

## Choosing the right rope

A precondition for a long lifetime and good performance is the correct choice of rope. The outer wire diameter, the design, the stranding method and the wire strength are among the parameters that have to be defined.

The table given below is a useful aid when deciding on which type of rope to use.

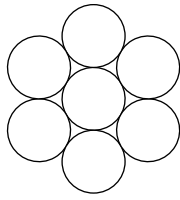
|                            | Ropeway systems                                                                    |                                                                                    |                                                                                    |                                                                                     |                                                                                      |                                                                                      |
|----------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                            | Unidirectional ropeway                                                             |                                                                                    |                                                                                    | Revers. ropeway                                                                     | Funicular                                                                            | Ski-tow                                                                              |
|                            | Monocable                                                                          |                                                                                    | Multicable                                                                         | Multicable                                                                          |                                                                                      |                                                                                      |
|                            |  |  |  |  |  |  |
| Track rope                 |                                                                                    |                                                                                    | 4.23–4.26                                                                          | 4.23–4.26                                                                           |                                                                                      |                                                                                      |
| Carrying rope              | 4.09–4.18<br>4.20–4.22                                                             | 4.11–4.18<br>4.20–4.22                                                             |                                                                                    |                                                                                     |                                                                                      | 4.08–4.11<br>4.19–4.20                                                               |
| Hauling rope               |                                                                                    |                                                                                    | 4.11–4.18<br>4.20–4.22                                                             | 4.11–4.18<br>4.20–4.22                                                              | 4.11–4.18<br>4.20–4.22                                                               |                                                                                      |
| Tension rope               | 4.28                                                                               | 4.28                                                                               | 4.28                                                                               | 4.28                                                                                |                                                                                      | 4.28                                                                                 |
| Telephone and Signal cable | 4.03–4.05<br>4.29–4.30                                                             | 4.03–4.05<br>4.29–4.30                                                             | 4.03–4.05<br>4.29–4.30                                                             | 4.03–4.05<br>4.29–4.30                                                              |                                                                                      | 4.03                                                                                 |
| Winch rope<br>Rescue rope  |                                                                                    |                                                                                    |                                                                                    | 4.08–4.11<br>4.19–4.20                                                              |                                                                                      |                                                                                      |

# UNITS CONVERSION FACTORS

| To convert from:<br>To convert to: | to:<br>from:                 | Multiple by:<br>Divide by: |
|------------------------------------|------------------------------|----------------------------|
| microns                            | mils                         | 0.03937                    |
| mm                                 | in                           | 0.03937                    |
| cm                                 | in                           | 0.39370                    |
| m                                  | ft                           | 3.2808                     |
| km                                 | ft                           | 3280.8                     |
| km                                 | mi                           | 0.62137                    |
| kg                                 | lb.                          | 2.2046                     |
| g                                  | oz.                          | 0.0353                     |
| kg/m                               | lb./ft                       | 0.67197                    |
| t (1000 kg)                        | short ton (2000 lb.)         | 0.9072                     |
| N                                  | lbf                          | 0.2248                     |
| kN                                 | lbf                          | 224.809                    |
| kN                                 | short ton                    | 0.112                      |
| N x m                              | lb. x ft                     | 0.73757                    |
| N/cm                               | lb./in                       | 0.5710                     |
| mm <sup>2</sup>                    | in <sup>2</sup>              | 0.00155                    |
| kPa                                | PSI                          | 0.14511                    |
| N/mm <sup>2</sup>                  | PSI                          | 0.000145                   |
| lt                                 | US gallon                    | 0.2642                     |
| lt                                 | Imp. gallon                  | 0.22                       |
| °C = $\frac{5}{9} (°F - 32)$       | °F = $\frac{9}{5} (°C + 32)$ |                            |

## Diameter conversion table

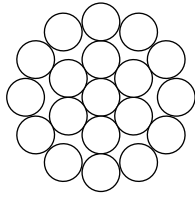
| inch           | mm, nominal | mm, actual |
|----------------|-------------|------------|
| $\frac{3}{16}$ | 5           | 4.76       |
| $\frac{1}{4}$  | 6           | 6.35       |
| $\frac{3}{8}$  | 9           | 9.525      |
| $\frac{1}{2}$  | 13          | 12.7       |
| $\frac{5}{8}$  | 16          | 15.875     |
| $\frac{3}{4}$  | 19          | 19.05      |
| $\frac{7}{8}$  | 22          | 22.225     |
| 1              | 26          | 25.4       |
| $1\frac{1}{8}$ | 29          | 28.575     |
| $1\frac{1}{4}$ | 32          | 31.75      |
| $1\frac{3}{8}$ | 35          | 34.925     |
| $1\frac{1}{2}$ | 38          | 38.1       |
| $1\frac{5}{8}$ | 42          | 41.275     |
| $1\frac{3}{4}$ | 45          | 44.45      |
| $1\frac{7}{8}$ | 48          | 47.625     |
| 2              | 51          | 50.8       |
| $2\frac{1}{8}$ | 54          | 53.975     |
| $2\frac{1}{4}$ | 57          | 57.15      |
| $2\frac{3}{8}$ | 61          | 60.325     |
| $2\frac{1}{2}$ | 64          | 63.5       |
| $2\frac{5}{8}$ | 67          | 66.675     |
| $2\frac{3}{4}$ | 70          | 69.85      |
| $2\frac{7}{8}$ | 74          | 73.025     |
| 3              | 77          | 76.2       |
| $3\frac{1}{8}$ | 80          | 79.375     |
| $3\frac{1}{4}$ | 83          | 82.55      |
| $3\frac{3}{8}$ | 86          | 85.725     |
| $3\frac{1}{2}$ | 90          | 88.9       |
| $3\frac{5}{8}$ | 92          | 92.075     |
| $3\frac{3}{4}$ | 96          | 95.25      |
| $3\frac{7}{8}$ | 99          | 98.425     |
| 4              | 102         | 101.6      |



## Single stranded rope 1 x 7 (1+6 standard)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 5.0                 | 1.65             | 15                   | 12.5           | 24                           | 25         | 27         | 28         | 30         | 31         | 33         | 22                    | 24         | 25         | 26         | 28         | 29         | 30         |
| 5.2                 | 1.70             | 16                   | 13.3           | 25                           | 27         | 29         | 30         | 32         | 33         | 35         | 24                    | 25         | 27         | 28         | 29         | 31         | 32         |
| 5.3                 | 1.75             | 17                   | 14.0           | 27                           | 29         | 30         | 32         | 34         | 35         | 37         | 25                    | 27         | 28         | 30         | 31         | 32         | 34         |
| 5.5                 | 1.80             | 18                   | 14.8           | 28                           | 30         | 32         | 34         | 35         | 37         | 39         | 26                    | 28         | 30         | 31         | 33         | 34         | 36         |
| 5.6                 | 1.85             | 19                   | 15.7           | 30                           | 32         | 34         | 36         | 37         | 39         | 41         | 28                    | 30         | 31         | 33         | 35         | 36         | 38         |
| 5.8                 | 1.90             | 20                   | 16.5           | 32                           | 34         | 36         | 37         | 40         | 42         | 44         | 29                    | 31         | 33         | 35         | 37         | 38         | 40         |
| 5.9                 | 1.95             | 21                   | 17.4           | 33                           | 35         | 38         | 39         | 42         | 44         | 46         | 31                    | 33         | 35         | 37         | 39         | 40         | 42         |
| 6.0                 | 2.00             | 22                   | 18.3           | 35                           | 37         | 39         | 42         | 44         | 46         | 48         | 33                    | 35         | 37         | 39         | 41         | 42         | 44         |
| 6.2                 | 2.05             | 23                   | 19.2           | 37                           | 39         | 41         | 44         | 46         | 48         | 51         | 34                    | 36         | 39         | 41         | 43         | 44         | 47         |
| 6.4                 | 2.10             | 25                   | 20.2           | 39                           | 41         | 44         | 46         | 48         | 51         | 53         | 36                    | 38         | 40         | 43         | 45         | 47         | 49         |
| 6.5                 | 2.15             | 26                   | 21.1           | 40                           | 43         | 46         | 48         | 50         | 53         | 56         | 38                    | 40         | 42         | 45         | 47         | 49         | 51         |
| 6.7                 | 2.20             | 27                   | 22.1           | 42                           | 45         | 48         | 50         | 53         | 56         | 58         | 39                    | 42         | 44         | 47         | 49         | 51         | 54         |
| 6.8                 | 2.25             | 28                   | 23.1           | 44                           | 47         | 50         | 52         | 55         | 58         | 61         | 41                    | 44         | 46         | 49         | 51         | 53         | 56         |
| 7.0                 | 2.30             | 29                   | 24.2           | 46                           | 49         | 52         | 55         | 58         | 61         | 64         | 43                    | 46         | 48         | 51         | 54         | 56         | 59         |
| 7.5                 | 2.50             | 35                   | 28.5           | 55                           | 58         | 62         | 65         | 68         | 72         | 75         | 51                    | 54         | 57         | 60         | 63         | 66         | 69         |
| 7.7                 | 2.55             | 36                   | 29.6           | 57                           | 60         | 64         | 67         | 71         | 74         | 78         | 53                    | 56         | 60         | 63         | 66         | 69         | 72         |
| 8.0                 | 2.65             | 39                   | 32.0           | 61                           | 65         | 69         | 73         | 77         | 80         | 84         | 57                    | 61         | 64         | 68         | 71         | 74         | 78         |
| 8.3                 | 2.75             | 42                   | 34.5           | 66                           | 70         | 74         | 78         | 82         | 87         | 91         | 61                    | 65         | 69         | 73         | 77         | 80         | 83         |
| 8.5                 | 2.85             | 45                   | 37.0           | 71                           | 75         | 80         | 84         | 88         | 93         | 97         | 66                    | 70         | 74         | 78         | 82         | 85         | 90         |
| 8.9                 | 2.95             | 48                   | 39.6           | 76                           | 81         | 86         | 90         | 95         | 100        | 104        | 71                    | 75         | 80         | 84         | 88         | 92         | 96         |
| 9.0                 | 3.05             | 52                   | 42.3           | 81                           | 86         | 91         | 96         | 101        | 106        | 112        | 75                    | 80         | 85         | 89         | 94         | 98         | 103        |
| 9.5                 | 3.20             | 57                   | 46.6           | 89                           | 95         | 101        | 106        | 111        | 117        | 123        | 83                    | 88         | 94         | 98         | 104        | 108        | 113        |
| 10.0                | 3.30             | 60                   | 49.5           | 95                           | 101        | 107        | 112        | 118        | 124        | 130        | 88                    | 94         | 99         | 104        | 110        | 114        | 120        |
| 10.3                | 3.40             | 64                   | 52.6           | 101                          | 107        | 113        | 119        | 126        | 132        | 138        | 94                    | 100        | 106        | 111        | 117        | 121        | 127        |
| 10.5                | 3.50             | 68                   | 55.7           | 107                          | 113        | 120        | 126        | 133        | 140        | 147        | 99                    | 105        | 112        | 117        | 124        | 129        | 135        |
| 10.9                | 3.60             | 72                   | 58.9           | 113                          | 120        | 127        | 134        | 141        | 148        | 155        | 105                   | 112        | 118        | 124        | 131        | 136        | 143        |
| 11.0                | 3.65             | 74                   | 60.8           | 116                          | 124        | 131        | 138        | 145        | 153        | 160        | 108                   | 115        | 122        | 128        | 135        | 140        | 147        |
| 11.5                | 3.80             | 80                   | 65.8           | 126                          | 134        | 142        | 149        | 157        | 165        | 173        | 117                   | 125        | 132        | 139        | 146        | 152        | 160        |
| 11.8                | 3.90             | 85                   | 69.3           | 133                          | 141        | 150        | 157        | 166        | 174        | 183        | 123                   | 131        | 139        | 146        | 154        | 160        | 168        |
| 12.0                | 4.00             | 89                   | 72.9           | 140                          | 149        | 157        | 165        | 174        | 183        | 192        | 130                   | 138        | 146        | 154        | 162        | 169        | 177        |
| 12.4                | 4.10             | 93                   | 76.6           | 147                          | 156        | 165        | 174        | 183        | 192        | 202        | 136                   | 145        | 154        | 162        | 170        | 177        | 186        |
| 12.5                | 4.20             | 98                   | 80.4           | 154                          | 164        | 173        | 182        | 192        | 202        | 212        | 143                   | 152        | 161        | 170        | 179        | 186        | 195        |
| 13.0                | 4.30             | 103                  | 84.2           | 161                          | 171        | 182        | 191        | 201        | 212        | 222        | 150                   | 159        | 169        | 178        | 187        | 195        | 204        |
| 13.3                | 4.40             | 107                  | 88.1           | 169                          | 180        | 190        | 200        | 211        | 221        | 232        | 157                   | 167        | 177        | 186        | 196        | 204        | 214        |
| 13.5                | 4.50             | 112                  | 92.2           | 176                          | 188        | 199        | 209        | 220        | 232        | 243        | 164                   | 175        | 185        | 194        | 205        | 213        | 223        |
| 13.9                | 4.60             | 117                  | 96.3           | 184                          | 196        | 208        | 218        | 230        | 242        | 254        | 171                   | 182        | 193        | 203        | 214        | 223        | 233        |
| 14.0                | 4.70             | 123                  | 100.5          | 192                          | 205        | 217        | 228        | 240        | 252        | 265        | 179                   | 190        | 202        | 212        | 223        | 232        | 244        |
| 14.5                | 4.80             | 128                  | 105.1          | 201                          | 214        | 227        | 238        | 251        | 264        | 277        | 187                   | 199        | 211        | 222        | 234        | 243        | 255        |

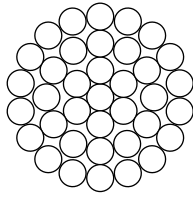
 on request



## Single stranded rope 1 x 19 (1+6+12 standard)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 10.0                | 2.00             | 60                   | 0.49           | 95                           | 101        | 107        | 112        | 118        | 124        | 130        | 87                    | 93         | 98         | 103        | 109        | 113        | 119        |
| 10.5                | 2.10             | 66                   | 0.55           | 104                          | 111        | 118        | 124        | 130        | 137        | 144        | 96                    | 102        | 108        | 114        | 120        | 125        | 131        |
| 11.0                | 2.20             | 73                   | 0.60           | 115                          | 122        | 129        | 136        | 143        | 150        | 158        | 105                   | 112        | 119        | 125        | 132        | 137        | 143        |
| 11.5                | 2.30             | 80                   | 0.65           | 125                          | 133        | 141        | 148        | 156        | 164        | 172        | 115                   | 122        | 130        | 136        | 144        | 149        | 157        |
| 12.0                | 2.40             | 87                   | 0.71           | 137                          | 145        | 154        | 162        | 170        | 179        | 188        | 126                   | 134        | 142        | 149        | 157        | 163        | 171        |
| 12.5                | 2.50             | 94                   | 0.77           | 148                          | 157        | 167        | 175        | 185        | 194        | 204        | 136                   | 145        | 154        | 161        | 170        | 177        | 185        |
| 13.0                | 2.60             | 102                  | 0.84           | 160                          | 170        | 180        | 190        | 200        | 210        | 220        | 147                   | 157        | 166        | 174        | 184        | 191        | 200        |
| 13.5                | 2.70             | 110                  | 0.90           | 173                          | 184        | 195        | 204        | 215        | 226        | 237        | 159                   | 169        | 179        | 188        | 198        | 206        | 216        |
| 14.0                | 2.80             | 118                  | 0.97           | 185                          | 197        | 209        | 220        | 232        | 243        | 255        | 171                   | 182        | 192        | 202        | 213        | 221        | 232        |
| 14.5                | 2.90             | 126                  | 1.04           | 199                          | 211        | 224        | 235        | 248        | 260        | 273        | 183                   | 194        | 206        | 216        | 228        | 237        | 249        |
| 15.0                | 3.00             | 136                  | 1.11           | 213                          | 226        | 240        | 252        | 266        | 279        | 293        | 196                   | 208        | 221        | 232        | 244        | 254        | 266        |
| 15.5                | 3.10             | 145                  | 1.19           | 227                          | 242        | 256        | 269        | 284        | 298        | 312        | 209                   | 222        | 236        | 248        | 261        | 271        | 284        |
| 16.0                | 3.20             | 154                  | 1.27           | 242                          | 258        | 273        | 287        | 303        | 318        | 333        | 223                   | 237        | 251        | 264        | 278        | 289        | 303        |
| 16.5                | 3.30             | 164                  | 1.35           | 258                          | 274        | 291        | 305        | 322        | 338        | 355        | 237                   | 252        | 267        | 281        | 296        | 308        | 323        |
| 17.0                | 3.40             | 174                  | 1.43           | 273                          | 291        | 308        | 324        | 341        | 359        | 376        | 252                   | 268        | 284        | 298        | 314        | 327        | 342        |
| 17.5                | 3.50             | 185                  | 1.51           | 290                          | 308        | 327        | 343        | 362        | 380        | 399        | 267                   | 283        | 300        | 316        | 333        | 346        | 363        |
| 18.0                | 3.60             | 195                  | 1.60           | 306                          | 326        | 345        | 363        | 383        | 402        | 422        | 282                   | 300        | 318        | 334        | 352        | 366        | 384        |
| 18.5                | 3.70             | 206                  | 1.69           | 324                          | 344        | 365        | 383        | 404        | 425        | 445        | 298                   | 317        | 336        | 353        | 372        | 386        | 405        |
| 19.0                | 3.80             | 218                  | 1.78           | 342                          | 364        | 385        | 405        | 427        | 448        | 470        | 314                   | 334        | 354        | 372        | 392        | 408        | 428        |
| 19.5                | 3.90             | 229                  | 1.88           | 360                          | 383        | 406        | 426        | 449        | 472        | 495        | 331                   | 352        | 373        | 392        | 413        | 430        | 451        |
| 20.0                | 4.00             | 241                  | 1.98           | 378                          | 403        | 427        | 448        | 472        | 497        | 521        | 348                   | 370        | 393        | 412        | 435        | 452        | 474        |
| 20.5                | 4.10             | 253                  | 2.08           | 398                          | 423        | 448        | 471        | 496        | 522        | 547        | 366                   | 389        | 412        | 433        | 457        | 475        | 498        |
| 21.0                | 4.20             | 266                  | 2.18           | 417                          | 444        | 470        | 494        | 521        | 547        | 574        | 384                   | 408        | 433        | 455        | 479        | 498        | 522        |
| 21.5                | 4.30             | 278                  | 2.28           | 437                          | 465        | 493        | 518        | 546        | 573        | 601        | 402                   | 428        | 453        | 476        | 502        | 522        | 547        |
| 22.0                | 4.40             | 291                  | 2.39           | 458                          | 487        | 516        | 542        | 571        | 600        | 629        | 421                   | 448        | 475        | 499        | 525        | 546        | 573        |
| 22.5                | 4.50             | 305                  | 2.50           | 479                          | 510        | 540        | 568        | 598        | 629        | 659        | 441                   | 469        | 497        | 522        | 550        | 572        | 600        |
| 23.0                | 4.60             | 319                  | 2.61           | 500                          | 532        | 564        | 593        | 625        | 657        | 689        | 460                   | 490        | 519        | 545        | 575        | 598        | 627        |
| 23.5                | 4.70             | 333                  | 2.73           | 522                          | 556        | 589        | 619        | 652        | 685        | 719        | 481                   | 511        | 542        | 569        | 600        | 624        | 654        |
| 24.0                | 4.80             | 347                  | 2.85           | 545                          | 579        | 614        | 645        | 680        | 715        | 749        | 501                   | 533        | 565        | 594        | 626        | 650        | 682        |
| 24.5                | 4.90             | 361                  | 2.96           | 568                          | 604        | 640        | 672        | 709        | 745        | 781        | 522                   | 555        | 589        | 619        | 652        | 678        | 711        |
| 25.0                | 5.00             | 376                  | 3.09           | 591                          | 628        | 666        | 700        | 738        | 775        | 813        | 544                   | 578        | 613        | 644        | 679        | 705        | 740        |

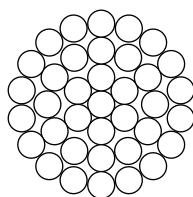
 on request



## Single stranded rope 1 x 37 (1+6+12+18 standard)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 16.0                | 2.30             | 154                  | 1.27           | 243                          | 258        | 273        | 287        | 303        | 318        | 334        | 218                   | 232        | 246        | 259        | 273        | 283        | 297        |
| 16.5                | 2.35             | 161                  | 1.32           | 253                          | 269        | 285        | 300        | 316        | 332        | 348        | 228                   | 242        | 257        | 270        | 284        | 296        | 310        |
| 17.0                | 2.40             | 168                  | 1.38           | 264                          | 281        | 298        | 313        | 330        | 347        | 364        | 238                   | 253        | 268        | 282        | 297        | 309        | 324        |
| 17.5                | 2.50             | 183                  | 1.50           | 287                          | 305        | 323        | 340        | 358        | 376        | 395        | 258                   | 275        | 291        | 306        | 322        | 335        | 351        |
| 18.0                | 2.55             | 190                  | 1.56           | 298                          | 317        | 336        | 353        | 372        | 391        | 410        | 268                   | 286        | 303        | 318        | 335        | 348        | 365        |
| 18.5                | 2.65             | 205                  | 1.68           | 322                          | 343        | 363        | 382        | 402        | 423        | 443        | 290                   | 308        | 327        | 343        | 362        | 376        | 394        |
| 19.0                | 2.70             | 213                  | 1.75           | 334                          | 356        | 377        | 396        | 417        | 439        | 460        | 301                   | 320        | 339        | 356        | 376        | 390        | 409        |
| 19.5                | 2.80             | 229                  | 1.88           | 359                          | 382        | 405        | 426        | 449        | 472        | 495        | 324                   | 344        | 365        | 383        | 404        | 420        | 440        |
| 20.0                | 2.85             | 237                  | 1.95           | 372                          | 396        | 420        | 441        | 465        | 489        | 512        | 335                   | 357        | 378        | 397        | 418        | 435        | 456        |
| 20.5                | 2.90             | 246                  | 2.01           | 386                          | 410        | 435        | 457        | 481        | 506        | 530        | 347                   | 369        | 391        | 411        | 433        | 450        | 472        |
| 21.0                | 3.00             | 263                  | 2.15           | 413                          | 439        | 465        | 489        | 515        | 541        | 568        | 371                   | 395        | 419        | 440        | 464        | 482        | 505        |
| 21.5                | 3.05             | 272                  | 2.23           | 426                          | 454        | 481        | 505        | 532        | 559        | 587        | 384                   | 408        | 433        | 455        | 479        | 498        | 522        |
| 22.0                | 3.15             | 290                  | 2.37           | 455                          | 484        | 513        | 539        | 568        | 597        | 626        | 409                   | 435        | 461        | 485        | 511        | 531        | 557        |
| 22.5                | 3.20             | 299                  | 2.45           | 470                          | 500        | 529        | 556        | 586        | 616        | 646        | 423                   | 450        | 477        | 501        | 528        | 548        | 575        |
| 23.0                | 3.30             | 318                  | 2.61           | 499                          | 531        | 563        | 592        | 623        | 655        | 687        | 449                   | 478        | 507        | 532        | 561        | 583        | 611        |
| 23.5                | 3.35             | 328                  | 2.69           | 515                          | 547        | 580        | 610        | 642        | 675        | 708        | 463                   | 493        | 522        | 549        | 578        | 601        | 630        |
| 24.0                | 3.40             | 338                  | 2.77           | 530                          | 564        | 598        | 628        | 662        | 695        | 729        | 477                   | 507        | 538        | 565        | 596        | 619        | 649        |
| 24.5                | 3.50             | 358                  | 2.93           | 562                          | 597        | 633        | 665        | 701        | 737        | 773        | 505                   | 538        | 570        | 599        | 631        | 656        | 688        |
| 25.0                | 3.55             | 368                  | 3.02           | 578                          | 615        | 651        | 684        | 721        | 758        | 795        | 520                   | 553        | 586        | 616        | 649        | 675        | 707        |
| 25.5                | 3.65             | 389                  | 3.19           | 611                          | 650        | 688        | 723        | 762        | 801        | 840        | 550                   | 585        | 620        | 651        | 686        | 713        | 748        |
| 26.0                | 3.70             | 400                  | 3.28           | 627                          | 667        | 707        | 743        | 783        | 823        | 863        | 565                   | 601        | 637        | 669        | 705        | 733        | 768        |
| 26.5                | 3.75             | 411                  | 3.37           | 645                          | 686        | 727        | 764        | 805        | 846        | 887        | 580                   | 617        | 654        | 688        | 725        | 753        | 790        |
| 27.0                | 3.85             | 433                  | 3.55           | 680                          | 723        | 766        | 805        | 849        | 892        | 935        | 612                   | 651        | 690        | 725        | 764        | 794        | 832        |
| 27.5                | 3.90             | 444                  | 3.64           | 697                          | 742        | 786        | 826        | 871        | 915        | 960        | 628                   | 668        | 708        | 744        | 784        | 814        | 854        |
| 28.0                | 4.00             | 467                  | 3.83           | 734                          | 780        | 827        | 869        | 916        | 963        | 1009       | 660                   | 702        | 744        | 782        | 824        | 857        | 898        |
| 29.0                | 4.10             | 491                  | 4.02           | 771                          | 820        | 869        | 913        | 962        | 1011       | 1060       | 694                   | 738        | 782        | 822        | 866        | 900        | 944        |
| 29.5                | 4.20             | 515                  | 4.22           | 809                          | 860        | 912        | 958        | 1009       | 1061       | 1112       | 728                   | 774        | 820        | 862        | 908        | 944        | 990        |
| 30.0                | 4.25             | 527                  | 4.32           | 828                          | 881        | 933        | 981        | 1034       | 1086       | 1139       | 745                   | 793        | 840        | 883        | 930        | 967        | 1014       |
| 30.5                | 4.35             | 552                  | 4.53           | 867                          | 922        | 978        | 1027       | 1083       | 1138       | 1193       | 780                   | 830        | 880        | 925        | 974        | 1013       | 1062       |
| 31.0                | 4.40             | 565                  | 4.63           | 887                          | 944        | 1000       | 1051       | 1108       | 1164       | 1221       | 799                   | 849        | 900        | 946        | 997        | 1036       | 1086       |
| 31.5                | 4.50             | 591                  | 4.85           | 929                          | 988        | 1047       | 1100       | 1159       | 1218       | 1277       | 836                   | 889        | 942        | 990        | 1043       | 1084       | 1137       |
| 32.0                | 4.55             | 605                  | 4.96           | 949                          | 1010       | 1070       | 1125       | 1185       | 1245       | 1306       | 854                   | 909        | 963        | 1012       | 1067       | 1108       | 1162       |
| 32.5                | 4.60             | 618                  | 5.07           | 970                          | 1032       | 1094       | 1149       | 1211       | 1273       | 1335       | 873                   | 929        | 984        | 1034       | 1090       | 1133       | 1188       |
| 33.0                | 4.70             | 645                  | 5.29           | 1013                         | 1077       | 1142       | 1200       | 1264       | 1329       | 1393       | 911                   | 969        | 1027       | 1080       | 1138       | 1183       | 1240       |
| 33.5                | 4.80             | 672                  | 5.51           | 1055                         | 1123       | 1190       | 1250       | 1318       | 1385       | 1452       | 950                   | 1010       | 1071       | 1125       | 1186       | 1233       | 1292       |
| 34.0                | 4.85             | 687                  | 5.63           | 1078                         | 1147       | 1216       | 1277       | 1346       | 1415       | 1483       | 970                   | 1032       | 1094       | 1150       | 1211       | 1259       | 1320       |
| 34.5                | 4.90             | 701                  | 5.75           | 1100                         | 1171       | 1241       | 1304       | 1374       | 1444       | 1514       | 990                   | 1053       | 1117       | 1173       | 1236       | 1285       | 1347       |
| 35.0                | 5.00             | 730                  | 5.98           | 1146                         | 1219       | 1292       | 1357       | 1430       | 1503       | 1576       | 1031                  | 1097       | 1163       | 1222       | 1287       | 1338       | 1403       |

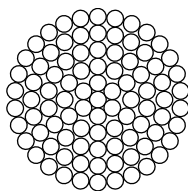
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## Single stranded rope 1 x 61 (1+6+12+18+24 standard)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 21.0                | 2.35             | 265                  | 2.18           | 417                          | 443        | 470        | 494        | 520        | 547        | 573        | 371                   | 394        | 418        | 439        | 463        | 481        | 504        |
| 21.5                | 2.40             | 277                  | 2.27           | 435                          | 463        | 490        | 515        | 543        | 571        | 598        | 387                   | 412        | 436        | 458        | 483        | 502        | 526        |
| 22.5                | 2.50             | 300                  | 2.46           | 472                          | 502        | 532        | 559        | 589        | 619        | 649        | 420                   | 447        | 473        | 497        | 524        | 545        | 571        |
| 23.0                | 2.55             | 313                  | 2.56           | 491                          | 522        | 553        | 581        | 613        | 644        | 675        | 437                   | 465        | 492        | 517        | 545        | 567        | 594        |
| 23.5                | 2.60             | 325                  | 2.66           | 510                          | 543        | 575        | 604        | 637        | 669        | 702        | 454                   | 483        | 512        | 538        | 567        | 589        | 618        |
| 24.0                | 2.65             | 338                  | 2.77           | 530                          | 564        | 597        | 628        | 662        | 695        | 729        | 472                   | 502        | 532        | 559        | 589        | 612        | 642        |
| 24.5                | 2.70             | 350                  | 2.87           | 550                          | 585        | 620        | 652        | 687        | 722        | 757        | 490                   | 521        | 552        | 580        | 611        | 635        | 666        |
| 25.0                | 2.75             | 363                  | 2.98           | 571                          | 607        | 643        | 676        | 712        | 749        | 785        | 508                   | 540        | 573        | 602        | 634        | 659        | 691        |
| 26.0                | 2.90             | 404                  | 3.31           | 634                          | 675        | 715        | 752        | 792        | 832        | 873        | 565                   | 601        | 637        | 669        | 705        | 733        | 768        |
| 27.0                | 3.00             | 432                  | 3.55           | 679                          | 722        | 765        | 804        | 848        | 891        | 934        | 604                   | 643        | 681        | 716        | 754        | 784        | 822        |
| 28.0                | 3.10             | 462                  | 3.79           | 725                          | 771        | 817        | 859        | 905        | 951        | 997        | 645                   | 686        | 727        | 764        | 805        | 837        | 878        |
| 29.0                | 3.20             | 492                  | 4.04           | 773                          | 822        | 871        | 915        | 965        | 1014       | 1063       | 688                   | 732        | 775        | 815        | 859        | 892        | 936        |
| 30.0                | 3.30             | 523                  | 4.29           | 822                          | 874        | 926        | 973        | 1026       | 1078       | 1130       | 731                   | 778        | 824        | 866        | 913        | 949        | 995        |
| 30.5                | 3.40             | 556                  | 4.56           | 872                          | 928        | 983        | 1033       | 1089       | 1144       | 1200       | 776                   | 826        | 875        | 920        | 969        | 1007       | 1056       |
| 31.0                | 3.45             | 572                  | 4.69           | 898                          | 955        | 1012       | 1064       | 1121       | 1178       | 1235       | 799                   | 850        | 901        | 947        | 998        | 1037       | 1087       |
| 31.5                | 3.50             | 589                  | 4.83           | 924                          | 983        | 1042       | 1095       | 1154       | 1213       | 1271       | 822                   | 875        | 927        | 974        | 1027       | 1067       | 1119       |
| 32.0                | 3.55             | 606                  | 4.97           | 951                          | 1011       | 1072       | 1126       | 1187       | 1247       | 1308       | 846                   | 900        | 954        | 1002       | 1056       | 1098       | 1151       |
| 32.5                | 3.60             | 623                  | 5.11           | 978                          | 1040       | 1102       | 1158       | 1220       | 1283       | 1345       | 870                   | 925        | 981        | 1031       | 1086       | 1129       | 1184       |
| 33.0                | 3.65             | 640                  | 5.25           | 1005                         | 1069       | 1133       | 1191       | 1255       | 1319       | 1383       | 894                   | 951        | 1008       | 1060       | 1117       | 1160       | 1217       |
| 33.5                | 3.70             | 658                  | 5.39           | 1033                         | 1098       | 1164       | 1223       | 1289       | 1355       | 1421       | 919                   | 978        | 1036       | 1089       | 1147       | 1192       | 1250       |
| 34.0                | 3.75             | 676                  | 5.54           | 1061                         | 1129       | 1196       | 1257       | 1325       | 1392       | 1460       | 944                   | 1005       | 1065       | 1119       | 1179       | 1225       | 1285       |
| 34.5                | 3.80             | 694                  | 5.69           | 1090                         | 1159       | 1228       | 1291       | 1360       | 1430       | 1499       | 970                   | 1031       | 1093       | 1149       | 1211       | 1258       | 1319       |
| 35.0                | 3.90             | 731                  | 5.99           | 1148                         | 1221       | 1294       | 1360       | 1433       | 1506       | 1579       | 1021                  | 1086       | 1151       | 1210       | 1275       | 1325       | 1389       |
| 36.0                | 4.00             | 769                  | 6.30           | 1207                         | 1284       | 1361       | 1430       | 1507       | 1584       | 1661       | 1074                  | 1143       | 1211       | 1273       | 1341       | 1394       | 1461       |
| 37.0                | 4.10             | 808                  | 6.62           | 1268                         | 1349       | 1430       | 1502       | 1583       | 1664       | 1745       | 1129                  | 1200       | 1272       | 1337       | 1409       | 1464       | 1535       |
| 38.0                | 4.20             | 848                  | 6.95           | 1331                         | 1415       | 1500       | 1576       | 1661       | 1746       | 1831       | 1184                  | 1260       | 1335       | 1403       | 1478       | 1536       | 1611       |
| 39.0                | 4.30             | 888                  | 7.28           | 1395                         | 1483       | 1572       | 1652       | 1741       | 1830       | 1919       | 1241                  | 1320       | 1399       | 1470       | 1550       | 1610       | 1688       |
| 39.5                | 4.40             | 930                  | 7.63           | 1460                         | 1553       | 1646       | 1730       | 1823       | 1916       | 2009       | 1300                  | 1382       | 1465       | 1540       | 1622       | 1686       | 1768       |
| 40.0                | 4.45             | 951                  | 7.80           | 1493                         | 1589       | 1684       | 1769       | 1864       | 1960       | 2055       | 1329                  | 1414       | 1499       | 1575       | 1659       | 1724       | 1808       |
| 40.5                | 4.50             | 973                  | 7.98           | 1527                         | 1624       | 1722       | 1809       | 1907       | 2004       | 2101       | 1359                  | 1446       | 1532       | 1610       | 1697       | 1763       | 1849       |
| 41.0                | 4.55             | 994                  | 8.15           | 1561                         | 1661       | 1760       | 1850       | 1949       | 2049       | 2148       | 1390                  | 1478       | 1567       | 1646       | 1735       | 1803       | 1890       |
| 41.5                | 4.60             | 1017                 | 8.34           | 1596                         | 1698       | 1800       | 1891       | 1993       | 2095       | 2196       | 1421                  | 1511       | 1602       | 1683       | 1774       | 1843       | 1933       |
| 42.0                | 4.65             | 1039                 | 8.52           | 1631                         | 1735       | 1839       | 1932       | 2036       | 2140       | 2244       | 1452                  | 1544       | 1637       | 1720       | 1812       | 1883       | 1975       |
| 42.5                | 4.70             | 1061                 | 8.70           | 1666                         | 1773       | 1879       | 1974       | 2080       | 2186       | 2293       | 1483                  | 1578       | 1672       | 1757       | 1851       | 1924       | 2017       |
| 43.0                | 4.75             | 1084                 | 8.89           | 1702                         | 1810       | 1919       | 2016       | 2125       | 2233       | 2342       | 1515                  | 1611       | 1708       | 1795       | 1891       | 1965       | 2061       |
| 43.5                | 4.80             | 1107                 | 9.08           | 1738                         | 1849       | 1959       | 2059       | 2170       | 2280       | 2391       | 1547                  | 1645       | 1744       | 1832       | 1931       | 2007       | 2104       |
| 44.0                | 4.85             | 1130                 | 9.27           | 1774                         | 1887       | 2000       | 2102       | 2215       | 2328       | 2441       | 1579                  | 1680       | 1780       | 1871       | 1971       | 2049       | 2148       |
| 45.0                | 5.00             | 1201                 | 9.85           | 1886                         | 2006       | 2126       | 2234       | 2354       | 2474       | 2594       | 1678                  | 1785       | 1892       | 1988       | 2095       | 2177       | 2283       |

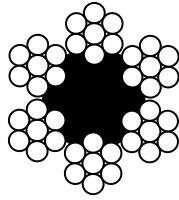
 on request



## Single stranded rope 1 x 91 (1+6+12+18+24+30 standard)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.-o<br>mm        | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 27.0                | 2.45             | 430                  | 3.53           | 675                          | 718        | 761        | 800        | 843        | 886        | 929        | 594                   | 632        | 670        | 704        | 742        | 771        | 808        |
| 27.5                | 2.50             | 448                  | 3.67           | 703                          | 748        | 792        | 833        | 878        | 922        | 967        | 619                   | 658        | 697        | 733        | 772        | 802        | 841        |
| 28.0                | 2.55             | 466                  | 3.82           | 731                          | 778        | 824        | 866        | 913        | 960        | 1006       | 644                   | 685        | 726        | 762        | 803        | 835        | 875        |
| 28.5                | 2.60             | 484                  | 3.97           | 760                          | 809        | 857        | 901        | 949        | 997        | 1046       | 669                   | 712        | 754        | 793        | 835        | 868        | 910        |
| 29.0                | 2.65             | 503                  | 4.12           | 790                          | 840        | 890        | 936        | 986        | 1036       | 1086       | 695                   | 739        | 783        | 823        | 868        | 901        | 945        |
| 29.5                | 2.70             | 522                  | 4.28           | 820                          | 872        | 924        | 971        | 1023       | 1076       | 1128       | 721                   | 767        | 813        | 855        | 901        | 936        | 981        |
| 30.0                | 2.75             | 542                  | 4.44           | 850                          | 905        | 959        | 1007       | 1062       | 1116       | 1170       | 748                   | 796        | 844        | 887        | 934        | 971        | 1018       |
| 31.0                | 2.80             | 561                  | 4.60           | 882                          | 938        | 994        | 1044       | 1101       | 1157       | 1213       | 776                   | 825        | 875        | 919        | 968        | 1006       | 1055       |
| 32.0                | 2.90             | 602                  | 4.94           | 946                          | 1006       | 1066       | 1120       | 1180       | 1241       | 1301       | 832                   | 885        | 938        | 986        | 1039       | 1079       | 1132       |
| 33.0                | 3.00             | 644                  | 5.28           | 1012                         | 1076       | 1141       | 1199       | 1263       | 1328       | 1392       | 890                   | 947        | 1004       | 1055       | 1112       | 1155       | 1211       |
| 34.0                | 3.10             | 688                  | 5.64           | 1080                         | 1149       | 1218       | 1280       | 1349       | 1417       | 1486       | 951                   | 1011       | 1072       | 1126       | 1187       | 1233       | 1293       |
| 35.0                | 3.20             | 733                  | 6.01           | 1152                         | 1225       | 1298       | 1364       | 1438       | 1511       | 1584       | 1013                  | 1078       | 1142       | 1201       | 1265       | 1314       | 1378       |
| 36.0                | 3.25             | 757                  | 6.20           | 1188                         | 1263       | 1339       | 1407       | 1483       | 1558       | 1634       | 1045                  | 1112       | 1178       | 1238       | 1305       | 1356       | 1422       |
| 36.5                | 3.30             | 780                  | 6.40           | 1225                         | 1303       | 1381       | 1451       | 1529       | 1607       | 1685       | 1078                  | 1146       | 1215       | 1277       | 1345       | 1398       | 1466       |
| 37.0                | 3.35             | 804                  | 6.59           | 1262                         | 1342       | 1423       | 1495       | 1575       | 1656       | 1736       | 1110                  | 1181       | 1252       | 1316       | 1386       | 1440       | 1510       |
| 37.5                | 3.40             | 828                  | 6.79           | 1300                         | 1383       | 1465       | 1540       | 1623       | 1705       | 1788       | 1144                  | 1217       | 1290       | 1355       | 1428       | 1484       | 1556       |
| 38.0                | 3.45             | 852                  | 6.99           | 1338                         | 1423       | 1509       | 1585       | 1671       | 1756       | 1841       | 1178                  | 1253       | 1328       | 1395       | 1470       | 1528       | 1602       |
| 38.5                | 3.50             | 877                  | 7.19           | 1377                         | 1465       | 1553       | 1632       | 1719       | 1807       | 1895       | 1212                  | 1289       | 1366       | 1436       | 1513       | 1572       | 1649       |
| 39.0                | 3.55             | 902                  | 7.40           | 1417                         | 1507       | 1597       | 1679       | 1769       | 1859       | 1949       | 1247                  | 1326       | 1406       | 1477       | 1557       | 1617       | 1696       |
| 39.5                | 3.60             | 928                  | 7.61           | 1457                         | 1550       | 1643       | 1726       | 1819       | 1912       | 2005       | 1282                  | 1364       | 1446       | 1519       | 1601       | 1663       | 1744       |
| 40.0                | 3.65             | 954                  | 7.82           | 1498                         | 1593       | 1689       | 1774       | 1870       | 1965       | 2061       | 1318                  | 1402       | 1486       | 1561       | 1645       | 1710       | 1793       |
| 41.0                | 3.70             | 980                  | 8.04           | 1539                         | 1637       | 1735       | 1823       | 1921       | 2019       | 2117       | 1354                  | 1441       | 1527       | 1604       | 1691       | 1757       | 1842       |
| 42.0                | 3.80             | 1034                 | 8.48           | 1624                         | 1727       | 1831       | 1924       | 2027       | 2131       | 2234       | 1429                  | 1520       | 1611       | 1693       | 1784       | 1854       | 1944       |
| 43.0                | 3.90             | 1089                 | 8.93           | 1710                         | 1819       | 1928       | 2026       | 2135       | 2244       | 2353       | 1505                  | 1601       | 1697       | 1783       | 1879       | 1952       | 2047       |
| 44.0                | 4.00             | 1146                 | 9.40           | 1799                         | 1914       | 2028       | 2131       | 2246       | 2360       | 2475       | 1583                  | 1684       | 1785       | 1876       | 1976       | 2054       | 2153       |
| 45.0                | 4.10             | 1204                 | 9.87           | 1890                         | 2010       | 2131       | 2239       | 2359       | 2480       | 2600       | 1663                  | 1769       | 1875       | 1970       | 2076       | 2157       | 2262       |
| 46.0                | 4.15             | 1233                 | 10.11          | 1936                         | 2060       | 2183       | 2294       | 2417       | 2541       | 2664       | 1704                  | 1812       | 1921       | 2019       | 2127       | 2210       | 2318       |
| 46.5                | 4.20             | 1263                 | 10.36          | 1983                         | 2109       | 2236       | 2349       | 2476       | 2602       | 2728       | 1745                  | 1856       | 1967       | 2068       | 2179       | 2264       | 2374       |
| 47.0                | 4.25             | 1293                 | 10.61          | 2031                         | 2160       | 2289       | 2406       | 2535       | 2664       | 2794       | 1787                  | 1901       | 2015       | 2117       | 2231       | 2318       | 2431       |
| 47.5                | 4.30             | 1324                 | 10.86          | 2079                         | 2211       | 2343       | 2463       | 2595       | 2727       | 2860       | 1829                  | 1946       | 2062       | 2167       | 2284       | 2373       | 2488       |
| 48.0                | 4.35             | 1355                 | 11.11          | 2127                         | 2263       | 2398       | 2520       | 2656       | 2791       | 2927       | 1872                  | 1991       | 2110       | 2218       | 2337       | 2428       | 2546       |
| 48.5                | 4.40             | 1386                 | 11.37          | 2176                         | 2315       | 2454       | 2578       | 2717       | 2856       | 2994       | 1915                  | 2037       | 2159       | 2269       | 2391       | 2484       | 2605       |
| 49.0                | 4.45             | 1418                 | 11.63          | 2226                         | 2368       | 2510       | 2637       | 2779       | 2921       | 3063       | 1959                  | 2084       | 2208       | 2321       | 2446       | 2541       | 2664       |
| 49.5                | 4.50             | 1450                 | 11.89          | 2277                         | 2422       | 2567       | 2697       | 2842       | 2988       | 3133       | 2004                  | 2131       | 2259       | 2374       | 2501       | 2599       | 2725       |
| 50.0                | 4.55             | 1483                 | 12.16          | 2328                         | 2476       | 2624       | 2758       | 2906       | 3054       | 3202       | 2048                  | 2179       | 2309       | 2427       | 2557       | 2657       | 2786       |
| 51.0                | 4.60             | 1515                 | 12.43          | 2379                         | 2531       | 2682       | 2819       | 2970       | 3122       | 3273       | 2094                  | 2227       | 2360       | 2480       | 2614       | 2716       | 2848       |
| 52.0                | 4.70             | 1582                 | 12.97          | 2484                         | 2642       | 2800       | 2942       | 3100       | 3259       | 3417       | 2186                  | 2325       | 2464       | 2589       | 2728       | 2835       | 2973       |
| 53.0                | 4.80             | 1650                 | 13.53          | 2590                         | 2755       | 2920       | 3069       | 3234       | 3399       | 3564       | 2279                  | 2425       | 2570       | 2700       | 2846       | 2957       | 3100       |
| 54.0                | 4.90             | 1719                 | 14.10          | 2699                         | 2871       | 3043       | 3198       | 3370       | 3542       | 3714       | 2375                  | 2527       | 2678       | 2814       | 2965       | 3081       | 3231       |

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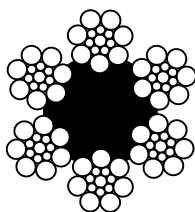


## 6 x (1+6) standard

| Characteristic data  |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|----------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\sigma$<br>mm | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 10.0                 | 1.07             | 39                   | 0.34           | 61                           | 64         | 68         | 72         | 76         | 80         | 83         | 55                    | 58         | 61         | 65         | 68         | 71         | 74         |
| 11.0                 | 1.17             | 46                   | 0.41           | 72                           | 77         | 82         | 86         | 90         | 95         | 100        | 65                    | 69         | 73         | 77         | 81         | 84         | 89         |
| 12.0                 | 1.28             | 55                   | 0.48           | 86                           | 92         | 97         | 102        | 108        | 113        | 119        | 78                    | 83         | 87         | 92         | 97         | 101        | 106        |
| 13.0                 | 1.38             | 64                   | 0.57           | 101                          | 108        | 114        | 120        | 126        | 133        | 139        | 91                    | 97         | 103        | 108        | 114        | 118        | 124        |
| 14.0                 | 1.50             | 76                   | 0.67           | 119                          | 126        | 134        | 141        | 148        | 156        | 163        | 107                   | 114        | 121        | 127        | 134        | 139        | 145        |
| 15.0                 | 1.60             | 86                   | 0.76           | 135                          | 144        | 152        | 160        | 169        | 177        | 186        | 122                   | 129        | 137        | 144        | 152        | 158        | 165        |
| 16.0                 | 1.70             | 97                   | 0.85           | 152                          | 162        | 172        | 180        | 190        | 200        | 209        | 137                   | 146        | 154        | 162        | 171        | 178        | 186        |
| 16.5                 | 1.75             | 103                  | 0.90           | 161                          | 172        | 182        | 191        | 201        | 212        | 222        | 145                   | 154        | 164        | 172        | 181        | 188        | 197        |
| 17.0                 | 1.81             | 110                  | 0.97           | 173                          | 184        | 195        | 205        | 216        | 227        | 238        | 155                   | 165        | 175        | 184        | 194        | 202        | 211        |
| 18.0                 | 1.91             | 123                  | 1.08           | 193                          | 205        | 218        | 229        | 241        | 253        | 266        | 174                   | 185        | 196        | 206        | 217        | 225        | 236        |
| 19.0                 | 2.02             | 137                  | 1.21           | 215                          | 229        | 243        | 255        | 269        | 283        | 296        | 194                   | 206        | 218        | 230        | 242        | 251        | 264        |
| 20.0                 | 2.13             | 152                  | 1.34           | 239                          | 254        | 269        | 283        | 298        | 313        | 329        | 215                   | 229        | 242        | 255        | 268        | 279        | 292        |
| 21.0                 | 2.24             | 168                  | 1.48           | 264                          | 280        | 297        | 312        | 329        | 346        | 363        | 237                   | 252        | 267        | 281        | 296        | 308        | 323        |
| 22.0                 | 2.34             | 184                  | 1.62           | 289                          | 307        | 325        | 342        | 360        | 379        | 397        | 260                   | 276        | 293        | 308        | 324        | 337        | 353        |
| 23.0                 | 2.45             | 202                  | 1.77           | 316                          | 337        | 357        | 375        | 395        | 415        | 435        | 285                   | 303        | 321        | 337        | 356        | 370        | 388        |
| 24.0                 | 2.56             | 220                  | 1.93           | 345                          | 367        | 389        | 409        | 431        | 452        | 474        | 310                   | 330        | 350        | 368        | 387        | 403        | 422        |
| 25.0                 | 2.66             | 238                  | 2.09           | 373                          | 397        | 420        | 442        | 466        | 489        | 513        | 336                   | 357        | 378        | 398        | 419        | 435        | 457        |
| 26.0                 | 2.77             | 257                  | 2.26           | 404                          | 429        | 455        | 478        | 504        | 530        | 555        | 363                   | 386        | 410        | 430        | 454        | 471        | 494        |
| 27.0                 | 2.88             | 278                  | 2.45           | 437                          | 465        | 493        | 518        | 546        | 573        | 601        | 393                   | 418        | 443        | 466        | 491        | 510        | 535        |
| 28.0                 | 3.00             | 301                  | 2.65           | 473                          | 503        | 533        | 560        | 590        | 621        | 651        | 426                   | 453        | 480        | 504        | 531        | 552        | 579        |
| 29.0                 | 3.10             | 321                  | 2.83           | 505                          | 537        | 569        | 598        | 630        | 662        | 694        | 454                   | 483        | 512        | 538        | 567        | 589        | 618        |
| 30.0                 | 3.20             | 342                  | 3.01           | 538                          | 572        | 606        | 637        | 671        | 705        | 740        | 484                   | 515        | 545        | 573        | 604        | 628        | 658        |
| 30.5                 | 3.25             | 354                  | 3.12           | 556                          | 591        | 627        | 659        | 694        | 729        | 765        | 500                   | 532        | 564        | 593        | 625        | 649        | 681        |
| 31.0                 | 3.30             | 366                  | 3.22           | 574                          | 611        | 647        | 680        | 717        | 753        | 790        | 517                   | 550        | 582        | 612        | 645        | 670        | 703        |
| 32.0                 | 3.42             | 392                  | 3.45           | 615                          | 654        | 693        | 729        | 768        | 807        | 846        | 554                   | 589        | 624        | 656        | 691        | 718        | 753        |
| 33.0                 | 3.52             | 415                  | 3.65           | 651                          | 693        | 734        | 772        | 813        | 855        | 896        | 586                   | 624        | 661        | 694        | 732        | 761        | 797        |
| 34.0                 | 3.63             | 441                  | 3.88           | 692                          | 736        | 780        | 820        | 864        | 908        | 952        | 623                   | 662        | 702        | 738        | 777        | 808        | 847        |
| 35.0                 | 3.73             | 467                  | 4.11           | 733                          | 780        | 826        | 868        | 915        | 962        | 1009       | 660                   | 702        | 744        | 782        | 824        | 856        | 898        |
| 36.0                 | 3.85             | 496                  | 4.37           | 779                          | 829        | 879        | 923        | 973        | 1023       | 1072       | 701                   | 746        | 791        | 831        | 876        | 910        | 954        |
| 37.0                 | 3.95             | 522                  | 4.60           | 820                          | 872        | 924        | 971        | 1024       | 1076       | 1128       | 738                   | 785        | 832        | 874        | 921        | 958        | 1004       |
| 38.0                 | 4.05             | 549                  | 4.83           | 862                          | 917        | 972        | 1021       | 1076       | 1131       | 1186       | 776                   | 825        | 874        | 919        | 968        | 1006       | 1055       |
| 39.0                 | 4.17             | 583                  | 5.13           | 915                          | 973        | 1032       | 1084       | 1142       | 1201       | 1259       | 824                   | 876        | 929        | 976        | 1028       | 1069       | 1121       |
| 40.0                 | 4.28             | 613                  | 5.40           | 963                          | 1024       | 1086       | 1141       | 1202       | 1264       | 1325       | 867                   | 922        | 977        | 1027       | 1082       | 1125       | 1179       |
| 41.0                 | 4.38             | 642                  | 5.65           | 1008                         | 1072       | 1137       | 1194       | 1259       | 1323       | 1387       | 907                   | 965        | 1023       | 1075       | 1133       | 1177       | 1234       |
| 42.0                 | 4.48             | 672                  | 5.91           | 1054                         | 1122       | 1189       | 1249       | 1316       | 1383       | 1451       | 949                   | 1009       | 1070       | 1124       | 1185       | 1231       | 1291       |

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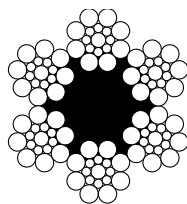




## 6 x 15 Seale

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 14.0                | 1.35             | 77                   | 0.68           | 121                          | 129        | 136        | 143        | 151        | 159        | 167        | 108                   | 115        | 121        | 128        | 135        | 140        | 147        |
| 15.0                | 1.45             | 89                   | 0.78           | 139                          | 148        | 157        | 165        | 174        | 183        | 191        | 124                   | 132        | 140        | 147        | 155        | 161        | 168        |
| 16.0                | 1.55             | 101                  | 0.89           | 159                          | 169        | 179        | 189        | 199        | 209        | 219        | 142                   | 151        | 160        | 168        | 177        | 184        | 193        |
| 17.0                | 1.64             | 113                  | 1.00           | 178                          | 190        | 201        | 211        | 222        | 234        | 245        | 159                   | 169        | 179        | 188        | 198        | 206        | 216        |
| 18.0                | 1.74             | 128                  | 1.12           | 201                          | 213        | 226        | 238        | 250        | 263        | 276        | 179                   | 190        | 201        | 211        | 223        | 232        | 243        |
| 19.0                | 1.83             | 141                  | 1.24           | 222                          | 236        | 250        | 262        | 277        | 291        | 305        | 197                   | 210        | 222        | 234        | 246        | 256        | 268        |
| 20.0                | 1.92             | 155                  | 1.37           | 244                          | 259        | 275        | 289        | 304        | 320        | 336        | 217                   | 231        | 245        | 257        | 271        | 282        | 295        |
| 21.0                | 2.02             | 172                  | 1.52           | 271                          | 288        | 305        | 321        | 338        | 355        | 372        | 241                   | 256        | 271        | 285        | 301        | 312        | 328        |
| 22.0                | 2.12             | 190                  | 1.67           | 298                          | 317        | 336        | 353        | 372        | 391        | 410        | 265                   | 282        | 299        | 314        | 331        | 344        | 361        |
| 23.0                | 2.20             | 205                  | 1.81           | 322                          | 343        | 363        | 382        | 402        | 423        | 443        | 287                   | 305        | 323        | 340        | 358        | 372        | 390        |
| 24.0                | 2.30             | 223                  | 1.96           | 350                          | 372        | 395        | 415        | 437        | 459        | 481        | 311                   | 331        | 351        | 369        | 389        | 404        | 424        |
| 25.0                | 2.40             | 243                  | 2.14           | 382                          | 406        | 430        | 452        | 476        | 501        | 525        | 340                   | 361        | 383        | 402        | 424        | 441        | 462        |
| 26.0                | 2.50             | 264                  | 2.32           | 415                          | 441        | 468        | 491        | 518        | 544        | 571        | 369                   | 393        | 416        | 437        | 461        | 479        | 502        |
| 27.0                | 2.60             | 285                  | 2.51           | 447                          | 476        | 504        | 530        | 558        | 587        | 615        | 398                   | 423        | 449        | 472        | 497        | 516        | 542        |
| 28.0                | 2.70             | 307                  | 2.70           | 482                          | 513        | 544        | 572        | 602        | 633        | 664        | 429                   | 457        | 484        | 509        | 536        | 557        | 584        |
| 29.0                | 2.80             | 330                  | 2.90           | 518                          | 551        | 583        | 613        | 646        | 679        | 712        | 461                   | 490        | 519        | 546        | 575        | 598        | 627        |
| 30.0                | 2.90             | 353                  | 3.10           | 554                          | 589        | 624        | 656        | 691        | 727        | 762        | 493                   | 524        | 556        | 584        | 615        | 640        | 671        |
| 31.0                | 2.98             | 375                  | 3.30           | 588                          | 626        | 663        | 697        | 734        | 772        | 809        | 523                   | 557        | 590        | 620        | 653        | 679        | 712        |
| 32.0                | 3.08             | 400                  | 3.52           | 628                          | 668        | 708        | 744        | 784        | 824        | 864        | 559                   | 595        | 630        | 662        | 698        | 725        | 761        |
| 33.0                | 3.18             | 427                  | 3.75           | 670                          | 712        | 755        | 794        | 836        | 879        | 922        | 596                   | 634        | 672        | 706        | 744        | 773        | 811        |
| 34.0                | 3.27             | 451                  | 3.97           | 708                          | 753        | 798        | 838        | 883        | 929        | 974        | 630                   | 670        | 710        | 746        | 786        | 817        | 857        |
| 35.0                | 3.37             | 478                  | 4.20           | 750                          | 798        | 846        | 889        | 936        | 984        | 1032       | 668                   | 710        | 753        | 791        | 833        | 866        | 908        |
| 36.0                | 3.47             | 508                  | 4.47           | 797                          | 848        | 899        | 944        | 995        | 1046       | 1097       | 709                   | 755        | 800        | 840        | 886        | 920        | 965        |
| 37.0                | 3.56             | 535                  | 4.71           | 840                          | 893        | 947        | 995        | 1049       | 1102       | 1156       | 748                   | 795        | 843        | 886        | 933        | 970        | 1017       |
| 38.0                | 3.65             | 562                  | 4.95           | 882                          | 939        | 995        | 1045       | 1101       | 1158       | 1214       | 785                   | 835        | 885        | 930        | 980        | 1019       | 1068       |
| 39.0                | 3.76             | 595                  | 5.23           | 933                          | 993        | 1052       | 1106       | 1165       | 1225       | 1284       | 831                   | 884        | 937        | 984        | 1037       | 1078       | 1130       |
| 40.0                | 3.85             | 623                  | 5.48           | 978                          | 1040       | 1103       | 1159       | 1221       | 1283       | 1346       | 870                   | 926        | 981        | 1031       | 1087       | 1129       | 1184       |
| 41.0                | 3.95             | 657                  | 5.78           | 1032                         | 1097       | 1163       | 1222       | 1288       | 1353       | 1419       | 918                   | 977        | 1035       | 1088       | 1146       | 1191       | 1249       |
| 42.0                | 4.05             | 691                  | 6.08           | 1085                         | 1154       | 1223       | 1285       | 1354       | 1423       | 1492       | 965                   | 1027       | 1088       | 1144       | 1205       | 1252       | 1313       |
| 43.0                | 4.15             | 724                  | 6.37           | 1137                         | 1209       | 1282       | 1347       | 1419       | 1492       | 1564       | 1012                  | 1076       | 1141       | 1199       | 1263       | 1313       | 1376       |
| 44.0                | 4.24             | 757                  | 6.66           | 1188                         | 1264       | 1339       | 1408       | 1483       | 1559       | 1635       | 1057                  | 1125       | 1192       | 1253       | 1320       | 1372       | 1438       |
| 45.0                | 4.34             | 792                  | 6.97           | 1243                         | 1322       | 1401       | 1472       | 1552       | 1631       | 1710       | 1106                  | 1177       | 1247       | 1310       | 1381       | 1435       | 1505       |
| 46.0                | 4.44             | 829                  | 7.29           | 1301                         | 1384       | 1467       | 1541       | 1624       | 1707       | 1790       | 1158                  | 1232       | 1305       | 1372       | 1445       | 1502       | 1575       |

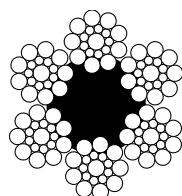
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## 6 x 17 Seale

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 18.0                | 1.57             | 128                  | 1.13           | 201                          | 214        | 227        | 238        | 251        | 264        | 277        | 179                   | 190        | 202        | 212        | 224        | 232        | 244        |
| 19.0                | 1.67             | 144                  | 1.26           | 225                          | 240        | 254        | 267        | 281        | 296        | 310        | 201                   | 213        | 226        | 238        | 250        | 260        | 273        |
| 20.0                | 1.75             | 159                  | 1.40           | 249                          | 265        | 281        | 295        | 311        | 327        | 343        | 222                   | 236        | 250        | 263        | 277        | 288        | 302        |
| 21.0                | 1.85             | 176                  | 1.55           | 276                          | 294        | 311        | 327        | 345        | 362        | 380        | 246                   | 261        | 277        | 291        | 307        | 319        | 334        |
| 22.0                | 1.93             | 193                  | 1.69           | 302                          | 321        | 341        | 358        | 377        | 397        | 416        | 269                   | 286        | 303        | 319        | 336        | 349        | 366        |
| 23.0                | 2.02             | 211                  | 1.85           | 331                          | 352        | 373        | 392        | 413        | 434        | 455        | 294                   | 313        | 332        | 349        | 367        | 382        | 400        |
| 24.0                | 2.10             | 228                  | 2.01           | 358                          | 381        | 404        | 424        | 447        | 470        | 492        | 319                   | 339        | 359        | 377        | 398        | 413        | 433        |
| 25.0                | 2.20             | 249                  | 2.19           | 391                          | 416        | 441        | 464        | 489        | 514        | 539        | 348                   | 371        | 393        | 413        | 435        | 452        | 474        |
| 26.0                | 2.27             | 267                  | 2.35           | 420                          | 447        | 473        | 497        | 524        | 551        | 578        | 374                   | 397        | 421        | 443        | 466        | 485        | 508        |
| 27.0                | 2.35             | 288                  | 2.53           | 452                          | 481        | 510        | 535        | 564        | 593        | 622        | 402                   | 428        | 453        | 477        | 502        | 522        | 547        |
| 28.0                | 2.45             | 310                  | 2.73           | 486                          | 517        | 548        | 576        | 607        | 638        | 669        | 433                   | 461        | 488        | 513        | 540        | 562        | 589        |
| 29.0                | 2.55             | 335                  | 2.94           | 525                          | 559        | 592        | 622        | 656        | 689        | 723        | 468                   | 497        | 527        | 554        | 584        | 607        | 636        |
| 30.0                | 2.63             | 357                  | 3.15           | 561                          | 597        | 633        | 665        | 701        | 736        | 772        | 500                   | 531        | 563        | 592        | 624        | 648        | 680        |
| 31.0                | 2.73             | 383                  | 3.37           | 601                          | 640        | 678        | 712        | 751        | 789        | 827        | 535                   | 569        | 603        | 634        | 668        | 694        | 728        |
| 32.0                | 2.80             | 405                  | 3.57           | 636                          | 677        | 717        | 754        | 794        | 835        | 875        | 566                   | 602        | 638        | 671        | 707        | 735        | 770        |
| 33.0                | 2.90             | 432                  | 3.81           | 679                          | 722        | 765        | 804        | 848        | 891        | 934        | 604                   | 643        | 681        | 716        | 754        | 784        | 822        |
| 34.0                | 2.98             | 458                  | 4.03           | 720                          | 766        | 811        | 853        | 898        | 944        | 990        | 640                   | 681        | 722        | 759        | 800        | 831        | 871        |
| 35.0                | 3.07             | 485                  | 4.27           | 761                          | 810        | 858        | 902        | 950        | 999        | 1047       | 678                   | 721        | 764        | 803        | 846        | 879        | 922        |
| 36.0                | 3.15             | 512                  | 4.51           | 804                          | 856        | 907        | 953        | 1004       | 1055       | 1107       | 716                   | 761        | 807        | 848        | 894        | 929        | 974        |
| 37.0                | 3.25             | 544                  | 4.79           | 854                          | 909        | 963        | 1012       | 1066       | 1121       | 1175       | 760                   | 809        | 857        | 901        | 949        | 986        | 1034       |
| 38.0                | 3.33             | 572                  | 5.03           | 898                          | 955        | 1012       | 1064       | 1121       | 1178       | 1235       | 799                   | 850        | 901        | 947        | 997        | 1037       | 1087       |
| 39.0                | 3.43             | 604                  | 5.32           | 948                          | 1009       | 1069       | 1123       | 1184       | 1244       | 1305       | 844                   | 898        | 951        | 1000       | 1054       | 1095       | 1148       |
| 40.0                | 3.50             | 632                  | 5.56           | 992                          | 1055       | 1118       | 1175       | 1239       | 1302       | 1365       | 883                   | 939        | 995        | 1046       | 1102       | 1146       | 1201       |
| 41.0                | 3.60             | 666                  | 5.86           | 1045                         | 1112       | 1178       | 1238       | 1305       | 1371       | 1438       | 930                   | 989        | 1049       | 1102       | 1161       | 1207       | 1265       |
| 42.0                | 3.69             | 701                  | 6.16           | 1100                         | 1170       | 1240       | 1303       | 1373       | 1443       | 1513       | 979                   | 1041       | 1104       | 1160       | 1222       | 1270       | 1332       |
| 43.0                | 3.79             | 738                  | 6.49           | 1158                         | 1232       | 1306       | 1372       | 1446       | 1519       | 1593       | 1031                  | 1096       | 1162       | 1221       | 1287       | 1337       | 1402       |
| 44.0                | 3.87             | 770                  | 6.77           | 1209                         | 1286       | 1363       | 1432       | 1509       | 1586       | 1663       | 1076                  | 1144       | 1213       | 1274       | 1343       | 1396       | 1463       |
| 45.0                | 3.96             | 806                  | 7.09           | 1265                         | 1345       | 1426       | 1498       | 1579       | 1660       | 1740       | 1126                  | 1197       | 1269       | 1334       | 1405       | 1460       | 1531       |
| 46.0                | 4.05             | 842                  | 7.41           | 1322                         | 1407       | 1491       | 1567       | 1651       | 1735       | 1819       | 1177                  | 1252       | 1327       | 1394       | 1469       | 1527       | 1601       |
| 47.0                | 4.13             | 877                  | 7.71           | 1376                         | 1464       | 1552       | 1631       | 1718       | 1806       | 1894       | 1225                  | 1303       | 1381       | 1451       | 1529       | 1589       | 1666       |
| 48.0                | 4.22             | 917                  | 8.07           | 1439                         | 1531       | 1622       | 1705       | 1797       | 1888       | 1980       | 1281                  | 1362       | 1444       | 1517       | 1599       | 1662       | 1742       |
| 49.0                | 4.30             | 951                  | 8.37           | 1493                         | 1588       | 1683       | 1768       | 1863       | 1959       | 2054       | 1328                  | 1413       | 1498       | 1574       | 1658       | 1723       | 1807       |
| 50.0                | 4.40             | 997                  | 8.78           | 1566                         | 1666       | 1765       | 1855       | 1955       | 2054       | 2154       | 1394                  | 1482       | 1571       | 1651       | 1740       | 1808       | 1896       |

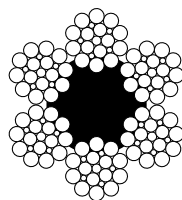
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## 6 x 19 Seale

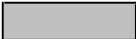
| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 18.0                | 1.45             | 131                  | 1.15           | 205                          | 218        | 231        | 243        | 256        | 269        | 282        | 182                   | 194        | 206        | 216        | 228        | 237        | 248        |
| 19.0                | 1.53             | 145                  | 1.28           | 228                          | 242        | 257        | 270        | 284        | 299        | 313        | 203                   | 216        | 229        | 240        | 253        | 263        | 276        |
| 20.0                | 1.61             | 160                  | 1.41           | 252                          | 268        | 284        | 298        | 314        | 330        | 346        | 224                   | 238        | 253        | 265        | 280        | 291        | 305        |
| 21.0                | 1.69             | 177                  | 1.56           | 278                          | 296        | 314        | 330        | 347        | 365        | 383        | 248                   | 263        | 279        | 293        | 309        | 321        | 337        |
| 22.0                | 1.77             | 194                  | 1.71           | 305                          | 324        | 344        | 361        | 380        | 400        | 419        | 271                   | 289        | 306        | 321        | 339        | 352        | 369        |
| 23.0                | 1.85             | 213                  | 1.87           | 334                          | 355        | 376        | 396        | 417        | 438        | 459        | 297                   | 316        | 335        | 352        | 371        | 386        | 404        |
| 24.0                | 1.92             | 230                  | 2.03           | 362                          | 385        | 408        | 429        | 452        | 475        | 498        | 322                   | 343        | 363        | 382        | 402        | 418        | 438        |
| 25.0                | 2.02             | 252                  | 2.22           | 396                          | 421        | 446        | 469        | 494        | 519        | 544        | 352                   | 375        | 397        | 417        | 440        | 457        | 479        |
| 26.0                | 2.10             | 273                  | 2.40           | 429                          | 456        | 483        | 508        | 535        | 563        | 590        | 382                   | 406        | 430        | 452        | 476        | 495        | 519        |
| 27.0                | 2.18             | 294                  | 2.59           | 462                          | 491        | 520        | 547        | 576        | 606        | 635        | 411                   | 437        | 463        | 487        | 513        | 533        | 559        |
| 28.0                | 2.25             | 314                  | 2.76           | 493                          | 524        | 555        | 584        | 615        | 646        | 678        | 438                   | 466        | 494        | 519        | 547        | 569        | 596        |
| 29.0                | 2.34             | 338                  | 2.97           | 531                          | 564        | 598        | 629        | 662        | 696        | 730        | 472                   | 502        | 532        | 559        | 590        | 613        | 642        |
| 30.0                | 2.42             | 362                  | 3.18           | 568                          | 604        | 640        | 673        | 709        | 745        | 781        | 505                   | 538        | 570        | 599        | 631        | 656        | 687        |
| 31.0                | 2.50             | 388                  | 3.41           | 608                          | 647        | 686        | 721        | 760        | 798        | 837        | 542                   | 576        | 610        | 642        | 676        | 703        | 737        |
| 32.0                | 2.58             | 412                  | 3.63           | 647                          | 689        | 730        | 767        | 808        | 849        | 891        | 576                   | 613        | 650        | 683        | 719        | 747        | 784        |
| 33.0                | 2.66             | 437                  | 3.84           | 685                          | 729        | 773        | 812        | 856        | 899        | 943        | 610                   | 649        | 688        | 723        | 761        | 791        | 830        |
| 34.0                | 2.74             | 464                  | 4.08           | 729                          | 775        | 822        | 863        | 910        | 956        | 1003       | 649                   | 690        | 731        | 768        | 810        | 841        | 882        |
| 35.0                | 2.83             | 495                  | 4.36           | 777                          | 827        | 876        | 921        | 970        | 1020       | 1069       | 692                   | 736        | 780        | 819        | 863        | 897        | 941        |
| 36.0                | 2.90             | 521                  | 4.58           | 817                          | 869        | 921        | 968        | 1020       | 1072       | 1124       | 727                   | 774        | 820        | 862        | 908        | 944        | 989        |
| 37.0                | 2.98             | 549                  | 4.83           | 862                          | 917        | 972        | 1022       | 1076       | 1131       | 1186       | 767                   | 816        | 865        | 909        | 958        | 996        | 1044       |
| 38.0                | 3.07             | 583                  | 5.13           | 915                          | 973        | 1031       | 1084       | 1142       | 1200       | 1259       | 814                   | 866        | 918        | 965        | 1017       | 1056       | 1108       |
| 39.0                | 3.15             | 611                  | 5.38           | 960                          | 1021       | 1082       | 1137       | 1198       | 1260       | 1321       | 854                   | 909        | 963        | 1012       | 1067       | 1108       | 1162       |
| 40.0                | 3.23             | 644                  | 5.67           | 1011                         | 1076       | 1140       | 1198       | 1262       | 1327       | 1391       | 900                   | 957        | 1015       | 1066       | 1123       | 1168       | 1224       |
| 41.0                | 3.30             | 675                  | 5.94           | 1059                         | 1127       | 1194       | 1255       | 1322       | 1390       | 1457       | 943                   | 1003       | 1063       | 1117       | 1177       | 1223       | 1282       |
| 42.0                | 3.39             | 710                  | 6.25           | 1115                         | 1186       | 1257       | 1321       | 1392       | 1463       | 1534       | 992                   | 1056       | 1119       | 1176       | 1239       | 1287       | 1350       |
| 43.0                | 3.47             | 742                  | 6.53           | 1165                         | 1239       | 1313       | 1380       | 1454       | 1528       | 1602       | 1037                  | 1103       | 1169       | 1228       | 1294       | 1345       | 1410       |
| 44.0                | 3.55             | 778                  | 6.84           | 1221                         | 1299       | 1376       | 1446       | 1524       | 1602       | 1680       | 1087                  | 1156       | 1225       | 1287       | 1357       | 1410       | 1478       |
| 45.0                | 3.63             | 814                  | 7.17           | 1279                         | 1360       | 1441       | 1515       | 1596       | 1678       | 1759       | 1138                  | 1210       | 1283       | 1348       | 1421       | 1476       | 1548       |
| 46.0                | 3.72             | 855                  | 7.52           | 1343                         | 1428       | 1514       | 1590       | 1676       | 1762       | 1847       | 1195                  | 1271       | 1347       | 1416       | 1492       | 1550       | 1625       |
| 47.0                | 3.79             | 889                  | 7.82           | 1395                         | 1484       | 1573       | 1653       | 1742       | 1830       | 1919       | 1242                  | 1321       | 1400       | 1471       | 1550       | 1611       | 1689       |
| 48.0                | 3.88             | 927                  | 8.16           | 1456                         | 1548       | 1641       | 1725       | 1817       | 1910       | 2003       | 1296                  | 1378       | 1461       | 1535       | 1617       | 1681       | 1762       |
| 49.0                | 3.95             | 964                  | 8.48           | 1513                         | 1610       | 1706       | 1793       | 1889       | 1986       | 2082       | 1347                  | 1433       | 1518       | 1596       | 1681       | 1747       | 1832       |
| 50.0                | 4.05             | 1012                 | 8.90           | 1588                         | 1689       | 1790       | 1881       | 1983       | 2084       | 2185       | 1413                  | 1503       | 1593       | 1675       | 1765       | 1834       | 1923       |

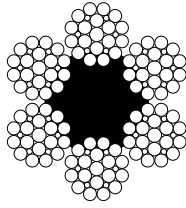
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## 6 x 21 FW (Filler Wire)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 23.0                | 1.71             | 215                  | 1.89           | 338                          | 359        | 381        | 400        | 422        | 443        | 465        | 297                   | 316        | 335        | 352        | 371        | 386        | 404        |
| 24.0                | 1.79             | 234                  | 2.06           | 368                          | 392        | 415        | 436        | 460        | 483        | 506        | 324                   | 345        | 365        | 384        | 404        | 420        | 441        |
| 25.0                | 1.86             | 254                  | 2.23           | 398                          | 424        | 449        | 472        | 497        | 523        | 548        | 351                   | 373        | 395        | 415        | 438        | 455        | 477        |
| 26.0                | 1.94             | 276                  | 2.42           | 433                          | 460        | 488        | 512        | 540        | 568        | 595        | 381                   | 405        | 429        | 451        | 475        | 494        | 518        |
| 27.0                | 2.01             | 296                  | 2.61           | 465                          | 495        | 525        | 551        | 581        | 610        | 640        | 409                   | 435        | 462        | 485        | 511        | 531        | 557        |
| 28.0                | 2.08             | 318                  | 2.80           | 499                          | 531        | 563        | 591        | 623        | 655        | 687        | 439                   | 467        | 495        | 520        | 548        | 570        | 597        |
| 29.0                | 2.16             | 342                  | 3.01           | 537                          | 572        | 606        | 637        | 671        | 705        | 739        | 473                   | 503        | 533        | 560        | 590        | 613        | 643        |
| 30.0                | 2.23             | 365                  | 3.22           | 574                          | 610        | 647        | 680        | 716        | 753        | 789        | 505                   | 537        | 569        | 598        | 630        | 655        | 687        |
| 31.0                | 2.30             | 390                  | 3.43           | 612                          | 651        | 690        | 725        | 764        | 803        | 842        | 539                   | 573        | 607        | 638        | 672        | 699        | 732        |
| 32.0                | 2.38             | 417                  | 3.67           | 654                          | 696        | 738        | 775        | 817        | 858        | 900        | 576                   | 612        | 649        | 682        | 719        | 747        | 783        |
| 33.0                | 2.45             | 441                  | 3.88           | 692                          | 736        | 780        | 820        | 864        | 908        | 952        | 609                   | 648        | 686        | 721        | 760        | 790        | 828        |
| 34.0                | 2.53             | 471                  | 4.14           | 739                          | 786        | 833        | 876        | 923        | 970        | 1017       | 651                   | 692        | 733        | 771        | 812        | 844        | 885        |
| 35.0                | 2.61             | 499                  | 4.39           | 784                          | 834        | 884        | 929        | 979        | 1028       | 1078       | 690                   | 734        | 778        | 817        | 861        | 895        | 938        |
| 36.0                | 2.67             | 525                  | 4.62           | 824                          | 876        | 929        | 976        | 1028       | 1081       | 1133       | 725                   | 771        | 817        | 859        | 905        | 940        | 986        |
| 37.0                | 2.75             | 556                  | 4.89           | 873                          | 928        | 984        | 1034       | 1089       | 1145       | 1201       | 768                   | 817        | 866        | 910        | 959        | 996        | 1044       |
| 38.0                | 2.82             | 585                  | 5.15           | 919                          | 977        | 1036       | 1088       | 1147       | 1206       | 1264       | 809                   | 860        | 912        | 958        | 1009       | 1049       | 1100       |
| 39.0                | 2.90             | 618                  | 5.44           | 970                          | 1032       | 1094       | 1150       | 1211       | 1273       | 1335       | 854                   | 908        | 963        | 1012       | 1066       | 1108       | 1162       |
| 40.0                | 2.98             | 651                  | 5.73           | 1021                         | 1086       | 1152       | 1210       | 1275       | 1340       | 1405       | 899                   | 956        | 1013       | 1065       | 1122       | 1166       | 1223       |
| 41.0                | 3.05             | 682                  | 6.00           | 1071                         | 1140       | 1208       | 1269       | 1337       | 1406       | 1474       | 943                   | 1003       | 1063       | 1117       | 1177       | 1223       | 1282       |
| 42.0                | 3.12             | 715                  | 6.29           | 1122                         | 1194       | 1265       | 1330       | 1401       | 1473       | 1544       | 988                   | 1051       | 1114       | 1170       | 1233       | 1281       | 1343       |
| 43.0                | 3.20             | 751                  | 6.61           | 1179                         | 1255       | 1330       | 1397       | 1472       | 1547       | 1623       | 1038                  | 1104       | 1170       | 1230       | 1296       | 1346       | 1412       |
| 44.0                | 3.28             | 790                  | 6.95           | 1240                         | 1319       | 1398       | 1469       | 1548       | 1627       | 1706       | 1091                  | 1161       | 1230       | 1293       | 1362       | 1416       | 1484       |
| 45.0                | 3.35             | 823                  | 7.25           | 1293                         | 1375       | 1457       | 1531       | 1614       | 1696       | 1778       | 1138                  | 1210       | 1282       | 1348       | 1420       | 1476       | 1547       |
| 46.0                | 3.42             | 859                  | 7.56           | 1349                         | 1435       | 1521       | 1598       | 1684       | 1770       | 1856       | 1187                  | 1262       | 1338       | 1406       | 1482       | 1540       | 1614       |
| 47.0                | 3.51             | 902                  | 7.94           | 1416                         | 1507       | 1597       | 1678       | 1768       | 1858       | 1949       | 1246                  | 1326       | 1405       | 1477       | 1556       | 1617       | 1695       |
| 48.0                | 3.58             | 939                  | 8.27           | 1475                         | 1569       | 1663       | 1747       | 1841       | 1935       | 2029       | 1298                  | 1381       | 1463       | 1538       | 1620       | 1684       | 1765       |
| 49.0                | 3.65             | 978                  | 8.60           | 1535                         | 1633       | 1730       | 1818       | 1916       | 2014       | 2112       | 1351                  | 1437       | 1523       | 1600       | 1686       | 1752       | 1837       |
| 50.0                | 3.73             | 1021                 | 8.98           | 1602                         | 1705       | 1807       | 1898       | 2001       | 2103       | 2205       | 1410                  | 1500       | 1590       | 1671       | 1760       | 1829       | 1918       |
| 51.0                | 3.80             | 1060                 | 9.33           | 1665                         | 1771       | 1877       | 1972       | 2078       | 2184       | 2290       | 1465                  | 1558       | 1652       | 1736       | 1829       | 1900       | 1993       |
| 52.0                | 3.87             | 1101                 | 9.69           | 1728                         | 1838       | 1949       | 2048       | 2158       | 2268       | 2378       | 1521                  | 1618       | 1715       | 1802       | 1899       | 1973       | 2069       |
| 53.0                | 3.95             | 1144                 | 10.07          | 1796                         | 1911       | 2025       | 2128       | 2242       | 2357       | 2471       | 1581                  | 1681       | 1782       | 1873       | 1973       | 2050       | 2150       |
| 54.0                | 4.03             | 1190                 | 10.47          | 1868                         | 1987       | 2106       | 2213       | 2332       | 2451       | 2570       | 1644                  | 1749       | 1853       | 1948       | 2052       | 2133       | 2236       |
| 55.0                | 4.10             | 1235                 | 10.86          | 1938                         | 2062       | 2185       | 2296       | 2420       | 2543       | 2667       | 1706                  | 1814       | 1923       | 2021       | 2129       | 2213       | 2320       |

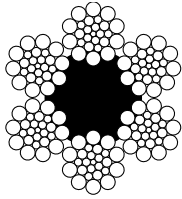
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## 6 x 25 FW (Filler Wire)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 28.0                | 1.80             | 322                  | 2.84           | 506                          | 538        | 570        | 599        | 632        | 664        | 696        | 440                   | 468        | 496        | 521        | 549        | 571        | 599        |
| 29.0                | 1.87             | 346                  | 3.05           | 544                          | 578        | 613        | 644        | 679        | 713        | 748        | 473                   | 503        | 533        | 560        | 590        | 613        | 643        |
| 30.0                | 1.93             | 370                  | 3.26           | 581                          | 618        | 655        | 689        | 726        | 763        | 800        | 506                   | 538        | 570        | 599        | 631        | 656        | 688        |
| 31.0                | 2.00             | 397                  | 3.49           | 623                          | 663        | 702        | 738        | 778        | 817        | 857        | 542                   | 576        | 611        | 642        | 677        | 703        | 737        |
| 32.0                | 2.07             | 423                  | 3.73           | 665                          | 707        | 749        | 788        | 830        | 872        | 915        | 578                   | 615        | 652        | 685        | 722        | 750        | 787        |
| 33.0                | 2.12             | 448                  | 3.95           | 704                          | 749        | 793        | 834        | 879        | 923        | 968        | 612                   | 651        | 690        | 725        | 764        | 794        | 833        |
| 34.0                | 2.19             | 474                  | 4.17           | 744                          | 792        | 839        | 882        | 929        | 976        | 1024       | 647                   | 689        | 730        | 767        | 808        | 840        | 880        |
| 35.0                | 2.25             | 498                  | 4.38           | 782                          | 831        | 881        | 926        | 976        | 1026       | 1075       | 680                   | 723        | 767        | 806        | 849        | 882        | 925        |
| 36.0                | 2.33             | 535                  | 4.71           | 841                          | 894        | 948        | 996        | 1050       | 1103       | 1157       | 731                   | 778        | 825        | 867        | 913        | 949        | 995        |
| 37.0                | 2.35             | 552                  | 4.86           | 867                          | 922        | 977        | 1027       | 1082       | 1137       | 1192       | 754                   | 802        | 850        | 893        | 941        | 978        | 1025       |
| 38.0                | 2.45             | 593                  | 5.22           | 931                          | 990        | 1049       | 1103       | 1162       | 1221       | 1281       | 810                   | 861        | 913        | 959        | 1011       | 1050       | 1101       |
| 39.0                | 2.50             | 622                  | 5.47           | 976                          | 1038       | 1101       | 1157       | 1219       | 1281       | 1343       | 849                   | 903        | 958        | 1006       | 1060       | 1102       | 1155       |
| 40.0                | 2.59             | 662                  | 5.83           | 1040                         | 1106       | 1173       | 1232       | 1298       | 1365       | 1431       | 905                   | 963        | 1020       | 1072       | 1130       | 1174       | 1231       |
| 41.0                | 2.65             | 691                  | 6.08           | 1084                         | 1153       | 1222       | 1285       | 1354       | 1423       | 1492       | 943                   | 1003       | 1064       | 1118       | 1178       | 1224       | 1283       |
| 42.0                | 2.70             | 722                  | 6.36           | 1134                         | 1206       | 1278       | 1343       | 1416       | 1488       | 1560       | 987                   | 1049       | 1112       | 1169       | 1232       | 1280       | 1342       |
| 43.0                | 2.77             | 758                  | 6.67           | 1190                         | 1266       | 1342       | 1410       | 1486       | 1562       | 1637       | 1035                  | 1101       | 1167       | 1227       | 1293       | 1343       | 1408       |
| 44.0                | 2.85             | 803                  | 7.06           | 1260                         | 1340       | 1421       | 1493       | 1573       | 1653       | 1733       | 1096                  | 1166       | 1236       | 1299       | 1369       | 1422       | 1491       |
| 45.0                | 2.91             | 835                  | 7.35           | 1311                         | 1395       | 1478       | 1554       | 1637       | 1721       | 1804       | 1141                  | 1214       | 1286       | 1352       | 1424       | 1480       | 1552       |
| 46.0                | 2.98             | 873                  | 7.68           | 1370                         | 1457       | 1545       | 1623       | 1711       | 1798       | 1885       | 1192                  | 1268       | 1344       | 1412       | 1488       | 1546       | 1621       |
| 47.0                | 3.03             | 909                  | 8.00           | 1428                         | 1518       | 1609       | 1691       | 1782       | 1873       | 1964       | 1242                  | 1321       | 1400       | 1471       | 1551       | 1611       | 1689       |
| 48.0                | 3.10             | 948                  | 8.35           | 1489                         | 1584       | 1679       | 1764       | 1859       | 1954       | 2048       | 1295                  | 1378       | 1460       | 1535       | 1617       | 1680       | 1762       |
| 49.0                | 3.16             | 991                  | 8.72           | 1556                         | 1655       | 1754       | 1843       | 1942       | 2041       | 2140       | 1353                  | 1440       | 1526       | 1603       | 1690       | 1755       | 1841       |
| 50.0                | 3.23             | 1030                 | 9.06           | 1617                         | 1720       | 1823       | 1916       | 2019       | 2122       | 2225       | 1407                  | 1496       | 1586       | 1667       | 1756       | 1825       | 1913       |
| 51.0                | 3.30             | 1073                 | 9.45           | 1685                         | 1793       | 1900       | 1997       | 2104       | 2211       | 2319       | 1466                  | 1560       | 1653       | 1737       | 1830       | 1902       | 1994       |
| 52.0                | 3.36             | 1119                 | 9.84           | 1756                         | 1868       | 1980       | 2081       | 2192       | 2304       | 2416       | 1528                  | 1625       | 1723       | 1810       | 1907       | 1982       | 2078       |
| 53.0                | 3.43             | 1161                 | 10.22          | 1823                         | 1939       | 2055       | 2160       | 2276       | 2392       | 2508       | 1586                  | 1687       | 1788       | 1879       | 1980       | 2057       | 2157       |
| 54.0                | 3.48             | 1203                 | 10.59          | 1889                         | 2009       | 2130       | 2238       | 2358       | 2479       | 2599       | 1643                  | 1748       | 1853       | 1947       | 2052       | 2132       | 2235       |
| 55.0                | 3.55             | 1248                 | 10.98          | 1959                         | 2084       | 2209       | 2321       | 2446       | 2571       | 2696       | 1705                  | 1813       | 1922       | 2020       | 2128       | 2211       | 2318       |
| 56.0                | 3.62             | 1291                 | 11.36          | 2026                         | 2155       | 2285       | 2401       | 2530       | 2659       | 2788       | 1763                  | 1875       | 1988       | 2089       | 2201       | 2287       | 2398       |
| 57.0                | 3.68             | 1341                 | 11.80          | 2106                         | 2240       | 2374       | 2495       | 2629       | 2763       | 2898       | 1832                  | 1949       | 2066       | 2171       | 2287       | 2376       | 2492       |
| 58.0                | 3.75             | 1389                 | 12.22          | 2180                         | 2319       | 2458       | 2583       | 2722       | 2861       | 3000       | 1897                  | 2018       | 2139       | 2247       | 2368       | 2460       | 2580       |
| 59.0                | 3.80             | 1435                 | 12.63          | 2253                         | 2396       | 2540       | 2669       | 2812       | 2956       | 3099       | 1960                  | 2085       | 2210       | 2322       | 2447       | 2542       | 2665       |
| 60.0                | 3.88             | 1488                 | 13.10          | 2336                         | 2485       | 2634       | 2768       | 2917       | 3066       | 3214       | 2033                  | 2162       | 2292       | 2408       | 2538       | 2636       | 2764       |

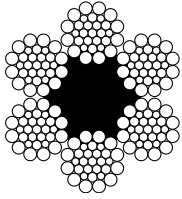
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## 6 x 26 WS (Warrington-Seale)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 28.0                | 2.09             | 318                  | 2.80           | 500                          | 532        | 564        | 592        | 624        | 656        | 688        | 435                   | 463        | 490        | 515        | 543        | 564        | 592        |
| 29.0                | 2.15             | 339                  | 2.99           | 533                          | 567        | 600        | 631        | 665        | 699        | 733        | 463                   | 493        | 522        | 549        | 579        | 601        | 630        |
| 30.0                | 2.23             | 365                  | 3.21           | 573                          | 609        | 646        | 678        | 715        | 751        | 788        | 498                   | 530        | 562        | 590        | 622        | 646        | 677        |
| 31.0                | 2.30             | 389                  | 3.42           | 611                          | 649        | 688        | 723        | 762        | 801        | 840        | 531                   | 565        | 599        | 629        | 663        | 689        | 722        |
| 32.0                | 2.38             | 414                  | 3.64           | 650                          | 692        | 733        | 770        | 812        | 853        | 894        | 566                   | 602        | 638        | 670        | 706        | 734        | 769        |
| 33.0                | 2.45             | 439                  | 3.86           | 689                          | 733        | 777        | 817        | 861        | 905        | 948        | 600                   | 638        | 676        | 711        | 749        | 778        | 816        |
| 34.0                | 2.52             | 467                  | 4.11           | 734                          | 780        | 827        | 869        | 916        | 963        | 1009       | 638                   | 679        | 720        | 756        | 797        | 828        | 868        |
| 35.0                | 2.60             | 496                  | 4.36           | 778                          | 828        | 877        | 922        | 971        | 1021       | 1070       | 677                   | 720        | 763        | 802        | 845        | 878        | 921        |
| 36.0                | 2.68             | 526                  | 4.63           | 826                          | 879        | 931        | 979        | 1031       | 1084       | 1137       | 719                   | 765        | 810        | 852        | 897        | 932        | 978        |
| 37.0                | 2.75             | 552                  | 4.86           | 867                          | 922        | 977        | 1027       | 1082       | 1137       | 1193       | 754                   | 802        | 850        | 894        | 942        | 978        | 1026       |
| 38.0                | 2.82             | 580                  | 5.11           | 911                          | 969        | 1027       | 1079       | 1137       | 1196       | 1254       | 793                   | 843        | 894        | 939        | 990        | 1028       | 1078       |
| 39.0                | 2.90             | 614                  | 5.41           | 965                          | 1026       | 1087       | 1143       | 1204       | 1266       | 1327       | 839                   | 893        | 946        | 994        | 1048       | 1088       | 1141       |
| 40.0                | 2.97             | 645                  | 5.67           | 1012                         | 1077       | 1141       | 1199       | 1264       | 1328       | 1393       | 881                   | 937        | 993        | 1043       | 1099       | 1142       | 1198       |
| 41.0                | 3.05             | 679                  | 5.97           | 1066                         | 1134       | 1202       | 1263       | 1331       | 1398       | 1466       | 927                   | 986        | 1045       | 1099       | 1158       | 1203       | 1261       |
| 42.0                | 3.12             | 711                  | 6.25           | 1116                         | 1187       | 1258       | 1322       | 1393       | 1464       | 1535       | 971                   | 1033       | 1094       | 1150       | 1212       | 1259       | 1320       |
| 43.0                | 3.20             | 747                  | 6.57           | 1172                         | 1247       | 1321       | 1389       | 1463       | 1538       | 1613       | 1020                  | 1085       | 1150       | 1208       | 1273       | 1323       | 1387       |
| 44.0                | 3.27             | 783                  | 6.89           | 1230                         | 1308       | 1386       | 1457       | 1535       | 1613       | 1692       | 1070                  | 1138       | 1206       | 1267       | 1335       | 1387       | 1455       |
| 45.0                | 3.35             | 822                  | 7.24           | 1291                         | 1374       | 1456       | 1530       | 1612       | 1694       | 1777       | 1123                  | 1195       | 1267       | 1331       | 1402       | 1457       | 1528       |
| 46.0                | 3.42             | 857                  | 7.54           | 1345                         | 1431       | 1516       | 1593       | 1679       | 1765       | 1850       | 1170                  | 1245       | 1319       | 1386       | 1461       | 1518       | 1591       |
| 47.0                | 3.50             | 896                  | 7.89           | 1407                         | 1497       | 1586       | 1667       | 1756       | 1846       | 1936       | 1224                  | 1302       | 1380       | 1450       | 1528       | 1588       | 1665       |
| 48.0                | 3.58             | 934                  | 8.22           | 1466                         | 1559       | 1653       | 1737       | 1830       | 1924       | 2017       | 1275                  | 1357       | 1438       | 1511       | 1592       | 1654       | 1735       |
| 49.0                | 3.65             | 974                  | 8.57           | 1529                         | 1626       | 1723       | 1811       | 1908       | 2006       | 2103       | 1330                  | 1415       | 1499       | 1576       | 1660       | 1725       | 1809       |
| 50.0                | 3.72             | 1012                 | 8.91           | 1590                         | 1691       | 1792       | 1883       | 1984       | 2086       | 2187       | 1383                  | 1471       | 1559       | 1638       | 1727       | 1794       | 1881       |
| 51.0                | 3.80             | 1055                 | 9.29           | 1657                         | 1763       | 1868       | 1963       | 2069       | 2174       | 2280       | 1442                  | 1533       | 1625       | 1708       | 1800       | 1870       | 1961       |
| 52.0                | 3.88             | 1098                 | 9.66           | 1724                         | 1834       | 1944       | 2043       | 2153       | 2262       | 2372       | 1500                  | 1596       | 1691       | 1777       | 1873       | 1946       | 2040       |
| 53.0                | 3.95             | 1139                 | 10.03          | 1789                         | 1903       | 2017       | 2119       | 2233       | 2347       | 2461       | 1556                  | 1655       | 1755       | 1844       | 1943       | 2019       | 2117       |
| 54.0                | 4.02             | 1181                 | 10.39          | 1854                         | 1973       | 2091       | 2197       | 2315       | 2433       | 2551       | 1613                  | 1716       | 1819       | 1911       | 2014       | 2093       | 2194       |
| 55.0                | 4.09             | 1223                 | 10.76          | 1920                         | 2042       | 2164       | 2274       | 2397       | 2519       | 2641       | 1670                  | 1777       | 1883       | 1979       | 2085       | 2166       | 2271       |
| 56.0                | 4.17             | 1268                 | 11.15          | 1990                         | 2117       | 2244       | 2358       | 2484       | 2611       | 2738       | 1731                  | 1842       | 1952       | 2051       | 2161       | 2246       | 2355       |
| 57.0                | 4.25             | 1319                 | 11.61          | 2071                         | 2203       | 2335       | 2453       | 2585       | 2717       | 2849       | 1802                  | 1916       | 2031       | 2135       | 2249       | 2337       | 2450       |
| 58.0                | 4.33             | 1366                 | 12.02          | 2145                         | 2281       | 2418       | 2541       | 2677       | 2814       | 2951       | 1866                  | 1985       | 2104       | 2210       | 2329       | 2420       | 2538       |
| 59.0                | 4.40             | 1412                 | 12.42          | 2216                         | 2357       | 2499       | 2626       | 2767       | 2908       | 3049       | 1928                  | 2051       | 2174       | 2284       | 2407       | 2501       | 2622       |
| 60.0                | 4.47             | 1455                 | 12.80          | 2284                         | 2429       | 2575       | 2705       | 2851       | 2996       | 3142       | 1987                  | 2113       | 2240       | 2354       | 2480       | 2577       | 2702       |

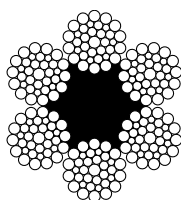
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## 6 x 31 WS (Warrington-Seale)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 32.0                | 2.06             | 420                  | 3.70           | 660                          | 702        | 744        | 782        | 824        | 866        | 908        | 574                   | 610        | 647        | 680        | 716        | 744        | 781        |
| 33.0                | 2.12             | 447                  | 3.93           | 701                          | 746        | 790        | 830        | 875        | 920        | 964        | 610                   | 649        | 688        | 723        | 761        | 791        | 829        |
| 34.0                | 2.19             | 474                  | 4.17           | 744                          | 791        | 838        | 881        | 928        | 976        | 1023       | 647                   | 688        | 729        | 766        | 808        | 839        | 880        |
| 35.0                | 2.25             | 502                  | 4.42           | 789                          | 839        | 889        | 935        | 985        | 1035       | 1085       | 686                   | 730        | 774        | 813        | 857        | 890        | 933        |
| 36.0                | 2.32             | 532                  | 4.68           | 835                          | 889        | 942        | 990        | 1043       | 1096       | 1149       | 727                   | 773        | 819        | 861        | 907        | 943        | 988        |
| 37.0                | 2.38             | 562                  | 4.94           | 882                          | 938        | 994        | 1045       | 1101       | 1157       | 1213       | 767                   | 816        | 865        | 909        | 958        | 995        | 1043       |
| 38.0                | 2.45             | 592                  | 5.21           | 929                          | 989        | 1048       | 1101       | 1160       | 1220       | 1279       | 809                   | 860        | 912        | 958        | 1009       | 1049       | 1100       |
| 39.0                | 2.50             | 622                  | 5.48           | 977                          | 1039       | 1101       | 1157       | 1220       | 1282       | 1344       | 850                   | 904        | 958        | 1007       | 1061       | 1102       | 1156       |
| 40.0                | 2.57             | 655                  | 5.77           | 1029                         | 1094       | 1160       | 1219       | 1284       | 1350       | 1415       | 895                   | 952        | 1009       | 1060       | 1117       | 1161       | 1217       |
| 41.0                | 2.64             | 691                  | 6.08           | 1085                         | 1155       | 1224       | 1286       | 1355       | 1424       | 1493       | 944                   | 1004       | 1065       | 1119       | 1179       | 1225       | 1284       |
| 42.0                | 2.70             | 722                  | 6.35           | 1133                         | 1206       | 1278       | 1343       | 1415       | 1487       | 1559       | 986                   | 1049       | 1112       | 1168       | 1231       | 1279       | 1341       |
| 43.0                | 2.78             | 761                  | 6.70           | 1195                         | 1271       | 1347       | 1416       | 1492       | 1568       | 1644       | 1039                  | 1106       | 1172       | 1231       | 1298       | 1348       | 1414       |
| 44.0                | 2.84             | 793                  | 6.98           | 1245                         | 1324       | 1404       | 1475       | 1554       | 1634       | 1713       | 1083                  | 1152       | 1221       | 1283       | 1352       | 1405       | 1473       |
| 45.0                | 2.90             | 831                  | 7.32           | 1305                         | 1388       | 1471       | 1546       | 1629       | 1712       | 1796       | 1135                  | 1208       | 1280       | 1345       | 1417       | 1473       | 1544       |
| 46.0                | 2.97             | 869                  | 7.65           | 1365                         | 1452       | 1539       | 1617       | 1704       | 1791       | 1878       | 1187                  | 1263       | 1339       | 1407       | 1482       | 1540       | 1615       |
| 47.0                | 3.04             | 908                  | 7.99           | 1426                         | 1517       | 1607       | 1689       | 1780       | 1871       | 1962       | 1240                  | 1319       | 1398       | 1469       | 1548       | 1609       | 1687       |
| 48.0                | 3.10             | 947                  | 8.33           | 1486                         | 1581       | 1676       | 1761       | 1855       | 1950       | 2045       | 1293                  | 1375       | 1458       | 1532       | 1614       | 1677       | 1758       |
| 49.0                | 3.15             | 984                  | 8.66           | 1544                         | 1643       | 1741       | 1830       | 1928       | 2026       | 2125       | 1344                  | 1429       | 1515       | 1592       | 1677       | 1743       | 1827       |
| 50.0                | 3.23             | 1027                 | 9.04           | 1613                         | 1715       | 1818       | 1910       | 2013       | 2116       | 2219       | 1403                  | 1492       | 1582       | 1662       | 1751       | 1820       | 1908       |
| 51.0                | 3.28             | 1065                 | 9.37           | 1671                         | 1778       | 1884       | 1980       | 2087       | 2193       | 2300       | 1454                  | 1547       | 1639       | 1723       | 1815       | 1886       | 1978       |
| 52.0                | 3.35             | 1105                 | 9.73           | 1735                         | 1846       | 1956       | 2056       | 2166       | 2277       | 2387       | 1510                  | 1606       | 1702       | 1789       | 1885       | 1958       | 2053       |
| 53.0                | 3.40             | 1141                 | 10.04          | 1791                         | 1905       | 2019       | 2122       | 2236       | 2350       | 2464       | 1558                  | 1657       | 1757       | 1846       | 1945       | 2021       | 2119       |
| 54.0                | 3.49             | 1196                 | 10.52          | 1877                         | 1997       | 2116       | 2224       | 2343       | 2463       | 2582       | 1633                  | 1737       | 1841       | 1935       | 2039       | 2118       | 2221       |
| 55.0                | 3.55             | 1240                 | 10.91          | 1946                         | 2070       | 2194       | 2306       | 2430       | 2554       | 2678       | 1693                  | 1801       | 1909       | 2006       | 2114       | 2196       | 2303       |
| 56.0                | 3.60             | 1279                 | 11.26          | 2009                         | 2137       | 2265       | 2380       | 2508       | 2636       | 2763       | 1748                  | 1859       | 1970       | 2070       | 2182       | 2267       | 2377       |
| 57.0                | 3.68             | 1335                 | 11.74          | 2095                         | 2229       | 2362       | 2482       | 2616       | 2749       | 2883       | 1823                  | 1939       | 2055       | 2160       | 2276       | 2364       | 2479       |
| 58.0                | 3.75             | 1384                 | 12.18          | 2173                         | 2312       | 2450       | 2575       | 2713       | 2851       | 2990       | 1891                  | 2011       | 2131       | 2240       | 2360       | 2452       | 2571       |
| 59.0                | 3.80             | 1427                 | 12.56          | 2241                         | 2384       | 2526       | 2655       | 2798       | 2940       | 3083       | 1950                  | 2074       | 2198       | 2310       | 2434       | 2529       | 2651       |
| 60.0                | 3.88             | 1483                 | 13.05          | 2328                         | 2476       | 2624       | 2758       | 2906       | 3054       | 3203       | 2025                  | 2154       | 2283       | 2399       | 2528       | 2627       | 2754       |
| 61.0                | 3.94             | 1530                 | 13.47          | 2403                         | 2556       | 2709       | 2846       | 2999       | 3152       | 3305       | 2090                  | 2223       | 2356       | 2476       | 2609       | 2711       | 2843       |
| 62.0                | 4.00             | 1580                 | 13.91          | 2481                         | 2639       | 2797       | 2939       | 3097       | 3255       | 3413       | 2158                  | 2296       | 2433       | 2557       | 2694       | 2799       | 2935       |
| 63.0                | 4.06             | 1621                 | 14.26          | 2545                         | 2707       | 2869       | 3015       | 3177       | 3339       | 3501       | 2214                  | 2355       | 2496       | 2623       | 2764       | 2872       | 3011       |
| 64.0                | 4.10             | 1655                 | 14.57          | 2599                         | 2764       | 2930       | 3079       | 3244       | 3410       | 3575       | 2261                  | 2405       | 2549       | 2679       | 2823       | 2932       | 3075       |

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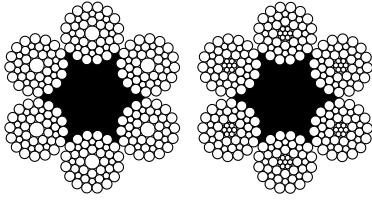


## 6 x 36 WS (Warrington-Seale)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 33.0                | 1.87             | 450                  | 3.96           | 706                          | 751        | 796        | 836        | 881        | 926        | 971        | 607                   | 646        | 684        | 719        | 758        | 787        | 825        |
| 34.0                | 1.93             | 480                  | 4.22           | 753                          | 801        | 849        | 892        | 940        | 988        | 1036       | 648                   | 689        | 730        | 767        | 809        | 840        | 881        |
| 35.0                | 1.95             | 495                  | 4.35           | 777                          | 826        | 876        | 920        | 970        | 1019       | 1069       | 668                   | 711        | 753        | 792        | 834        | 867        | 909        |
| 36.0                | 2.04             | 537                  | 4.72           | 843                          | 896        | 950        | 998        | 1052       | 1106       | 1159       | 725                   | 771        | 817        | 859        | 905        | 940        | 985        |
| 37.0                | 2.10             | 568                  | 5.00           | 892                          | 948        | 1005       | 1056       | 1113       | 1170       | 1227       | 767                   | 816        | 865        | 908        | 957        | 994        | 1043       |
| 38.0                | 2.15             | 596                  | 5.25           | 936                          | 995        | 1055       | 1109       | 1168       | 1228       | 1287       | 805                   | 856        | 907        | 953        | 1005       | 1044       | 1094       |
| 39.0                | 2.21             | 630                  | 5.54           | 989                          | 1052       | 1115       | 1171       | 1234       | 1297       | 1360       | 850                   | 905        | 959        | 1007       | 1062       | 1103       | 1156       |
| 40.0                | 2.27             | 660                  | 5.81           | 1036                         | 1102       | 1168       | 1227       | 1293       | 1359       | 1425       | 891                   | 948        | 1005       | 1056       | 1112       | 1156       | 1212       |
| 41.0                | 2.33             | 695                  | 6.12           | 1091                         | 1161       | 1230       | 1293       | 1362       | 1432       | 1501       | 939                   | 998        | 1058       | 1112       | 1172       | 1217       | 1276       |
| 42.0                | 2.38             | 728                  | 6.40           | 1143                         | 1215       | 1288       | 1354       | 1426       | 1499       | 1572       | 983                   | 1045       | 1108       | 1164       | 1227       | 1274       | 1336       |
| 43.0                | 2.44             | 764                  | 6.72           | 1199                         | 1275       | 1352       | 1420       | 1497       | 1573       | 1650       | 1031                  | 1097       | 1162       | 1222       | 1287       | 1337       | 1402       |
| 44.0                | 2.50             | 802                  | 7.06           | 1259                         | 1339       | 1419       | 1491       | 1572       | 1652       | 1732       | 1083                  | 1152       | 1221       | 1283       | 1352       | 1404       | 1472       |
| 45.0                | 2.57             | 841                  | 7.40           | 1320                         | 1404       | 1488       | 1563       | 1647       | 1731       | 1816       | 1135                  | 1207       | 1279       | 1345       | 1417       | 1472       | 1543       |
| 46.0                | 2.60             | 872                  | 7.67           | 1369                         | 1456       | 1543       | 1622       | 1709       | 1796       | 1883       | 1177                  | 1252       | 1327       | 1395       | 1470       | 1527       | 1601       |
| 46.5                | 2.64             | 891                  | 7.84           | 1398                         | 1487       | 1577       | 1657       | 1746       | 1835       | 1924       | 1203                  | 1279       | 1356       | 1425       | 1501       | 1560       | 1635       |
| 47.0                | 2.67             | 916                  | 8.06           | 1438                         | 1529       | 1621       | 1703       | 1795       | 1887       | 1978       | 1237                  | 1315       | 1394       | 1465       | 1544       | 1604       | 1681       |
| 48.0                | 2.73             | 954                  | 8.39           | 1497                         | 1592       | 1688       | 1774       | 1869       | 1964       | 2060       | 1287                  | 1369       | 1451       | 1525       | 1607       | 1670       | 1751       |
| 49.0                | 2.78             | 993                  | 8.74           | 1559                         | 1658       | 1757       | 1847       | 1946       | 2045       | 2144       | 1340                  | 1426       | 1511       | 1588       | 1673       | 1738       | 1823       |
| 50.0                | 2.84             | 1036                 | 9.12           | 1627                         | 1730       | 1834       | 1927       | 2031       | 2135       | 2238       | 1399                  | 1488       | 1577       | 1658       | 1747       | 1814       | 1902       |
| 51.0                | 2.90             | 1079                 | 9.50           | 1694                         | 1802       | 1910       | 2007       | 2115       | 2223       | 2331       | 1457                  | 1550       | 1643       | 1726       | 1819       | 1889       | 1981       |
| 52.0                | 2.96             | 1120                 | 9.86           | 1758                         | 1870       | 1982       | 2083       | 2195       | 2307       | 2419       | 1512                  | 1608       | 1705       | 1791       | 1888       | 1961       | 2056       |
| 53.0                | 3.02             | 1164                 | 10.25          | 1828                         | 1945       | 2061       | 2166       | 2282       | 2399       | 2515       | 1572                  | 1672       | 1773       | 1863       | 1963       | 2039       | 2138       |
| 54.0                | 3.07             | 1203                 | 10.59          | 1888                         | 2009       | 2129       | 2237       | 2358       | 2478       | 2598       | 1624                  | 1728       | 1831       | 1924       | 2028       | 2106       | 2208       |
| 55.0                | 3.13             | 1253                 | 11.02          | 1967                         | 2092       | 2217       | 2330       | 2455       | 2581       | 2706       | 1691                  | 1799       | 1907       | 2004       | 2112       | 2193       | 2300       |
| 56.0                | 3.18             | 1294                 | 11.39          | 2032                         | 2161       | 2291       | 2407       | 2537       | 2666       | 2796       | 1748                  | 1859       | 1970       | 2070       | 2182       | 2266       | 2376       |
| 57.0                | 3.24             | 1343                 | 11.82          | 2109                         | 2243       | 2378       | 2499       | 2633       | 2767       | 2902       | 1814                  | 1929       | 2045       | 2149       | 2264       | 2352       | 2466       |
| 58.0                | 3.30             | 1389                 | 12.22          | 2181                         | 2320       | 2458       | 2583       | 2722       | 2861       | 3000       | 1875                  | 1995       | 2114       | 2222       | 2341       | 2432       | 2550       |
| 59.0                | 3.37             | 1447                 | 12.73          | 2272                         | 2416       | 2561       | 2691       | 2836       | 2981       | 3125       | 1954                  | 2078       | 2202       | 2314       | 2439       | 2534       | 2657       |
| 60.0                | 3.41             | 1490                 | 13.11          | 2340                         | 2489       | 2638       | 2772       | 2921       | 3070       | 3219       | 2012                  | 2140       | 2268       | 2384       | 2512       | 2609       | 2736       |
| 61.0                | 3.47             | 1536                 | 13.52          | 2412                         | 2566       | 2719       | 2858       | 3011       | 3165       | 3319       | 2074                  | 2207       | 2339       | 2458       | 2590       | 2690       | 2821       |
| 62.0                | 3.53             | 1588                 | 13.98          | 2494                         | 2653       | 2812       | 2955       | 3113       | 3272       | 3431       | 2145                  | 2281       | 2418       | 2541       | 2677       | 2781       | 2916       |
| 63.0                | 3.58             | 1642                 | 14.45          | 2578                         | 2743       | 2907       | 3055       | 3219       | 3383       | 3547       | 2217                  | 2359       | 2500       | 2627       | 2768       | 2876       | 3015       |
| 64.0                | 3.64             | 1695                 | 14.91          | 2661                         | 2830       | 3000       | 3152       | 3322       | 3491       | 3660       | 2288                  | 2434       | 2580       | 2711       | 2857       | 2967       | 3111       |
| 65.0                | 3.70             | 1749                 | 15.39          | 2746                         | 2921       | 3096       | 3254       | 3429       | 3604       | 3778       | 2362                  | 2512       | 2663       | 2798       | 2949       | 3063       | 3212       |

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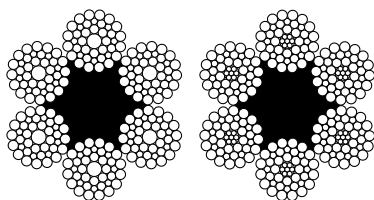




## 6 x 41 [46 or 47] WS (Warrington-Seale)

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 40.0                | 2.00             | 657                  | 5.78           | 1032                         | 1097       | 1163       | 1222       | 1288       | 1354       | 1419       | 877                   | 933        | 989        | 1039       | 1095       | 1137       | 1192       |
| 40.0+               | 2.00             | 645                  | 5.68           | 1013                         | 1078       | 1142       | 1200       | 1265       | 1329       | 1394       | 861                   | 916        | 971        | 1020       | 1075       | 1117       | 1171       |
| 41.0                | 2.05             | 685                  | 6.03           | 1076                         | 1145       | 1213       | 1275       | 1343       | 1412       | 1480       | 915                   | 973        | 1031       | 1084       | 1142       | 1186       | 1244       |
| 41.0+               | 2.05             | 675                  | 5.94           | 1059                         | 1126       | 1194       | 1255       | 1322       | 1390       | 1457       | 900                   | 957        | 1015       | 1066       | 1124       | 1167       | 1224       |
| 42.0                | 2.10             | 706                  | 6.22           | 1109                         | 1180       | 1250       | 1314       | 1384       | 1455       | 1526       | 943                   | 1003       | 1063       | 1117       | 1177       | 1222       | 1282       |
| 42.0+               | 2.10             | 693                  | 6.10           | 1088                         | 1158       | 1227       | 1289       | 1359       | 1428       | 1497       | 925                   | 984        | 1043       | 1096       | 1155       | 1200       | 1258       |
| 43.0                | 2.15             | 743                  | 6.54           | 1167                         | 1241       | 1315       | 1382       | 1456       | 1531       | 1605       | 992                   | 1055       | 1118       | 1175       | 1238       | 1286       | 1348       |
| 43.0+               | 2.15             | 731                  | 6.43           | 1148                         | 1221       | 1294       | 1360       | 1433       | 1506       | 1579       | 976                   | 1038       | 1100       | 1156       | 1218       | 1265       | 1327       |
| 44.0                | 2.20             | 781                  | 6.87           | 1226                         | 1304       | 1382       | 1452       | 1530       | 1608       | 1686       | 1042                  | 1108       | 1175       | 1234       | 1301       | 1351       | 1417       |
| 44.0+               | 2.20             | 767                  | 6.75           | 1205                         | 1281       | 1358       | 1427       | 1504       | 1581       | 1657       | 1024                  | 1089       | 1154       | 1213       | 1278       | 1328       | 1392       |
| 45.0                | 2.25             | 821                  | 7.23           | 1289                         | 1371       | 1453       | 1527       | 1609       | 1691       | 1773       | 1096                  | 1165       | 1235       | 1298       | 1368       | 1421       | 1490       |
| 45.0+               | 2.25             | 805                  | 7.09           | 1264                         | 1345       | 1425       | 1498       | 1578       | 1659       | 1739       | 1075                  | 1143       | 1212       | 1273       | 1342       | 1394       | 1461       |
| 46.0                | 2.30             | 861                  | 7.57           | 1351                         | 1437       | 1523       | 1601       | 1687       | 1773       | 1859       | 1149                  | 1222       | 1295       | 1361       | 1434       | 1489       | 1562       |
| 46.0+               | 2.30             | 846                  | 7.44           | 1328                         | 1413       | 1497       | 1573       | 1658       | 1742       | 1827       | 1129                  | 1201       | 1273       | 1337       | 1409       | 1464       | 1535       |
| 47.0                | 2.35             | 897                  | 7.90           | 1409                         | 1498       | 1588       | 1669       | 1759       | 1848       | 1938       | 1197                  | 1274       | 1350       | 1419       | 1495       | 1553       | 1628       |
| 47.0+               | 2.35             | 883                  | 7.77           | 1387                         | 1475       | 1563       | 1643       | 1731       | 1819       | 1908       | 1179                  | 1254       | 1329       | 1396       | 1471       | 1528       | 1602       |
| 48.0                | 2.40             | 940                  | 8.28           | 1476                         | 1570       | 1665       | 1749       | 1843       | 1937       | 2031       | 1255                  | 1335       | 1415       | 1487       | 1567       | 1627       | 1706       |
| 48.0+               | 2.40             | 923                  | 8.12           | 1449                         | 1541       | 1633       | 1716       | 1809       | 1901       | 1993       | 1231                  | 1310       | 1388       | 1459       | 1537       | 1597       | 1674       |
| 49.0                | 2.45             | 983                  | 8.65           | 1543                         | 1641       | 1740       | 1828       | 1926       | 2025       | 2123       | 1312                  | 1395       | 1479       | 1554       | 1637       | 1701       | 1783       |
| 49.0+               | 2.45             | 968                  | 8.51           | 1519                         | 1616       | 1713       | 1800       | 1896       | 1993       | 2090       | 1291                  | 1373       | 1456       | 1530       | 1612       | 1674       | 1755       |
| 50.0                | 2.50             | 1028                 | 9.05           | 1614                         | 1717       | 1820       | 1912       | 2015       | 2118       | 2220       | 1372                  | 1459       | 1547       | 1625       | 1713       | 1779       | 1865       |
| 50.0+               | 2.50             | 1009                 | 8.88           | 1584                         | 1685       | 1785       | 1876       | 1977       | 2078       | 2179       | 1346                  | 1432       | 1518       | 1595       | 1681       | 1746       | 1830       |
| 51.0                | 2.55             | 1060                 | 9.33           | 1664                         | 1770       | 1876       | 1971       | 2077       | 2183       | 2289       | 1414                  | 1504       | 1594       | 1675       | 1765       | 1834       | 1923       |
| 51.0+               | 2.55             | 1042                 | 9.17           | 1636                         | 1740       | 1844       | 1938       | 2042       | 2147       | 2251       | 1391                  | 1479       | 1568       | 1647       | 1736       | 1803       | 1891       |
| 52.0                | 2.60             | 1105                 | 9.72           | 1734                         | 1845       | 1955       | 2055       | 2165       | 2276       | 2386       | 1474                  | 1568       | 1662       | 1747       | 1840       | 1912       | 2004       |
| 52.0+               | 2.60             | 1084                 | 9.54           | 1701                         | 1810       | 1918       | 2016       | 2124       | 2232       | 2341       | 1446                  | 1538       | 1630       | 1713       | 1805       | 1875       | 1966       |
| 53.0                | 2.65             | 1135                 | 9.99           | 1782                         | 1895       | 2009       | 2111       | 2224       | 2338       | 2451       | 1514                  | 1611       | 1707       | 1794       | 1891       | 1964       | 2059       |
| 53.0+               | 2.65             | 1117                 | 9.83           | 1754                         | 1865       | 1977       | 2078       | 2189       | 2301       | 2413       | 1491                  | 1586       | 1681       | 1766       | 1861       | 1933       | 2027       |
| 54.0                | 2.70             | 1181                 | 10.40          | 1855                         | 1973       | 2091       | 2197       | 2315       | 2434       | 2552       | 1576                  | 1677       | 1777       | 1868       | 1968       | 2044       | 2143       |
| 54.0+               | 2.70             | 1160                 | 10.21          | 1821                         | 1937       | 2053       | 2158       | 2274       | 2390       | 2506       | 1548                  | 1647       | 1745       | 1834       | 1932       | 2007       | 2105       |
| 55.0                | 2.75             | 1215                 | 10.69          | 1908                         | 2030       | 2151       | 2261       | 2382       | 2504       | 2625       | 1622                  | 1725       | 1828       | 1921       | 2025       | 2103       | 2205       |
| 55.0+               | 2.75             | 1194                 | 10.50          | 1874                         | 1993       | 2113       | 2220       | 2339       | 2459       | 2578       | 1593                  | 1694       | 1796       | 1887       | 1989       | 2065       | 2166       |
| 56.0                | 2.80             | 1281                 | 11.28          | 2012                         | 2140       | 2268       | 2383       | 2511       | 2639       | 2768       | 1710                  | 1819       | 1928       | 2026       | 2135       | 2217       | 2325       |

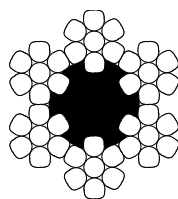
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## 6 x 41 [46 or 47] WS (Warrington-Seale)

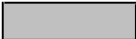
| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |  |  |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|--|--|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN | 1670<br>kN            | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |  |  |
| 56.0+               | 2.80             | 1260                 | 11.08          | 1978                         | 2104       | 2230       | 2343       | 2469       | 2595       | 2721       | 1681       | 1788                  | 1895       | 1991       | 2099       | 2180       | 2285       |  |  |
| 57.0                | 2.85             | 1315                 | 11.57          | 2064                         | 2195       | 2327       | 2445       | 2577       | 2708       | 2839       | 1754       | 1866                  | 1978       | 2078       | 2190       | 2275       | 2385       |  |  |
| 57.0+               | 2.85             | 1291                 | 11.36          | 2027                         | 2156       | 2285       | 2401       | 2530       | 2659       | 2789       | 1723       | 1833                  | 1942       | 2041       | 2151       | 2234       | 2342       |  |  |
| 58.0                | 2.90             | 1358                 | 11.95          | 2131                         | 2267       | 2403       | 2525       | 2661       | 2797       | 2932       | 1812       | 1927                  | 2042       | 2146       | 2262       | 2349       | 2463       |  |  |
| 58.0+               | 2.90             | 1336                 | 11.75          | 2097                         | 2231       | 2364       | 2484       | 2618       | 2752       | 2885       | 1783       | 1896                  | 2010       | 2112       | 2225       | 2311       | 2424       |  |  |
| 59.0                | 2.95             | 1411                 | 12.41          | 2215                         | 2356       | 2497       | 2624       | 2765       | 2906       | 3047       | 1882       | 2002                  | 2122       | 2230       | 2350       | 2441       | 2559       |  |  |
| 59.0+               | 2.95             | 1385                 | 12.19          | 2175                         | 2313       | 2452       | 2576       | 2715       | 2853       | 2992       | 1848       | 1966                  | 2084       | 2190       | 2308       | 2397       | 2513       |  |  |
| 60.0                | 3.00             | 1462                 | 12.87          | 2296                         | 2442       | 2588       | 2720       | 2866       | 3012       | 3159       | 1952       | 2076                  | 2200       | 2312       | 2436       | 2530       | 2653       |  |  |
| 60.0+               | 3.00             | 1439                 | 12.66          | 2259                         | 2403       | 2547       | 2677       | 2821       | 2965       | 3108       | 1920       | 2043                  | 2165       | 2275       | 2398       | 2490       | 2611       |  |  |
| 61.0                | 3.05             | 1517                 | 13.35          | 2382                         | 2534       | 2686       | 2822       | 2974       | 3126       | 3277       | 2025       | 2154                  | 2283       | 2399       | 2528       | 2626       | 2753       |  |  |
| 61.0+               | 3.05             | 1490                 | 13.11          | 2339                         | 2488       | 2637       | 2771       | 2920       | 3069       | 3218       | 1988       | 2115                  | 2242       | 2356       | 2482       | 2578       | 2703       |  |  |
| 62.0                | 3.10             | 1573                 | 13.85          | 2470                         | 2628       | 2785       | 2926       | 3084       | 3241       | 3398       | 2100       | 2233                  | 2367       | 2488       | 2621       | 2723       | 2855       |  |  |
| 62.0+               | 3.10             | 1547                 | 13.62          | 2429                         | 2584       | 2738       | 2878       | 3032       | 3187       | 3342       | 2065       | 2196                  | 2328       | 2446       | 2578       | 2677       | 2807       |  |  |
| 63.0                | 3.15             | 1623                 | 14.28          | 2548                         | 2710       | 2872       | 3018       | 3180       | 3343       | 3505       | 2165       | 2303                  | 2441       | 2565       | 2703       | 2808       | 2944       |  |  |
| 63.0+               | 3.15             | 1592                 | 14.01          | 2499                         | 2658       | 2817       | 2960       | 3119       | 3279       | 3438       | 2124       | 2259                  | 2394       | 2516       | 2652       | 2754       | 2888       |  |  |
| 59.0                | 3.20             | 1678                 | 14.77          | 2635                         | 2803       | 2970       | 3121       | 3289       | 3457       | 3625       | 2240       | 2382                  | 2525       | 2653       | 2796       | 2904       | 3045       |  |  |
| 64.0+               | 3.20             | 1650                 | 14.52          | 2591                         | 2756       | 2921       | 3070       | 3235       | 3400       | 3565       | 2202       | 2343                  | 2483       | 2609       | 2750       | 2856       | 2994       |  |  |
| 65.0+               | 3.25             | 1673                 | 14.72          | 2627                         | 2794       | 2962       | 3112       | 3280       | 3447       | 3614       | 2233       | 2375                  | 2517       | 2645       | 2788       | 2895       | 3036       |  |  |
| 66.0+               | 3.30             | 1734                 | 15.26          | 2722                         | 2896       | 3069       | 3225       | 3398       | 3572       | 3745       | 2314       | 2461                  | 2609       | 2741       | 2889       | 3000       | 3146       |  |  |
| 67.0+               | 3.35             | 1787                 | 15.72          | 2805                         | 2984       | 3163       | 3323       | 3502       | 3681       | 3859       | 2384       | 2536                  | 2688       | 2825       | 2977       | 3092       | 3242       |  |  |
| 68.0+               | 3.40             | 1841                 | 16.20          | 2890                         | 3074       | 3258       | 3424       | 3608       | 3792       | 3976       | 2457       | 2613                  | 2770       | 2910       | 3067       | 3185       | 3340       |  |  |
| 69.0+               | 3.45             | 1906                 | 16.77          | 2992                         | 3183       | 3374       | 3545       | 3736       | 3926       | 4117       | 2544       | 2706                  | 2868       | 3013       | 3175       | 3298       | 3458       |  |  |
| 70.0+               | 3.50             | 1945                 | 17.12          | 3054                         | 3249       | 3443       | 3618       | 3813       | 4007       | 4202       | 2596       | 2761                  | 2927       | 3075       | 3241       | 3366       | 3529       |  |  |
| 71.0+               | 3.55             | 2004                 | 17.64          | 3147                         | 3347       | 3548       | 3728       | 3928       | 4129       | 4329       | 2675       | 2845                  | 3016       | 3169       | 3339       | 3468       | 3637       |  |  |
| 72.0+               | 3.60             | 2070                 | 18.21          | 3249                         | 3456       | 3663       | 3849       | 4056       | 4263       | 4470       | 2762       | 2938                  | 3114       | 3272       | 3448       | 3581       | 3755       |  |  |
| 73.0+               | 3.65             | 2121                 | 18.67          | 3330                         | 3542       | 3754       | 3945       | 4157       | 4370       | 4582       | 2831       | 3011                  | 3191       | 3353       | 3534       | 3670       | 3849       |  |  |
| 74.0+               | 3.70             | 2189                 | 19.26          | 3436                         | 3655       | 3874       | 4071       | 4290       | 4509       | 4728       | 2921       | 3107                  | 3293       | 3460       | 3646       | 3787       | 3971       |  |  |
| 75.0+               | 3.75             | 2251                 | 19.81          | 3534                         | 3759       | 3985       | 4187       | 4412       | 4637       | 4863       | 3004       | 3196                  | 3387       | 3559       | 3750       | 3895       | 4085       |  |  |
| 76.0+               | 3.80             | 2321                 | 20.42          | 3643                         | 3875       | 4107       | 4316       | 4548       | 4780       | 5012       | 3097       | 3294                  | 3491       | 3669       | 3866       | 4015       | 4210       |  |  |
| 77.0+               | 3.85             | 2348                 | 20.66          | 3687                         | 3922       | 4156       | 4368       | 4603       | 4837       | 5072       | 3134       | 3333                  | 3533       | 3713       | 3912       | 4063       | 4261       |  |  |
| 78.0+               | 3.90             | 2419                 | 21.29          | 3798                         | 4040       | 4282       | 4500       | 4742       | 4984       | 5226       | 3229       | 3434                  | 3640       | 3825       | 4031       | 4186       | 4390       |  |  |
| 79.0+               | 3.95             | 2475                 | 21.78          | 3885                         | 4132       | 4380       | 4603       | 4850       | 5098       | 5345       | 3302       | 3513                  | 3723       | 3912       | 4123       | 4282       | 4490       |  |  |
| 80.0+               | 4.00             | 2549                 | 22.43          | 4002                         | 4257       | 4512       | 4741       | 4996       | 5251       | 5506       | 3402       | 3618                  | 3835       | 4030       | 4247       | 4411       | 4625       |  |  |

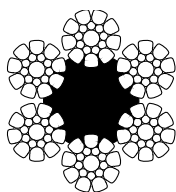
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## 6 x (1+6) standard compacted

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 10.0                | 1.15             | 45                   | 0.39           | 70                           | 75         | 79         | 83         | 88         | 92         | 97         | 63                    | 67         | 71         | 75         | 79         | 82         | 86         |
| 11.0                | 1.25             | 53                   | 0.46           | 83                           | 89         | 94         | 99         | 104        | 109        | 115        | 75                    | 80         | 84         | 89         | 94         | 97         | 102        |
| 12.0                | 1.37             | 63                   | 0.55           | 99                           | 106        | 112        | 118        | 124        | 130        | 137        | 89                    | 95         | 101        | 106        | 112        | 116        | 122        |
| 13.0                | 1.49             | 75                   | 0.65           | 117                          | 125        | 132        | 139        | 147        | 154        | 162        | 106                   | 112        | 119        | 125        | 132        | 137        | 144        |
| 14.0                | 1.60             | 86                   | 0.75           | 136                          | 144        | 153        | 161        | 169        | 178        | 186        | 122                   | 130        | 138        | 145        | 152        | 158        | 166        |
| 15.0                | 1.70             | 98                   | 0.85           | 154                          | 163        | 173        | 182        | 192        | 202        | 211        | 138                   | 147        | 156        | 164        | 173        | 179        | 188        |
| 16.0                | 1.82             | 112                  | 0.97           | 175                          | 186        | 197        | 208        | 219        | 230        | 241        | 158                   | 168        | 178        | 187        | 197        | 205        | 214        |
| 17.0                | 1.93             | 126                  | 1.10           | 198                          | 211        | 223        | 235        | 247        | 260        | 272        | 178                   | 190        | 201        | 211        | 222        | 231        | 242        |
| 18.0                | 2.07             | 144                  | 1.25           | 226                          | 240        | 255        | 268        | 282        | 297        | 311        | 203                   | 216        | 229        | 241        | 254        | 264        | 277        |
| 19.0                | 2.16             | 157                  | 1.36           | 246                          | 262        | 278        | 292        | 307        | 323        | 339        | 222                   | 236        | 250        | 263        | 277        | 288        | 302        |
| 20.0                | 2.28             | 175                  | 1.52           | 274                          | 292        | 309        | 325        | 343        | 360        | 378        | 247                   | 263        | 278        | 293        | 308        | 320        | 336        |
| 21.0                | 2.38             | 191                  | 1.66           | 300                          | 319        | 338        | 355        | 374        | 393        | 412        | 270                   | 287        | 304        | 319        | 337        | 350        | 367        |
| 22.0                | 2.52             | 214                  | 1.86           | 336                          | 357        | 379        | 398        | 419        | 441        | 462        | 302                   | 322        | 341        | 358        | 377        | 392        | 411        |
| 23.0                | 2.63             | 233                  | 2.02           | 365                          | 388        | 412        | 432        | 456        | 479        | 502        | 329                   | 349        | 370        | 389        | 410        | 426        | 447        |
| 24.0                | 2.74             | 252                  | 2.19           | 395                          | 421        | 446        | 469        | 494        | 519        | 544        | 356                   | 379        | 401        | 422        | 444        | 462        | 484        |
| 25.0                | 2.85             | 273                  | 2.38           | 429                          | 457        | 484        | 509        | 536        | 563        | 591        | 386                   | 411        | 436        | 458        | 482        | 501        | 526        |
| 26.0                | 2.97             | 296                  | 2.58           | 465                          | 495        | 524        | 551        | 580        | 610        | 640        | 418                   | 445        | 472        | 496        | 522        | 543        | 569        |
| 27.0                | 3.08             | 320                  | 2.78           | 502                          | 534        | 566        | 594        | 626        | 658        | 690        | 452                   | 480        | 509        | 535        | 564        | 586        | 614        |
| 28.0                | 3.20             | 344                  | 2.99           | 540                          | 574        | 609        | 640        | 674        | 709        | 743        | 486                   | 517        | 548        | 576        | 607        | 631        | 661        |
| 29.0                | 3.33             | 373                  | 3.24           | 585                          | 623        | 660        | 694        | 731        | 768        | 806        | 527                   | 560        | 594        | 624        | 658        | 684        | 717        |
| 30.0                | 3.44             | 397                  | 3.46           | 624                          | 664        | 703        | 739        | 779        | 819        | 858        | 561                   | 597        | 633        | 665        | 701        | 729        | 764        |

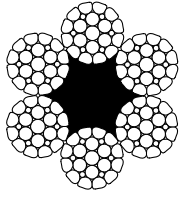
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## 6 x 19 Seale *compacted*

| Characteristic data |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|---------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\phi$<br>mm  | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 16.0                | 1.35             | 114                  | 1.00           | 180                          | 191        | 203        | 213        | 224        | 236        | 247        | 160                   | 170        | 180        | 189        | 200        | 207        | 217        |
| 17.0                | 1.44             | 129                  | 1.12           | 202                          | 215        | 228        | 240        | 253        | 265        | 278        | 180                   | 191        | 203        | 213        | 225        | 234        | 245        |
| 18.0                | 1.52             | 144                  | 1.25           | 226                          | 241        | 255        | 268        | 282        | 297        | 311        | 201                   | 214        | 227        | 238        | 251        | 261        | 274        |
| 19.0                | 1.60             | 159                  | 1.38           | 250                          | 265        | 281        | 296        | 312        | 327        | 343        | 222                   | 236        | 250        | 263        | 277        | 288        | 302        |
| 20.0                | 1.68             | 176                  | 1.53           | 277                          | 294        | 312        | 328        | 345        | 363        | 381        | 246                   | 262        | 278        | 292        | 307        | 319        | 335        |
| 21.0                | 1.77             | 194                  | 1.69           | 305                          | 324        | 344        | 361        | 380        | 400        | 419        | 271                   | 289        | 306        | 321        | 339        | 352        | 369        |
| 22.0                | 1.85             | 213                  | 1.85           | 334                          | 355        | 376        | 396        | 417        | 438        | 459        | 297                   | 316        | 335        | 352        | 371        | 386        | 404        |
| 22.5                | 1.87             | 219                  | 1.90           | 343                          | 365        | 387        | 407        | 429        | 450        | 472        | 306                   | 325        | 344        | 362        | 381        | 396        | 416        |
| 23.0                | 1.94             | 234                  | 2.03           | 367                          | 390        | 414        | 435        | 458        | 482        | 505        | 327                   | 347        | 368        | 387        | 408        | 424        | 444        |
| 24.0                | 2.03             | 256                  | 2.23           | 402                          | 427        | 453        | 476        | 501        | 527        | 553        | 357                   | 380        | 403        | 423        | 446        | 464        | 486        |
| 25.0                | 2.10             | 275                  | 2.39           | 432                          | 460        | 487        | 512        | 539        | 567        | 595        | 385                   | 409        | 434        | 456        | 480        | 499        | 523        |
| 25.5                | 2.15             | 287                  | 2.50           | 451                          | 480        | 509        | 535        | 563        | 592        | 621        | 402                   | 427        | 453        | 476        | 501        | 521        | 546        |
| 26.0                | 2.20             | 301                  | 2.62           | 473                          | 503        | 533        | 560        | 590        | 620        | 650        | 421                   | 447        | 474        | 498        | 525        | 546        | 572        |
| 26.5                | 2.23             | 310                  | 2.70           | 487                          | 518        | 549        | 577        | 608        | 639        | 670        | 433                   | 461        | 488        | 513        | 541        | 562        | 589        |
| 27.0                | 2.28             | 324                  | 2.82           | 509                          | 541        | 573        | 603        | 635        | 667        | 700        | 453                   | 482        | 510        | 536        | 565        | 587        | 616        |
| 28.0                | 2.37             | 350                  | 3.04           | 549                          | 584        | 619        | 651        | 686        | 721        | 756        | 489                   | 520        | 551        | 579        | 610        | 634        | 665        |
| 29.0                | 2.45             | 375                  | 3.26           | 588                          | 626        | 663        | 697        | 734        | 772        | 809        | 523                   | 557        | 590        | 620        | 654        | 679        | 712        |
| 30.0                | 2.55             | 405                  | 3.52           | 635                          | 676        | 716        | 753        | 793        | 833        | 874        | 565                   | 601        | 637        | 670        | 706        | 733        | 769        |
| 31.0                | 2.62             | 425                  | 3.70           | 667                          | 710        | 752        | 791        | 833        | 876        | 918        | 594                   | 632        | 670        | 704        | 741        | 771        | 808        |
| 32.0                | 2.70             | 452                  | 3.93           | 710                          | 755        | 801        | 841        | 887        | 932        | 977        | 632                   | 672        | 713        | 749        | 789        | 820        | 860        |
| 33.0                | 2.79             | 484                  | 4.21           | 760                          | 808        | 857        | 900        | 949        | 997        | 1046       | 676                   | 720        | 763        | 801        | 844        | 878        | 920        |
| 34.0                | 2.89             | 518                  | 4.51           | 813                          | 865        | 917        | 964        | 1015       | 1067       | 1119       | 724                   | 770        | 816        | 858        | 904        | 939        | 985        |
| 35.0                | 2.95             | 542                  | 4.71           | 850                          | 905        | 959        | 1008       | 1062       | 1116       | 1170       | 757                   | 805        | 853        | 897        | 945        | 982        | 1030       |
| 35.5                | 3.00             | 559                  | 4.86           | 877                          | 933        | 989        | 1039       | 1095       | 1151       | 1207       | 781                   | 830        | 880        | 925        | 975        | 1013       | 1062       |
| 36.0                | 3.05             | 578                  | 5.02           | 907                          | 965        | 1022       | 1074       | 1132       | 1190       | 1248       | 807                   | 858        | 910        | 956        | 1007       | 1047       | 1098       |
| 37.0                | 3.13             | 609                  | 5.30           | 957                          | 1017       | 1078       | 1133       | 1194       | 1255       | 1316       | 851                   | 906        | 960        | 1009       | 1063       | 1104       | 1158       |

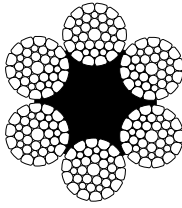
 on request



## 6 x 25 FW (Filler Wire) *compacted*

| Characteristic data  |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|----------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\sigma$<br>mm | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 20.0                 | 1.34             | 180                  | 1.56           | 282                          | 300        | 318        | 334        | 352        | 370        | 388        | 245                   | 261        | 276        | 291        | 306        | 318        | 333        |
| 21.0                 | 1.40             | 197                  | 1.71           | 309                          | 328        | 348        | 366        | 385        | 405        | 425        | 269                   | 286        | 303        | 318        | 335        | 348        | 365        |
| 22.0                 | 1.47             | 217                  | 1.89           | 341                          | 363        | 385        | 404        | 426        | 448        | 469        | 297                   | 316        | 335        | 352        | 370        | 385        | 404        |
| 23.0                 | 1.53             | 236                  | 2.05           | 371                          | 394        | 418        | 439        | 463        | 486        | 510        | 322                   | 343        | 363        | 382        | 403        | 418        | 438        |
| 24.0                 | 1.60             | 255                  | 2.22           | 400                          | 425        | 451        | 474        | 499        | 525        | 550        | 348                   | 370        | 392        | 412        | 434        | 451        | 473        |
| 25.0                 | 1.66             | 278                  | 2.42           | 437                          | 464        | 492        | 517        | 545        | 573        | 601        | 380                   | 404        | 428        | 450        | 474        | 493        | 516        |
| 26.0                 | 1.74             | 302                  | 2.63           | 474                          | 505        | 535        | 562        | 592        | 622        | 653        | 413                   | 439        | 465        | 489        | 515        | 535        | 561        |
| 27.0                 | 1.80             | 325                  | 2.83           | 511                          | 544        | 576        | 605        | 638        | 670        | 703        | 445                   | 473        | 501        | 527        | 555        | 577        | 605        |
| 28.0                 | 1.87             | 351                  | 3.05           | 550                          | 585        | 620        | 652        | 687        | 722        | 757        | 479                   | 509        | 540        | 567        | 598        | 621        | 651        |
| 29.0                 | 1.93             | 374                  | 3.26           | 588                          | 625        | 663        | 697        | 734        | 771        | 809        | 512                   | 544        | 577        | 606        | 639        | 663        | 696        |
| 30.0                 | 2.00             | 403                  | 3.50           | 632                          | 672        | 712        | 749        | 789        | 829        | 869        | 550                   | 585        | 620        | 651        | 686        | 713        | 748        |
| 31.0                 | 2.07             | 428                  | 3.73           | 672                          | 715        | 758        | 797        | 839        | 882        | 925        | 585                   | 622        | 660        | 693        | 730        | 759        | 796        |
| 32.0                 | 2.15             | 463                  | 4.03           | 727                          | 773        | 819        | 861        | 907        | 954        | 1000       | 632                   | 673        | 713        | 749        | 789        | 820        | 860        |
| 33.0                 | 2.22             | 493                  | 4.29           | 774                          | 823        | 873        | 917        | 966        | 1015       | 1065       | 673                   | 716        | 759        | 798        | 841        | 873        | 916        |
| 34.0                 | 2.28             | 519                  | 4.51           | 814                          | 866        | 918        | 965        | 1017       | 1068       | 1120       | 708                   | 754        | 799        | 839        | 884        | 919        | 963        |
| 35.0                 | 2.35             | 550                  | 4.79           | 864                          | 919        | 974        | 1024       | 1079       | 1134       | 1189       | 752                   | 800        | 848        | 891        | 938        | 975        | 1022       |
| 36.0                 | 2.41             | 580                  | 5.05           | 911                          | 969        | 1027       | 1079       | 1137       | 1195       | 1253       | 792                   | 843        | 893        | 939        | 989        | 1028       | 1078       |
| 37.0                 | 2.47             | 608                  | 5.29           | 954                          | 1015       | 1076       | 1131       | 1191       | 1252       | 1313       | 830                   | 883        | 936        | 984        | 1037       | 1077       | 1129       |
| 38.0                 | 2.54             | 645                  | 5.61           | 1012                         | 1077       | 1141       | 1199       | 1264       | 1328       | 1393       | 881                   | 937        | 993        | 1044       | 1100       | 1142       | 1198       |
| 39.0                 | 2.63             | 685                  | 5.96           | 1075                         | 1143       | 1212       | 1274       | 1342       | 1410       | 1479       | 935                   | 995        | 1054       | 1108       | 1168       | 1213       | 1272       |
| 40.0                 | 2.68             | 716                  | 6.23           | 1124                         | 1195       | 1267       | 1331       | 1403       | 1474       | 1546       | 977                   | 1040       | 1102       | 1158       | 1220       | 1268       | 1329       |
| 41.0                 | 2.76             | 755                  | 6.57           | 1185                         | 1261       | 1336       | 1404       | 1480       | 1555       | 1631       | 1031                  | 1097       | 1163       | 1222       | 1287       | 1338       | 1402       |
| 42.0                 | 2.82             | 793                  | 6.90           | 1245                         | 1324       | 1403       | 1475       | 1554       | 1633       | 1713       | 1083                  | 1152       | 1221       | 1283       | 1352       | 1405       | 1473       |
| 43.0                 | 2.89             | 829                  | 7.21           | 1301                         | 1384       | 1467       | 1541       | 1624       | 1707       | 1790       | 1132                  | 1204       | 1276       | 1341       | 1413       | 1468       | 1539       |
| 44.0                 | 2.95             | 870                  | 7.57           | 1366                         | 1453       | 1540       | 1619       | 1706       | 1793       | 1880       | 1189                  | 1264       | 1340       | 1408       | 1484       | 1542       | 1617       |
| 45.0                 | 3.02             | 906                  | 7.88           | 1422                         | 1513       | 1603       | 1685       | 1775       | 1866       | 1957       | 1237                  | 1316       | 1395       | 1466       | 1545       | 1605       | 1683       |
| 46.0                 | 3.08             | 946                  | 8.23           | 1485                         | 1579       | 1674       | 1759       | 1854       | 1948       | 2043       | 1292                  | 1374       | 1456       | 1530       | 1613       | 1675       | 1757       |
| 47.0                 | 3.15             | 988                  | 8.60           | 1552                         | 1651       | 1749       | 1838       | 1937       | 2036       | 2135       | 1350                  | 1436       | 1522       | 1599       | 1685       | 1751       | 1836       |
| 48.0                 | 3.22             | 1026                 | 8.93           | 1611                         | 1714       | 1817       | 1909       | 2012       | 2114       | 2217       | 1402                  | 1491       | 1580       | 1661       | 1750       | 1818       | 1906       |
| 49.0                 | 3.29             | 1078                 | 9.38           | 1693                         | 1801       | 1908       | 2005       | 2113       | 2221       | 2329       | 1473                  | 1566       | 1660       | 1745       | 1838       | 1910       | 2003       |
| 50.0                 | 3.35             | 1116                 | 9.70           | 1751                         | 1863       | 1974       | 2075       | 2186       | 2298       | 2410       | 1524                  | 1621       | 1718       | 1805       | 1902       | 1976       | 2072       |
| 51.0                 | 3.42             | 1166                 | 10.14          | 1831                         | 1947       | 2064       | 2169       | 2285       | 2402       | 2518       | 1593                  | 1694       | 1795       | 1887       | 1988       | 2066       | 2166       |
| 52.0                 | 3.50             | 1214                 | 10.56          | 1906                         | 2027       | 2149       | 2258       | 2379       | 2501       | 2622       | 1658                  | 1764       | 1869       | 1964       | 2070       | 2151       | 2255       |

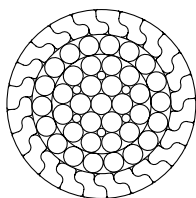
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## 6 x 36 WS (Warrington-Seale) compacted

| Characteristic data  |                  |                      |                | Nom. aggregate breaking load |            |            |            |            |            |            | Minimum breaking load |            |            |            |            |            |            |
|----------------------|------------------|----------------------|----------------|------------------------------|------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|------------|
| Nom.- $\sigma$<br>mm | Outer wire<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1570<br>kN                   | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN | 1570<br>kN            | 1670<br>kN | 1770<br>kN | 1860<br>kN | 1960<br>kN | 2060<br>kN | 2160<br>kN |
| 30.0                 | 1.77             | 408                  | 3.55           | 640                          | 681        | 722        | 759        | 799        | 840        | 881        | 551                   | 586        | 621        | 652        | 687        | 714        | 749        |
| 31.0                 | 1.83             | 433                  | 3.77           | 680                          | 723        | 767        | 806        | 849        | 892        | 935        | 585                   | 622        | 659        | 693        | 730        | 758        | 795        |
| 32.0                 | 1.88             | 459                  | 4.00           | 721                          | 767        | 813        | 855        | 901        | 946        | 992        | 620                   | 660        | 699        | 735        | 774        | 805        | 844        |
| 33.0                 | 1.95             | 489                  | 4.25           | 767                          | 816        | 865        | 909        | 958        | 1007       | 1056       | 660                   | 702        | 744        | 782        | 824        | 856        | 897        |
| 34.0                 | 2.00             | 518                  | 4.51           | 813                          | 865        | 917        | 963        | 1015       | 1067       | 1119       | 699                   | 744        | 788        | 828        | 873        | 907        | 951        |
| 35.0                 | 2.06             | 551                  | 4.79           | 864                          | 919        | 974        | 1024       | 1079       | 1134       | 1189       | 743                   | 791        | 838        | 881        | 928        | 964        | 1011       |
| 36.0                 | 2.13             | 589                  | 5.13           | 925                          | 984        | 1043       | 1096       | 1155       | 1214       | 1273       | 796                   | 846        | 897        | 943        | 993        | 1032       | 1082       |
| 37.0                 | 2.18             | 617                  | 5.36           | 968                          | 1030       | 1091       | 1147       | 1209       | 1270       | 1332       | 833                   | 886        | 939        | 986        | 1039       | 1080       | 1132       |
| 38.0                 | 2.25             | 657                  | 5.72           | 1031                         | 1097       | 1163       | 1222       | 1288       | 1353       | 1419       | 887                   | 943        | 1000       | 1051       | 1107       | 1150       | 1206       |
| 39.0                 | 2.30             | 679                  | 5.91           | 1067                         | 1135       | 1202       | 1264       | 1332       | 1399       | 1467       | 917                   | 976        | 1034       | 1087       | 1145       | 1190       | 1247       |
| 40.0                 | 2.35             | 718                  | 6.25           | 1128                         | 1200       | 1272       | 1336       | 1408       | 1480       | 1552       | 970                   | 1032       | 1094       | 1149       | 1211       | 1258       | 1319       |
| 41.0                 | 2.42             | 752                  | 6.55           | 1181                         | 1256       | 1332       | 1399       | 1475       | 1550       | 1625       | 1016                  | 1080       | 1145       | 1203       | 1268       | 1317       | 1381       |
| 42.0                 | 2.48             | 793                  | 6.90           | 1245                         | 1324       | 1403       | 1475       | 1554       | 1633       | 1713       | 1071                  | 1139       | 1207       | 1268       | 1337       | 1388       | 1456       |
| 43.0                 | 2.55             | 835                  | 7.27           | 1312                         | 1395       | 1479       | 1554       | 1638       | 1721       | 1805       | 1128                  | 1200       | 1272       | 1336       | 1408       | 1463       | 1534       |
| 44.0                 | 2.59             | 870                  | 7.57           | 1365                         | 1452       | 1539       | 1617       | 1704       | 1791       | 1878       | 1174                  | 1249       | 1324       | 1391       | 1466       | 1523       | 1597       |
| 45.0                 | 2.65             | 906                  | 7.88           | 1423                         | 1513       | 1604       | 1686       | 1776       | 1867       | 1958       | 1224                  | 1302       | 1379       | 1450       | 1528       | 1587       | 1664       |
| 46.0                 | 2.71             | 952                  | 8.28           | 1495                         | 1590       | 1685       | 1771       | 1866       | 1962       | 2057       | 1286                  | 1368       | 1449       | 1523       | 1605       | 1667       | 1748       |
| 47.0                 | 2.77             | 992                  | 8.63           | 1557                         | 1656       | 1755       | 1845       | 1944       | 2043       | 2142       | 1339                  | 1424       | 1510       | 1586       | 1672       | 1736       | 1821       |
| 48.0                 | 2.83             | 1030                 | 8.96           | 1617                         | 1720       | 1823       | 1915       | 2018       | 2121       | 2224       | 1390                  | 1479       | 1568       | 1647       | 1736       | 1803       | 1891       |
| 49.0                 | 2.89             | 1079                 | 9.39           | 1694                         | 1802       | 1910       | 2007       | 2115       | 2223       | 2331       | 1457                  | 1550       | 1642       | 1726       | 1819       | 1889       | 1981       |
| 50.0                 | 2.95             | 1121                 | 9.75           | 1760                         | 1872       | 1984       | 2085       | 2197       | 2309       | 2421       | 1513                  | 1610       | 1706       | 1793       | 1889       | 1962       | 2058       |
| 51.0                 | 3.00             | 1160                 | 10.09          | 1821                         | 1937       | 2053       | 2158       | 2274       | 2390       | 2506       | 1566                  | 1666       | 1766       | 1856       | 1955       | 2031       | 2130       |
| 52.0                 | 3.07             | 1214                 | 10.56          | 1906                         | 2027       | 2149       | 2258       | 2379       | 2501       | 2622       | 1639                  | 1744       | 1848       | 1942       | 2046       | 2126       | 2229       |
| 53.0                 | 3.13             | 1264                 | 10.99          | 1984                         | 2110       | 2237       | 2350       | 2477       | 2603       | 2729       | 1706                  | 1815       | 1923       | 2021       | 2130       | 2213       | 2320       |
| 54.0                 | 3.20             | 1312                 | 11.42          | 2061                         | 2192       | 2323       | 2441       | 2572       | 2704       | 2835       | 1772                  | 1885       | 1998       | 2099       | 2212       | 2298       | 2410       |
| 55.0                 | 3.25             | 1359                 | 11.83          | 2134                         | 2270       | 2406       | 2529       | 2664       | 2800       | 2936       | 1835                  | 1952       | 2069       | 2175       | 2291       | 2380       | 2496       |
| 56.0                 | 3.30             | 1401                 | 12.19          | 2200                         | 2340       | 2480       | 2606       | 2746       | 2886       | 3026       | 1892                  | 2012       | 2133       | 2241       | 2361       | 2453       | 2572       |
| 57.0                 | 3.37             | 1464                 | 12.73          | 2298                         | 2444       | 2591       | 2722       | 2869       | 3015       | 3162       | 1976                  | 2102       | 2228       | 2341       | 2467       | 2563       | 2687       |
| 58.0                 | 3.43             | 1513                 | 13.16          | 2376                         | 2527       | 2678       | 2814       | 2966       | 3117       | 3268       | 2043                  | 2173       | 2303       | 2420       | 2550       | 2649       | 2778       |
| 59.0                 | 3.48             | 1562                 | 13.59          | 2452                         | 2609       | 2765       | 2905       | 3062       | 3218       | 3374       | 2109                  | 2243       | 2378       | 2499       | 2633       | 2735       | 2868       |
| 60.0                 | 3.55             | 1620                 | 14.09          | 2543                         | 2705       | 2867       | 3012       | 3174       | 3336       | 3498       | 2187                  | 2326       | 2465       | 2591       | 2730       | 2836       | 2974       |

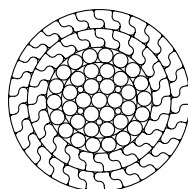
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## Locked-coil, single-layer for passenger ropeways

| Characteristic data |                |                      |                | Nom. aggregate breaking load |      |      |      | Minimum breaking load |      |      |      |
|---------------------|----------------|----------------------|----------------|------------------------------|------|------|------|-----------------------|------|------|------|
| Nom. Ø<br>mm        | Theor. Ø<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | Average strength (kN)        |      |      |      | Average strength (kN) |      |      |      |
|                     |                |                      |                | 1470                         | 1570 | 1670 | 1770 | 1470                  | 1570 | 1670 | 1770 |
| <b>16</b>           | 16.0           | 171                  | 1.44           | 251                          | 268  | 286  | 303  | 226                   | 242  | 251  | 266  |
| <b>17</b>           | 17.1           | 199                  | 1.67           | 293                          | 312  | 332  | 352  | 263                   | 281  | 292  | 310  |
| <b>18</b>           | 18.1           | 224                  | 1.88           | 330                          | 352  | 375  | 397  | 297                   | 317  | 330  | 349  |
| <b>19</b>           | 19.2           | 248                  | 2.09           | 365                          | 390  | 415  | 440  | 329                   | 351  | 365  | 387  |
| <b>20</b>           | 20.2           | 273                  | 2.30           | 402                          | 429  | 456  | 484  | 362                   | 386  | 402  | 426  |
| <b>21</b>           | 21.1           | 305                  | 2.56           | 448                          | 479  | 509  | 540  | 403                   | 431  | 448  | 475  |
| <b>22</b>           | 22.1           | 333                  | 2.80           | 490                          | 523  | 557  | 590  | 441                   | 471  | 490  | 519  |
| <b>23</b>           | 23.2           | 363                  | 3.05           | 534                          | 570  | 606  | 642  | 480                   | 513  | 533  | 565  |
| <b>24</b>           | 24.2           | 400                  | 3.36           | 588                          | 628  | 668  | 708  | 529                   | 565  | 588  | 623  |
| <b>25</b>           | 24.9           | 420                  | 3.53           | 618                          | 660  | 702  | 744  | 556                   | 594  | 618  | 655  |
| <b>26</b>           | 26.1           | 459                  | 3.86           | 675                          | 721  | 767  | 813  | 608                   | 649  | 675  | 715  |
| <b>27</b>           | 27.3           | 510                  | 4.28           | 749                          | 800  | 851  | 902  | 674                   | 720  | 749  | 794  |
| <b>28</b>           | 28.5           | 553                  | 4.65           | 813                          | 868  | 923  | 979  | 732                   | 781  | 813  | 861  |
| <b>29</b>           | 29.3           | 582                  | 4.89           | 855                          | 913  | 972  | 1030 | 770                   | 822  | 855  | 906  |
| <b>30</b>           | 30.0           | 591                  | 4.96           | 868                          | 927  | 987  | 1046 | 782                   | 835  | 868  | 920  |
| <b>31</b>           | 31.3           | 638                  | 5.36           | 938                          | 1002 | 1066 | 1130 | 844                   | 902  | 938  | 994  |
| <b>32</b>           | 32.3           | 673                  | 5.65           | 989                          | 1057 | 1124 | 1191 | 890                   | 951  | 989  | 1048 |
| <b>33</b>           | 33.1           | 707                  | 5.94           | 1039                         | 1110 | 1180 | 1251 | 935                   | 999  | 1039 | 1101 |
| <b>34</b>           | 33.9           | 747                  | 6.28           | 1098                         | 1173 | 1248 | 1323 | 989                   | 1056 | 1098 | 1164 |
| <b>35</b>           | 35.2           | 799                  | 6.71           | 1174                         | 1254 | 1334 | 1414 | 1057                  | 1129 | 1174 | 1244 |
| <b>36</b>           | 36.0           | 845                  | 7.10           | 1242                         | 1327 | 1411 | 1496 | 1118                  | 1194 | 1242 | 1316 |
| <b>37</b>           | 37.2           | 902                  | 7.57           | 1325                         | 1415 | 1506 | 1596 | 1193                  | 1274 | 1325 | 1404 |
| <b>38</b>           | 38.3           | 970                  | 8.15           | 1427                         | 1524 | 1621 | 1718 | 1284                  | 1371 | 1426 | 1512 |
| <b>39</b>           | 39.3           | 1019                 | 8.56           | 1498                         | 1600 | 1702 | 1803 | 1348                  | 1440 | 1497 | 1587 |
| <b>40</b>           | 40.2           | 1069                 | 8.98           | 1571                         | 1678 | 1784 | 1891 | 1414                  | 1510 | 1570 | 1664 |
| <b>41</b>           | 41.2           | 1114                 | 9.36           | 1637                         | 1749 | 1860 | 1971 | 1474                  | 1574 | 1637 | 1735 |
| <b>42</b>           | 41.8           | 1149                 | 9.65           | 1689                         | 1804 | 1919 | 2034 | 1520                  | 1623 | 1688 | 1790 |
| <b>43</b>           | 42.7           | 1190                 | 9.99           | 1749                         | 1868 | 1987 | 2106 | 1574                  | 1681 | 1748 | 1853 |
| <b>44</b>           | 44.2           | 1269                 | 10.66          | 1865                         | 1992 | 2119 | 2246 | 1679                  | 1793 | 1865 | 1976 |
| <b>45</b>           | 44.9           | 1324                 | 11.13          | 1947                         | 2079 | 2212 | 2344 | 1752                  | 1871 | 1946 | 2063 |

Intermediate sizes or alterations on request

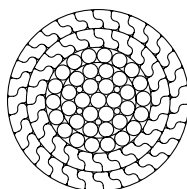


## Locked-coil, double-layer for passenger ropeways

| Characteristic data |                |                      |                | Nom. aggregate breaking load |      |      |      | Minimum breaking load |      |      |      |
|---------------------|----------------|----------------------|----------------|------------------------------|------|------|------|-----------------------|------|------|------|
| Nom. Ø<br>mm        | Theor. Ø<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | Average strength (kN)        |      |      |      | Average strength (kN) |      |      |      |
|                     |                |                      |                | 1470                         | 1570 | 1670 | 1770 | 1470                  | 1570 | 1670 | 1770 |
| <b>28</b>           | 28.0           | 549                  | 4.61           | 807                          | 862  | 917  | 972  | 727                   | 776  | 807  | 855  |
| <b>29</b>           | 29.3           | 598                  | 5.03           | 880                          | 940  | 999  | 1059 | 792                   | 846  | 880  | 932  |
| <b>30</b>           | 29.7           | 609                  | 5.12           | 895                          | 956  | 1017 | 1078 | 806                   | 861  | 895  | 949  |
| <b>31</b>           | 30.9           | 664                  | 5.58           | 977                          | 1043 | 1109 | 1176 | 879                   | 939  | 976  | 1035 |
| <b>32</b>           | 32.2           | 713                  | 5.99           | 1049                         | 1120 | 1191 | 1263 | 944                   | 1008 | 1048 | 1111 |
| <b>33</b>           | 33.0           | 742                  | 6.24           | 1091                         | 1166 | 1240 | 1314 | 982                   | 1049 | 1091 | 1156 |
| <b>34</b>           | 33.9           | 801                  | 6.73           | 1178                         | 1258 | 1338 | 1418 | 1060                  | 1132 | 1178 | 1248 |
| <b>35</b>           | 35.1           | 856                  | 7.19           | 1258                         | 1344 | 1429 | 1515 | 1132                  | 1209 | 1258 | 1333 |
| <b>36</b>           | 35.9           | 889                  | 7.47           | 1307                         | 1395 | 1484 | 1573 | 1176                  | 1256 | 1306 | 1384 |
| <b>37</b>           | 36.8           | 948                  | 7.96           | 1393                         | 1488 | 1583 | 1677 | 1254                  | 1339 | 1393 | 1476 |
| <b>38</b>           | 37.8           | 992                  | 8.33           | 1458                         | 1557 | 1656 | 1755 | 1312                  | 1401 | 1457 | 1545 |
| <b>39</b>           | 38.9           | 1063                 | 8.93           | 1563                         | 1669 | 1775 | 1881 | 1406                  | 1502 | 1562 | 1656 |
| <b>40</b>           | 39.7           | 1100                 | 9.24           | 1617                         | 1727 | 1837 | 1947 | 1455                  | 1554 | 1617 | 1713 |
| <b>41</b>           | 41.1           | 1178                 | 9.90           | 1732                         | 1850 | 1968 | 2086 | 1559                  | 1665 | 1732 | 1836 |
| <b>42</b>           | 41.8           | 1215                 | 10.20          | 1786                         | 1907 | 2029 | 2150 | 1607                  | 1717 | 1785 | 1892 |
| <b>43</b>           | 43.2           | 1306                 | 10.97          | 1919                         | 2050 | 2180 | 2311 | 1727                  | 1845 | 1919 | 2034 |
| <b>44</b>           | 44.3           | 1348                 | 11.32          | 1981                         | 2116 | 2251 | 2385 | 1783                  | 1904 | 1981 | 2099 |
| <b>45</b>           | 44.8           | 1371                 | 11.52          | 2015                         | 2152 | 2290 | 2427 | 1814                  | 1937 | 2015 | 2135 |
| <b>46</b>           | 45.7           | 1434                 | 12.04          | 2108                         | 2251 | 2395 | 2538 | 1897                  | 2026 | 2107 | 2233 |
| <b>47</b>           | 47.0           | 1505                 | 12.64          | 2212                         | 2362 | 2513 | 2663 | 1991                  | 2126 | 2211 | 2344 |
| <b>48</b>           | 47.7           | 1550                 | 13.02          | 2279                         | 2434 | 2589 | 2744 | 2051                  | 2191 | 2278 | 2415 |
| <b>49</b>           | 48.7           | 1623                 | 13.63          | 2385                         | 2548 | 2710 | 2872 | 2147                  | 2293 | 2385 | 2527 |
| <b>50</b>           | 49.8           | 1705                 | 14.32          | 2507                         | 2677 | 2884 | 3018 | 2256                  | 2409 | 2506 | 2656 |
| <b>51</b>           | 51.0           | 1778                 | 14.94          | 2614                         | 2792 | 2970 | 3147 | 2353                  | 2513 | 2613 | 2770 |
| <b>52</b>           | 51.9           | 1834                 | 15.40          | 2696                         | 2879 | 3063 | 3246 | 2426                  | 2591 | 2695 | 2856 |
| <b>53</b>           | 53.0           | 1934                 | 16.24          | 2843                         | 3036 | 3230 | 3423 | 2559                  | 2733 | 2842 | 3012 |
| <b>54</b>           | 53.6           | 1973                 | 16.58          | 2901                         | 3098 | 3295 | 3493 | 2611                  | 2788 | 2900 | 3074 |
| <b>55</b>           | 54.7           | 2053                 | 17.24          | 3017                         | 3223 | 3428 | 3633 | 2716                  | 2900 | 3016 | 3197 |
| <b>56</b>           | 56.5           | 2192                 | 18.41          | 3223                         | 3442 | 3661 | 3880 | 2900                  | 3098 | 3222 | 3415 |
| <b>57</b>           | 57.4           | 2248                 | 18.89          | 3305                         | 3530 | 3755 | 3980 | 2975                  | 3177 | 3305 | 3502 |
| <b>58</b>           | 58.0           | 2301                 | 19.33          | 3383                         | 3613 | 3843 | 4073 | 3045                  | 3252 | 3382 | 3585 |
| <b>59</b>           | 59.3           | 2396                 | 20.12          | 3522                         | 3761 | 4001 | 4241 | 3170                  | 3385 | 3521 | 3732 |
| <b>60</b>           | 60.0           | 2452                 | 20.60          | 3605                         | 3850 | 4095 | 4340 | 3244                  | 3465 | 3604 | 3820 |

Intermediate sizes or alterations on request

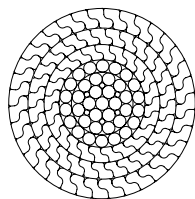




## Locked-coil, double-layer for passenger ropeways

| Characteristic data |                |                      |                | Nom. aggregate breaking load |      |      |      | Minimum breaking load |      |      |      |
|---------------------|----------------|----------------------|----------------|------------------------------|------|------|------|-----------------------|------|------|------|
| Nom. Ø<br>mm        | Theor. Ø<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | Average strength (kN)        |      |      |      | Average strength (kN) |      |      |      |
|                     |                |                      |                | 1470                         | 1570 | 1670 | 1770 | 1470                  | 1570 | 1670 | 1770 |
| <b>61</b>           | 61.2           | 2549                 | 21.41          | 3747                         | 4002 | 4256 | 4511 | 3372                  | 3601 | 3746 | 3970 |
| <b>62</b>           | 61.8           | 2594                 | 21.79          | 3813                         | 4072 | 4331 | 4591 | 3431                  | 3665 | 3811 | 4040 |
| <b>63</b>           | 63.1           | 2697                 | 22.66          | 3965                         | 4234 | 4504 | 4774 | 3568                  | 3811 | 3964 | 4201 |
| <b>64</b>           | 63.7           | 2731                 | 22.94          | 4014                         | 4287 | 4560 | 4833 | 3613                  | 3858 | 4013 | 4253 |
| <b>65</b>           | 64.8           | 2844                 | 23.89          | 4181                         | 4466 | 4750 | 5035 | 3763                  | 4019 | 4180 | 4431 |
| <b>66</b>           | 66.4           | 2976                 | 25.00          | 4375                         | 4673 | 4970 | 5268 | 3938                  | 4205 | 4374 | 4636 |
| <b>67</b>           | 67.2           | 3050                 | 25.62          | 4483                         | 4788 | 5093 | 5398 | 4035                  | 4309 | 4482 | 4750 |
| <b>68</b>           | 68.4           | 3151                 | 26.46          | 4631                         | 4946 | 5261 | 5576 | 4168                  | 4452 | 4630 | 4907 |
| <b>69</b>           | 69.2           | 3226                 | 27.10          | 4742                         | 5065 | 5387 | 5710 | 4268                  | 4558 | 4741 | 5025 |
| <b>70</b>           | 70.4           | 3330                 | 27.97          | 4895                         | 5227 | 5560 | 5893 | 4405                  | 4705 | 4893 | 5186 |
| <b>71</b>           | 71.2           | 3407                 | 28.62          | 5009                         | 5349 | 5690 | 6031 | 4508                  | 4814 | 5007 | 5307 |
| <b>72</b>           | 72.4           | 3515                 | 29.53          | 5168                         | 5519 | 5871 | 6222 | 4651                  | 4967 | 5166 | 5476 |
| <b>73</b>           | 73.2           | 3593                 | 30.18          | 5282                         | 5641 | 6000 | 6360 | 4754                  | 5077 | 5280 | 5597 |
| <b>74</b>           | 74.4           | 3702                 | 31.10          | 5442                         | 5812 | 6183 | 6553 | 4898                  | 5231 | 5441 | 5767 |
| <b>75</b>           | 75.2           | 3784                 | 31.78          | 5562                         | 5941 | 6319 | 6697 | 5006                  | 5347 | 5561 | 5894 |
| <b>76</b>           | 76.4           | 3896                 | 32.72          | 5727                         | 6116 | 6506 | 6895 | 5154                  | 5505 | 5725 | 6068 |
| <b>77</b>           | 77.2           | 3979                 | 33.43          | 5850                         | 6248 | 6646 | 7044 | 5265                  | 5623 | 5848 | 6198 |
| <b>78</b>           | 78.4           | 4097                 | 34.42          | 6023                         | 6432 | 6842 | 7252 | 5420                  | 5789 | 6021 | 6382 |
| <b>79</b>           | 79.1           | 4170                 | 35.02          | 6129                         | 6546 | 6963 | 7380 | 5516                  | 5892 | 6128 | 6495 |
| <b>80</b>           | 80.4           | 4301                 | 36.13          | 6323                         | 6753 | 7183 | 7613 | 5691                  | 6078 | 6321 | 6700 |
| <b>81</b>           | 81.2           | 4385                 | 36.83          | 6446                         | 6884 | 7323 | 7761 | 5801                  | 6196 | 6444 | 6830 |
| <b>82</b>           | 82.4           | 4510                 | 37.89          | 6630                         | 7081 | 7532 | 7983 | 5967                  | 6373 | 6628 | 7025 |
| <b>83</b>           | 83.3           | 4606                 | 38.69          | 6770                         | 7231 | 7691 | 8152 | 6093                  | 6508 | 6768 | 7174 |
| <b>84</b>           | 84.4           | 4723                 | 39.67          | 6943                         | 7415 | 7888 | 8360 | 6249                  | 6674 | 6941 | 7357 |
| <b>85</b>           | 85.3           | 4821                 | 40.49          | 7086                         | 7568 | 8050 | 8532 | 6378                  | 6811 | 7084 | 7508 |
| <b>86</b>           | 86.4           | 4941                 | 41.50          | 7263                         | 7757 | 8251 | 8745 | 6537                  | 6981 | 7261 | 7696 |
| <b>87</b>           | 87.3           | 5040                 | 42.34          | 7409                         | 7913 | 8417 | 8921 | 6668                  | 7122 | 7407 | 7851 |
| <b>88</b>           | 88.4           | 5163                 | 43.37          | 7590                         | 8106 | 8623 | 9139 | 6831                  | 7296 | 7588 | 8042 |
| <b>89</b>           | 89.3           | 5265                 | 44.23          | 7740                         | 8266 | 8793 | 9319 | 6966                  | 7439 | 7737 | 8201 |
| <b>90</b>           | 90.4           | 5391                 | 45.28          | 7924                         | 8463 | 9002 | 9541 | 7132                  | 7617 | 7922 | 8396 |

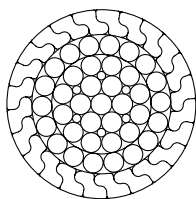
Intermediate sizes or alterations on request



## Locked-coil, 3- and more layers

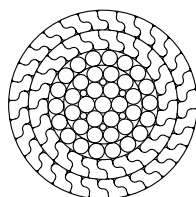
| Characteristic data  |                  |                      |                | Nom. aggregate breaking load |      |      |      | Minimum breaking load |      |      |      |
|----------------------|------------------|----------------------|----------------|------------------------------|------|------|------|-----------------------|------|------|------|
| Nom.- $\sigma$<br>mm | locked<br>layers | A<br>mm <sup>2</sup> | Weight<br>kg/m | Average strength (kN)        |      |      |      | Average strength (kN) |      |      |      |
|                      |                  |                      |                | 1180                         | 1280 | 1370 | 1570 | 1180                  | 1280 | 1370 | 1570 |
| <b>50</b>            | 3                | 1809                 | 15.11          | 2135                         | 2316 | 2478 | 2840 | 1921                  | 2084 | 2230 | 2556 |
| <b>52</b>            | 3                | 1935                 | 16.16          | 2283                         | 2477 | 2651 | 3038 | 2055                  | 2229 | 2386 | 2734 |
| <b>54</b>            | 3                | 2054                 | 17.15          | 2424                         | 2629 | 2814 | 3225 | 2181                  | 2366 | 2533 | 2902 |
| <b>56</b>            | 3                | 2189                 | 18.28          | 2583                         | 2802 | 2999 | 3437 | 2325                  | 2522 | 2699 | 3093 |
| <b>58</b>            | 3                | 2372                 | 19.81          | 2799                         | 3036 | 3250 | 3724 | 2519                  | 2733 | 2925 | 3352 |
| <b>60</b>            | 3                | 2514                 | 20.99          | 2967                         | 3218 | 3444 | 3947 | 2670                  | 2896 | 3100 | 3552 |
| <b>62</b>            | 3                | 2668                 | 22.28          | 3148                         | 3415 | 3655 | 4189 | 2833                  | 3074 | 3290 | 3770 |
| <b>64</b>            | 3                | 2888                 | 24.11          | 3408                         | 3697 | 3957 | 4534 | 3067                  | 3327 | 3561 | 4081 |
| <b>66</b>            | 3                | 3042                 | 25.40          | 3590                         | 3894 | 4168 | 4776 | 3231                  | 3504 | 3751 | 4298 |
| <b>68</b>            | 3                | 3190                 | 26.64          | 3764                         | 4083 | 4370 | 5008 | 3388                  | 3675 | 3933 | 4507 |
| <b>70</b>            | 3                | 3399                 | 28.38          | 4011                         | 4351 | 4657 | 5336 | 3610                  | 3916 | 4191 | 4803 |
| <b>71</b>            | 3                | 3480                 | 29.06          | 4106                         | 4454 | 4768 | 5464 | 3696                  | 4009 | 4291 | 4917 |
| <b>73</b>            | 3                | 3660                 | 30.56          | 4319                         | 4685 | 5014 | 5746 | 3887                  | 4216 | 4513 | 5172 |
| <b>75</b>            | 3                | 3828                 | 31.96          | 4517                         | 4900 | 5244 | 6010 | 4065                  | 4410 | 4720 | 5409 |
| <b>76</b>            | 4                | 4094                 | 34.18          | 4831                         | 5240 | 5609 | 6428 | 4348                  | 4716 | 5048 | 5785 |
| <b>78</b>            | 4                | 4278                 | 35.72          | 5048                         | 5476 | 5861 | 6716 | 4543                  | 4928 | 5275 | 6045 |
| <b>80</b>            | 4                | 4454                 | 37.19          | 5256                         | 5701 | 6102 | 6993 | 4730                  | 5131 | 5492 | 6294 |
| <b>82</b>            | 4                | 4709                 | 39.32          | 5557                         | 6028 | 6451 | 7393 | 5001                  | 5425 | 5806 | 6654 |
| <b>84</b>            | 4                | 4931                 | 41.17          | 5819                         | 6312 | 6755 | 7742 | 5237                  | 5681 | 6080 | 6968 |
| <b>86</b>            | 4                | 5150                 | 43.00          | 6077                         | 6592 | 7056 | 8086 | 5469                  | 5933 | 6350 | 7277 |
| <b>88</b>            | 4                | 5352                 | 44.69          | 6315                         | 6851 | 7332 | 8403 | 5684                  | 6166 | 6599 | 7562 |
| <b>89</b>            | 5                | 5646                 | 47.14          | 6662                         | 7227 | 7735 | 8864 | 5996                  | 6504 | 6962 | 7978 |
| <b>91</b>            | 5                | 5864                 | 48.96          | 6920                         | 7506 | 8034 | 9206 | 6228                  | 6755 | 7230 | 8286 |

Intermediate sizes or alterations on request



### Locked-coil, single-layer for material ropeways

| Characteristic data |                |                      |                | Nom. aggregate breaking load |      |      |      | Minimum breaking load |      |      |      |
|---------------------|----------------|----------------------|----------------|------------------------------|------|------|------|-----------------------|------|------|------|
| Nom. Ø<br>mm        | Theor. Ø<br>mm | A<br>mm <sup>2</sup> | Weight<br>kg/m | Average strength (kN)        |      |      |      | Average strength (kN) |      |      |      |
|                     |                |                      |                | 1180                         | 1280 | 1370 | 1470 | 1180                  | 1280 | 1370 | 1470 |
| <b>22</b>           | 22.2           | 333                  | 2.80           | 393                          | 426  | 456  | 490  | 354                   | 384  | 402  | 431  |
| <b>24</b>           | 24.3           | 408                  | 3.43           | 481                          | 522  | 559  | 600  | 433                   | 470  | 492  | 528  |
| <b>26</b>           | 25.8           | 454                  | 3.81           | 536                          | 581  | 622  | 668  | 482                   | 523  | 547  | 587  |
| <b>28</b>           | 28.1           | 539                  | 4.53           | 636                          | 690  | 739  | 793  | 573                   | 621  | 650  | 698  |
| <b>30</b>           | 30.3           | 628                  | 5.27           | 741                          | 804  | 860  | 923  | 667                   | 723  | 757  | 812  |
| <b>32</b>           | 31.8           | 686                  | 5.77           | 810                          | 879  | 940  | 1009 | 729                   | 791  | 827  | 888  |
| <b>34</b>           | 33.9           | 752                  | 6.32           | 888                          | 963  | 1031 | 1106 | 799                   | 867  | 907  | 973  |
| <b>36</b>           | 35.9           | 879                  | 7.38           | 1037                         | 1125 | 1204 | 1292 | 933                   | 1012 | 1059 | 1137 |
| <b>38</b>           | 38.3           | 994                  | 8.35           | 1173                         | 1272 | 1362 | 1461 | 1056                  | 1145 | 1198 | 1286 |
| <b>40</b>           | 40.0           | 1077                 | 9.05           | 1271                         | 1378 | 1475 | 1583 | 1144                  | 1241 | 1298 | 1393 |
| <b>42</b>           | 42.3           | 1169                 | 9.82           | 1380                         | 1497 | 1602 | 1719 | 1242                  | 1347 | 1410 | 1513 |
| <b>44</b>           | 44.2           | 1281                 | 10.76          | 1511                         | 1639 | 1755 | 1883 | 1360                  | 1475 | 1544 | 1657 |

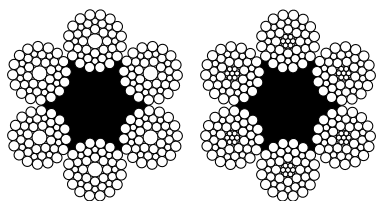


### Locked-coil, double-layer for material ropeways

|           |      |      |       |      |      |      |      |      |      |      |      |
|-----------|------|------|-------|------|------|------|------|------|------|------|------|
| <b>36</b> | 36.3 | 919  | 7.72  | 1085 | 1177 | 1259 | 1351 | 976  | 1059 | 1108 | 1189 |
| <b>38</b> | 37.8 | 986  | 8.28  | 1163 | 1262 | 1351 | 1449 | 1047 | 1136 | 1189 | 1275 |
| <b>40</b> | 40.2 | 1134 | 9.52  | 1338 | 1451 | 1553 | 1667 | 1204 | 1306 | 1367 | 1467 |
| <b>42</b> | 42.3 | 1244 | 10.45 | 1468 | 1592 | 1704 | 1828 | 1321 | 1433 | 1499 | 1609 |
| <b>44</b> | 44.3 | 1370 | 11.50 | 1616 | 1753 | 1876 | 2013 | 1455 | 1578 | 1651 | 1772 |
| <b>46</b> | 46.0 | 1460 | 12.27 | 1723 | 1869 | 2001 | 2147 | 1551 | 1682 | 1761 | 1889 |
| <b>48</b> | 48.3 | 1631 | 13.70 | 1925 | 2088 | 2235 | 2398 | 1732 | 1879 | 1967 | 2110 |
| <b>50</b> | 50.1 | 1761 | 14.80 | 2079 | 2255 | 2413 | 2589 | 1871 | 2029 | 2124 | 2279 |
| <b>52</b> | 52.0 | 1844 | 15.49 | 2176 | 2361 | 2527 | 2711 | 1959 | 2125 | 2224 | 2386 |
| <b>54</b> | 53.8 | 1990 | 16.71 | 2348 | 2547 | 2726 | 2925 | 2113 | 2292 | 2399 | 2574 |
| <b>56</b> | 56.5 | 2192 | 18.41 | 2587 | 2806 | 3003 | 3223 | 2328 | 2525 | 2643 | 2836 |
| <b>58</b> | 58.0 | 2301 | 19.33 | 2716 | 2946 | 3153 | 3383 | 2444 | 2651 | 2775 | 2977 |
| <b>60</b> | 60.4 | 2484 | 20.87 | 2931 | 3180 | 3403 | 3652 | 2638 | 2862 | 2995 | 3213 |
| <b>62</b> | 62.4 | 2635 | 22.13 | 3109 | 3372 | 3610 | 3873 | 2798 | 3035 | 3176 | 3408 |
| <b>64</b> | 64.3 | 2803 | 23.55 | 3308 | 3588 | 3840 | 4121 | 2977 | 3229 | 3380 | 3626 |

Intermediate sizes or alterations on request

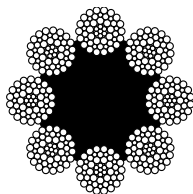
# TENSION (COUNTERWEIGHT) ROPES



## 6 x 41 (47) WS Warrington-Seale

| Characteristic data |                  |                   |                 |                      |                | Nom. aggr. break. load |            | Minimum breaking load |            |
|---------------------|------------------|-------------------|-----------------|----------------------|----------------|------------------------|------------|-----------------------|------------|
| Nom. Ø<br>mm        | Outer wire<br>mm | Act. Ø<br>maximum | Bore<br>minimum | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1860<br>kN             | 1960<br>kN | 1860<br>kN            | 1960<br>kN |
| <b>16</b>           | 0.80             | 17.0              | 19.0            | 103                  | 0.91           | 192                    | 202        | 163                   | 172        |
| <b>18</b>           | 0.90             | 19.1              | 21.1            | 131                  | 1.15           | 244                    | 257        | 207                   | 218        |
| <b>20</b>           | 1.00             | 21.2              | 23.2            | 165                  | 1.45           | 306                    | 323        | 260                   | 274        |
| <b>22</b>           | 1.10             | 23.3              | 25.3            | 201                  | 1.77           | 373                    | 394        | 317                   | 335        |
| <b>24</b>           | 1.20             | 25.4              | 27.4            | 234                  | 2.06           | 436                    | 459        | 371                   | 390        |
| <b>26 +</b>         | 1.30             | 27.6              | 29.6            | 273                  | 2.40           | 507                    | 534        | 431                   | 454        |
| <b>28 +</b>         | 1.40             | 29.7              | 32.7            | 313                  | 2.76           | 583                    | 614        | 495                   | 522        |
| <b>30 +</b>         | 1.50             | 31.8              | 34.8            | 365                  | 3.21           | 678                    | 715        | 576                   | 607        |
| <b>32 +</b>         | 1.60             | 33.9              | 36.9            | 410                  | 3.61           | 762                    | 803        | 648                   | 683        |
| <b>34 +</b>         | 1.70             | 36.0              | 39.0            | 464                  | 4.08           | 862                    | 909        | 733                   | 772        |
| <b>36 +</b>         | 1.80             | 38.2              | 41.2            | 515                  | 4.53           | 958                    | 1009       | 814                   | 858        |
| <b>38 +</b>         | 1.90             | 40.3              | 43.3            | 568                  | 5.00           | 1057                   | 1114       | 898                   | 947        |
| <b>40 +</b>         | 2.00             | 42.4              | 45.4            | 645                  | 5.68           | 1200                   | 1265       | 1020                  | 1075       |

+ with resolved core wire



## 8 x 47 WS Warrington-Seale

| Characteristic data |                  |                   |                 |                      |                | Nom. aggr. break. load | Minimum breaking load |
|---------------------|------------------|-------------------|-----------------|----------------------|----------------|------------------------|-----------------------|
| Nom. Ø<br>mm        | Outer wire<br>mm | Act. Ø<br>maximum | Bore<br>minimum | A<br>mm <sup>2</sup> | Weight<br>kg/m | 1860<br>kN             | 1860<br>kN            |
| <b>40 +</b>         | 1.67             | 42.4              | 46.4            | 589                  | 5.42           | 1095                   | 931                   |
| <b>45 +</b>         | 1.90             | 47.7              | 51.7            | 762                  | 7.01           | 1417                   | 1205                  |
| <b>50 +</b>         | 2.10             | 53.0              | 57.0            | 943                  | 8.68           | 1754                   | 1491                  |
| <b>55 +</b>         | 2.30             | 58.3              | 62.3            | 1125                 | 10.35          | 2093                   | 1779                  |
| <b>60 +</b>         | 2.60             | 65.7              | 69.7            | 1430                 | 13.15          | 2659                   | 2260                  |
| <b>65 +</b>         | 2.75             | 70.0              | 74.0            | 1616                 | 14.86          | 3005                   | 2554                  |
| <b>70 +</b>         | 2.95             | 74.2              | 78.2            | 1825                 | 17.03          | 3444                   | 2927                  |
| <b>75 +</b>         | 3.15             | 79.5              | 83.5            | 2093                 | 19.26          | 3893                   | 3309                  |

+ with resolved core wire