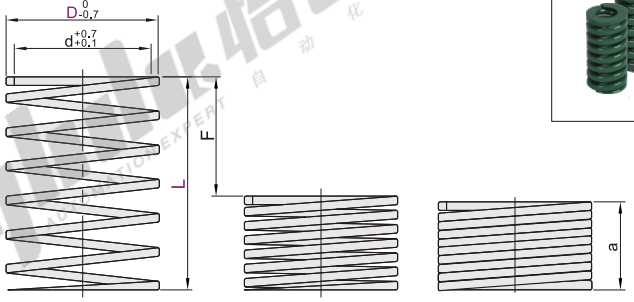
# Coil Springs — Heavy Load Spring (Green)

| Code | Type | Material | Maximum Allowable Deflection |
|---|---|---|---|
| YSWH | Heavy Load | Oil-Cooled Tempered Spring Steel | L×24% |

L Dimensional Tolerance

| L | Tol. |
|---|---|
| 50 or Less | ±0.5 |
| 50 or More | ±1.0% |

- Load(±10%).
- Perpendicularity (2° or Less).
- Load (N): Spring constant (N / mm) × Deflection(Fmm)
- Heat resistant temperature is 150 ℃.
- 1kgf=9.81N.
- The solid height values are for reference only.There may be some variation between lots.
- The spring color and number of turns may vary depending on the production batch. But the performance of the product meets the standard and does not affect the use.




The first perspective

| Part Number | | | Inner Dia. | Spring Constant N/mm | a | Usage Method | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0.3 million times F=L×24% | | 0.5 million times F=L×21.6% | | 1 million times F=L×19.2% | |
| Code | D | L | d | | Solid Height | Fmm | Load N | Fmm | Load N | Fmm | Load N |
| YSWH | 6 | 15 | 3 | 38.10 | 11.0 | 3.6 | 137 | 3.2 | 123 | 2.9 | 110 |
| | | 20 | | 28.60 | 14.7 | 4.8 | | 4.3 | | 3.8 | |
| | | 25 | | 22.90 | 18.4 | 6.0 | | 5.4 | | 4.8 | |
| | | 30 | | 19.10 | 22.0 | 7.2 | | 6.5 | | 5.8 | |
| | | 35 | | 16.30 | 25.7 | 8.4 | | 7.6 | | 6.7 | |
| | | 40 | | 14.30 | 29.4 | 9.6 | | 8.6 | | 7.7 | |
| | | 45 | | 12.70 | 33.0 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 11.40 | 36.7 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 10.40 | 40.4 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 9.50 | 44.0 | 14.4 | | 13.0 | | 11.5 | |
| | 8 | 10 | 4 | 86.25 | 7.2 | 2.4 | 206 | 2.2 | 186 | 1.9 | 167 |
| | | 15 | | 57.50 | 10.8 | 3.6 | | 3.2 | | 2.9 | |
| | | 20 | | 43.13 | 14.4 | 4.8 | | 4.3 | | 3.8 | |
| | | 25 | | 34.50 | 18.0 | 6.0 | | 5.4 | | 4.8 | |
| | | 30 | | 28.75 | 21.6 | 7.2 | | 6.5 | | 5.8 | |
| | | 35 | | 24.64 | 25.2 | 8.4 | | 7.6 | | 6.7 | |
| | | 40 | | 21.56 | 28.8 | 9.6 | | 8.6 | | 7.7 | |
| | | 45 | | 19.17 | 32.4 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 17.25 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 15.68 | 39.6 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 14.38 | 43.2 | 14.4 | | 13.0 | | 11.5 | |
| | | 65 | | 13.27 | 47.7 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 12.32 | 51.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 11.50 | 55.1 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 10.70 | 58.6 | 19.1 | | 17.2 | | 15.4 | |
| | 10 | 10 | 5 | 123.00 | 7.5 | 2.4 | 294 | 2.2 | 265 | 1.9 | 235 |
| | | 15 | | 81.70 | 11.1 | 3.6 | | 3.2 | | 2.9 | |
| | | 20 | | 61.34 | 14.4 | 4.8 | | 4.3 | | 3.8 | |
| | | 25 | | 49.07 | 18.0 | 6.0 | | 5.4 | | 4.8 | |
| | | 30 | | 40.90 | 21.6 | 7.2 | | 6.5 | | 5.8 | |
| | | 35 | | 35.05 | 25.2 | 8.4 | | 7.6 | | 6.7 | |
| | | 40 | | 30.67 | 28.8 | 9.6 | | 8.6 | | 7.7 | |
| | | 45 | | 27.26 | 32.4 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 24.54 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 22.31 | 39.6 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 20.45 | 43.2 | 14.4 | | 13.0 | | 11.5 | |
| | | 65 | | 18.87 | 46.8 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 17.53 | 50.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 16.36 | 54.0 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 15.34 | 57.6 | 19.2 | | 17.3 | | 15.4 | |
| | | 90 | | 13.63 | 64.8 | 21.6 | | 19.4 | | 17.3 | |
| | 12 | 15 | 6 | 117.00 | 11.1 | 3.6 | 422 | 3.2 | 373 | 2.9 | 333 |
| | | 20 | | 86.34 | 14.4 | 4.8 | | 4.3 | | 3.8 | |
| | | 25 | | 69.07 | 18.0 | 6.0 | | 5.4 | | 4.8 | |
| | | 30 | | 57.56 | 21.6 | 7.2 | | 6.5 | | 5.8 | |
| | | 35 | | 49.34 | 25.2 | 8.4 | | 7.6 | | 6.7 | |
| | | 40 | | 43.17 | 28.8 | 9.6 | | 8.6 | | 7.7 | |
| | | 45 | | 38.37 | 32.4 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 34.54 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 31.40 | 39.6 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 28.78 | 43.2 | 14.4 | | 13.0 | | 11.5 | |
| | | 65 | | 26.57 | 46.8 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 24.67 | 50.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 23.02 | 54.0 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 21.59 | 57.6 | 19.2 | | 17.3 | | 15.4 | |
| | | 90 | | 19.19 | 64.8 | 21.6 | | 19.4 | | 17.3 | |
| | 14 | 20 | 7 | 120.00 | 14.6 | 4.8 | 579 | 4.3 | 520 | 3.8 | 461 |
| | | 25 | | 96.30 | 18.0 | 6.0 | | 5.4 | | 4.8 | |
| | | 30 | | 80.25 | 21.6 | 7.2 | | 6.5 | | 5.8 | |
| | | 35 | | 68.78 | 25.2 | 8.4 | | 7.6 | | 6.7 | |
| | | 40 | | 60.19 | 28.8 | 9.6 | | 8.6 | | 7.7 | |
| | | 45 | | 53.50 | 32.4 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 48.15 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 43.77 | 39.6 | 13.2 | | 11.9 | | 10.6 | |

| Part Number | | | Inner Dia. | Spring Constant N/mm | a | Usage Method | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0.3 million times F=L×24% | | 0.5 million times F=L×21.6% | | 1 million times F=L×19.2% | |
| Code | D | L | d | | Solid Height | Fmm | Load N | Fmm | Load N | Fmm | Load N |
| YSWH | 14 | 60 | 7 | 40.12 | 43.2 | 14.4 | 579 | 13.0 | 520 | 11.5 | 461 |
| | | 65 | | 37.04 | 46.8 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 34.39 | 50.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 32.10 | 54.0 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 30.09 | 57.6 | 19.2 | | 17.3 | | 15.4 | |
| | | 90 | | 26.75 | 64.8 | 21.6 | | 19.4 | | 17.3 | |
| | | 100 | | 24.07 | 72.0 | 24.0 | | 21.6 | | 19.2 | |
| | 16 | 20 | 8 | 157.00 | 14.8 | 4.8 | 755 | 4.3 | 677 | 3.8 | 608 |
| | | 25 | | 125.37 | 18.0 | 6.0 | | 5.4 | | 4.8 | |
| | | 30 | | 104.48 | 21.6 | 7.2 | | 6.5 | | 5.8 | |
| | | 35 | | 89.55 | 25.2 | 8.4 | | 7.6 | | 6.7 | |
| | | 40 | | 78.36 | 28.8 | 9.6 | | 8.6 | | 7.7 | |
| | | 45 | | 69.65 | 32.4 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 62.69 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 56.99 | 39.6 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 52.24 | 43.2 | 14.4 | | 13.0 | | 11.5 | |
| | | 65 | | 48.22 | 46.8 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 44.78 | 50.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 41.79 | 54.0 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 39.18 | 57.6 | 19.2 | | 17.3 | | 15.4 | |
| | | 90 | | 34.83 | 64.8 | 21.6 | | 19.4 | | 17.3 | |
| | | 100 | | 31.34 | 72.0 | 24.0 | | 21.6 | | 19.2 | |
| | 18 | 20 | 9 | 198.00 | 14.6 | 4.8 | 951 | 4.3 | 853 | 3.8 | 765 |
| | | 25 | | 157.96 | 18.0 | 6.0 | | 5.4 | | 4.8 | |
| | | 30 | | 131.64 | 21.6 | 7.2 | | 6.5 | | 5.8 | |
| | | 35 | | 112.83 | 25.2 | 8.4 | | 7.6 | | 6.7 | |
| | | 40 | | 98.73 | 28.8 | 9.6 | | 8.6 | | 7.7 | |
| | | 45 | | 87.76 | 32.4 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 78.98 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 71.80 | 39.6 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 65.82 | 43.2 | 14.4 | | 13.0 | | 11.5 | |
| | | 65 | | 60.75 | 46.8 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 56.42 | 50.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 52.65 | 54.0 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 49.36 | 57.6 | 19.2 | | 17.3 | | 15.4 | |
| | | 90 | | 43.88 | 64.8 | 21.6 | | 19.4 | | 17.3 | |
| | | 100 | | 39.49 | 72.0 | 24.0 | | 21.6 | | 19.2 | |
| | 20 | 20 | 10 | 245.00 | 14.6 | 4.8 | 1177 | 4.3 | 1059 | 3.8 | 941 |
| | | 25 | | 196.11 | 18.0 | 6.0 | | 5.4 | | 4.8 | |
| | | 30 | | 163.43 | 21.6 | 7.2 | | 6.5 | | 5.8 | |
| | | 35 | | 140.08 | 25.2 | 8.4 | | 7.6 | | 6.7 | |
| | | 40 | | 122.57 | 28.8 | 9.6 | | 8.6 | | 7.7 | |
| | | 45 | | 108.95 | 32.4 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 98.06 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 89.14 | 39.6 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 81.71 | 43.2 | 14.4 | | 13.0 | | 11.5 | |
| | | 65 | | 75.43 | 46.8 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 70.04 | 50.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 52.65 | 54.0 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 61.28 | 57.6 | 19.2 | | 17.3 | | 15.4 | |
| | | 90 | | 54.48 | 64.8 | 21.6 | | 19.4 | | 17.3 | |
| | | 100 | | 49.03 | 72.0 | 24.0 | | 21.6 | | 19.2 | |

| Part Number | | | Inner Dia. | Spring Constant N/mm | a | Usage Method | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0.3 million times F=L×24% | | 0.5 million times F=L×21.6% | | 1 million times F=L×19.2% | |
| Code | D | L | d | | Solid Height | Fmm | Load N | Fmm | Load N | Fmm | Load N |
| YSWH | 25 | 20 | 12.5 | 382.10 | 4.5 | 4.8 | 1834 | 4.32 | 1657 | 3.84 | 1471 |
| | | 25 | | 306.85 | 18.0 | 6.0 | | 5.4 | | 4.8 | |
| | | 30 | | 255.71 | 21.6 | 7.2 | | 6.5 | | 5.8 | |
| | | 35 | | 219.18 | 25.2 | 8.4 | | 7.6 | | 6.7 | |
| | | 40 | | 191.78 | 28.8 | 9.6 | | 8.6 | | 7.7 | |
| | | 45 | | 170.47 | 32.4 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 153.43 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 139.48 | 39.6 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 127.85 | 43.2 | 14.4 | | 13.0 | | 11.5 | |
| | | 65 | | 118.02 | 46.8 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 109.59 | 50.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 102.28 | 54.4 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 95.89 | 57.6 | 19.2 | | 17.3 | | 15.4 | |
| | | 90 | | 85.24 | 64.8 | 21.6 | | 19.4 | | 17.3 | |
| | | 100 | | 76.71 | 72.0 | 24.0 | | 21.6 | | 19.2 | |
| | 30 | 25 | 15 | 440.74 | 18.0 | 6.0 | 2648 | 5.4 | 2380 | 4.8 | 2120 |
| | | 30 | | 367.28 | 21.6 | 7.2 | | 6.5 | | 5.8 | |
| | | 35 | | 314.81 | 25.2 | 8.4 | | 7.6 | | 6.7 | |
| | | 40 | | 275.46 | 28.8 | 9.6 | | 8.6 | | 7.7 | |
| | | 45 | | 244.86 | 32.4 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 220.37 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 200.34 | 39.6 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 183.64 | 43.2 | 14.4 | | 13.0 | | 11.5 | |
| | | 65 | | 169.52 | 46.8 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 157.41 | 50.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 146.91 | 54.0 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 137.73 | 57.6 | 19.2 | | 17.3 | | 15.4 | |
| | | 90 | | 122.43 | 64.8 | 21.6 | | 19.4 | | 17.3 | |
| | | 100 | | 110.19 | 72.0 | 24.0 | | 21.6 | | 19.2 | |
| | 35 | 40 | 17.5 | 375.00 | 28.8 | 9.6 | 3600 | 8.6 | 3240 | 7.7 | 2870 |
| | | 45 | | 333.33 | 32.4 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 300.00 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 272.73 | 39.6 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 250.00 | 43.2 | 14.4 | | 13.0 | | 11.5 | |
| | | 65 | | 230.77 | 46.8 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 214.29 | 50.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 200.00 | 54.0 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 187.50 | 57.6 | 19.2 | | 17.3 | | 15.4 | |
| | | 90 | | 166.67 | 64.8 | 21.6 | | 19.4 | | 17.3 | |
| | | 100 | | 150.00 | 72.0 | 24.0 | | 21.6 | | 19.2 | |
| | 40 | 40 | 20 | 490.00 | 28.7 | 9.6 | 4710 | 8.6 | 4240 | 7.7 | 3770 |
| | | 45 | | 436.21 | 33.0 | 10.8 | | 9.7 | | 8.6 | |
| | | 50 | | 392.59 | 36.0 | 12.0 | | 10.8 | | 9.6 | |
| | | 55 | | 356.90 | 40.4 | 13.2 | | 11.9 | | 10.6 | |
| | | 60 | | 327.16 | 43.2 | 14.4 | | 13.0 | | 11.5 | |
| | | 65 | | 301.99 | 47.7 | 15.6 | | 14.0 | | 12.5 | |
| | | 70 | | 280.42 | 50.4 | 16.8 | | 15.1 | | 13.4 | |
| | | 75 | | 261.73 | 55.1 | 18.0 | | 16.2 | | 14.4 | |
| | | 80 | | 245.37 | 57.6 | 19.2 | | 17.3 | | 15.4 | |
| | | 90 | | 218.11 | 64.8 | 21.6 | | 19.4 | | 17.3 | |
| | | 100 | | 196.30 | 72.0 | 24.0 | | 21.6 | | 19.2 | |

Please order as shown

| Part Number | | | d |
|---|---|---|---|
| Code | D | L | |
| YSWH | 40 | 40 | 20 |
| | | 45 | |

YSWH – D40 – L40

Discount price

| Per | 1~19 | 20~ |
|---|---|---|
| Price | 100% | Additional quotation |

Delivery 4