.3 | 3 | 5 |
| | | | | 9.6 | 0.464 | | 5.8 | | |
| | | | | 14 | 0.3 | | 8.2 | | |
| | | | | 20 | 0.204 | | 11.3 | | |
| | | | | 29 | 0.138 | | 16.2 | | |
| | 5.63 | 4.37 | 4.37 | 8.5 | 0.377 | 1.58 | 4.3 | 3.9 | 6.1 |
| | | | | 12.5 | 0.24 | | 5.8 | | |
| | | | | 18.5 | 0.158 | | 8.2 | | |
| | | | | 26 | 0.105 | | 11.3 | | |
| | | | | 38.5 | 0.071 | | 16.2 | | |
| | 6.93 | 5.67 | 5.67 | 11.5 | 0.187 | 1.27 | 4.6 | 5 | 7.6 |
| | | | | 17 | 0.119 | | 6.2 | | |
| | | | | 25.5 | 0.078 | | 8.9 | | |
| | | | | 36.5 | 0.052 | | 12.3 | | |
| | | | | 54 | 0.035 | | 17.7 | | |
| 8.63 | 7.37 | 7.37 | 16 | 0.091 | 1.02 | 5.1 | 6.8 | 9.4 | |
| | | | 24.5 | 0.058 | | 7.1 | | | |
| | | | 37 | 0.038 | | 10.2 | | | |
| | | | 55 | 0.026 | | 14.3 | | | |
| | | | 80.5 | 0.017 | | 20.6 | | | |
| 0.80 | 4.8 | 3.2 | 6.9 | 1.891 | 3.25 | 5.2 | 2.8 | 5.3 | |
| | | | 9.7 | 1.211 | | 7 | | | |
| | | | 14 | 0.783 | | 9.8 | | | |
| | | | 19.5 | 0.533 | | 13.5 | | | |
| | | | 28 | 0.359 | | 19.1 | | | |
| | 5.8 | 4.2 | 4.2 | 8.3 | 0.972 | 2.65 | 5.6 | 3.8 | 6.3 |
| | | | | 12 | 0.619 | | 7.7 | | |
| | | | | 17.5 | 0.4 | | 10.9 | | |
| | | | | 24.5 | 0.272 | | 15.1 | | |
| | | | | 36 | 0.184 | | 21.5 | | |
| | 7.1 | 5.5 | 5.5 | 10.5 | 0.487 | 2.45 | 5.6 | 5 | 7.7 |
| | | | | 15.5 | 0.309 | | 7.7 | | |
| | | | | 23 | 0.2 | | 10.9 | | |
| | | | | 33 | 0.136 | | 15.1 | | |
| | | | | 48 | 0.092 | | 21.5 | | |
| | 8.8 | 7.2 | 7.2 | 14.5 | 0.237 | 1.99 | 6.1 | 6.6 | 9.6 |
| | | | | 21.5 | 0.151 | | 8.4 | | |
| | | | | 32 | 0.098 | | 12 | | |
| | | | | 47 | 0.066 | | 16.7 | | |
| | | | | 68 | 0.045 | | 23.8 | | |
| 10.8 | 9.2 | 9.2 | 20 | 0.122 | 1.57 | 6.9 | 8.6 | 11.6 | |
| | | | 30 | 0.078 | | 9.8 | | | |
| | | | 45 | 0.05 | | 14.3 | | | |
| | | | 66 | 0.034 | | 19.9 | | | |
| | | | 96.5 | 0.023 | | 28.5 | | | |

| Wire Dia. (mm) | Outer Dia. (mm) | Inner Dia. (mm) | Free Length (mm) | Spring Rate | Max.Load (kgf) | Work Height (mm) | Shaft Dia. Reference (mm) | Dore Dia. Reference (mm) | |
|-------------------|--------------------|--------------------|---------------------|-------------|-------------------|---------------------|---------------------------------|--------------------------------|-----|
| d | Do | Di | Lo | kgf/mm | P1 | L1 | R | H | |
| 1.00 | 6 | 4 | 8.5 | 2.371 | 4.46 | 6.6 | 3.6 | 6.5 | |
| | | | 12 | 1.511 | | 9 | | | |
| | | | 17 | 0.977 | | 12.6 | | | |
| | | | 24 | 0.664 | | 17.4 | | | |
| | | | 34.5 | 0.449 | | 24.6 | | | |
| | 7.3 | 5.3 | 10 | 1.181 | 3.48 | 7.3 | 4.9 | 7.8 | |
| | | | 14.5 | 0.754 | | 10.1 | | | |
| | | | 21.5 | 0.489 | | 14.3 | | | |
| | | | 30.5 | 0.333 | | 19.9 | | | |
| | | | 43.5 | 0.224 | | 28.3 | | | |
| | 9 | 7 | 13 | 0.58 | 3.38 | 7.3 | 6.5 | 9.6 | |
| | | | 19 | 0.368 | | 10.1 | | | |
| | | | 28.5 | 0.238 | | 14.3 | | | |
| | | | 40.5 | 0.162 | | 19.9 | | | |
| | | | 59 | 0.11 | | 28.3 | | | |
| | 11 | 9 | 17.5 | 0.296 | 2.79 | 8 | 8.4 | 11.8 | |
| | | | 26 | 0.189 | | 11.2 | | | |
| | | | 39 | 0.122 | | 16 | | | |
| | | | 56 | 0.083 | | 22.4 | | | |
| | | | 81.5 | 0.056 | | 32 | | | |
| | 13.5 | 11.5 | 24 | 0.152 | 2.24 | 9.4 | 10.8 | 14.4 | |
| | | | 36.5 | 0.097 | | 13.4 | | | |
| | | | 55.5 | 0.062 | | 19.4 | | | |
| | | | 80.5 | 0.042 | | 27.4 | | | |
| | | | 115 | 0.029 | | 39.4 | | | |
| | 1.25 | 7.55 | 5.05 | 12 | 2.962 | 13.61 | 7.2 | 4.7 | 8.1 |
| | | | | 17 | 1.841 | | 9.8 | | |
| | | | | 25 | 1.201 | | 13.8 | | |
| 35.5 | | | | 0.826 | 19.2 | | | | |
| 51.5 | | | | 0.55 | 27.1 | | | | |
| 9.25 | | 6.75 | 15 | 1.461 | 10.71 | 7.4 | 6.1 | 9.6 | |
| | | | 22 | 0.91 | | 10.5 | | | |
| | | | 33 | 0.594 | | 14.9 | | | |
| | | | 47.5 | 0.404 | | 21 | | | |
| | | | 69 | 0.274 | | 30 | | | |
| 11.25 | | 8.75 | 20 | 0.723 | 8.72 | 7.7 | 8.2 | 11.9 | |
| | | | 29.5 | 0.46 | | 10.8 | | | |
| | | | 44.5 | 0.298 | | 15.2 | | | |
| | | | 64 | 0.203 | | 21.1 | | | |
| | | | 93.5 | 0.137 | | 30 | | | |
| 13.75 | | 11.25 | 27 | 0.37 | 7.05 | 8.2 | 10.6 | 14.6 | |
| | | | 41.5 | 0.236 | | 11.6 | | | |
| | | | 62.5 | 0.152 | | 16.5 | | | |
| | | | 90.5 | 0.104 | | 23.1 | | | |
| | | | 130 | 0.07 | | 32.9 | | | |
| 17.25 | | 14.75 | 40.5 | 0.177 | 5.53 | 9.1 | 14.1 | 18.2 | |
| | | | 62 | 0.112 | | 12.9 | | | |
| | | | 94 | 0.073 | | 18.5 | | | |
| | | | 140 | 0.049 | | 26 | | | |
| | | | 205 | 0.033 | | 37.3 | | | |

| Wire Dia. (mm) | Outer Dia. (mm) | Inner Dia. (mm) | Free Length (mm) | Spring Rate | Max.Load (kgf) | Work Height (mm) | Shaft Dia. Reference (mm) | Dore Dia. Reference (mm) | |
|-------------------|--------------------|--------------------|---------------------|-------------|-------------------|---------------------|---------------------------------|--------------------------------|------|
| d | Do | Di | Lo | kgf/mm | P1 | L1 | R | H | |
| 1.60 | 9.6 | 6.4 | 14.5 | 3.803 | 21.61 | 9 | 5.9 | 10.1 | |
| | | | 21.5 | 2.421 | | 12.6 | | | |
| | | | 31.5 | 1.571 | | 17.9 | | | |
| | | | 45 | 1.061 | | 24.8 | | | |
| | | | 65.5 | 0.719 | | 35.2 | | | |
| | 11.6 | 8.4 | 8.4 | 18.5 | 1.951 | 17.31 | 9.4 | 7.9 | 12.1 |
| | | | | 27 | 1.241 | | 13.2 | | |
| | | | | 40.5 | 0.803 | | 18.9 | | |
| | | | | 58.5 | 0.544 | | 26.5 | | |
| | | | | 85 | 0.368 | | 37.9 | | |
| | 14.1 | 10.9 | 10.9 | 24 | 0.996 | 13.81 | 10 | 10.3 | 14.7 |
| | | | | 36 | 0.636 | | 14 | | |
| | | | | 53.5 | 0.412 | | 20.1 | | |
| | | | | 78 | 0.279 | | 28 | | |
| | | | | 115 | 0.188 | | 39.9 | | |
| | 17.6 | 14.4 | 14.4 | 34 | 0.474 | 10.81 | 11 | 13.7 | 18.3 |
| | | | | 51.5 | 0.302 | | 15.5 | | |
| | | | | 77.5 | 0.196 | | 22.2 | | |
| | | | | 110 | 0.133 | | 31.2 | | |
| | | | | 165 | 0.09 | | 44.6 | | |
| 21.6 | 18.1 | 18.1 | 48 | 0.243 | 8.66 | 12.4 | 17.5 | 22.5 | |
| | | | 73.5 | 0.155 | | 17.6 | | | |
| | | | 110 | 0.101 | | 25.5 | | | |
| | | | 165 | 0.068 | | 36 | | | |
| | | | 240 | 0.046 | | 51.8 | | | |
| 2.00 | 12 | 8 | 18 | 4.753 | 32.42 | 11.2 | 7.5 | 12.5 | |
| | | | 26.5 | 3.052 | | 15.6 | | | |
| | | | 38.5 | 1.961 | | 22 | | | |
| | | | 55 | 1.331 | | 30.6 | | | |
| | | | 79.5 | 0.899 | | 43.4 | | | |
| | 14.5 | 10.5 | 10.5 | 22.5 | 2.442 | 25.92 | 11.7 | 9.9 | 15.1 |
| | | | | 33 | 1.551 | | 16.4 | | |
| | | | | 49.5 | 1.001 | | 23.5 | | |
| | | | | 71 | 0.683 | | 33 | | |
| | | | | 105 | 0.461 | | 47.2 | | |
| | 18 | 14 | 14 | 30 | 1.161 | 20.21 | 12.5 | 13.4 | 18.6 |
| | | | | 45 | 0.739 | | 17.7 | | |
| | | | | 68 | 0.479 | | 25.5 | | |
| | | | | 98 | 0.326 | | 35.9 | | |
| | | | | 145 | 0.22 | | 51.4 | | |
| | 22 | 18 | 18 | 41 | 0.595 | 16.21 | 13.6 | 17.1 | 22.9 |
| | | | | 62 | 0.379 | | 19.2 | | |
| | | | | 94 | 0.244 | | 27.6 | | |
| | | | | 135 | 0.166 | | 38.8 | | |
| | | | | 200 | 0.112 | | 55.6 | | |
| 27 | 23 | 23 | 58 | 0.304 | 13.01 | 15 | 22 | 27.9 | |
| | | | 88.5 | 0.194 | | 21.4 | | | |
| | | | 135 | 0.126 | | 31 | | | |
| | | | 195 | 0.085 | | 43.8 | | | |
| | | | 290 | 0.058 | | 63 | | | |

| Wire Dia. (mm) | Outer Dia. (mm) | Inner Dia. (mm) | Free Length (mm) | Spring Rate | Max.Load (kgf) | Work Height (mm) | Shaft Dia. Reference (mm) | Dore Dia. Reference (mm) |
|-------------------|--------------------|--------------------|---------------------|-------------|-------------------|---------------------|---------------------------------|--------------------------------|
| d | Do | Di | Lo | kgf/mm | P1 | L1 | R | H |
| 2.20 | 11 | 6.6 | 16.2 | 10.207 | 31.4 | 12.9 | 6 | 11.6 |
| | | | 23 | 6.485 | | 17.7 | | |
| | | | 36.5 | 3.762 | | 27.4 | | |
| | | | 56.8 | 2.302 | | 41.9 | | |
| | 15 | 10.6 | 20 | 3.312 | 26.2 | 12.9 | 10 | 15.6 |
| | | | 30.2 | 2.111 | | 17.7 | | |
| | | | 48.9 | 1.22 | | 27.4 | | |
| | 24 | 19.6 | 39.2 | 0.67 | 16.9 | 14 | 18.9 | 24.7 |
| | | | 59.1 | 0.428 | | 19.5 | | |
| 2.50 | 15 | 10 | 22 | 5.954 | 47.7 | 14 | 9.4 | 15.6 |
| | | | 32 | 3.793 | | 19.5 | | |
| | | | 47.5 | 2.452 | | 27.8 | | |
| | | | 67.5 | 1.661 | | 38.7 | | |
| | | | 98 | 1.12 | | 55.1 | | |
| | 18.5 | 13.5 | 27.5 | 2.832 | 37.2 | 14.6 | 12.9 | 19.1 |
| | | | 41 | 1.801 | | 20.5 | | |
| | | | 61 | 1.17 | | 29.3 | | |
| | | | 88 | 0.794 | | 41.1 | | |
| | 22.5 | 17.5 | 130 | 0.536 | 29.8 | 58.9 | 16.8 | 23.2 |
| | | | 36 | 1.451 | | 15.5 | | |
| | | | 54 | 0.923 | | 21.9 | | |
| | | | 81.5 | 0.597 | | 31.5 | | |
| | | | 120 | 0.406 | | 44.3 | | |
| | | | 175 | 0.274 | | 63.6 | | |
| 2.50 | 27.5 | 22.5 | 49 | 0.744 | 23.8 | 16.8 | 21.6 | 28.4 |
| | | | 74.5 | 0.473 | | 24 | | |
| | | | 115 | 0.306 | | 34.8 | | |
| | | | 165 | 0.208 | | 49.2 | | |
| | | | 240 | 0.141 | | 70.8 | | |
| | 34.5 | 29.5 | 71.5 | 0.355 | 18.6 | 19.3 | 28.3 | 35.7 |
| | | | 110 | 0.227 | | 27.9 | | |
| | | | 170 | 0.146 | | 41 | | |
| | | | 245 | 0.099 | | 58.1 | | |
| 2.80 | 14 | 8.4 | 360 | 0.067 | 52.9 | 83.9 | 7.8 | 14.6 |
| | | | 20.5 | 13.009 | | 16.4 | | |
| | | | 29 | 6.414 | | 22.3 | | |
| | | | 45.9 | 4.784 | | 34.9 | | |
| | 20 | 14.4 | 71.4 | 2.932 | 38.7 | 53.3 | 13.8 | 20.6 |
| | | | 27.2 | 3.583 | | 16.4 | | |
| | | | 39.5 | 2.282 | | 22.5 | | |
| | | | 64.2 | 1.32 | | 34.9 | | |
| 30 | 24.4 | 47 | 0.906 | 26.4 | 17.9 | 23.7 | 30.7 | |
| | | 70.7 | 0.577 | | 24.9 | | | |

| Wire Dia. (mm) | Outer Dia. (mm) | Inner Dia. (mm) | Free Length (mm) | Spring Rate | Max.Load (kgf) | Work Height (mm) | Shaft Dia. Reference (mm) | Dore Dia. Reference (mm) | |
|-------------------|--------------------|--------------------|---------------------|-------------|-------------------|---------------------|---------------------------------|--------------------------------|------|
| d | Do | Di | Lo | kgf/mm | P1 | L1 | R | H | |
| 3.20 | 19.2 | 12.8 | 27.5 | 7.585 | 73.6 | 17.8 | 12.2 | 19.8 | |
| | | | 40 | 4.834 | | 24.9 | | | |
| | | | 59 | 3.132 | | 35.4 | | | |
| | | | 83.5 | 2.121 | | 49 | | | |
| | | | 120 | 1.441 | | 69.4 | | | |
| | 23.2 | 16.8 | 16.8 | 33.5 | 3.893 | 58.8 | 18.5 | 16.1 | 23.9 |
| | | | | 49.5 | 2.471 | | 25.9 | | |
| | | | | 74 | 1.601 | | 37.1 | | |
| | | | | 105 | 1.091 | | 51.6 | | |
| | 28.2 | 21.8 | 21.8 | 155 | 0.736 | 47 | 73.2 | 21.1 | 28.9 |
| | | | | 42.5 | 1.982 | | 19.1 | | |
| | | | | 63.5 | 1.261 | | 26.3 | | |
| 94.5 | | | | 0.818 | 37.1 | | | | |
| 35.2 | 28.8 | 28.8 | 135 | 0.556 | 36.8 | 51.6 | 27.6 | 36.4 | |
| | | | 200 | 0.376 | | 73.2 | | | |
| | | | 58.5 | 0.95 | | 19.8 | | | |
| | | | 88.5 | 0.604 | | 27.4 | | | |
| 43.2 | 36.8 | 36.8 | 135 | 0.39 | 29.4 | 38.8 | 35.6 | 44.4 | |
| | | | 190 | 0.266 | | 54.1 | | | |
| | | | 280 | 0.18 | | 77 | | | |
| | | | 82 | 0.486 | | 21.2 | | | |
| | | | 125 | 0.309 | | 29.7 | | | |
| 4.00 | 24 | 16 | 190 | 0.2 | 109 | 42.3 | 15.3 | 24.7 | |
| | | | 275 | 0.136 | | 59.2 | | | |
| | | | 405 | 0.092 | | 84.5 | | | |
| | | | 33.5 | 9.497 | | 22.2 | | | |
| | | | 49 | 6.044 | | 31 | | | |
| 4.00 | 29 | 21 | 72 | 3.912 | 87 | 44.2 | 20.3 | 29.7 | |
| | | | 105 | 2.662 | | 61.7 | | | |
| | | | 150 | 1.791 | | 87.7 | | | |
| | | | 41 | 4.863 | | 22.9 | | | |
| | | | 60.5 | 3.092 | | 32.2 | | | |
| | 36 | 28 | 28 | 89.5 | 2.001 | 68 | 46 | 27 | 37 |
| | | | | 130 | 1.361 | | 64.5 | | |
| | | | | 185 | 0.92 | | 92.1 | | |
| | | | | 53.5 | 2.321 | | 24 | | |
| | 44 | 36 | 36 | 79.5 | 1.471 | 54 | 33.3 | 34.8 | 45.2 |
| | | | | 120 | 0.954 | | 47.2 | | |
| | | | | 170 | 0.648 | | 65.8 | | |
| 250 | | | | 0.439 | 93.6 | | | | |
| 54 | 46 | 46 | 71 | 1.191 | 44 | 25.2 | 44 | 56 | |
| | | | 105 | 0.755 | | 35.1 | | | |
| | | | 160 | 0.489 | | 50 | | | |
| | | | 235 | 0.333 | | 69.8 | | | |
| | | | 340 | 0.224 | | 99.6 | | | |
| | | | 99 | 0.607 | | 27.4 | | | |
| | | | 150 | 0.387 | | 38.6 | | | |
| | | | 230 | 0.25 | | 55.4 | | | |
| | | | 335 | 0.17 | | 77.8 | | | |
| | | | 490 | 0.115 | | 111 | | | |

| Wire Dia. (mm) | Outer Dia. (mm) | Inner Dia. (mm) | Free Length (mm) | Spring Rate | Max.Load (kgf) | Work Height (mm) | Shaft Dia. Reference (mm) | Dore Dia. Reference (mm) |
|-------------------|--------------------|--------------------|---------------------|-------------|-------------------|---------------------|---------------------------------|--------------------------------|
| d | Do | Di | Lo | kgf/mm | P1 | L1 | R | H |
| 5.00 | 30 | 20 | 41 | 11.908 | 160 | 27.6 | 19.3 | 30.7 |
| | | | 60 | 7.555 | | 38.5 | | |
| | | | 87 | 4.884 | | 54.9 | | |
| | | | 125 | 3.326 | | 76.7 | | |
| | | | 180 | 2.242 | | 109 | | |
| | 37 | 27 | 51 | 5.654 | 125 | 28.7 | 26 | 38 |
| | | | 75 | 3.602 | | 40.2 | | |
| | | | 110 | 2.332 | | 57.5 | | |
| | | | 160 | 1.581 | | 80.5 | | |
| | | | 230 | 1.07 | | 115 | | |
| | 45 | 35 | 64 | 2.892 | 100 | 29.6 | 34 | 46 |
| | | | 95.5 | 1.841 | | 41.1 | | |
| | | | 140 | 1.191 | | 58.4 | | |
| | | | 205 | 0.81 | | 81.4 | | |
| | | | 300 | 0.547 | | 116 | | |
| | 55 | 45 | 85 | 1.481 | 80 | 30.9 | 43 | 57 |
| | | | 130 | 0.944 | | 43.2 | | |
| | | | 195 | 0.61 | | 61.6 | | |
| | | | 280 | 0.415 | | 86.1 | | |
| | | | 410 | 0.281 | | 123 | | |
| 68 | 58 | 120 | 0.742 | 64 | 32.3 | 56 | 70 | |
| | | 180 | 0.472 | | 45.3 | | | |
| | | 275 | 0.305 | | 64.8 | | | |
| | | 395 | 0.207 | | 90.8 | | | |
| | | 585 | 0.14 | | 130 | | | |