



COIL SPRINGS ISO 10243

— ISWG —

| D Hole Diameter | d Rod Diameter | L Free Length | Spring constant N/mm (kgf/mm) | F=Lx25% | | F=Lx30% | | F=Lx35% | | F=Lx40% | | Catalog No. | Base unit price |
|-----------------------|----------------------|---------------------|----------------------------------|-----------|-----------------|-----------|-----------------|---------|-----------------|---------|-----------------|-------------|------------------|
| | | | | Fmm | Load N (kgf) | Fmm | Load N (kgf) | Fmm | Load N (kgf) | Fmm | Load N (kgf) | | |
| Operation count | | | | 3,000,000 | | 1,500,000 | | 500,000 | | 200,000 | | Type D—L | 1 ~ 19 pieces |
| 10 | 5 | 25 | 10 { 1.02 } | 6.3 | 63 { 6.4 } | 7.5 | 75 { 7.6 } | 8.8 | 88 { 9 } | 10 | 100 { 10.2 } | ISWG10— | 25 |
| | | 32 | 8.5 { 0.87 } | 8 | 68 { 6.9 } | 9.6 | 82 { 8.4 } | 11.2 | 95 { 9.7 } | 12.8 | 109 { 11.1 } | | 32 |
| | | 38 | 6.8 { 0.69 } | 9.5 | 65 { 6.6 } | 11.4 | 78 { 7.9 } | 13.3 | 90 { 9.2 } | 15.2 | 103 { 10.5 } | | 38 |
| | | 44 | 6 { 0.61 } | 11 | 66 { 6.7 } | 13.2 | 79 { 8.1 } | 15.4 | 92 { 9.4 } | 17.6 | 106 { 10.8 } | | 44 |
| | | 51 | 5 { 0.51 } | 12.8 | 64 { 6.5 } | 15.3 | 77 { 7.8 } | 17.9 | 89 { 9.1 } | 20.4 | 102 { 10.4 } | | 51 |
| | | 64 | 4.3 { 0.44 } | 16 | 69 { 7 } | 19.2 | 83 { 8.5 } | 22.4 | 96 { 9.8 } | 25.6 | 110 { 11.2 } | | 64 |
| | | 76 | 3.2 { 0.33 } | 19 | 61 { 6.2 } | 22.8 | 73 { 7.4 } | 26.6 | 85 { 8.7 } | 30.4 | 97 { 9.9 } | | 76 |
| | | 305 | 1.1 { 0.11 } | 76.3 | 84 { 8.6 } | 91.5 | 101 { 10.3 } | 107 | 117 { 11.9 } | 122 | 134 { 13.7 } | 305 | |
| 12.5 | 6.3 | 25 | 17.9 { 1.82 } | 6.3 | 113 { 11.5 } | 7.5 | 134 { 13.7 } | 8.8 | 157 { 16 } | 10 | 179 { 18.2 } | ISWG12.5— | 25 |
| | | 32 | 16.4 { 1.67 } | 8 | 131 { 13.3 } | 9.6 | 157 { 16 } | 11.2 | 184 { 18.7 } | 12.8 | 210 { 21.4 } | | 32 |
| | | 38 | 13.6 { 1.39 } | 9.5 | 129 { 13.1 } | 11.4 | 155 { 15.8 } | 13.3 | 181 { 18.4 } | 15.2 | 207 { 21.1 } | | 38 |
| | | 44 | 12.1 { 1.23 } | 11 | 133 { 13.6 } | 13.2 | 160 { 16.3 } | 15.4 | 186 { 19 } | 17.6 | 213 { 21.7 } | | 44 |
| | | 51 | 11.4 { 1.16 } | 12.8 | 146 { 14.9 } | 15.3 | 174 { 17.7 } | 17.9 | 203 { 20.7 } | 20.4 | 233 { 23.7 } | | 51 |
| | | 64 | 9.3 { 0.95 } | 16 | 149 { 15.2 } | 19.2 | 179 { 18.2 } | 22.4 | 208 { 21.2 } | 25.6 | 238 { 24.3 } | | 64 |
| | | 76 | 7.1 { 0.72 } | 19 | 135 { 13.8 } | 22.8 | 162 { 16.5 } | 26.6 | 189 { 19.3 } | 30.4 | 216 { 22 } | | 76 |
| | | 89 | 5.4 { 0.55 } | 22.3 | 120 { 12.2 } | 26.7 | 144 { 14.7 } | 31.2 | 168 { 17.1 } | 35.6 | 192 { 19.6 } | 89 | |
| | | 102 | 4.1 { 0.42 } | 25.5 | 105 { 10.7 } | 30.6 | 125 { 12.7 } | 35.7 | 146 { 14.9 } | 40.8 | 167 { 17 } | 102 | |
| | | 305 | 1.4 { 0.14 } | 76.3 | 107 { 10.9 } | 91.5 | 128 { 13 } | 107 | 149 { 15.2 } | 122 | 171 { 17.4 } | 305 | |
| 16 | 8 | 25 | 23.4 { 2.38 } | 6.3 | 147 { 15 } | 7.5 | 176 { 17.9 } | 8.8 | 205 { 20.9 } | 10 | 234 { 23.8 } | ISWG16— | 25 |
| | | 32 | 22.9 { 2.33 } | 8 | 183 { 18.6 } | 9.6 | 220 { 22.4 } | 11.2 | 256 { 26.1 } | 12.8 | 293 { 29.9 } | | 32 |
| | | 38 | 19.3 { 1.97 } | 9.5 | 183 { 18.6 } | 11.4 | 220 { 22.4 } | 13.3 | 257 { 26.2 } | 15.2 | 293 { 29.9 } | | 38 |
| | | 44 | 17.1 { 1.74 } | 11 | 188 { 19.2 } | 13.2 | 226 { 23 } | 15.4 | 263 { 26.8 } | 17.6 | 301 { 30.7 } | | 44 |
| | | 51 | 15.7 { 1.6 } | 12.8 | 201 { 20.5 } | 15.3 | 240 { 24.5 } | 17.9 | 280 { 28.5 } | 20.4 | 320 { 32.6 } | | 51 |
| | | 64 | 10.7 { 1.09 } | 16 | 171 { 17.4 } | 19.2 | 205 { 20.9 } | 22.4 | 240 { 24.5 } | 25.6 | 274 { 27.9 } | | 64 |
| | | 76 | 10 { 1.02 } | 19 | 190 { 19.4 } | 22.8 | 228 { 23.2 } | 26.6 | 266 { 27.1 } | 30.4 | 304 { 31 } | | 76 |
| | | 89 | 8.6 { 0.88 } | 22.3 | 192 { 19.6 } | 26.7 | 230 { 23.4 } | 31.2 | 268 { 27.3 } | 35.6 | 306 { 31.2 } | 89 | |
| | | 102 | 7.8 { 0.79 } | 25.5 | 199 { 20.3 } | 30.6 | 239 { 24.4 } | 35.7 | 278 { 28.3 } | 40.8 | 318 { 32.4 } | 102 | |
| | | 115 | 6.6 { 0.67 } | 28.8 | 190 { 19.4 } | 34.5 | 228 { 23.2 } | 40.3 | 266 { 27.1 } | 46 | 304 { 31 } | 115 | |
| | | 305 | 2.5 { 0.25 } | 76.3 | 191 { 19.5 } | 91.5 | 229 { 23.3 } | 107 | 267 { 27.2 } | 122 | 305 { 31.1 } | 305 | |
| 20 | 10 | 25 | 55.8 { 5.69 } | 6.3 | 352 { 35.9 } | 7.5 | 419 { 42.7 } | 8.8 | 488 { 49.7 } | 10 | 558 { 56.9 } | ISWG20— | 25 |
| | | 32 | 45 { 4.59 } | 8 | 360 { 36.7 } | 9.6 | 432 { 44 } | 11.2 | 504 { 51.4 } | 12.8 | 576 { 58.7 } | | 32 |
| | | 38 | 33.3 { 3.39 } | 9.5 | 316 { 32.2 } | 11.4 | 380 { 38.7 } | 13.3 | 443 { 45.1 } | 15.2 | 506 { 51.6 } | | 38 |
| | | 44 | 30 { 3.06 } | 11 | 330 { 33.6 } | 13.2 | 396 { 40.4 } | 15.4 | 462 { 47.1 } | 17.6 | 528 { 53.8 } | | 44 |
| | | 51 | 24.5 { 2.5 } | 12.8 | 314 { 32 } | 15.3 | 375 { 38.2 } | 17.9 | 437 { 44.5 } | 20.4 | 500 { 51 } | | 51 |
| | | 64 | 20 { 2.04 } | 16 | 320 { 32.6 } | 19.2 | 384 { 39.1 } | 22.4 | 448 { 45.7 } | 25.6 | 512 { 52.2 } | | 64 |
| | | 76 | 16 { 1.63 } | 19 | 304 { 31 } | 22.8 | 365 { 37.2 } | 26.6 | 426 { 43.4 } | 30.4 | 486 { 49.5 } | | 76 |
| | | 89 | 14 { 1.43 } | 22.3 | 312 { 31.8 } | 26.7 | 374 { 38.1 } | 31.2 | 436 { 44.4 } | 35.6 | 498 { 50.7 } | 89 | |
| | | 102 | 12 { 1.22 } | 25.5 | 306 { 31.2 } | 30.6 | 367 { 37.4 } | 35.7 | 428 { 43.6 } | 40.8 | 490 { 49.9 } | 102 | |
| | | 115 | 10.9 { 1.11 } | 28.8 | 314 { 32 } | 34.5 | 376 { 38.3 } | 40.3 | 439 { 44.7 } | 46 | 501 { 51.1 } | 115 | |
| | | 127 | 9.5 { 0.97 } | 31.8 | 302 { 30.8 } | 38.1 | 362 { 36.9 } | 44.5 | 422 { 43 } | 50.8 | 483 { 49.2 } | 127 | |
| | | 139 | 8.4 { 0.86 } | 35 | 294 { 30 } | 42 | 353 { 36 } | 48.7 | 409 { 41.7 } | 56 | 470 { 47.9 } | 139 | |
| | | 152 | 7.5 { 0.76 } | 38 | 285 { 29 } | 45.6 | 342 { 34.8 } | 53.2 | 399 { 40.7 } | 60.8 | 456 { 46.5 } | 152 | |
| | | 305 | 4 { 0.41 } | 76.3 | 305 { 31.1 } | 91.5 | 366 { 37.3 } | 107 | 427 { 43.5 } | 122 | 488 { 49.7 } | 305 | |
| 25 | 12.5 | 25 | 100 { 10.19 } | 6.3 | 630 { 64.2 } | 7.5 | 750 { 76.4 } | 8.8 | 875 { 89.2 } | 10 | 1000 { 101.9 } | ISWG25— | 25 |
| | | 32 | 80.3 { 8.18 } | 8 | 642 { 65.4 } | 9.6 | 771 { 78.6 } | 11.2 | 899 { 91.6 } | 12.8 | 1028 { 104.8 } | | 32 |
| | | 38 | 62 { 6.32 } | 9.5 | 589 { 60 } | 11.4 | 707 { 72 } | 13.3 | 825 { 84.1 } | 15.2 | 942 { 96 } | | 38 |
| | | 44 | 52.9 { 5.39 } | 11 | 582 { 59.3 } | 13.2 | 698 { 71.1 } | 15.4 | 815 { 83 } | 17.6 | 931 { 94.9 } | | 44 |
| | | 51 | 44 { 4.48 } | 12.8 | 563 { 57.4 } | 15.3 | 673 { 68.6 } | 17.9 | 785 { 80 } | 20.4 | 898 { 91.5 } | | 51 |
| | | 64 | 35.2 { 3.59 } | 16 | 563 { 57.4 } | 19.2 | 676 { 68.9 } | 22.4 | 788 { 80.3 } | 25.6 | 901 { 91.8 } | | 64 |
| | | 76 | 28 { 2.85 } | 19 | 532 { 54.2 } | 22.8 | 638 { 65 } | 26.6 | 745 { 75.9 } | 30.4 | 851 { 86.7 } | | 76 |
| | | 89 | 24 { 2.45 } | 22.3 | 535 { 54.5 } | 26.7 | 641 { 65.3 } | 31.2 | 748 { 76.2 } | 35.6 | 854 { 87 } | 89 | |
| | | 102 | 21.1 { 2.15 } | 25.5 | 538 { 54.8 } | 30.6 | 646 { 65.8 } | 35.7 | 753 { 76.7 } | 40.8 | 861 { 87.7 } | 102 | |
| | | 115 | 18.7 { 1.91 } | 28.8 | 539 { 54.9 } | 34.5 | 645 { 65.7 } | 40.3 | 753 { 76.7 } | 46 | 860 { 87.6 } | 115 | |
| | | 127 | 16.7 { 1.7 } | 31.8 | 531 { 54.1 } | 38.1 | 636 { 64.8 } | 44.5 | 742 { 75.6 } | 50.8 | 848 { 86.4 } | 127 | |
| | | 139 | 15.3 { 1.56 } | 35 | 536 { 54.6 } | 42 | 643 { 65.5 } | 48.7 | 744 { 75.8 } | 56 | 857 { 87.3 } | 139 | |
| | | 152 | 14 { 1.43 } | 38 | 532 { 54.2 } | 45.6 | 638 { 65 } | 53.2 | 745 { 75.9 } | 60.8 | 851 { 86.7 } | 152 | |
| | | 178 | 12.5 { 1.27 } | 44.5 | 556 { 56.7 } | 53.4 | 668 { 68.1 } | 62.3 | 779 { 79.4 } | 71.2 | 890 { 90.7 } | 178 | |
| | | 203 | 10.4 { 1.06 } | 50.8 | 528 { 53.8 } | 60.9 | 633 { 64.5 } | 71.1 | 739 { 75.3 } | 81.2 | 844 { 86 } | 203 | |
| | | 305 | 7 { 0.71 } | 76.3 | 534 { 54.4 } | 91.5 | 641 { 65.3 } | 107 | 747 { 76.1 } | 122 | 854 { 87 } | 305 | |

Quotation

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