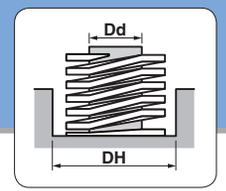
# ISO ばね　中荷重

# TJM MIDDLE RANGE LOADS ISO 10243

## COIL SPRING




| Dd (mm) | ばね定数 N/mm (kgf/mm) | 自由長 ×25% 300万回 たわみ (mm) | 荷重 N {kgf} | 自由長 ×30% 150万回 たわみ (mm) | 荷重 N {kgf} | 自由長 ×33.75% 50万回 たわみ (mm) | 荷重 N {kgf} | 自由長 ×37.5% 20万回 たわみ (mm) | 荷重 N {kgf} | たわみ限界 (mm) | Catalog No. | DH (mm) | 自由長 L (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 18.1 {1.84} | 6.3 | | 7.5 | | 8.4 | | 9.4 | | 10.3 | | | 25 |
| | 14.2 {1.44} | 8.0 | | 9.6 | | 10.8 | | 12.0 | | 13.3 | | | 32 |
| | 11.9 {1.21} | 9.5 | | 11.4 | | 12.8 | | 14.3 | | 15.9 | | | 38 |
| | 10.3 {1.05} | 11.0 | | 13.2 | | 14.9 | | 16.5 | | 18.3 | | | 44 |
| 5 | 8.9 {0.90} | 12.8 | 113 {11.5} | 15.3 | 136 {13.9} | 17.2 | 153 {15.6} | 19.1 | 170 {17.3} | 21.6 | | 10 | 51 |
| | 7.1 {0.72} | 16.0 | | 19.2 | | 21.6 | | 24.0 | | 27.0 | | | 64 |
| | 6.0 {0.61} | 19.0 | | 22.8 | | 25.7 | | 28.5 | | 32.3 | | | 76 |
| | 5.1 {0.52} | 22.3 | | 26.7 | | 30.0 | | 33.4 | | 38.2 | | | 89 |
| | 4.4 {0.44} | 25.5 | | 30.6 | | 34.4 | | 38.3 | | 43.6 | | | 102 |
| | 1.5 {0.15} | 76.3 | | 91.5 | | 102.9 | | 114.4 | | 134.2 | | | 305 |
| | 32.0 {3.26} | 6.3 | | 7.5 | | 8.4 | | 9.4 | | 10.2 | | | 25 |
| | 25.0 {2.55} | 8.0 | | 9.6 | | 10.8 | | 12.0 | | 13.0 | | | 32 |
| | 21.1 {2.15} | 9.5 | | 11.4 | | 12.8 | | 14.3 | | 15.6 | | | 38 |
| | 18.2 {1.85} | 11.0 | | 13.2 | | 14.9 | | 16.5 | | 18.0 | | | 44 |
| | 15.7 {1.60} | 12.8 | | 15.3 | | 17.2 | | 19.1 | | 21.1 | | | 51 |
| | 12.5 {1.27} | 16.0 | 200 {20.4} | 19.2 | 240 {24.5} | 21.6 | 270 {27.5} | 24.0 | 300 {30.6} | 26.5 | | 12.5 | 64 |
| 6.3 | 10.5 {1.07} | 19.0 | | 22.8 | | 25.7 | | 28.5 | | 31.8 | | | 76 |
| | 9.0 {0.91} | 22.3 | | 26.7 | | 30.0 | | 33.4 | | 37.7 | | | 89 |
| | 7.8 {0.79} | 25.5 | | 30.6 | | 34.4 | | 38.3 | | 43.1 | | | 102 |
| | 7.0 {0.71} | 28.8 | | 34.5 | | 38.8 | | 43.1 | | 49.1 | | | 115 |
| | 2.6 {0.26} | 76.3 | | 91.5 | | 102.9 | | 114.4 | | 131.7 | | | 305 |
| | 53.3 {5.43} | 6.3 | | 7.5 | | 8.4 | | 9.4 | | 9.8 | | | 25 |
| | 41.7 {4.25} | 8.0 | | 9.6 | | 10.8 | | 12.0 | | 12.7 | | | 32 |
| | 35.1 {3.58} | 9.5 | | 11.4 | | 12.8 | | 14.3 | | 15.3 | | | 38 |
| | 30.3 {3.09} | 11.0 | | 13.2 | | 14.9 | | 16.5 | | 17.9 | TJM | | 44 |
| | 26.1 {2.66} | 12.8 | | 15.3 | | 17.2 | | 19.1 | | 20.7 | | | 51 |
| | 20.8 {2.12} | 16.0 | 333 {34} | 19.2 | 400 {40.8} | 21.6 | 450 {45.9} | 24.0 | 500 {51} | 26.2 | | 16 | 64 |
| 8 | 17.5 {1.78} | 19.0 | | 22.8 | | 25.7 | | 28.5 | | 31.4 | | | 76 |
| | 15.0 {1.53} | 22.3 | | 26.7 | | 30.0 | | 33.4 | | 37.7 | | | 89 |
| | 13.1 {1.33} | 25.5 | | 30.6 | | 34.4 | | 38.3 | | 43.8 | | | 102 |
| | 11.6 {1.18} | 28.8 | | 34.5 | | 38.8 | | 43.1 | | 49.3 | | | 115 |
| | 10.5 {1.07} | 31.8 | | 38.1 | | 42.9 | | 47.6 | | 54.3 | | | 127 |
| | 4.4 {0.44} | 76.3 | | 91.5 | | 102.9 | | 114.4 | | 131.5 | | | 305 |
| | 85.3 {8.70} | 6.3 | | 7.5 | | 8.4 | | 9.4 | | 9.8 | | | 25 |
| | 66.7 {6.80} | 8.0 | | 9.6 | | 10.8 | | 12.0 | | 12.7 | | | 32 |
| | 56.1 {5.72} | 9.5 | | 11.4 | | 12.8 | | 14.3 | | 15.3 | | | 38 |
| | 48.5 {4.94} | 11.0 | | 13.2 | | 14.9 | | 16.5 | | 18.0 | | | 44 |
| | 41.8 {4.26} | 12.8 | | 15.3 | | 17.2 | | 19.1 | | 21.2 | | | 51 |
| | 33.3 {3.39} | 16.0 | | 19.2 | | 21.6 | | 24.0 | | 27.3 | | | 64 |
| | 28.1 {2.86} | 19.0 | | 22.8 | | 25.7 | | 28.5 | | 32.4 | | | 76 |
| | 24.0 {2.44} | 22.3 | 533 {54.4} | 26.7 | 640 {65.3} | 30.0 | 720 {73.4} | 33.4 | 800 {81.6} | 38.4 | | 20 | 89 |
| | 20.9 {2.13} | 25.5 | | 30.6 | | 34.4 | | 38.3 | | 42.6 | | | 102 |
| 10 | 18.6 {1.83} | 28.8 | | 34.5 | | 38.8 | | 43.1 | | 48.6 | | | 115 |
| | 16.8 {1.71} | 31.8 | | 38.1 | | 42.9 | | 47.6 | | 54.0 | | | 127 |
| | 15.3 {1.56} | 34.8 | | 41.7 | | 46.9 | | 52.1 | | 59.5 | | | 139 |
| | 14.0 {1.42} | 38.0 | | 45.6 | | 51.3 | | 57.0 | | 65.9 | | | 152 |
| | 12.0 {1.22} | 44.5 | | 53.4 | | 60.1 | | 66.8 | | 77.9 | | | 178 |
| | 10.5 {1.07} | 50.8 | | 60.9 | | 68.5 | | 76.1 | | 89.3 | | | 203 |
| | 7.0 {0.71} | 76.3 | | 91.5 | | 102.9 | | 114.4 | | 135.0 | | | 305 |

| Dd (mm) | ばね定数 N/mm (kgf/mm) | 自由長 ×25% 300万回 たわみ (mm) | 荷重 N {kgf} | 自由長 ×30% 150万回 たわみ (mm) | 荷重 N {kgf} | 自由長 ×33.75% 50万回 たわみ (mm) | 荷重 N {kgf} | 自由長 ×37.5% 20万回 たわみ (mm) | 荷重 N {kgf} | たわみ限界 (mm) | Catalog No. | DH (mm) | 自由長 L (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 128.0 {13.05} | 6.3 | | 7.5 | | 8.4 | | 9.4 | | 9.5 | | | 25 |
| | 100.0 {10.20} | 8.0 | | 9.6 | | 10.8 | | 12.0 | | 12.3 | | | 32 |
| | 84.2 {8.58} | 9.5 | | 11.4 | | 12.8 | | 14.3 | | 14.9 | | | 38 |
| | 72.7 {7.41} | 11.0 | | 13.2 | | 14.9 | | 16.5 | | 17.2 | | | 44 |
| | 62.7 {6.39} | 12.8 | | 15.3 | | 17.2 | | 19.1 | | 19.9 | | | 51 |
| | 50.0 {5.10} | 16.0 | | 19.2 | | 21.6 | | 24.0 | | 25.4 | | | 64 |
| | 42.1 {3.01} | 19.0 | | 22.8 | | 25.7 | | 28.5 | | 30.6 | | | 76 |
| 12.5 | 36.0 {3.67} | 22.3 | 800 {81.6} | 26.7 | 960 {97.9} | 30.0 | 1080 {110.2} | 33.4 | 1200 {122.4} | 36.2 | | 25 | 89 |
| | 31.4 {3.20} | 25.5 | | 30.6 | | 34.4 | | 38.3 | | 41.8 | | | 102 |
| | 27.8 {2.83} | 28.8 | | 34.5 | | 38.8 | | 43.1 | | 47.6 | | | 115 |
| | 25.2 {2.57} | 31.8 | | 38.1 | | 42.9 | | 47.6 | | 52.8 | | | 127 |
| | 23.0 {2.34} | 34.8 | | 41.7 | | 46.9 | | 52.1 | | 57.6 | | | 139 |
| | 21.1 {2.15} | 38.0 | | 45.6 | | 51.3 | | 57.0 | | 63.2 | | | 152 |
| | 18.0 {1.83} | 44.5 | | 53.4 | | 60.1 | | 66.8 | | 73.5 | | | 178 |
| | 15.8 {1.61} | 50.8 | | 60.9 | | 68.5 | | 76.1 | | 83.9 | | | 203 |
| | 14.0 {1.42} | 57.3 | | 68.7 | | 77.3 | | 85.9 | | 95.0 | | | 229 |
| | 10.5 {1.07} | 76.3 | | 91.5 | | 102.9 | | 114.4 | | 126.8 | | | 305 |
| | 154.4 {15.74} | 9.5 | | 11.4 | | 12.8 | | 14.3 | | 14.9 | | | 38 |
| | 133.3 {13.59} | 11.0 | | 13.2 | | 14.9 | | 16.5 | | 17.5 | | | 44 |
| | 115.0 {11.73} | 12.8 | | 15.3 | | 17.2 | | 19.1 | | 20.6 | | | 51 |
| | 91.7 {9.35} | 16.0 | | 19.2 | | 21.6 | | 24.0 | | 25.5 | | | 64 |
| | 77.2 {7.87} | 19.0 | | 22.8 | | 25.7 | | 28.5 | | 30.8 | | | 76 |
| | 65.9 {6.72} | 22.3 | | 26.7 | | 30.0 | | 33.4 | | 36.7 | | | 89 |
| | 57.5 {5.86} | 25.5 | | 30.6 | | 34.4 | | 38.3 | | 42.6 | TJM | | 102 |
| | 51.0 {5.20} | 28.8 | | 34.5 | | 38.8 | | 43.1 | | 48.6 | | | 115 |
| 16 | 46.2 {4.71} | 31.8 | 1467 {149.6} | 38.1 | 1760 {179.5} | 42.9 | 1980 {202} | 47.6 | 2200 {224.4} | 53.3 | | 32 | 127 |
| | 42.2 {4.30} | 34.8 | | 41.7 | | 46.9 | | 52.1 | | 55.6 | | | 139 |
| | 38.6 {3.93} | 38.0 | | 45.6 | | 51.3 | | 57.0 | | 61.0 | | | 152 |
| | 33.0 {3.36} | 44.5 | | 53.4 | | 60.1 | | 66.8 | | 71.4 | | | 178 |
| | 28.9 {2.94} | 50.8 | | 60.9 | | 68.5 | | 76.1 | | 82.6 | | | 203 |
| | 25.6 {2.61} | 57.3 | | 68.7 | | 77.3 | | 85.9 | | 92.9 | | | 229 |
| | 23.1 {2.35} | 63.5 | | 76.2 | | 85.7 | | 95.3 | | 103.6 | | | 254 |
| | 19.2 {1.95} | 76.3 | | 91.5 | | 102.9 | | 114.4 | | 124.2 | | | 305 |
| | 156.9 {16.00} | 12.8 | | 15.3 | | 17.2 | | 19.1 | | 19.6 | | | 51 |
| | 125.0 {12.75} | 16.0 | | 19.2 | | 21.6 | | 24.0 | | 25.0 | | | 64 |
| | 105.3 {10.74} | 19.0 | | 22.8 | | 25.7 | | 28.5 | | 30.3 | | | 76 |
| | 89.9 {9.16} | 22.3 | | 26.7 | | 30.0 | | 33.4 | | 35.7 | | | 89 |
| | 78.4 {7.99} | 25.5 | | 30.6 | | 34.4 | | 38.3 | | 41.1 | | | 102 |
| | 69.6 {7.09} | 28.8 | | 34.5 | | 38.8 | | 43.1 | | 46.6 | | | 115 |
| 20 | 63.0 {6.42} | 31.8 | 2000 {204} | 38.1 | 2400 {244.8} | 42.9 | 2700 {275.4} | 47.6 | 3000 {306} | 52.3 | | 40 | 127 |
| | 57.6 {5.87} | 34.8 | | 41.7 | | 46.9 | | 52.1 | | 53.8 | | | 139 |
| | 52.6 {5.36} | 38.0 | | 45.6 | | 51.3 | | 57.0 | | 59.0 | | | 152 |
| | 44.9 {4.57} | 44.5 | | 53.4 | | 60.1 | | 66.8 | | 68.9 | | | 178 |
| | 39.4 {4.01} | 50.8 | | 60.9 | | 68.5 | | 76.1 | | 78.1 | | | 203 |
| | 34.9 {3.55} | 57.3 | | 68.7 | | 77.3 | | 85.9 | | 88.4 | | | 229 |
| | 31.5 {3.21} | 63.5 | | 76.2 | | 85.7 | | 95.3 | | 98.6 | | | 254 |
| | 26.2 {2.67} | 76.3 | | 91.5 | | 102.9 | | 114.4 | | 117.2 | | | 305 |

Order

| Catalog No. | DH | − | L |
|---|---|---|---|
| TJM | 10 | − | 25 |

＊ 1N=0.1daN=0.102kg　1mm=0.0394in.

⚠ たわみ限界について
密着長に近いたわみになります。
参考値になりますのでご注意下さい。







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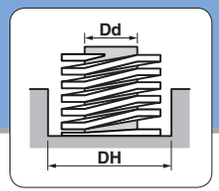
# ISO ばね　中荷重
# TJM MIDDLE RANGE LOADS ISO 10243

## COIL SPRING




| Dd (mm) | ばね定数 N/mm {kgf/mm} | 自由長 ×25% 300万回 たわみ (mm) | 荷重 N {kgf} | 自由長 ×30% 150万回 たわみ (mm) | 荷重 N {kgf} | 自由長 ×33.75% 50万回 たわみ (mm) | 荷重 N {kgf} | 自由長 ×37.5% 20万回 たわみ (mm) | 荷重 N {kgf} | たわみ限界 (mm) | Catalog No. | DH (mm) | 自由長 L (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 208.3 {21.24} | 16.0 | 3333 {340} | 19.2 | 4000 {408} | 21.6 | 4500 {459} | 24.0 | 5000 {510} | 24.2 | TJM | 50 | 64 |
| | 175.4 {17.89} | 19.0 | | 22.8 | | 25.7 | | 28.5 | | 29.3 | | | 76 |
| | 149.8 {15.27} | 22.3 | | 26.7 | | 30.0 | | 33.4 | | 34.6 | | | 89 |
| | 130.7 {13.33} | 25.5 | | 30.6 | | 34.4 | | 38.3 | | 41.1 | | | 102 |
| | 115.9 {11.82} | 28.8 | | 34.5 | | 38.8 | | 43.1 | | 46.4 | | | 115 |
| | 105.0 {10.71} | 31.8 | | 38.1 | | 42.9 | | 47.6 | | 51.6 | | | 127 |
| | 95.9 {9.78} | 34.8 | | 41.7 | | 46.9 | | 52.1 | | 56.9 | | | 139 |
| | 87.7 {8.94} | 38.0 | | 45.6 | | 51.3 | | 57.0 | | 62.8 | | | 152 |
| | 74.9 {7.63} | 44.5 | | 53.4 | | 60.1 | | 66.8 | | 74.6 | | | 178 |
| | 65.7 {6.70} | 50.8 | | 60.9 | | 68.5 | | 76.1 | | 85.8 | | | 203 |
| | 58.2 {5.93} | 57.3 | | 68.7 | | 77.3 | | 85.9 | | 99.1 | | | 229 |
| | 52.5 {5.35} | 63.5 | | 76.2 | | 85.7 | | 95.3 | | 108.7 | | | 254 |
| | 43.7 {4.45} | 76.3 | | 91.5 | | 102.9 | | 114.4 | | 131.7 | | | 305 |
| 38 | 280.7 {28.63} | 19.0 | 5333 {544} | 22.8 | 6400 {652.8} | 25.7 | 7200 {734.4} | 28.5 | 8000 {816} | 28.6 | | 63 | 76 |
| | 239.7 {24.44} | 22.3 | | 26.7 | | 30.0 | | 33.4 | | 34.4 | | | 89 |
| | 209.2 {21.33} | 25.5 | | 30.6 | | 34.4 | | 38.3 | | 40.5 | | | 102 |
| | 185.5 {18.92} | 28.8 | | 34.5 | | 38.8 | | 43.1 | | 43.9 | | | 115 |
| | 168.0 {17.13} | 31.8 | | 38.1 | | 42.9 | | 47.6 | | 49.9 | | | 127 |
| | 140.4 {14.32} | 38.0 | | 45.6 | | 51.3 | | 57.0 | | 61.0 | | | 152 |
| | 119.9 {12.22} | 44.5 | | 53.4 | | 60.1 | | 66.8 | | 72.9 | | | 178 |
| | 105.1 {10.72} | 50.8 | | 60.9 | | 68.5 | | 76.1 | | 84.1 | | | 203 |
| | 93.2 {9.50} | 57.3 | | 68.7 | | 77.3 | | 85.9 | | 96.4 | | | 229 |
| | 84.0 {8.56} | 63.5 | | 76.2 | | 85.7 | | 95.3 | | 108.1 | | | 254 |
| | 69.9 {7.12} | 76.3 | | 91.5 | | 102.9 | | 114.4 | | 131.1 | | | 305 |

Order

| Catalog No. | DH | – | L |
|---|---|---|---|
| TJM | 50 | – | 64 |

＊ 1N=0.1daN=0.102kg　1mm=0.0394in.

⚠ たわみ限界について
密着長に近いたわみになります。
参考値になりますのでご注意下さい。







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