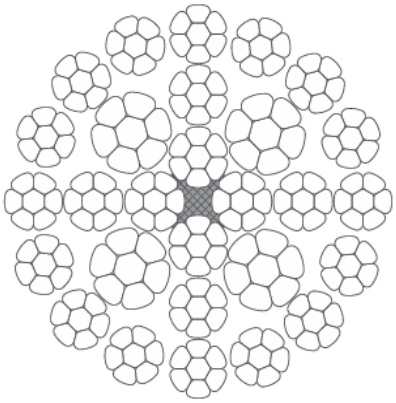
# Mobile Lattice Boom / Crawler Crane Rope Specifications

**KEY: RR = rotation resistance; C = compacted; PIR = Plastic Impregnation W = Warrington Core**

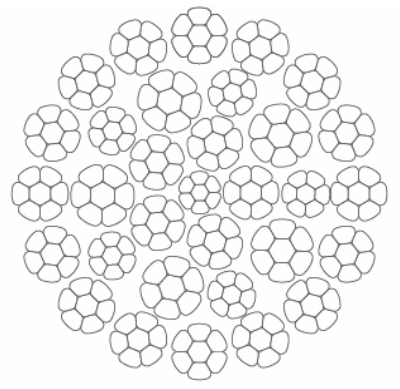
## *Hoist & Auxiliary Ropes*

**28x7 RR + C + W**



| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2160 MPa |
| 10 | - | 55.3 | 0.49 | 89.1 | 99 |
| 11 | 7/16 | 66.9 | 0.59 | 107.8 | 119.8 |
| 12 | - | 79.6 | 0.71 | 128.3 | 142.6 |
| 13 | 1/2 | 93.4 | 0.83 | 150 | 167.3 |
| 14 | 9/16 | 108.3 | 0.96 | 174.6 | 194.0 |
| 15 | - | 124.3 | 1.10 | 200 | 222.8 |
| 16 | 5/8 | 141.4 | 1.25 | 228.1 | 253.4 |
| 17 | - | 159.7 | 1.42 | 260 | 286.1 |
| | | | **f** - Fill Factor | **k** - Spinning Loss Factor | |
| | | | 0.700 | 0.823 | 0.830 |

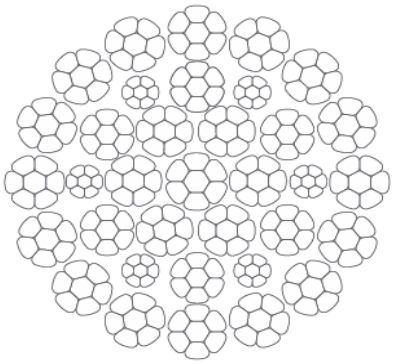
**32x7 RR + C + W**



| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2160 MPa |
| 18 | - | 177.2 | 1.59 | 286 | 317.6 |
| 19 | 3/4 | 197.4 | 1.77 | 319 | 356 |
| 20 | - | 218.8 | 1.96 | 353 | 392.2 |
| 21 | - | 241.2 | 2.16 | 389 | 432.4 |
| 22 | 7/8 | 264.7 | 2.38 | 427 | 474.5 |
| 23 | - | 289.3 | 2.60 | 467 | 518.6 |
| 24 | - | 315.0 | 2.83 | 508 | 564.7 |
| 25 | 1 | 341.8 | 3.07 | 551 | 612.7 |
| 26 | - | 369.7 | 3.32 | 596 | 662.7 |

| f - Fill Factor | k - Spinning Loss Factor | |
|---|---|---|
| 0.700 | 0.823 | 0.830 |

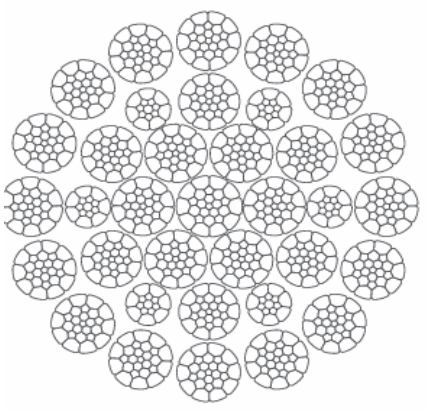
**35x7 RR + C + W**



| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2160 MPa |
| 28 | 1-1/8 | 433.1 | 3.87 | 698 | 760.8 |
| 29 | - | 464.6 | 4.15 | 749 | 816 |
| 30 | - | 497.2 | 4.44 | 801 | 873 |
| 32 | - | 565.7 | 5.05 | 912 | 994 |
| 34 | 1-3/8 | 638.6 | 5.71 | 1029 | 1122 |
| 36 | - | 715.9 | 6.40 | 1154 | 1258 |
| 38 | 1-1/2 | 797.7 | 7.13 | 1285 | 1401 |
| 40 | - | 883.8 | 7.90 | 1424 | 1553 |
| 42 | 1-5/8 | 974.4 | 8.71 | 1570 | 1712 |
| 44 | - | 1069.4 | 9.56 | 1723 | 1879 |
| 46 | - | 1168.9 | 10.45 | 1884 | 2053 |
| 48 | 1-7/8 | 1272.7 | 11.37 | 2051 | 2236 |

| f - Fill Factor | k - Spinning Loss Factor | |
|---|---|---|
| 0.700 | 0.823 | 0.813 |

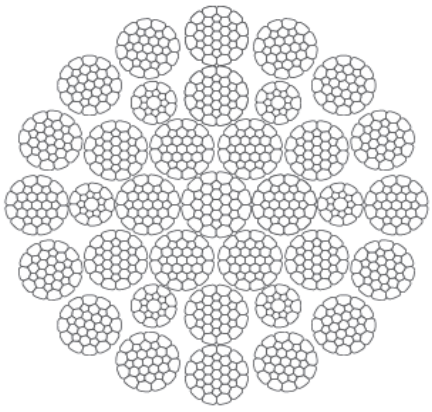
**35x26 RR + C + W**



| Diameter | | Section | Mass | Minimum breaking load |
|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN |
| | | | | **2160 MPa** |
| 68 | - | 2602.7 | 23.42 | 4352 |
| 70 | - | 2758.0 | 24.82 | 4611 |
| 72 | - | 2917.9 | 26.26 | 4879 |

| **f** - Fill Factor | **k** - Spinning Loss Factor |
|---|---|
| 0.717 | 0.774 |

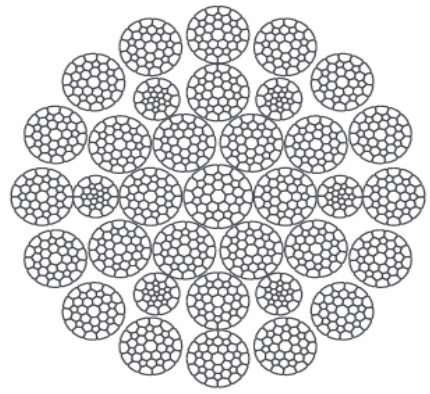
**35x31 RR + C + W**



| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2060 MPa |
| 74 | - | 3040.2 | 27.37 | - | 5046 |
| 76 | 3 | 3206.8 | 28.87 | - | 5322 |
| 78 | - | 3377.8 | 30.41 | - | 5606 |
| 80 | - | 3553.2 | 31.99 | - | 5897 |
| 82 | - | 3718.5 | 33.47 | - | 6172 |
| 84 | - | 3825.2 | 34.20 | - | 6410 |
| 86 | - | 4009.5 | 35.85 | - | 6719 |
| 89 | 3-1/2 | 4294.1 | 38.40 | - | 7196 |

| f - Fill Factor | k - Spinning Loss Factor | |
|---|---|---|
| 0.724 | 0.850 | 0.742 |

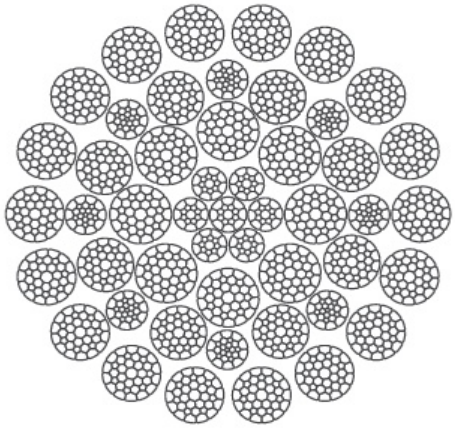
**35x36 RR + C + W**



| Diameter | | Section | Mass | Minimum breaking load |
|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN |
| | | | | 2060 MPa |
| 93 | - | 4706.6 | 42.01 | 8043 |
| 97 | - | 5120.2 | 45.70 | 8750 |
| 100 | - | 5441.8 | 48.57 | 9299 |
| 102 | - | 5661.7 | 50.54 | 9675 |
| 109 | - | 6331.4 | 56.81 | 10800 |

| f - Fill Factor | k - Spinning Loss Factor |
|---|---|
| 0.690 | 0.870 |

**49x36 RR + C + W**



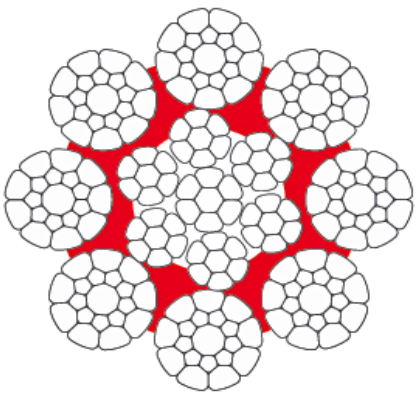
| Diameter | | Section | Mass | Minimum breaking load |
|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN |
| | | | | 2060 MPa |
| 113 | 4-1/2 | 6804.7 | 61.05 | 11607 |
| 118 | - | 7420.2 | 66.57 | 12657 |
| 121 | - | 7802.3 | 70.00 | 13309 |
| 125 | - | 8326.6 | 74.71 | 14204 |

| f - Fill Factor | k - Spinning Loss Factor |
|---|---|
| 0.680 | 0.870 |

## *Mobile Lattice Boom / Crawler Crane Boom Ropes*

## Plastic Impregnated Boom Ropes (PIR) For Guided Systems Only

**8x19 PIR**

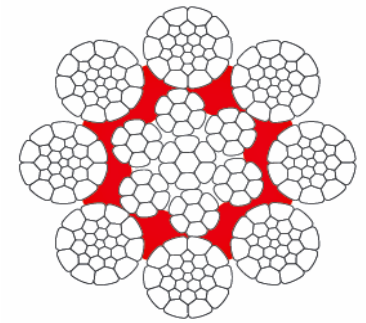


| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2160 MPa |
| 6.5 | - | 23.5 | 0.20 | - | 41.8 |
| 7 | - | 27.3 | 0.24 | - | 48.5 |
| 7.2 | - | 28.9 | 0.26 | - | 51.6 |
| 8 | 5/16 | 35.8 | 0.32 | - | 65.6 |
| 9 | - | 45.6 | 0.41 | - | 83.5 |
| 10 | - | 56.9 | 0.51 | - | 104 |
| 11 | 7/16 | 69.9 | 0.63 | - | 128 |
| 12 | - | 82.0 | 0.73 | - | 150.5 |
| 13 | 1/2 | 95.8 | 0.86 | - | 175.5 |
| 14 | 9/16 | 110.4 | 0.99 | - | 202 |
| 15 | - | 127.5 | 1.14 | - | 233.4 |

| f - Fill Factor | k - Spinning Loss Factor | |
|---|---|---|
| 0.720 | - | 0.845 |

⚠ Never use with swivel

## 8x26 PIR

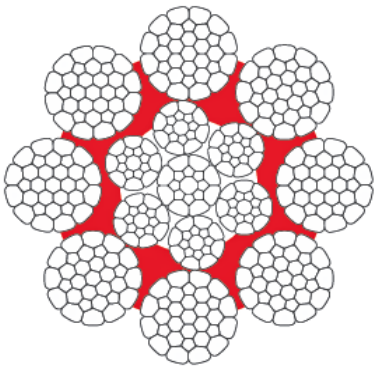


| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2160 MPa |
| 16 | 5/8 | 140.1 | 1.26 | 231 | 245 |
| 18 | - | 177.3 | 1.59 | 292 | 310 |
| 19 | 3/4 | 197.5 | 1.77 | 326 | 345 |
| 20 | - | 218.9 | 1.96 | 361 | 382 |
| 22 | 7/8 | 264.8 | 2.37 | 437 | 463 |
| 23 | - | 291.2 | 2.60 | 481 | 503 |
| 24 | - | 317.1 | 2.83 | 523 | 548 |
| 25.4 | 1 | 355.2 | 3.17 | 586 | 614 |
| 26 | - | 372.1 | 3.32 | 614 | 643 |
| 27 | - | 401.3 | 3.58 | 655 | 685 |
| 28 | 1-1/8 | 420.8 | 3.72 | 705 | 737 |
| 29 | - | 451.4 | 3.99 | 756 | 790 |
| 30 | - | 483.1 | 4.27 | 809 | 846 |
| 32 | 1-1/4 | 549.6 | 4.86 | 920 | 962 |

| f - Fill Factor | k - Spinning Loss Factor | |
|---|---|---|
| 0.695 | 0.845 | 0.810 |

⚠ Never use with swivel

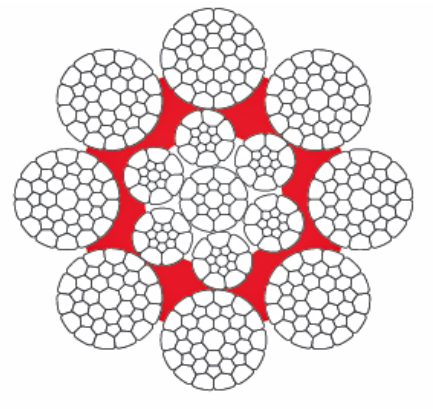
**8x31 PIR**



| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2160 MPa |
| 34 | 1-3/8 | 619.4 | 5.56 | 1030 | 1051 |
| 35 | - | 669.3 | 6.09 | 1091 | 1114 |
| 36 | - | 708.1 | 6.44 | 1161 | 1186 |
| 38 | 1-1/2 | 789.0 | 7.18 | 1294 | 1321 |
| 40 | - | 874.2 | 7.96 | 1434 | 1464 |
| 41.3 | - | 932.0 | 8.48 | 1529 | 1561 |
| 42 | 1-5/8 | 960.2 | 8.74 | 1578 | 1611 |
| 44 | 1-3/4 | 1053.8 | 9.60 | 1728 | 1765 |
| 44.5 | - | 1077.9 | 9.82 | 1768 | 1805 |
| 46 | - | 1151.8 | 10.49 | 1889 | 1929 |
| 48 | 1-7/8 | 1254.1 | 11.42 | 2057 | 2100 |
| 50 | 2 | 1342.3 | 12.15 | 2223 | 2269 |
| 51 | - | 1396.5 | 12.64 | 2303 | 2351 |
| 52 | - | 1451.8 | 13.14 | 2394 | 2444 |
| 54 | 2-1/8 | 1565.6 | 14.17 | 2582 | - |
| 56 | - | 1683.7 | 15.24 | 2776 | - |
| 58 | 2-1/4 | 1806.2 | 16.35 | 2978 | - |

| | **f** - Fill Factor | **k** - Spinning Loss Factor | |
|---|---|---|---|
| ⚠ Never **use with swivel** | 0.695 | 0.839 | 0.777 |

**8x36 PIR**

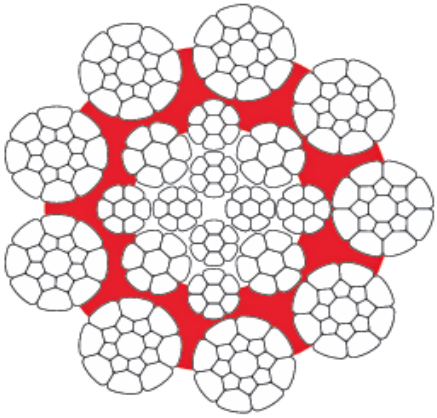


| Diameter | | Section | Mass | Minimum breaking load |
|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN |
| | | | | 1960 MPa |
| 60 | 2-3/8 | 1946.1 | 17.72 | 3192 |
| 62 | - | 2078.0 | 18.92 | 3408 |
| 64 | - | 2214.3 | 20.16 | 3632 |
| 65 | - | 2284.0 | 20.80 | 3746 |
| | | | f - Fill Factor | k - Spinning Loss Factor |
| | | | 0.695 | 0.837 |

⚠ Never use with swivel

## High Performance Plastic Impregnated Rope – Compacted with Warrington Core.

9X17 PIR High Performance

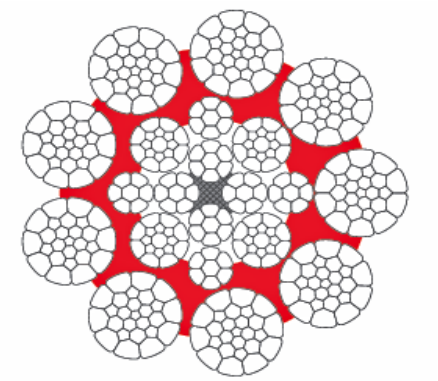


| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2160 MPa |
| 16 | 5/8 | 135.4 | 1.20 | 219 | 239 |
| 18 | - | 171.7 | 1.54 | 277 | 302 |
| 19 | 3/4 | 191.4 | 1.72 | 308 | 336 |

| f - Fill Factor | k - Spinning Loss Factor | |
|---|---|---|
| 0.675 | 0.830 | 0.815 |

⚠ Never use with swivel

9x26 PIR High Performance

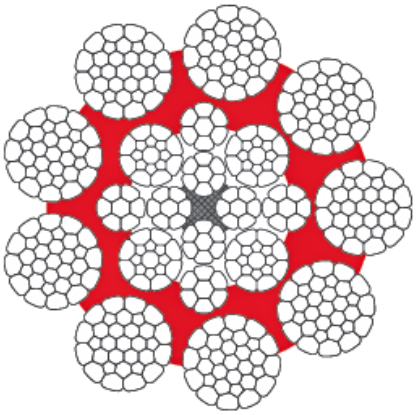


| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2160 MPa |
| 20 | - | 213.5 | 1.92 | 346 | 375 |
| 22 | 7/8 | 255.2 | 2.31 | 416 | 450 |
| 24 | - | 303.1 | 2.74 | 493 | 534 |
| 25 | - | 334.1 | 3.02 | 545 | 586 |
| 25.4 | - | 350.3 | 3.17 | 569 | 611 |
| 26 | - | 362.7 | 3.28 | 592 | 631 |
| 28 | 1-1/8 | 415.6 | 3.75 | 677 | 721 |
| 28.6 | - | 430.3 | 3.89 | 700 | 746 |
| 30 | - | 469.9 | 4.25 | 763 | 814 |
| 32 | 1-1/4 | 534.6 | 4.84 | 868 | 926 |

| f - Fill Factor | k - Spinning Loss Factor | |
|---|---|---|
| 0.675 | 0.830 | 0.815 |

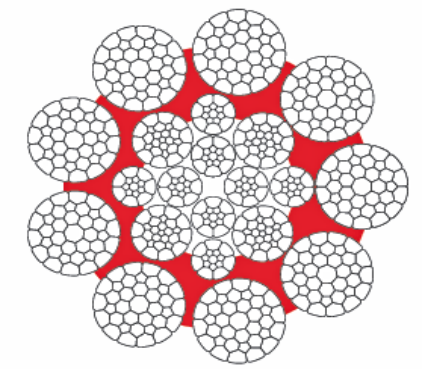
⚠ Never use with swivel

9x31 PIR High Performance



| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2160 MPa |
| 34 | 1-3/8 | 617.5 | 5.56 | 1015 | 1075 |
| 35 | - | 652.9 | 5.88 | 1104 | 1155 |
| 36 | - | 689.2 | 6.21 | 1168 | 1222 |
| 38 | 1-1/2 | 763.9 | 6.90 | 1290 | 1362 |
| 40 | - | 857.6 | 7.76 | 1401 | 1487 |
| 41 | - | 918.4 | 8.24 | 1482 | 1558 |
| 42 | - | 953.8 | 8.73 | 1563 | 1631 |
| 44 | - | 1051.3 | 9.51 | 1716 | 1785 |
| 46 | - | 1142 | 10.31 | 1870 | 1945 |
| 48 | - | 1235.3 | 11.18 | 2030 | 2106 |
| 50 | - | 1343.2 | 12.17 | 2198 | 2272 |
| | | | **f** - Fill Factor | **k** - Spinning Loss Factor | |
| ⚠ Never use with swivel | | | 0.675 | 0.830 | 0.815 |

9x36 PIR High Performance



| Diameter | | Section | Mass | Minimum breaking load | |
|---|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN | kN |
| | | | | 1960 MPa | 2160 MPa |
| 52 | - | 1443.4 | 12.99 | 2343 | 2405 |
| 54 | - | 1556.6 | 14.01 | 2527 | 2594 |
| 56 | 2-1/8 | 1674.0 | 15.07 | 2716 | 2789 |
| 58 | - | 1784.2 | 16.03 | 2934 | 3012 |
| 60 | - | 1914.6 | 17.24 | 3160 | 3244 |
| 62 | 2-3/8 | 2080.0 | 18.75 | 3402 | 3492 |
| 64 | - | 2186.4 | 19.98 | 3625 | 3721 |

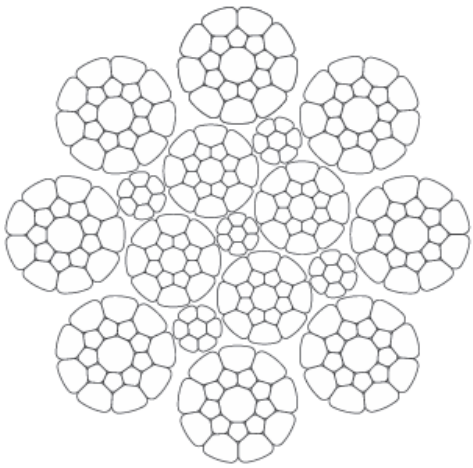
| f - Fill Factor | k - Spinning Loss Factor | |
|---|---|---|
| 0.675 | 0.830 | 0.790 |

⚠ Never **use with swivel**

## *Parallel Closed Ropes (boom)*

Must be anchored at both ends under tension

8x19 Parallel Closed Boom Rope

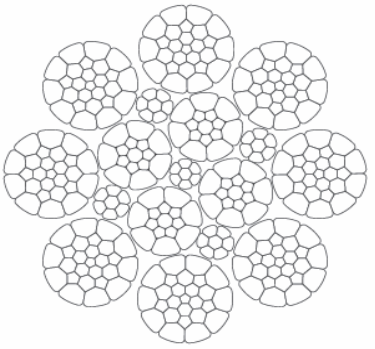


| Diameter | | Section | Mass | Minimum breaking load |
|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN |
| | | | | 2160 MPa |
| 6.4 | - | 23.7 | 0.20 | 43 |
| 7 | - | 28.3 | 0.25 | 51 |
| 7.2 | - | 29.9 | 0.26 | 54 |
| 8 | 5.16 | 36.8 | 0.32 | 67 |
| 9 | - | 46.6 | 0.40 | 85 |
| 10 | - | 57.1 | 0.50 | 105 |
| 11 | 7/16 | 69.1 | 0.60 | 126.4 |
| 12 | - | 82.1 | 0.71 | 150 |
| 13 | 1/2 | 95.9 | 0.83 | 175 |
| 14 | 9/16 | 112.2 | 0.97 | 205 |
| 15 | - | 130.0 | 1.13 | 238.6 |

| f - Fill Factor | k - Spinning Loss Factor |
|---|---|
| 0.733 | 0.845 |

⚠ Never use with swivel

8x26 Parallel Closed Boom Rope



| Diameter | | Section | Mass | Minimum breaking load |
|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN |
| | | | | 2160 MPa |
| 16 | 5/8 | 149.1 | 1.31 | 273 |
| 18 | - | 187.4 | 1.64 | 343 |
| 19 | 3/4 | 208.8 | 1.83 | 382 |
| 20 | - | 231.3 | 2.02 | 423 |
| 22 | 7/8 | 279.9 | 2.45 | 512 |
| 24 | - | 333.2 | 2.92 | 609 |
| 25 | - | 361.5 | 3.16 | 661 |
| 26 | - | 379.9 | 3.32 | 703 |
| 28 | 1-1/8 | 454.0 | 3.96 | 821 |
| 28.6 | - | 473.7 | 4.13 | 856 |

| f - Fill Factor | k - Spinning Loss Factor |
|---|---|
| 0.733 | 0.845 |

⚠ Never use with swivel

8x31 Parallel Closed Boom Rope

| Diameter | | Section | Mass | Minimum breaking load |
|---|---|---|---|---|
| mm | inch | mm² | kg/m | kN |
| | | | | 2160 MPa |
| 30 | - | 521.2 | 4.55 | 942 |
| 32 | 1-1/4 | 602.8 | 5.29 | 1086 |
| 34 | 1-3/8 | 680.5 | 5.97 | 1226 |
| 36 | - | 762.9 | 6.69 | 1375 |
| 38 | 1-1/2 | 842.2 | 7.38 | 1495 |
| 40 | - | 943.3 | 8.27 | 1658 |
| 42 | 1-5/8 | 1040.0 | 9.12 | 1828 |
| 44.5 | - | 1117.1 | 9.74 | 2003 |
| 46 | - | 1193.7 | 10.41 | 2140 |
| 48 | 1-7/8 | 1296.6 | 11.35 | 2309 |
| 50 | 2 | 1406.9 | 12.32 | 2505 |
| 50.8 | - | 1452.3 | 12.71 | 2586 |
| 52 | - | 1521.7 | 13.32 | 2710 |
| | | | **f** - Fill Factor | **k** - Spinning Loss Factor |
| | | | 0.733 | 0.830 |

⚠ Never use with swivel