# BRIDON | Fibre Rope Catalogue


**Bridon - the world's leading specialist in the manufacture of wire and rope solutions for the most demanding applications, delivering reassurance through unrivalled experience.**

# Specialist fibre rope solutions

Drawing from a background of long standing experience and technology, Bridon is an acknowledged world leader in the design, manufacture, development and supply of fibre rope.

VIKING

Recognising the demanding environments of the marine and offshore industry - Bridon offers a full and comprehensive range of specialist fibre rope products and engineered solutions specifically designed to meet these demands.

The *Difference* is
BRIDON

# Contents



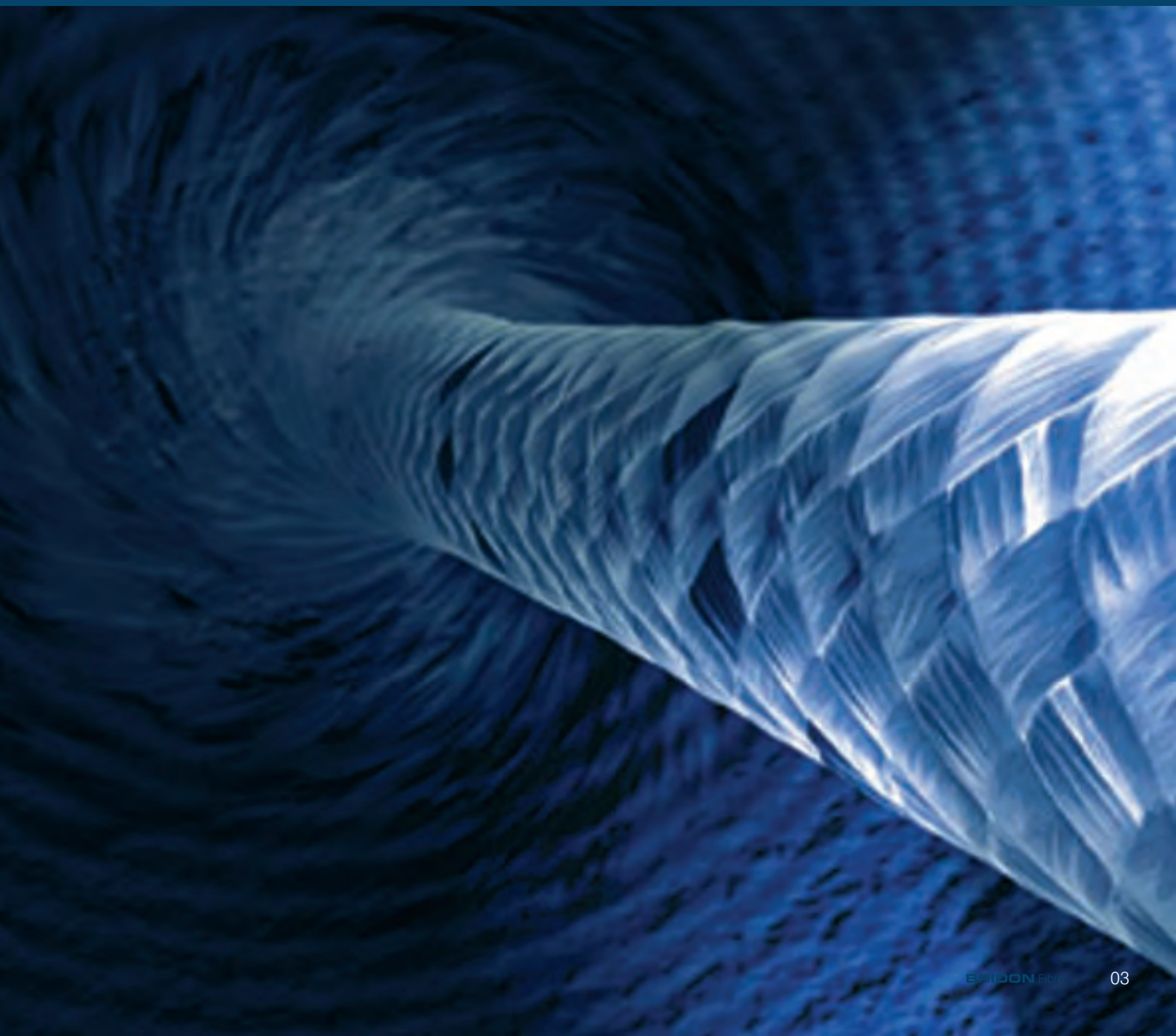


**ISO 9001**

Bridon operates quality management systems which comply with the requirements of EN ISO 9001:2000. These systems are assessed and registered by accredited certification bodies.

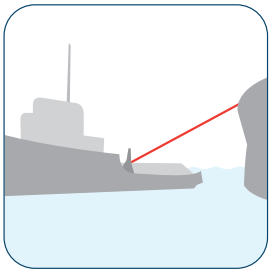
**ISO 14001**

Bridon operates environmental management systems which, where required by legislation or risk, comply with the requirements of EN ISO 14001:2004 and are assessed and registered by accredited certification bodies.

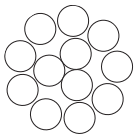


# Harbour, Escort & Ocean Towing

The role of the tug's towline is sometimes underestimated yet it is the vital element that provides the connection in any tow. Bridon have built a world class reputation in this industry and have developed an unrivalled portfolio of towing products to meet the exacting demands of today's world-wide tug boat operator. No two towing operations are the same, which is why rope selection is critical. Bridon's experience ensures that you can select the optimum rope solution for your particular operation. Working closely with towing operators Bridon provide engineered solutions for today's requirements and tomorrows's challenges.



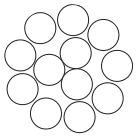
## 12 Strand Steelite / Steelite Xtra Roundline



- Easily spliced
- Torque balanced construction
- Compact circular construction

*(See page 9)*

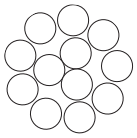
## 12 Strand Roundline Polyester



- Excellent grip characteristics
- Fibre blend maximises resistance to fusion
- Easy to splice

*(See page 14)*

## 12 Strand Roundline Nylon

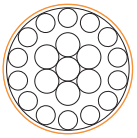


- Excellent grip characteristics
- Fibre blend maximises resistance to fusion
- Easy to splice

*(See page 15)*

BRIDON
SUPERLINE

## Steelite / Steelite Xtra

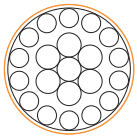


- High strength efficiency
- Balanced construction
- Loadbearing cores protected by a Braided jacket

*(See page 8)*

BRIDON
SUPERLINE

## Polyester



- High strength efficiency
- Balanced construction
- Loadbearing cores protected by a Braided jacket

*(See page 10)*

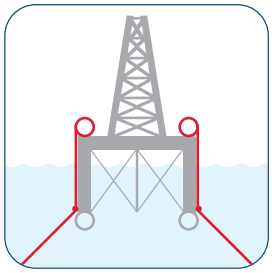
Products also suitable for this application are
Bridon Superline Nylon *(See page 12)*
Viking Braidline Nylon *(See page 13)*
Hypamix *(See page 20)*
Supermix *(See page 21)*

# Mooring Applications

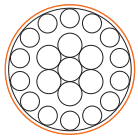
## Exploration Drilling Rigs

### Specialist Fibre MODU Tethers

Bridon Superline offers the highest strength to weight ratio facilitating a lightweight anchoring solution. The construction incorporates an increased thickness braided jacket to provide a level of protection for improved handling performance.



BRIDON SUPERLINE



Polyester (MODU)

*(See page 24)*

Steelite Xcel

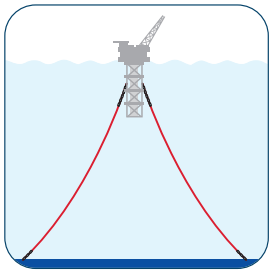
*(See page 26)*

Material grade can be selected for optimum application performance

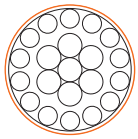
## Floating Production Mooring Systems

Bridon's specialist fibre tethers and high strength steel cables for permanent mooring of floating production facilities offer a range of properties to ensure the suitable solution for your specific requirements - system type, location, water depth, field life etc.

Bridon's in house engineering expertise can provide custom designed connection hardware. Our dedicated project management team will oversee all aspects of your mooring system project including but not limited to design, manufacture, QA & QC requirements, shipping & handling of large package weights, on site installation and handling advice.



BRIDON SUPERLINE



Polyester (Permanent Moorings)

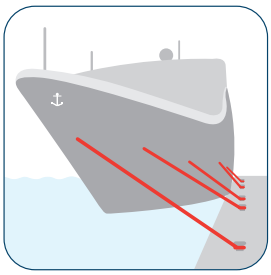
Bridon Superline is a torsionally balanced construction and the polyester material grades offer the highest strength to weight ratio for the permanent mooring solution. The inclusion of a particle filter layer to limit the ingress of abrasive particles and a marine finish on load bearing elements to enhance resistance to yarn on yarn abrasion ensures long term performance for field lives in excess of 20 years.

(*See page 25)*

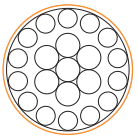
# Ship Mooring

With the continuing increase in size and tonnage, the requirements of today's mooring lines have become even more exacting.

Selecting the correct mooring line is critical in terms of performance and safety. To enable the operator to find the optimum mooring solution, Bridon offer a comprehensive range of premium products that can satisfy the requirements of any vessel.



BRIDON
SUPERLINE

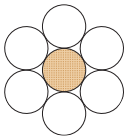


## Steelite / Steelite Xtra

- High strength efficiency
- Balanced construction
- Loadbearing cores protected by a Braided jacket

*(See page 8)*

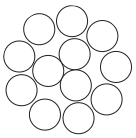
## Flexiline 6-Strand



- Robust 6 strand construction
- Good shape retension and spooling characteristics
- Excellent abrasion resistance
- Excellent for use on tension winches.

*(See page 16)*

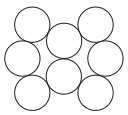
## TQ12



- 12 strand roundline profile giving improved abrasion characteristics
- Increased service lifetime over conventional constructions
- Reduced kinking
- Easy handling and storage
- TQ12 is quick and easy to splice
- Good round profile
- Floating Rope
- Easy to splice

*(See page 18)*

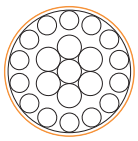
## Fybaline Xtra



- Floating Rope
- Easy to handle
- Easy to splice

*(See page 19)*

## M-Steel Winchline



- Light weight floating winch line
- High strength and low elongation
- Designed to work on single drum and self tensioning winches

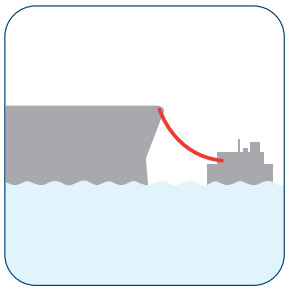
*(See page 17)*

Products also suitable for this application are

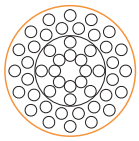
Bridon Superline Nylon *(See page 12)*
Viking Braidline Nylon *(See page 13)*
Bridon Superline Polyester *(See page 10)*
Viking Braidline Polyester *(See page 11)*
12 Strand Roundline Nylon *(See page 15)*
12 Strand Roundline Polyester *(See page 14)*
Hypamix *(See page 20)*
Supermix *(See page 21)*

# Off-take Mooring Systems

A comprehensive design package tailored to suit individual location requirements for single point moorings and tandem offloading systems. Packages include chafe chains, support buoys, shackles and fittings and are based on our high quality specialist fibre ropes. Bridon Superline Nylon and Viking Braidline Nylon Super Hawser offer a higher strength to weight ratio than conventional constructions and both are fully compliant with OCIMF Guidelines for the Purchasing & Testing of SPM Hawsers.



VIKING BRAIDLINE

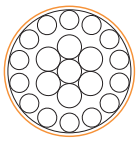


## Nylon Super Hawser

Viking Braidline Nylon Super Hawser is a balanced, flexible construction which distributes the weight and strength equally between the sheath and the braided core. Viking Braidline offers a higher elongation than competing constructions and is suitable for many shock load applications.

*(See page 22)*

BRIDON SUPERLINE



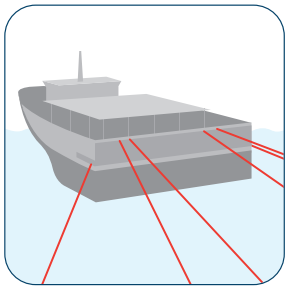
## Nylon OCIMF 2000

Bridon Superline is a torque balanced circular braided construction consisting of an outer protective braided jacket over a central group of parallel low twist cores. In the as new condition Bridon Superline offers a slightly stiffer solution than the Viking Braidline Construction.

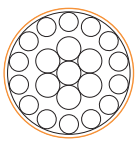
*(See page 23)*

# Seismic & Cable Laying

The challenge set by today's seismic market has led Bridon to develop and offer specific ropes tailored to meet these demands.



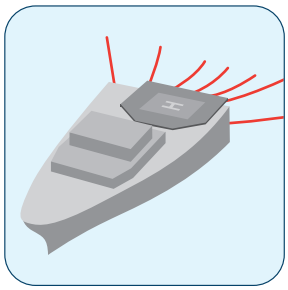
BRIDON SUPERLINE



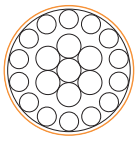
## Steelite

- High strength efficiency
- Balanced construction
- Loadbearing cores protected by a Braided jacket

*(See page 8)*



BRIDON SUPERLINE

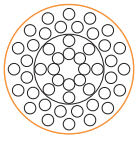


## Polyester

- High strength efficiency
- Balanced construction
- Loadbearing cores protected by a Braided jacket

*(See page 10)*

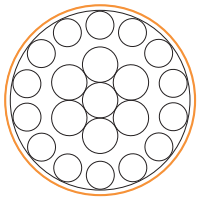
VIKING BRAIDLINE



## Polyester

- Flexible and easy to handle
- Balanced construction
- 50% of mass in sheath and 50% in core

*(See page 11)*



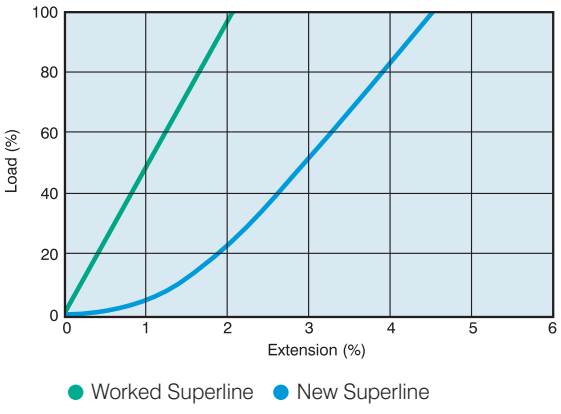
BRIDON
SUPERLINE

## Steelite / Steelite Xtra

| Nominal diameter | | Rope circumference | | Nominal mass | | Steelite | | | Steelite Xtra | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Minimum breaking force (F min) | | | Minimum breaking force (F min) | | |
| mm | ins | mm | ins | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) | kN | Tonnes | Tons (2000lb) |
| 28 | 1 1/8 | 88 | 3 1/2 | 0.46 | 0.31 | 466 | 47.5 | 52.3 | 608 | 62.0 | 68.3 |
| 30 | 1 7/32 | 94 | 3 3/4 | 0.48 | 0.32 | 503 | 51.3 | 56.5 | 657 | 67.0 | 73.8 |
| 32 | 1 5/16 | 101 | 4 | 0.67 | 0.45 | 593 | 60.4 | 66.6 | 687 | 70.0 | 77.1 |
| 34 | 1 13/32 | 107 | 4 1/4 | 0.73 | 0.49 | 674 | 68.7 | 75.7 | 814 | 83.0 | 91.5 |
| 36 | 1 1/2 | 113 | 4 1/2 | 0.77 | 0.52 | 722 | 73.6 | 81.1 | 912 | 93.0 | 102 |
| 40 | 1 5/8 | 126 | 5 | 0.87 | 0.59 | 883 | 90.0 | 99.2 | 1109 | 113 | 125 |
| 44 | 1 3/4 | 138 | 5 1/2 | 1.04 | 0.70 | 1050 | 107 | 118 | 1315 | 134 | 148 |
| 48 | 2 | 151 | 6 | 1.38 | 0.93 | 1236 | 126 | 139 | 1609 | 164 | 181 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.73 | 1.16 | 1442 | 147 | 162 | 1903 | 194 | 214 |
| 56 | 2 1/4 | 176 | 7 | 1.90 | 1.28 | 1658 | 169 | 186 | 2237 | 228 | 251 |
| 60 | 2 1/2 | 188 | 7 1/2 | 2.08 | 1.40 | 1893 | 193 | 213 | 2570 | 262 | 289 |
| 64 | 2 5/8 | 201 | 8 | 2.45 | 1.65 | 2384 | 243 | 268 | 3012 | 307 | 338 |
| 68 | 2 13/16 | 214 | 8 1/2 | 2.66 | 1.79 | 2639 | 269 | 296 | 3365 | 343 | 378 |
| 72 | 3 | 226 | 9 | 2.85 | 1.92 | 2963 | 302 | 333 | 3718 | 379 | 418 |
| 76 | 3 1/16 | 239 | 9 1/2 | 3.16 | 2.12 | 3335 | 340 | 375 | 4189 | 427 | 471 |
| 80 | 3 1/8 | 251 | 10 | 3.34 | 2.24 | 3659 | 373 | 411 | 4473 | 456 | 503 |
| 88 | 3 1/2 | 276 | 11 | 4.24 | 2.85 | 4444 | 453 | 499 | 5278 | 538 | 593 |
| 96 | 3 3/4 | 302 | 12 | 4.92 | 3.31 | 5229 | 533 | 587 | 6131 | 625 | 689 |
| 104 | 4 1/8 | 327 | 13 | 6.01 | 4.04 | 6141 | 626 | 690 | 7289 | 743 | 819 |
| 112 | 4 3/8 | 352 | 14 | 7.01 | 4.71 | 7191 | 733 | 808 | 8152 | 831 | 916 |
| 120 | 4 3/4 | 377 | 15 | 9.18 | 6.17 | 8231 | 839 | 925 | 9349 | 953 | 1050 |

**Material:** Dyneema®, high modulus polyethylene SK62 or SK75
**Construction:** Superline
**Colour:** Superline - White
**Markers:** Blue and lime - Steelite
Blue and pink - Steelite Xtra
**Relative Density:** 0.97 to 1.15 depending on diameter and jacket material (Check with sales office for specific details)
**Melting Point:** 150˚C
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** 0%
**Water Uptake:** Low
**UV Resistance:** Very Good
**Abrasion Resistance:** Excellent

### Load v Extension




Dyneema® is a registered trademark of Royal DSM N.V.

Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.
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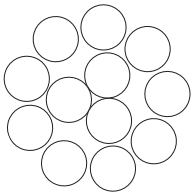
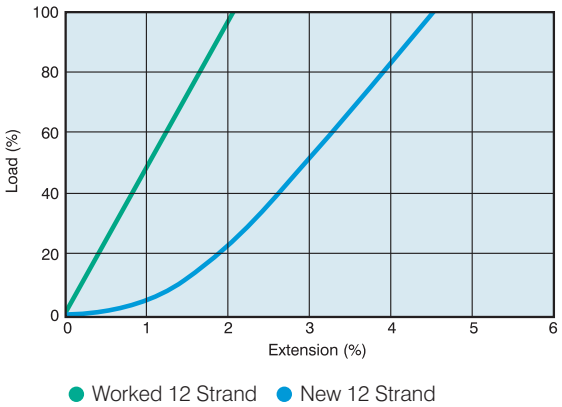


## 12 Strand Steelite / Steelite Xtra Roundline

| Nominal diameter | | Rope circumference | | Nominal mass | | Steelite | | | Steelite Xtra | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Minimum breaking force (F min) | | | Minimum breaking force (F min) | | |
| mm | ins | mm | ins | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) | kN | Tonnes | Tons (2000lb) |
| 12 | 1/2 | 38 | 1 1/2 | 0.08 | 0.06 | 137 | 14.0 | 15.4 | 162 | 16.5 | 18.2 |
| 14 | 9/16 | 44 | 1 3/4 | 0.10 | 0.07 | 169 | 17.2 | 19.0 | 198 | 20.2 | 22.3 |
| 16 | 5/8 | 50 | 2 | 0.12 | 0.08 | 199 | 20.3 | 22.4 | 234 | 23.9 | 26.3 |
| 18 | 3/4 | 57 | 2 1/4 | 0.17 | 0.11 | 244 | 24.9 | 27.4 | 311 | 31.7 | 34.9 |
| 20 | 13/16 | 63 | 2 1/2 | 0.21 | 0.14 | 331 | 33.7 | 37.1 | 389 | 39.7 | 43.7 |
| 22 | 7/8 | 69 | 2 3/4 | 0.25 | 0.17 | 393 | 40.1 | 44.2 | 462 | 47.1 | 51.9 |
| 24 | 1 | 75 | 3 | 0.27 | 0.18 | 417 | 42.5 | 46.8 | 491 | 50.0 | 55.1 |
| 28 | 1 1/8 | 88 | 3 1/2 | 0.38 | 0.25 | 566 | 57.7 | 63.6 | 666 | 67.9 | 74.8 |
| 32 | 1 5/16 | 101 | 4 | 0.50 | 0.34 | 740 | 75.4 | 83.1 | 870 | 88.7 | 97.7 |
| 36 | 1 1/2 | 113 | 4 1/2 | 0.63 | 0.42 | 903 | 92.0 | 101 | 1059 | 108 | 119 |
| 40 | 1 5/8 | 126 | 5 | 0.75 | 0.50 | 1059 | 108 | 119 | 1256 | 128 | 141 |
| 44 | 1 3/4 | 138 | 5 1/2 | 0.87 | 0.59 | 1246 | 127 | 140 | 1432 | 146 | 161 |
| 48 | 2 | 151 | 6 | 1.04 | 0.70 | 1442 | 147 | 162 | 1658 | 169 | 186 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.16 | 0.78 | 1609 | 164 | 181 | 1854 | 189 | 208 |
| 56 | 2 1/4 | 176 | 7 | 1.42 | 0.95 | 1893 | 193 | 213 | 2178 | 222 | 245 |
| 60 | 2 1/2 | 188 | 7 1/2 | 1.58 | 1.06 | 2060 | 210 | 231 | 2374 | 242 | 267 |
| 64 | 2 5/8 | 201 | 8 | 1.74 | 1.17 | 2325 | 237 | 261 | 2678 | 273 | 301 |
| 68 | 2 3/4 | 214 | 8 1/2 | 1.99 | 1.34 | 2570 | 262 | 289 | 2953 | 301 | 332 |
| 72 | 3 | 226 | 9 | 2.24 | 1.51 | 2914 | 297 | 327 | 3355 | 342 | 377 |
| 76 | 3 1/16 | 239 | 9 1/2 | 2.49 | 1.67 | 3237 | 330 | 364 | 3728 | 380 | 419 |
| 80 | 3 1/8 | 251 | 10 | 2.74 | 1.84 | 3541 | 361 | 398 | 4071 | 415 | 457 |

**Material:** Dyneema®, high modulus polyethylene SK62 or SK75
**Construction:** 12 strand (12x1)
**Colour:** 12 Strand - dark grey
Other custom colours available
**Markers:** Blue and lime - Steelite
Blue and pink - Steelite Xtra
**Relative Density:** 0.97
**Melting Point:** 150˚C
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** 0%
**Water Uptake:** Low
**UV Resistance:** Very Good
**Abrasion Resistance:** Excellent

### Load v Extension

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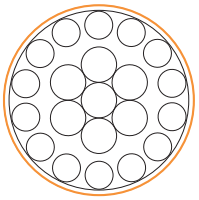
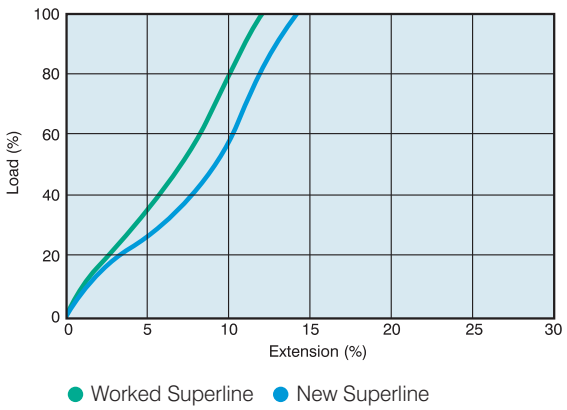


## BRIDON SUPERLINE Polyester

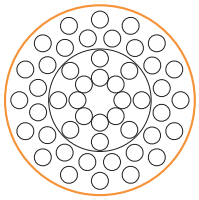
| Rope diameter | | Rope circumference | | Nominal Mass | | | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | | | |
| mm | ins | mm | ins | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 16 | 5/8 | 50 | 2 | 0.18 | 0.12 | 0.05 | 0.03 | 79.5 | 8.10 | 8.93 |
| 18 | 3/4 | 57 | 2 1/4 | 0.28 | 0.19 | 0.07 | 0.05 | 114 | 11.6 | 12.8 |
| 20 | 13/16 | 63 | 2 1/2 | 0.32 | 0.22 | 0.08 | 0.05 | 127 | 12.9 | 14.2 |
| 22 | 7/8 | 69 | 2 3/4 | 0.36 | 0.24 | 0.09 | 0.06 | 148 | 15.1 | 16.6 |
| 24 | 1 | 75 | 3 | 0.45 | 0.30 | 0.11 | 0.08 | 181 | 18.5 | 20.4 |
| 28 | 1 1/8 | 88 | 3 1/2 | 0.55 | 0.37 | 0.14 | 0.09 | 221 | 22.5 | 24.8 |
| 32 | 1 5/16 | 101 | 4 | 0.77 | 0.52 | 0.20 | 0.13 | 299 | 30.5 | 33.6 |
| 36 | 1 1/2 | 113 | 4 1/2 | 0.87 | 0.58 | 0.22 | 0.15 | 357 | 36.4 | 40.1 |
| 40 | 1 5/8 | 126 | 5 | 1.12 | 0.75 | 0.28 | 0.19 | 454 | 46.3 | 51.0 |
| 44 | 1 3/4 | 138 | 5 1/2 | 1.37 | 0.92 | 0.35 | 0.23 | 571 | 58.2 | 64.1 |
| 48 | 2 | 151 | 6 | 1.65 | 1.11 | 0.42 | 0.28 | 678 | 69.1 | 76.1 |
| 52 | 2 1/8 | 163 | 6 1/2 | 2.06 | 1.38 | 0.52 | 0.35 | 831 | 84.7 | 93.3 |
| 56 | 2 1/4 | 176 | 7 | 2.27 | 1.53 | 0.58 | 0.39 | 932 | 95.0 | 105 |
| 60 | 2 1/2 | 188 | 7 1/2 | 2.48 | 1.67 | 0.63 | 0.42 | 1030 | 105 | 116 |
| 64 | 2 5/8 | 201 | 8 | 2.80 | 1.88 | 0.71 | 0.48 | 1158 | 118 | 130 |
| 72 | 3 | 226 | 9 | 3.91 | 2.63 | 0.99 | 0.67 | 1648 | 168 | 185 |
| 80 | 3 1/8 | 251 | 10 | 4.56 | 3.06 | 1.16 | 0.78 | 1942 | 198 | 218 |
| 88 | 3 1/2 | 276 | 11 | 5.77 | 3.88 | 1.46 | 0.98 | 2433 | 248 | 273 |
| 96 | 3 3/4 | 302 | 12 | 6.64 | 4.46 | 1.68 | 1.13 | 2776 | 283 | 312 |
| 104 | 4 1/8 | 327 | 13 | 7.30 | 4.91 | 1.85 | 1.24 | 3071 | 313 | 345 |
| 112 | 4 3/8 | 352 | 14 | 8.63 | 5.80 | 2.19 | 1.47 | 3640 | 371 | 409 |
| 120 | 4 3/4 | 377 | 15 | 9.50 | 6.38 | 2.41 | 1.62 | 4022 | 410 | 452 |
| 128 | 5 | 402 | 16 | 10.77 | 7.24 | 2.73 | 1.84 | 4464 | 455 | 501 |
| 136 | 5 3/8 | 427 | 17 | 12.55 | 8.43 | 3.18 | 2.14 | 5219 | 532 | 586 |
| 144 | 5 5/8 | 452 | 18 | 13.89 | 9.33 | 3.52 | 2.37 | 5788 | 590 | 650 |
| 152 | 6 | 478 | 19 | 15.20 | 10.21 | 3.85 | 2.59 | 6357 | 648 | 714 |
| 160 | 6 1/4 | 503 | 20 | 16.77 | 11.27 | 4.25 | 2.86 | 7112 | 725 | 799 |
| 168 | 6 5/8 | 528 | 21 | 18.32 | 12.31 | 4.65 | 3.12 | 7671 | 782 | 862 |
| 176 | 6 7/8 | 553 | 22 | 20.54 | 13.80 | 5.21 | 3.50 | 8613 | 878 | 968 |
| 184 | 7 1/4 | 578 | 23 | 22.31 | 14.99 | 5.66 | 3.80 | 9359 | 954 | 1051 |
| 192 | 7 1/2 | 603 | 24 | 24.08 | 16.18 | 6.11 | 4.10 | 10104 | 1030 | 1135 |

**Material:** High Tenacity Polyester multifilament fibre
**Construction:** Superline
**Colour:** Natural (white)
**Markers:** Blue
**Relative Density:** 1.38
**Melting Point:** 256˚C
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** 0%
**Water uptake:** Low
**UV resistance:** Excellent
**Abrasion Resistance:** Very Good

### Load v Extension




Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.



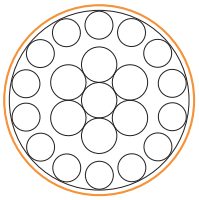
## VIKING BRAIDLINE Polyester

| Rope diameter | | Rope circumference | | Nominal Mass | | | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | | | |
| mm | ins | mm | ins | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 16 | 5/8 | 50 | 2 | 0.19 | 0.28 | 0.05 | 0.07 | 61.9 | 6.31 | 6.95 |
| 18 | 3/4 | 57 | 2 1/4 | 0.23 | 0.33 | 0.06 | 0.08 | 77.5 | 7.90 | 8.71 |
| 21 | 7/8 | 66 | 2 5/8 | 0.39 | 0.58 | 0.10 | 0.15 | 106 | 10.8 | 11.9 |
| 24 | 1 | 75 | 3 | 0.50 | 0.74 | 0.13 | 0.19 | 148 | 15.1 | 16.6 |
| 28 | 1 1/8 | 88 | 3 1/2 | 0.68 | 1.01 | 0.17 | 0.26 | 163 | 16.6 | 18.3 |
| 32 | 1 5/16 | 101 | 4 | 0.89 | 1.32 | 0.22 | 0.33 | 244 | 24.9 | 27.4 |
| 36 | 1 1/2 | 113 | 4 1/2 | 1.12 | 1.67 | 0.28 | 0.42 | 286 | 29.2 | 32.2 |
| 40 | 1 5/8 | 126 | 5 | 1.22 | 1.82 | 0.31 | 0.46 | 346 | 35.3 | 38.9 |
| 44 | 1 3/4 | 138 | 5 1/2 | 1.47 | 2.19 | 0.37 | 0.55 | 397 | 40.5 | 44.6 |
| 48 | 2 | 151 | 6 | 1.76 | 2.62 | 0.45 | 0.66 | 489 | 49.9 | 55.0 |
| 52 | 2 1/8 | 163 | 6 1/2 | 2.05 | 3.05 | 0.52 | 0.77 | 551 | 56.2 | 61.9 |
| 56 | 2 1/4 | 176 | 7 | 2.38 | 3.54 | 0.60 | 0.90 | 628 | 64.0 | 70.5 |
| 60 | 2 1/2 | 188 | 7 1/2 | 2.74 | 4.08 | 0.69 | 1.03 | 756 | 77.1 | 85.0 |
| 64 | 2 5/8 | 201 | 8 | 3.12 | 4.64 | 0.79 | 1.18 | 828 | 84.4 | 93.0 |
| 72 | 3 | 226 | 9 | 3.95 | 5.88 | 1.00 | 1.49 | 1059 | 108 | 119 |
| 80 | 3 1/8 | 251 | 10 | 4.87 | 7.25 | 1.24 | 1.84 | 1304 | 133 | 147 |
| 88 | 3 1/2 | 276 | 11 | 5.91 | 8.79 | 1.50 | 2.23 | 1549 | 158 | 174 |
| 96 | 3 3/4 | 302 | 12 | 7.02 | 10.45 | 1.78 | 2.65 | 1785 | 182 | 201 |
| 104 | 4 1/8 | 327 | 13 | 8.25 | 12.28 | 2.09 | 3.11 | 2050 | 209 | 230 |
| 112 | 4 3/8 | 352 | 14 | 9.56 | 14.23 | 2.42 | 3.61 | 2354 | 240 | 264 |
| 120 | 4 3/4 | 377 | 15 | 11.00 | 16.37 | 2.79 | 4.15 | 2697 | 275 | 303 |
| 128 | 5 | 402 | 16 | 12.50 | 18.60 | 3.17 | 4.72 | 2932 | 299 | 329 |
| 136 | 5 3/8 | 427 | 17 | 14.10 | 20.98 | 3.58 | 5.32 | 3305 | 337 | 371 |
| 144 | 5 5/8 | 452 | 18 | 15.80 | 23.51 | 4.01 | 5.96 | 3717 | 379 | 418 |
| 152 | 6 | 478 | 19 | 17.60 | 26.19 | 4.46 | 6.64 | 4129 | 421 | 464 |
| 160 | 6 1/4 | 503 | 20 | 19.50 | 29.02 | 4.95 | 7.36 | 4580 | 467 | 515 |
| 168 | 6 5/8 | 528 | 21 | 21.50 | 31.99 | 5.45 | 8.11 | 5031 | 513 | 565 |
| 176 | 7 | 553 | 22 | 23.60 | 35.12 | 5.98 | 8.91 | 5521 | 563 | 620 |
| 184 | 7 1/4 | 578 | 23 | 25.80 | 38.39 | 6.54 | 9.74 | 6031 | 615 | 678 |
| 192 | 7 1/2 | 603 | 24 | 28.10 | 41.82 | 7.13 | 10.60 | 6570 | 670 | 738 |
| 216 | 8 1/2 | 679 | 27 | 35.60 | 52.98 | 9.03 | 13.43 | 8316 | 848 | 934 |
| 240 | 9 1/2 | 754 | 30 | 43.90 | 65.33 | 11.13 | 16.57 | 10268 | 1047 | 1154 |

**Material:** High Tenacity Polyester multifilament fibre
**Construction:** Braidline
**Colour:** Natural (white)
**Markers:** Blue
**Relative Density:** 1.38
**Melting Point:** 256˚C
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** 0%
**Water uptake:** Low
**UV resistance:** Excellent
**Abrasion Resistance:** Very Good

### Load v Extension


Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.



BRIDON
SUPERLINE

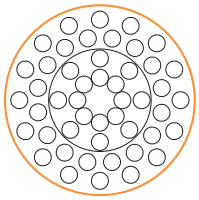
## Nylon

| Rope diameter | | Rope circumference | | Nominal Mass | | | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | | | |
| mm | ins | mm | ins | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 16 | 5/8 | 50 | 2 | 0.19 | 0.13 | 0.02 | 0.01 | 71.6 | 7.30 | 8.04 |
| 18 | 3/4 | 57 | 2 1/4 | 0.22 | 0.15 | 0.02 | 0.01 | 82.4 | 8.40 | 9.26 |
| 20 | 13/16 | 63 | 2 1/2 | 0.34 | 0.23 | 0.03 | 0.02 | 122 | 12.4 | 13.7 |
| 22 | 7/8 | 69 | 2 3/4 | 0.43 | 0.29 | 0.04 | 0.03 | 149 | 15.2 | 16.8 |
| 24 | 1 | 75 | 3 | 0.49 | 0.33 | 0.05 | 0.03 | 175 | 17.8 | 19.6 |
| 28 | 1 1/8 | 88 | 3 1/2 | 0.58 | 0.39 | 0.06 | 0.04 | 207 | 21.1 | 23.3 |
| 32 | 1 5/16 | 101 | 4 | 0.75 | 0.50 | 0.07 | 0.05 | 272 | 27.7 | 30.5 |
| 36 | 1 1/2 | 113 | 4 1/2 | 0.87 | 0.58 | 0.08 | 0.06 | 324 | 33.0 | 36.4 |
| 40 | 1 5/8 | 126 | 5 | 1.03 | 0.69 | 0.10 | 0.07 | 401 | 40.9 | 45.1 |
| 44 | 1 3/4 | 138 | 5 1/2 | 1.17 | 0.79 | 0.11 | 0.08 | 466 | 47.5 | 52.3 |
| 48 | 2 | 151 | 6 | 1.28 | 0.86 | 0.12 | 0.08 | 571 | 58.2 | 64.1 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.72 | 1.16 | 0.17 | 0.11 | 669 | 68.2 | 75.2 |
| 56 | 2 1/4 | 176 | 7 | 1.84 | 1.24 | 0.18 | 0.12 | 772 | 78.7 | 86.7 |
| 60 | 2 1/2 | 188 | 7 1/2 | 2.08 | 1.40 | 0.20 | 0.13 | 886 | 90.3 | 99.5 |
| 64 | 2 5/8 | 201 | 8 | 2.45 | 1.65 | 0.24 | 0.16 | 1010 | 103 | 114 |
| 72 | 3 | 226 | 9 | 3.12 | 2.10 | 0.30 | 0.20 | 1265 | 129 | 142 |
| 80 | 3 1/8 | 251 | 10 | 3.85 | 2.59 | 0.37 | 0.25 | 1579 | 161 | 177 |
| 88 | 3 1/2 | 276 | 11 | 4.82 | 3.24 | 0.47 | 0.31 | 2011 | 205 | 226 |
| 96 | 3 3/4 | 302 | 12 | 5.32 | 3.58 | 0.51 | 0.34 | 2276 | 232 | 256 |
| 104 | 4 1/8 | 327 | 13 | 6.29 | 4.23 | 0.61 | 0.41 | 2678 | 273 | 301 |
| 112 | 4 3/8 | 352 | 14 | 6.80 | 4.57 | 0.66 | 0.44 | 3021 | 308 | 339 |
| 120 | 4 3/4 | 377 | 15 | 8.17 | 5.49 | 0.79 | 0.53 | 3453 | 352 | 388 |
| 128 | 5 | 402 | 16 | 9.19 | 6.18 | 0.89 | 0.6 | 3875 | 395 | 435 |
| 136 | 5 3/8 | 427 | 17 | 10.18 | 6.84 | 0.98 | 0.66 | 4356 | 444 | 489 |
| 144 | 5 5/8 | 452 | 18 | 11.19 | 7.52 | 1.08 | 0.73 | 4787 | 488 | 538 |
| 152 | 6 | 478 | 19 | 12.66 | 8.51 | 1.22 | 0.82 | 5425 | 553 | 609 |
| 160 | 6 1/4 | 503 | 20 | 14.33 | 9.50 | 1.36 | 0.92 | 5935 | 605 | 667 |
| 168 | 6 5/8 | 528 | 21 | 15.16 | 10.19 | 1.46 | 0.98 | 6377 | 650 | 716 |
| 176 | 6 7/8 | 553 | 22 | 16.20 | 10.89 | 1.56 | 1.05 | 6838 | 697 | 768 |
| 184 | 7 1/4 | 578 | 23 | 17.23 | 11.58 | 1.66 | 1.12 | 7475 | 762 | 840 |
| 192 | 7 1/2 | 603 | 24 | 18.74 | 12.59 | 1.81 | 1.22 | 8240 | 840 | 926 |

**Material:** High tenacity Nylon multifilament fibre
**Construction:** Superline
**Colour:** Natural (white)
**Markers:** Blue
**Relative Density:** 1.14
**Melting Point:** 218˚C
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** Up to 10%
**Water uptake:** Up to 10%
**UV resistance:** Good
**Abrasion Resistance:** Good

### Load v Extension


Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.

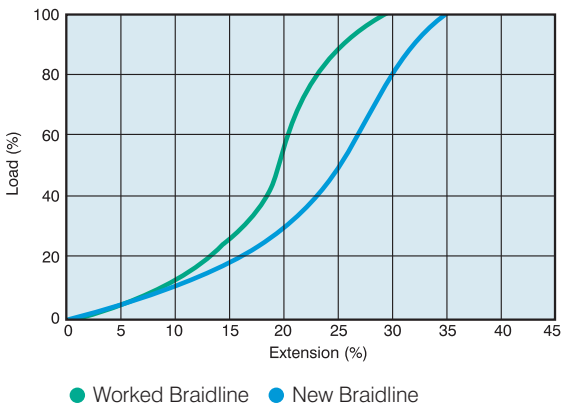


## VIKING BRAIDLINE Nylon

| Rope diameter | | Rope circumference | | Nominal Mass | | | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | | | |
| mm | ins | mm | ins | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 16 | 5/8 | 50 | 2 | 0.16 | 0.24 | 0.02 | 0.02 | 63.3 | 6.45 | 7.11 |
| 18 | 3/4 | 57 | 2 1/4 | 0.21 | 0.31 | 0.02 | 0.03 | 84.7 | 8.64 | 9.52 |
| 21 | 7/8 | 66 | 2 5/8 | 0.29 | 0.43 | 0.03 | 0.04 | 113 | 11.5 | 12.7 |
| 24 | 1 | 75 | 3 | 0.36 | 0.54 | 0.03 | 0.05 | 140 | 14.3 | 15.8 |
| 28 | 1 1/8 | 88 | 3 1/2 | 0.49 | 0.73 | 0.05 | 0.07 | 190 | 19.4 | 21.4 |
| 32 | 1 5/16 | 101 | 4 | 0.64 | 0.95 | 0.06 | 0.09 | 248 | 25.3 | 27.9 |
| 36 | 1 1/2 | 113 | 4 1/2 | 0.80 | 1.19 | 0.08 | 0.11 | 313 | 31.9 | 35.2 |
| 40 | 1 5/8 | 126 | 5 | 0.99 | 1.47 | 0.10 | 0.14 | 382 | 39.0 | 43.0 |
| 44 | 1 3/4 | 138 | 5 1/2 | 1.20 | 1.79 | 0.12 | 0.17 | 463 | 47.2 | 52.0 |
| 48 | 2 | 151 | 6 | 1.43 | 2.13 | 0.14 | 0.21 | 549 | 56.0 | 61.7 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.68 | 2.50 | 0.16 | 0.24 | 642 | 65.5 | 72.2 |
| 56 | 2 1/4 | 176 | 7 | 1.95 | 2.90 | 0.19 | 0.28 | 742 | 75.7 | 83.4 |
| 60 | 2 1/2 | 188 | 7 1/2 | 2.23 | 3.32 | 0.22 | 0.32 | 847 | 86.4 | 95.2 |
| 64 | 2 5/8 | 201 | 8 | 2.54 | 3.78 | 0.25 | 0.36 | 961 | 98.0 | 108 |
| 72 | 3 | 226 | 9 | 3.21 | 4.78 | 0.31 | 0.46 | 1216 | 124 | 137 |
| 80 | 3 1/8 | 251 | 10 | 3.97 | 5.91 | 0.38 | 0.57 | 1491 | 152 | 168 |
| 88 | 3 1/2 | 276 | 11 | 4.81 | 7.16 | 0.46 | 0.69 | 1795 | 183 | 202 |
| 96 | 3 3/4 | 302 | 12 | 5.72 | 8.51 | 0.55 | 0.82 | 2128 | 217 | 239 |
| 104 | 4 1/8 | 327 | 13 | 6.67 | 9.93 | 0.64 | 0.96 | 2461 | 251 | 277 |
| 112 | 4 3/8 | 352 | 14 | 7.47 | 11.12 | 0.72 | 1.07 | 2746 | 280 | 309 |
| 120 | 4 3/4 | 377 | 15 | 8.90 | 13.24 | 0.86 | 1.28 | 3246 | 331 | 365 |
| 128 | 5 | 402 | 16 | 9.85 | 14.66 | 0.95 | 1.41 | 3570 | 364 | 401 |
| 136 | 5 3/8 | 427 | 17 | 11.35 | 16.89 | 1.10 | 1.63 | 4089 | 417 | 460 |
| 144 | 5 5/8 | 452 | 18 | 12.62 | 18.78 | 1.22 | 1.81 | 4521 | 461 | 508 |
| 152 | 6 | 478 | 19 | 14.25 | 21.21 | 1.38 | 2.05 | 5070 | 517 | 570 |
| 160 | 6 1/4 | 503 | 20 | 15.50 | 23.07 | 1.50 | 2.23 | 5492 | 560 | 617 |
| 168 | 6 5/8 | 528 | 21 | 17.19 | 25.58 | 1.66 | 2.47 | 6051 | 617 | 680 |
| 176 | 7 | 553 | 22 | 18.91 | 28.14 | 1.82 | 2.72 | 6610 | 674 | 743 |
| 192 | 7 1/2 | 603 | 24 | 22.57 | 33.59 | 2.18 | 3.24 | 7826 | 798 | 879 |
| 216 | 8 1/2 | 679 | 27 | 28.50 | 42.41 | 2.75 | 4.09 | 9807 | 1000 | 1102 |
| 240 | 9 1/2 | 754 | 30 | 35.20 | 52.38 | 3.40 | 5.05 | 12062 | 1230 | 1355 |

**Material:** High tenacity Nylon multifilament fibre
**Construction:** Braidline
**Colour:** Natural (white)
**Markers:** Blue
**Relative Density:** 1.14
**Melting Point:** 218˚C
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** Up to 10%
**Water uptake:** Up to 10%
**UV resistance:** Good
**Abrasion Resistance:** Good

### Load v Extension

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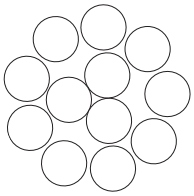
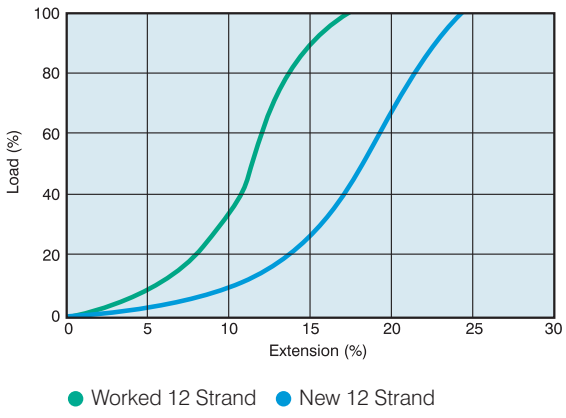


## 12 Strand Roundline Polyester

| Rope diameter | | Rope circumference | | Nominal Mass | | | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | | | |
| mm | ins | mm | ins | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 24 | 1 | 75 | 3 | 0.50 | 0.34 | 0.13 | 0.09 | 129 | 13.1 | 14.4 |
| 28 | 1 1/8 | 88 | 3 1/2 | 0.59 | 0.40 | 0.15 | 0.10 | 163 | 16.6 | 18.3 |
| 32 | 1 5/16 | 101 | 4 | 0.79 | 0.53 | 0.20 | 0.13 | 222 | 22.6 | 24.9 |
| 36 | 1 1/2 | 113 | 4 1/2 | 1.02 | 0.69 | 0.26 | 0.17 | 273 | 27.8 | 30.6 |
| 40 | 1 5/8 | 126 | 5 | 1.22 | 0.82 | 0.31 | 0.21 | 331 | 33.7 | 37.1 |
| 44 | 1 3/4 | 138 | 5 1/2 | 1.42 | 0.95 | 0.36 | 0.24 | 387 | 39.4 | 43.4 |
| 48 | 2 | 151 | 6 | 1.72 | 1.16 | 0.44 | 0.29 | 473 | 48.2 | 53.1 |
| 52 | 2 1/8 | 163 | 6 1/2 | 2.02 | 1.36 | 0.51 | 0.34 | 545 | 55.6 | 61.3 |
| 56 | 2 1/4 | 176 | 7 | 2.30 | 1.55 | 0.58 | 0.39 | 628 | 64.0 | 70.5 |
| 60 | 2 1/2 | 188 | 7 1/2 | 2.71 | 1.82 | 0.69 | 0.46 | 748 | 76.2 | 84.0 |
| 64 | 2 5/8 | 201 | 8 | 2.98 | 2.00 | 0.76 | 0.51 | 823 | 83.9 | 92.5 |
| 68 | 2 3/4 | 214 | 8 1/2 | 3.36 | 2.26 | 0.85 | 0.57 | 925 | 94.3 | 104 |
| 72 | 3 | 226 | 9 | 3.92 | 2.63 | 0.99 | 0.67 | 1069 | 109 | 120 |
| 80 | 3 1/8 | 251 | 10 | 4.85 | 3.26 | 1.23 | 0.83 | 1295 | 132 | 145 |
| 88 | 3 1/2 | 276 | 11 | 5.77 | 3.88 | 1.46 | 0.98 | 1560 | 159 | 175 |
| 96 | 3 3/4 | 302 | 12 | 6.97 | 4.68 | 1.77 | 1.19 | 1874 | 191 | 210 |

**Material:** High Tenacity Polyester multifilament fibre
**Construction:** 12 strand (12X1)
**Colour:** Natural (white)
**Markers:** Blue
**Relative Density:** 1.38
**Melting Point:** 256˚C
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** 0%
**Water uptake:** Low
**UV resistance:** Excellent
**Abrasion Resistance:** Very Good

### Load v Extension

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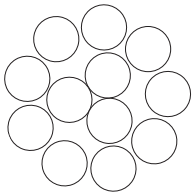
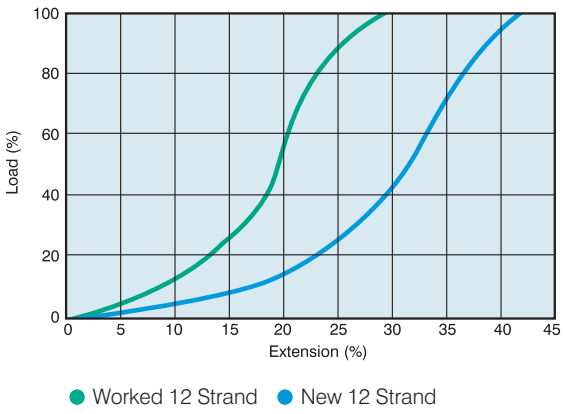


## 12 Strand Roundline Nylon

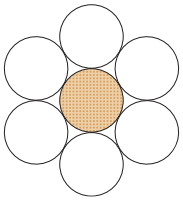
| Rope diameter | | Rope circumference | | Nominal Mass | | | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | | | |
| mm | ins | mm | ins | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 24 | 1 | 75 | 3 | 0.39 | 0.3 | 0.04 | 0.03 | 135 | 13.8 | 15.2 |
| 28 | 1 1/8 | 88 | 3 1/2 | 0.50 | 0.3 | 0.05 | 0.03 | 178 | 18.1 | 19.9 |
| 32 | 1 5/16 | 101 | 4 | 0.67 | 0.5 | 0.06 | 0.04 | 230 | 23.4 | 25.8 |
| 36 | 1 1/2 | 113 | 4 1/2 | 0.84 | 0.6 | 0.08 | 0.05 | 291 | 29.7 | 32.7 |
| 40 | 1 5/8 | 126 | 5 | 1.01 | 0.7 | 0.10 | 0.07 | 342 | 34.9 | 38.5 |
| 44 | 1 3/4 | 138 | 5 1/2 | 1.18 | 0.8 | 0.11 | 0.08 | 414 | 42.2 | 46.5 |
| 48 | 2 | 151 | 6 | 1.43 | 1.0 | 0.14 | 0.09 | 479 | 48.8 | 53.8 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.68 | 1.1 | 0.16 | 0.11 | 576 | 58.7 | 64.7 |
| 56 | 2 1/4 | 176 | 7 | 2.01 | 1.4 | 0.19 | 0.13 | 683 | 69.6 | 76.7 |
| 60 | 2 1/2 | 188 | 7 1/2 | 2.26 | 1.5 | 0.22 | 0.15 | 764 | 77.9 | 85.8 |
| 64 | 2 5/8 | 201 | 8 | 2.52 | 1.7 | 0.24 | 0.16 | 852 | 86.8 | 95.7 |
| 68 | 2 3/4 | 214 | 8 1/2 | 2.86 | 1.9 | 0.28 | 0.19 | 961 | 98.0 | 108 |
| 72 | 3 | 226 | 9 | 3.30 | 2.2 | 0.32 | 0.21 | 1099 | 112 | 123 |
| 80 | 3 1/8 | 251 | 10 | 4.03 | 2.7 | 0.39 | 0.26 | 1295 | 132 | 145 |
| 88 | 3 1/2 | 276 | 11 | 4.78 | 3.2 | 0.46 | 0.31 | 1521 | 155 | 171 |
| 96 | 3 3/4 | 302 | 12 | 5.79 | 3.9 | 0.56 | 0.38 | 1874 | 191 | 210 |

**Material:** High tenacity Nylon multifilament fibre
**Construction:** 12 strand (12X1)
**Colour:** Natural (white)
**Markers:** Blue
**Relative Density:** 1.14
**Melting Point:** 218˚C
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** Up to 10%
**Water uptake:** Up to 10%
**UV resistance:** Good
**Abrasion Resistance:** Good

### Load v Extension




Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.

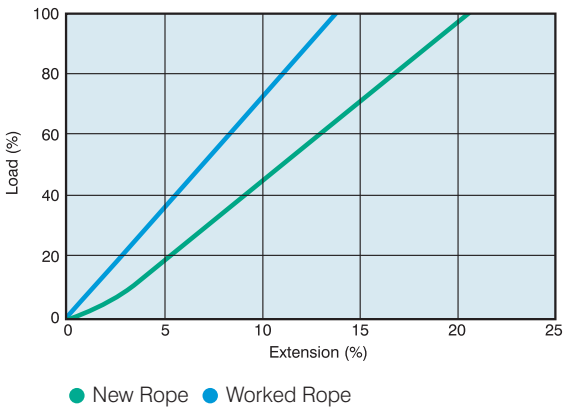


## Flexiline 6-Strand

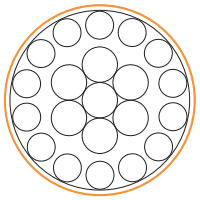
| Rope diameter | | Rope circumference | | Nominal Mass | | | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | | | |
| mm | ins | mm | ins | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 40 | 1 5/8 | 126 | 5 | 1.10 | 1.64 | 0.19 | 0.29 | 304 | 31.0 | 34.2 |
| 44 | 1 3/4 | 138 | 5 1/2 | 1.37 | 2.04 | 0.24 | 0.36 | 412 | 42.0 | 46.3 |
| 48 | 2 | 151 | 6 | 1.63 | 2.43 | 0.29 | 0.43 | 490 | 50.0 | 55.1 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.77 | 2.63 | 0.31 | 0.46 | 530 | 54.0 | 59.5 |
| 56 | 2 1/4 | 176 | 7 | 2.20 | 3.27 | 0.39 | 0.58 | 716 | 73.0 | 80.4 |
| 60 | 2 1/2 | 188 | 7 1/2 | 2.38 | 3.54 | 0.42 | 0.62 | 755 | 77.0 | 84.9 |
| 62 | 2 9/16 | 195 | 7 3/4 | 2.59 | 3.85 | 0.46 | 0.68 | 853 | 87.0 | 95.9 |
| 64 | 2 5/8 | 201 | 8 | 2.70 | 4.02 | 0.48 | 0.71 | 873 | 89.0 | 98.1 |
| 68 | 2 3/4 | 214 | 8 1/2 | 3.08 | 4.58 | 0.54 | 0.81 | 1010 | 103 | 114 |
| 70 | 2 7/8 | 220 | 8 3/4 | 3.41 | 5.07 | 0.60 | 0.89 | 1108 | 113 | 125 |
| 72 | 3 | 226 | 9 | 3.61 | 5.37 | 0.64 | 0.95 | 1177 | 120 | 132 |
| 78 | 3 1/8 | 245 | 9 3/4 | 4.00 | 5.95 | 0.70 | 1.05 | 1294 | 132 | 145 |

**Material:** Polyester multifilament yarn and co-polymer Monofilaments
**Construction:** 6 strand with core
**Colour:** Natural (white)
**Markers:** Blue
**Relative Density:** 1.25
**Melting Point:** 220˚C
**Torque Properties:** Torque Resistant
**Shrinkage (Cold Water):** None
**Water uptake:** Low
**UV resistance:** Excellent
**Abrasion Resistance:** Excellent

### Load v Extension




Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.

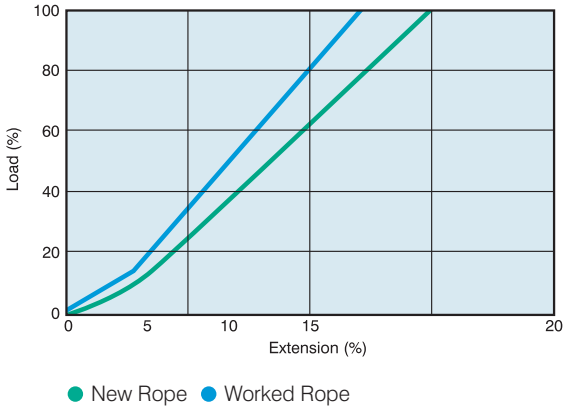


## M-Steel Winchline

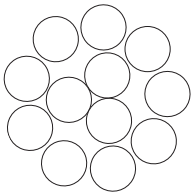
| Rope diameter | | Rope circumference | | Nominal Mass In air | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|
| mm | ins | mm | ins | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 36 | 1 1/2 | 113 | 4 1/2 | 0.63 | 0.4 | 248 | 25.3 | 27.9 |
| 40 | 1 5/8 | 126 | 5 | 0.74 | 0.5 | 308 | 31.4 | 34.6 |
| 44 | 1 3/4 | 138 | 5 1/2 | 0.90 | 0.6 | 387 | 39.4 | 43.4 |
| 48 | 2 | 151 | 6 | 1.16 | 0.8 | 475 | 48.4 | 53.3 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.35 | 0.9 | 560 | 57.1 | 62.9 |
| 56 | 2 1/4 | 176 | 7 | 1.50 | 1.0 | 635 | 64.7 | 71.3 |
| 60 | 2 1/2 | 188 | 7 1/2 | 1.71 | 1.1 | 735 | 74.9 | 82.5 |
| 64 | 2 5/8 | 201 | 8 | 1.91 | 1.3 | 850 | 86.6 | 95.4 |
| 68 | 2 3/4 | 214 | 8 1/2 | 2.11 | 1.4 | 930 | 94.8 | 104 |
| 72 | 3 | 226 | 9 | 2.32 | 1.6 | 1050 | 107 | 118 |
| 76 | 3 1/16 | 239 | 9 1/2 | 2.54 | 1.7 | 1158 | 118 | 130 |
| 80 | 3 1/8 | 251 | 10 | 2.74 | 1.8 | 1265 | 129 | 142 |
| 88 | 3 1/2 | 276 | 11 | 3.43 | 2.3 | 1589 | 162 | 179 |
| 96 | 3 3/4 | 302 | 12 | 4.14 | 2.8 | 1942 | 198 | 218 |

**Material:** High Tenacity Polyolefin Fibre
**Construction:** 6/1 or 12/1 load-bearing core protected by braided outer sheath
**Colour:** High visibility Yellow, Blue or White
**Markers:** Blue
**Relative Density:** 0.92
**Melting Point:** 170˚C
**Torque Properties:** Torque generating (6/1) Torque balanced (12/1)
**Shrinkage (Cold Water):** 0%
**Water uptake:** Low
**UV resistance:** Fully UV stabilised
**Abrasion Resistance:** Good

### Load v Extension




Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.

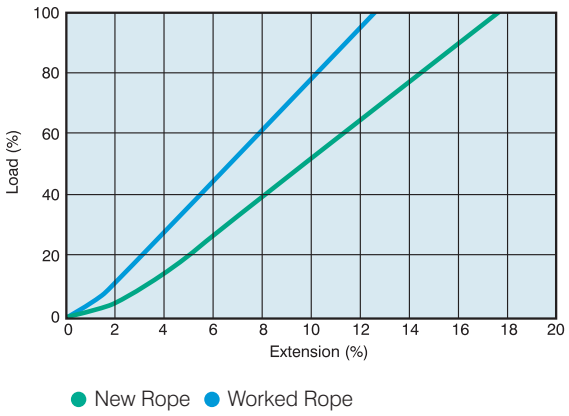


## TQ12

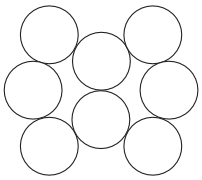
| Rope diameter | | Rope circumference | | Nominal Mass In air | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|
| mm | ins | mm | ins | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 36 | 1 1/2 | 113 | 4 1/2 | 0.59 | 0.4 | 278 | 28.3 | 31.2 |
| 40 | 1 5/8 | 126 | 5 | 0.72 | 0.5 | 319 | 32.5 | 35.8 |
| 44 | 1 3/4 | 138 | 5 1/2 | 0.88 | 0.6 | 378 | 38.5 | 42.4 |
| 48 | 2 | 151 | 6 | 1.04 | 0.7 | 442 | 45.1 | 49.7 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.22 | 0.8 | 518 | 52.8 | 58.2 |
| 56 | 2 1/4 | 176 | 7 | 1.42 | 1.0 | 594 | 60.5 | 66.7 |
| 60 | 2 1/2 | 188 | 7 1/2 | 1.63 | 1.1 | 680 | 69.3 | 76.4 |
| 64 | 2 5/8 | 201 | 8 | 1.85 | 1.2 | 766 | 78.1 | 86.1 |
| 68 | 2 3/4 | 214 | 8 1/2 | 2.09 | 1.4 | 863 | 88.0 | 97.0 |
| 72 | 3 | 226 | 9 | 2.34 | 1.6 | 960 | 97.9 | 108 |
| 76 | 3 1/6 | 239 | 9 1/2 | 2.61 | 1.8 | 1069 | 109 | 120 |
| 80 | 3 1/8 | 251 | 10 | 2.89 | 1.9 | 1187 | 121 | 133 |
| 88 | 3 1/2 | 276 | 11 | 3.50 | 2.4 | 1403 | 143 | 158 |
| 96 | 3 3/4 | 302 | 12 | 4.16 | 2.8 | 1638 | 167 | 184 |

**Material:** High Tenacity Polyolefin fibre
**Construction:** 12 strand (6X2)
**Colour:** Blue and white
**Markers:** None
**Relative Density:** 0.91
**Melting Point:** 170˚C
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** 0%
**Water uptake:** Low
**UV resistance:** Fully UV Stabilised
**Abrasion Resistance:** Moderate

### Load v Extension




Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.

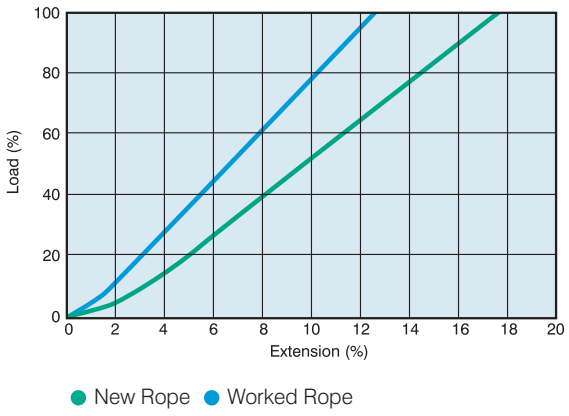


## Fybaline Xtra

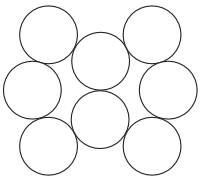
| Rope diameter | | Rope circumference | | Nominal Mass In air | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|
| mm | ins | mm | ins | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 36 | 1 1/2 | 113 | 4 1/2 | 0.62 | 0.4 | 259 | 26.4 | 29.1 |
| 40 | 1 5/8 | 126 | 5 | 0.77 | 0.5 | 320 | 32.6 | 35.9 |
| 44 | 1 3/4 | 138 | 5 1/2 | 0.93 | 0.6 | 380 | 38.7 | 42.6 |
| 48 | 2 | 151 | 6 | 1.10 | 0.7 | 444 | 45.3 | 49.9 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.30 | 0.9 | 521 | 53.1 | 58.5 |
| 56 | 2 1/4 | 176 | 7 | 1.50 | 1.0 | 596 | 60.8 | 67.0 |
| 60 | 2 1/2 | 188 | 7 1/2 | 1.80 | 1.2 | 684 | 69.7 | 76.8 |
| 64 | 2 5/8 | 201 | 8 | 2.05 | 1.4 | 770 | 78.5 | 86.5 |
| 68 | 2 3/4 | 214 | 8 1/2 | 2.33 | 1.6 | 870 | 88.7 | 97.7 |
| 72 | 3 | 226 | 9 | 2.61 | 1.8 | 965 | 98.4 | 108 |
| 76 | 3 1/16 | 239 | 9 1/2 | 2.90 | 1.9 | 1079 | 110 | 121 |
| 80 | 3 1/8 | 251 | 10 | 3.22 | 2.2 | 1187 | 121 | 133 |
| 88 | 3 1/2 | 276 | 11 | 3.89 | 2.6 | 1373 | 140 | 154 |
| 96 | 3 3/4 | 302 | 12 | 4.64 | 3.1 | 1609 | 164 | 181 |

**Material:** A melt blend of high tenacity polyester and polyolefin fibre
**Construction:** 8 Strand Multiplait (4X2)
**Colour:** High visibility yellow
**Markers:** Blue
**Relative Density:** 0.97 (floats)
**Melting Point:** 170˚C
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** 0%
**Water uptake:** Low
**UV resistance:** Fully UV stabilised
**Abrasion Resistance:** Good

### Load v Extension




Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.

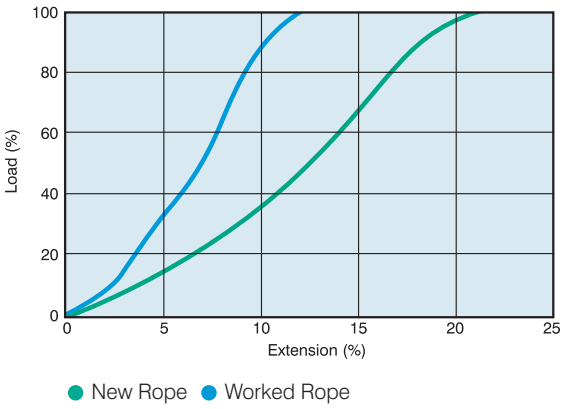


## Hypamix

| Rope diameter | | Rope circumference | | Nominal Mass | | | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | | | |
| mm | ins | mm | ins | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 40 | 1 5/8 | 126 | 5 | 0.98 | 0.7 | 0.06 | 0.04 | 417 | 42.5 | 46.8 |
| 44 | 1 3/4 | 138 | 5 1/2 | 1.19 | 0.8 | 0.11 | 0.08 | 496 | 50.6 | 55.8 |
| 48 | 2 | 151 | 6 | 1.41 | 0.9 | 0.14 | 0.09 | 564 | 57.5 | 63.4 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.66 | 1.1 | 0.16 | 0.11 | 676 | 68.9 | 75.9 |
| 56 | 2 1/4 | 176 | 7 | 1.92 | 1.3 | 0.19 | 0.12 | 789 | 80.4 | 88.6 |
| 60 | 2 1/2 | 188 | 7 1/2 | 2.21 | 1.5 | 0.21 | 0.14 | 903 | 92.0 | 101 |
| 64 | 2 5/8 | 201 | 8 | 2.51 | 1.7 | 0.24 | 0.16 | 1020 | 104 | 115 |
| 68 | 2 3/4 | 214 | 8 1/2 | 2.83 | 1.9 | 0.27 | 0.18 | 1130 | 115 | 127 |
| 72 | 3 | 226 | 9 | 3.18 | 2.1 | 0.31 | 0.21 | 1240 | 126 | 139 |
| 76 | 3 1/16 | 239 | 9 1/2 | 3.54 | 2.4 | 0.34 | 0.23 | 1413 | 144 | 159 |
| 80 | 3 1/8 | 251 | 10 | 3.92 | 2.6 | 0.38 | 0.25 | 1570 | 160 | 176 |
| 88 | 3 1/2 | 276 | 11 | 4.75 | 3.2 | 0.46 | 0.31 | 1884 | 192 | 212 |
| 96 | 3 3/4 | 302 | 12 | 5.65 | 3.8 | 0.55 | 0.37 | 2197 | 224 | 247 |

**Material:** Blend of continuous filament polyester and high tenacity Polyolefin
**Construction:** 8 strand Multiplait (4X2)
**Colour:** Natural (white)
**Markers:** Green, Red and Blue
**Relative Density:** 1.1 approximately
**Melting Point:** 170˚C (polyester 256˚C)
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** 0%
**Water uptake:** Low
**UV resistance:** Good, Polyolefin is Fully UV Stabilised
**Abrasion Resistance:** Very Good

### Load v Extension

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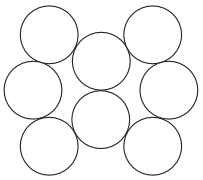
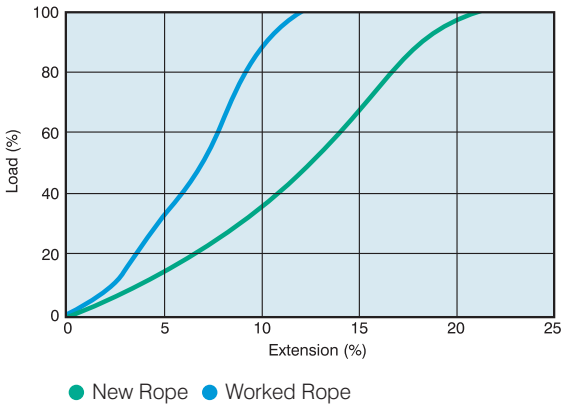


## Supermix

| Rope diameter | | Rope circumference | | Nominal Mass | | | | Minimum breaking force (F min) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | | | |
| mm | ins | mm | ins | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) |
| 36 | 1 1/2 | 113 | 4 1/2 | 0.76 | 0.51 | 0.05 | 0.03 | 206 | 21.0 | 23.1 |
| 40 | 1 5/8 | 126 | 5 | 0.95 | 0.64 | 0.06 | 0.04 | 256 | 26.1 | 28.8 |
| 44 | 1 3/4 | 138 | 5 1/2 | 1.15 | 0.77 | 0.07 | 0.05 | 304 | 31.0 | 34.2 |
| 48 | 2 | 151 | 6 | 1.36 | 0.91 | 0.09 | 0.06 | 358 | 36.5 | 40.2 |
| 52 | 2 1/8 | 163 | 6 1/2 | 1.60 | 1.08 | 0.10 | 0.07 | 418 | 42.6 | 46.9 |
| 56 | 2 1/4 | 176 | 7 | 1.85 | 1.24 | 0.12 | 0.08 | 478 | 48.7 | 53.7 |
| 60 | 2 1/2 | 188 | 7 1/2 | 2.12 | 1.42 | 0.13 | 0.09 | 533 | 54.3 | 59.8 |
| 64 | 2 5/8 | 201 | 8 | 2.42 | 1.63 | 0.15 | 0.10 | 619 | 63.1 | 69.5 |
| 72 | 3 | 226 | 9 | 3.06 | 2.06 | 0.19 | 0.13 | 771 | 78.6 | 86.6 |
| 80 | 3 1/8 | 251 | 10 | 3.78 | 2.54 | 0.24 | 0.16 | 926 | 94.4 | 104 |
| 88 | 3 1/2 | 276 | 11 | 4.57 | 3.07 | 0.29 | 0.20 | 1138 | 116 | 128 |
| 96 | 3 3/4 | 302 | 12 | 5.45 | 3.66 | 0.35 | 0.23 | 1334 | 136 | 150 |

**Material:** Blend of continuous filament polyester and staple Polyolefin
**Construction:** 8 strand Multiplait (4X2)
**Colour:** Natural (white) or Black
**Markers:** Green and Blue
**Relative Density:** 1.1 approximately
**Melting Point:** 170˚C (polyester 256˚C)
**Torque Properties:** Torque Balanced
**Shrinkage (Cold Water):** 0%
**Water uptake:** Low
**UV resistance:** Good, Polyolefin is Fully UV Stabilised
**Abrasion Resistance:** Very Good

### Load v Extension

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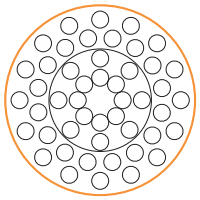
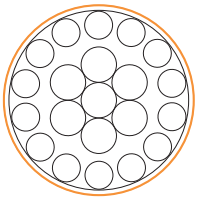


## VIKING BRAIDLINE Nylon Super Hawser

| Rope Diameter* | | Rope Circumference | | Nominal mass | | | | Minimum breaking force (F min) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | New Dry | | | New Wet | | |
| mm | in | mm | in | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) | kN | Tonnes | Tons (2000lb) |
| 80 | 3 1/8 | 251 | 10 | 4.0 | 2.7 | 0.39 | 0.26 | 1440 | 147 | 162 | 1370 | 140 | 154 |
| 88 | 3 1/2 | 277 | 11 | 4.8 | 3.2 | 0.46 | 0.31 | 1750 | 178 | 197 | 1660 | 169 | 187 |
| 96 | 3 3/4 | 302 | 12 | 5.7 | 3.8 | 0.55 | 0.37 | 2040 | 208 | 229 | 1940 | 198 | 218 |
| 104 | 4 1/8 | 327 | 13 | 6.7 | 4.5 | 0.65 | 0.43 | 2440 | 249 | 274 | 2310 | 236 | 260 |
| 112 | 4 3/8 | 352 | 14 | 7.8 | 5.2 | 0.75 | 0.51 | 2820 | 288 | 317 | 2680 | 273 | 301 |
| 120 | 4 3/4 | 377 | 15 | 8.9 | 6.0 | 0.86 | 0.58 | 3210 | 327 | 361 | 3050 | 311 | 343 |
| 128 | 5 | 402 | 16 | 10.2 | 6.9 | 0.98 | 0.66 | 3610 | 368 | 406 | 3420 | 349 | 384 |
| 136 | 5 3/8 | 427 | 17 | 11.4 | 7.7 | 1.10 | 0.74 | 4110 | 419 | 462 | 3900 | 398 | 438 |
| 144 | 5 5/8 | 452 | 18 | 12.8 | 8.6 | 1.24 | 0.83 | 4610 | 470 | 518 | 4370 | 446 | 491 |
| 152 | 6 | 478 | 19 | 14.3 | 9.6 | 1.38 | 0.93 | 5110 | 521 | 574 | 4850 | 495 | 545 |
| 160 | 6 1/4 | 503 | 20 | 15.8 | 10.6 | 1.52 | 1.02 | 5660 | 577 | 636 | 5370 | 548 | 603 |
| 168 | 6 5/8 | 528 | 21 | 17.4 | 11.7 | 1.68 | 1.13 | 6230 | 635 | 700 | 5910 | 603 | 664 |
| 176 | 6 7/8 | 553 | 22 | 19.1 | 12.8 | 1.84 | 1.24 | 6840 | 697 | 769 | 6490 | 662 | 729 |
| 184 | 7 1/4 | 578 | 23 | 20.9 | 14.0 | 2.02 | 1.36 | 7475 | 762 | 840 | 7100 | 724 | 798 |
| 192 | 7 1/2 | 603 | 24 | 22.8 | 15.3 | 2.20 | 1.48 | 8150 | 831 | 916 | 7730 | 788 | 869 |
| 200 | 7 7/8 | 628 | 25 | 24.7 | 16.6 | 2.38 | 1.60 | 8845 | 902 | 994 | 8390 | 856 | 943 |
| 208 | 8 1/4 | 654 | 26 | 26.7 | 17.9 | 2.58 | 1.73 | 9550 | 974 | 1073 | 9060 | 924 | 1018 |
| 216 | 8 1/2 | 679 | 27 | 28.8 | 19.4 | 2.78 | 1.87 | 10300 | 1050 | 1157 | 9770 | 996 | 1098 |
| 224 | 8 7/8 | 704 | 28 | 31.0 | 20.8 | 2.99 | 2.01 | 11080 | 1130 | 1245 | 10510 | 1072 | 1181 |
| 232 | 9 1/8 | 729 | 29 | 33.3 | 22.4 | 3.21 | 2.16 | 11870 | 1210 | 1334 | 11215 | 1144 | 1260 |
| 240 | 9 1/2 | 754 | 30 | 35.6 | 23.9 | 3.44 | 2.31 | 12700 | 1295 | 1427 | 12000 | 1224 | 1348 |

*Diameters shown in the above table are nominal values and should be used for guidance purposes only.
TCLL and extension data can be provided on request

Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.



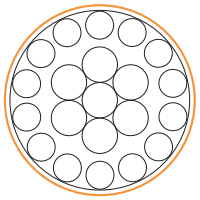
BRIDON
SUPERLINE

## Nylon OCIMF 2000

| Rope Diameter* | | Rope Circumference | | Nominal mass | | | | Minimum breaking force (F min) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | New Dry | | | New Wet | | |
| mm | in | mm | in | kg/m | lb/ft | kg/m | lb/ft | kN | Tonnes | Tons (2000lb) | kN | Tonnes | Tons (2000lb) |
| 80 | 3 1/8 | 251 | 10 | 4.2 | 2.8 | 0.41 | 0.27 | 1462 | 149 | 164 | 1344 | 137 | 151 |
| 88 | 3 4/8 | 277 | 11 | 5.2 | 3.5 | 0.50 | 0.34 | 1776 | 181 | 200 | 1628 | 166 | 183 |
| 96 | 3 6/8 | 302 | 12 | 6.1 | 4.1 | 0.59 | 0.40 | 2109 | 215 | 237 | 1942 | 198 | 218 |
| 104 | 4 1/8 | 327 | 13 | 7.0 | 4.7 | 0.68 | 0.45 | 2482 | 253 | 279 | 2276 | 232 | 256 |
| 112 | 4 3/8 | 352 | 14 | 8.3 | 5.6 | 0.80 | 0.54 | 2884 | 294 | 324 | 2649 | 270 | 298 |
| 120 | 4 3/4 | 377 | 15 | 9.5 | 6.4 | 0.92 | 0.62 | 3316 | 338 | 373 | 3041 | 310 | 342 |
| 128 | 5 | 402 | 16 | 10.4 | 7.0 | 1.00 | 0.68 | 3777 | 385 | 424 | 3463 | 353 | 389 |
| 136 | 5 3/8 | 427 | 17 | 11.7 | 7.9 | 1.13 | 0.76 | 4267 | 435 | 479 | 3914 | 399 | 440 |
| 144 | 5 5/8 | 452 | 18 | 13.2 | 8.9 | 1.27 | 0.86 | 4787 | 488 | 538 | 4395 | 448 | 494 |
| 152 | 6 | 478 | 19 | 14.6 | 9.8 | 1.41 | 0.95 | 5337 | 544 | 600 | 4905 | 500 | 551 |
| 160 | 6 2/8 | 503 | 20 | 16.2 | 10.9 | 1.56 | 1.05 | 5925 | 604 | 666 | 5435 | 554 | 611 |
| 168 | 6 5/8 | 528 | 21 | 17.8 | 12.0 | 1.72 | 1.16 | 6533 | 666 | 734 | 5994 | 611 | 674 |
| 176 | 6 7/8 | 553 | 22 | 19.8 | 13.3 | 1.91 | 1.28 | 7181 | 732 | 807 | 6592 | 672 | 741 |
| 184 | 7 2/8 | 578 | 23 | 22.2 | 14.9 | 2.14 | 1.44 | 7848 | 800 | 882 | 7210 | 735 | 810 |
| 192 | 7 4/8 | 603 | 24 | 24.1 | 16.2 | 2.33 | 1.56 | 8554 | 872 | 961 | 7858 | 801 | 883 |
| 200 | 7 7/8 | 628 | 25 | 26.1 | 17.5 | 2.52 | 1.69 | 9290 | 947 | 1044 | 8525 | 869 | 958 |
| 208 | 8 2/8 | 654 | 26 | 28.6 | 19.2 | 2.76 | 1.85 | 10055 | 1025 | 1130 | 9231 | 941 | 1037 |
| 216 | 8 4/8 | 679 | 27 | 30.5 | 20.5 | 2.94 | 1.98 | 10850 | 1106 | 1219 | 9957 | 1015 | 1119 |
| 224 | 8 7/8 | 704 | 28 | 32.5 | 21.8 | 3.14 | 2.10 | 11674 | 1190 | 1312 | 10722 | 1093 | 1205 |
| 232 | 9 1/8 | 729 | 29 | 35.4 | 23.8 | 3.42 | 2.30 | 12537 | 1278 | 1409 | 11507 | 1173 | 1293 |

*Diameters shown in the above table are nominal values and should be used for guidance purposes only.
TCLL and extension data can be provided on request

Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.



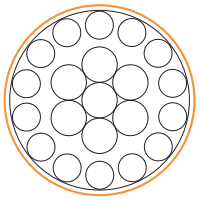
BRIDON
SUPERLINE

## Polyester (MODU)

| Diameter* | | MBL | | Approximate mass | | | | Post installation drift stiffness | | Intermediate stiffness | | Storm stiffness | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | in air | | Submerged | | | | | | | |
| in | mm | kN | kips | kg/m | lb/ft | kg/m | lb/ft | MN | $10^3$ kips | MN | $10^3$ kips | MN | $10^3$ kips |
| 5 5/16 | 135 | 3924 | 882 | 11.4 | 7.7 | 2.9 | 1.9 | 51.0 | 11.5 | 105.9 | 23.8 | 109.9 | 24.7 |
| 5 13/16 | 147 | 4905 | 1102 | 13.6 | 9.1 | 3.4 | 2.3 | 63.8 | 14.3 | 132.4 | 29.8 | 137.3 | 30.9 |
| 6 1/4 | 158 | 6180 | 1389 | 15.8 | 10.6 | 4.0 | 2.7 | 80.3 | 18.1 | 166.9 | 37.5 | 173.0 | 38.9 |
| 6 5/8 | 169 | 6965 | 1565 | 18.1 | 12.2 | 4.5 | 3.1 | 90.5 | 20.3 | 188.1 | 42.3 | 195.0 | 43.8 |
| 7 | 178 | 7848 | 1764 | 20.2 | 13.6 | 5.1 | 3.4 | 102.0 | 22.9 | 211.9 | 47.6 | 219.7 | 49.4 |
| 7 5/16 | 186 | 8829 | 1984 | 22.1 | 14.9 | 5.5 | 3.7 | 114.8 | 25.8 | 238.4 | 53.6 | 247.2 | 55.6 |
| 7 15/16 | 194 | 9810 | 2205 | 24.1 | 16.2 | 6.0 | 4.1 | 127.5 | 28.7 | 264.9 | 59.5 | 274.7 | 61.7 |

*Diameters shown in the above table are nominal values and should be used for guidance purposes only.

Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.

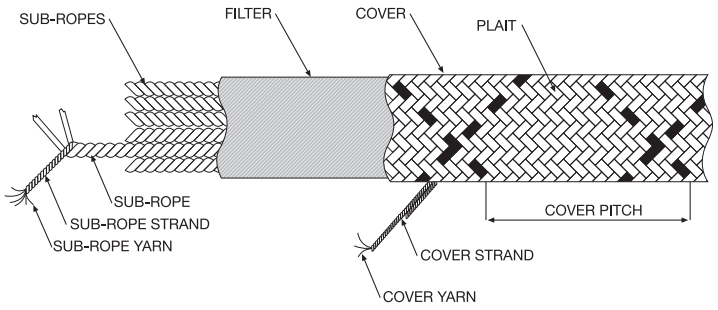


BRIDON
SUPERLINE

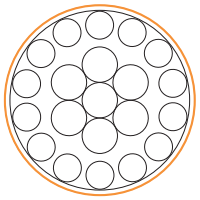
## Polyester (Permanent Mooring)

| Diameter* | | MBL | | Approximate mass | | | | Post installation drift stiffness | | Intermediate stiffness | | Storm stiffness | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In air | | Submerged | | | | | | | |
| in | mm | kN | kips | kg/m | lb/ft | kg/m | lb/ft | MN | $10^3$ kips | MN | $10^3$ kips | MN | $10^3$ kips |
| $4^{15}/_{16}$ | 126 | 3924 | 882 | 10.0 | 6.7 | 2.5 | 1.7 | 51.0 | 11.5 | 105.9 | 23.8 | 109.9 | 24.7 |
| $5^{1}/_{2}$ | 139 | 4905 | 1102 | 12.1 | 8.1 | 3.0 | 2.0 | 63.8 | 14.3 | 132.4 | 29.8 | 137.3 | 30.9 |
| $5^{15}/_{16}$ | 151 | 6180 | 1389 | 14.4 | 9.7 | 3.6 | 2.4 | 80.3 | 18.1 | 166.9 | 37.5 | 173.0 | 38.9 |
| $6^{1}/_{4}$ | 158 | 6959 | 1565 | 15.9 | 10.7 | 4.0 | 2.7 | 90.5 | 20.3 | 187.9 | 42.3 | 194.9 | 43.8 |
| $6^{5}/_{8}$ | 168 | 7848 | 1764 | 18.0 | 12.1 | 4.5 | 3.0 | 102.0 | 22.9 | 211.9 | 47.6 | 219.7 | 49.4 |
| $6^{15}/_{16}$ | 177 | 8829 | 1984 | 19.9 | 13.4 | 5.0 | 3.4 | 114.8 | 25.8 | 238.4 | 53.6 | 247.2 | 55.6 |
| $7^{1}/_{4}$ | 185 | 9810 | 2205 | 21.9 | 14.7 | 5.5 | 3.7 | 127.5 | 28.7 | 264.9 | 59.5 | 274.7 | 61.7 |
| $7^{15}/_{16}$ | 201 | 10987 | 2469 | 25.8 | 17.3 | 6.5 | 4.3 | 142.8 | 32.1 | 296.6 | 66.7 | 307.6 | 69.1 |
| $8^{3}/_{8}$ | 213 | 12263 | 2756 | 28.9 | 19.4 | 7.2 | 4.9 | 159.4 | 35.8 | 331.1 | 74.4 | 343.4 | 77.2 |
| $8^{3}/_{4}$ | 223 | 13734 | 3086 | 31.8 | 21.4 | 8.0 | 5.4 | 178.5 | 40.1 | 370.8 | 83.3 | 384.6 | 86.4 |
| 9 | 229 | 14715 | 3307 | 33.6 | 22.6 | 8.4 | 5.7 | 191.3 | 43.0 | 397.3 | 89.3 | 412.0 | 92.6 |
| $9^{1}/_{2}$ | 241 | 15696 | 3527 | 37.2 | 25.0 | 9.3 | 6.3 | 204.0 | 45.9 | 423.8 | 95.2 | 439.5 | 98.8 |
| $9^{3}/_{4}$ | 247 | 16677 | 3748 | 39.2 | 26.3 | 9.8 | 6.6 | 216.8 | 48.7 | 450.3 | 101.2 | 467.0 | 104.9 |
| $10^{1}/_{8}$ | 257 | 17858 | 3968 | 42.4 | 28.5 | 10.6 | 7.1 | 232.2 | 51.6 | 482.2 | 107.1 | 500.0 | 111.1 |
| $10^{3}/_{8}$ | 263 | 18639 | 4189 | 44.4 | 29.8 | 11.1 | 7.5 | 242.3 | 54.5 | 503.3 | 113.1 | 521.9 | 117.3 |
| $10^{9}/_{16}$ | 268 | 19620 | 4409 | 46.4 | 31.2 | 11.6 | 7.8 | 255.1 | 57.3 | 529.7 | 119.0 | 549.4 | 123.5 |
| $10^{13}/_{16}$ | 274 | 20601 | 4630 | 48.5 | 32.6 | 12.1 | 8.2 | 267.8 | 60.2 | 556.2 | 125.0 | 576.8 | 129.6 |
| $11^{1}/_{16}$ | 281 | 21582 | 4850 | 50.7 | 34.1 | 12.7 | 8.5 | 280.6 | 63.1 | 582.7 | 131.0 | 604.3 | 135.8 |
| $11^{1}/_{4}$ | 286 | 22563 | 5071 | 52.6 | 35.3 | 13.2 | 8.8 | 293.3 | 65.9 | 609.2 | 136.9 | 631.8 | 142.0 |
| $11^{7}/_{16}$ | 291 | 23544 | 5291 | 54.7 | 36.8 | 13.7 | 9.2 | 306.1 | 68.8 | 635.7 | 142.9 | 659.2 | 148.1 |
| $11^{5}/_{8}$ | 296 | 24525 | 5512 | 56.7 | 38.1 | 14.2 | 9.5 | 318.8 | 71.7 | 662.2 | 148.8 | 686.7 | 154.3 |

*Diameters shown in the above table are nominal values and should be used for guidance purposes only.




Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.



BRIDON
SUPERLINE

## Steelite Xcel

| Diameter* | | MBL | | Approximate mass In air | | 5% initial loading | | 10-30% 10 cycles | | 20-30% 300 cycles | | 50-50% 300 cycles | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| in | mm | kN | kips | kg/m | lb/ft | MN | $10^3$ kips | MN | $10^3$ kips | MN | $10^3$ kips | MN | $10^3$ kips |
| 3 3/16 | 81 | 3434 | 772 | 2.8 | 1.8 | 44.6 | 10.0 | 206.0 | 46.3 | 291.9 | 65.6 | 364.0 | 81.8 |
| 3 3/8 | 85 | 3924 | 882 | 3.0 | 2.0 | 51.0 | 11.5 | 235.4 | 52.9 | 333.5 | 75.0 | 415.9 | 93.5 |
| 3 1/2 | 89 | 3924 | 992 | 3.3 | 2.2 | 51.0 | 12.9 | 235.4 | 59.5 | 333.5 | 84.3 | 415.9 | 105.2 |
| 3 11/16 | 93 | 4905 | 1102 | 3.6 | 2.4 | 63.8 | 14.3 | 294.3 | 66.1 | 416.9 | 93.7 | 519.9 | 116.8 |
| 3 13/16 | 97 | 5396 | 1213 | 3.9 | 2.6 | 70.1 | 15.8 | 323.8 | 72.8 | 458.7 | 103.1 | 572.0 | 128.6 |
| 3 15/16 | 100 | 5886 | 1323 | 4.4 | 3.0 | 76.5 | 17.2 | 353.2 | 79.4 | 500.3 | 112.5 | 623.9 | 140.2 |
| 4 1/8 | 104 | 6377 | 1433 | 4.7 | 3.1 | 82.9 | 18.6 | 382.6 | 86.0 | 542.0 | 121.8 | 676.0 | 151.9 |
| 4 3/16 | 107 | 6867 | 1543 | 5.0 | 3.3 | 89.3 | 20.1 | 412.0 | 92.6 | 583.7 | 131.2 | 727.9 | 163.6 |
| 4 3/8 | 111 | 7358 | 1653 | 5.3 | 3.5 | 95.7 | 21.5 | 441.5 | 99.2 | 625.4 | 140.5 | 779.9 | 175.2 |
| 4 1/2 | 114 | 7848 | 1764 | 5.6 | 3.7 | 102.0 | 22.9 | 470.9 | 105.8 | 667.1 | 149.9 | 831.9 | 187.0 |
| 4 5/8 | 117 | 8339 | 1874 | 5.9 | 3.9 | 108.4 | 24.4 | 500.3 | 112.4 | 708.8 | 159.3 | 883.9 | 198.6 |
| 4 3/4 | 120 | 8829 | 1984 | 6.2 | 4.1 | 114.8 | 25.8 | 529.7 | 119.0 | 750.5 | 168.6 | 935.9 | 210.3 |
| 4 13/16 | 123 | 9320 | 2093 | 6.4 | 4.3 | 121.2 | 27.2 | 559.2 | 125.6 | 792.2 | 177.9 | 987.9 | 221.9 |
| 4 15/16 | 125 | 9810 | 2205 | 6.7 | 4.5 | 127.5 | 28.7 | 588.6 | 132.3 | 833.9 | 187.4 | 1039.9 | 233.7 |

Steelite Xcel constructions shown in the above table exhibit a relative density of <1 and are therefore neutrally buoyant in seawater.

*Diameters shown in the above table are nominal values and should be used for guidance purposes only.

Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.

## Physical Properties

| Material | Specific Gravity | Dynamic Co-efficient of Friction Against Steel | Melting Decomposition Temperature |
|---|---|---|---|
| | | | Deg. C |
| Nylon (Polyamide) | 1.14 | 0.1 - 0.12 | 218 |
| Polyester | 1.38 | 0.12 - 0.15 | 256 |
| Polypropylene | 0.91 | 0.15 - 0.22 | 165 |
| Polyester/Polyolefin Dual Fibres | 0.99 / 1.14 | 0.1 - 0.15 | 140 Polyolefin<br>256 Polyester |
| Polyester/Polypropylene Melt Mixture | 0.99 | 0.12 - 0.15 | 173 |
| HMPE (Steelite) | 0.97 | 0.07 | 147 |
| Aramid | 1.44 | 0.15 | Chars @ 500 |
| Steel | 7.85 | 0.23* | 1600 |

* Steel Wire is 0.23 but when lubricant / finishing is used the co-efficient may vary.

### Chemical Resistance

This table shows the residual strengths of synthetic fibres after chemical exposure under specific conditions.
Contact Bridon for more detailed information.

| Chemical | Conc | Temp | Time | Nylon | Polyester | Polypropylene | Aramid | HMPE |
|---|---|---|---|---|---|---|---|---|
| | (W/W%) | (°C) | (Hours) | (%) | (%) | (%) | (%) | (%) |
| Acids | | | | | | | | |
| Hydrochloric | 34 | 20 | 100 | 0 | 90 | 100 | 95 | 100 |
| Nitric66 | 20 | 100 | 0 | 70 | 100 | 95 | 95 | |
| Sulphuric | 96 | 20 | 100 | 0 | 100 | 100 | 40 | 90 |
| Formic | 90 | 20 | 100 | 0 | 95 | 100 | 90 | 100 |
| Acetic | 100 | 20 | 10 | 85 | 95 | 100 | 100 | 100 |
| Alkalis | | | | | | | | |
| Caustic Soda | 40 | 20 | 100 | 50 | 0 | 90 | 90 | 100 |
| Caustic Soda | 20 | 70 | 150 | 100 | 0 | 100 | 85 | 90 |
| Caustic potash | 40 | 20 | 100 | 90 | 0 | 90 | 90 | 100 |
| Solvents | | | | | | | | |
| Trichloroethylene | 100 | 30 | 150 | 100 | 95 | 80 | 100 | 100 |
| Carbon Tetrachloride | 100 | 20 | 150 | 100 | 100 | 100 | 98 | 100 |
| Benzene | 100 | 70 | 150 | 100 | 100 | 100 | 98 | 95 |
| Metacresol | 100 | 100 | 4 | 0 | 0 | 100 | 80 | 100 |
| Oxidising Agent | | | | | | | | |
| Hydrogen Peroxide | 10 | 20 | 100 | 0 | 100 | 90 | 95 | 100 |

### Extension and Elasticity

Rope extension and elasticity are important characteristics because they will determine rope behaviour in terms of peak loads and mooring excursions. Synthetic fibre ropes differ from steel because their load-extension characteristics are non-linear and time dependent.

The overall extension of a rope is made up from several different components:

### Elastic Extension

Elastic extension is the extension that is immediately recoverable upon the release of the load. In a continuously working environment elastic extension will dominate the rope behaviour.

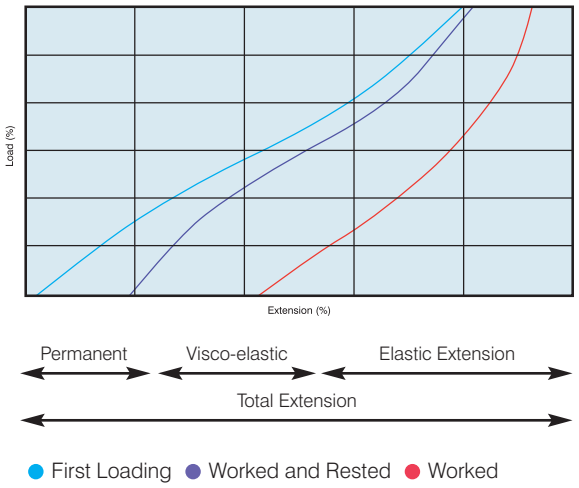
### Visco-elastic Extension

Visco-elastic extension is only recoverable with time after the release of the load. The behaviour of ropes subjected to occasional high loads will be significantly influenced by this visco-elastic component.

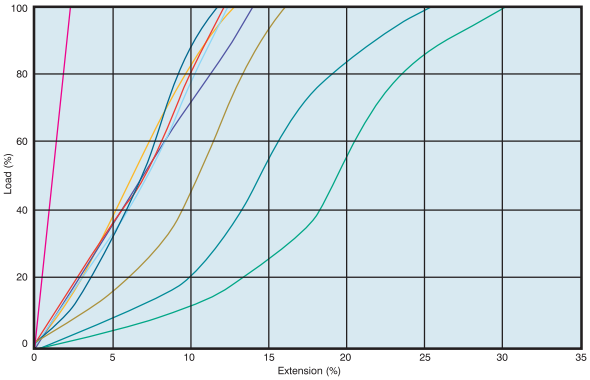
### Permanent Extension

Permanent extension is non-recoverable. It will occur when a new rope is first used or when a rope is subject to an unusually high load. It occurs as a result of the individual fibre components of the rope "bedding in" to their preferred positions. Continuous loading of some ropes can also lead to further permanent extension due to creep at the molecular level.

### Components of Rope Extension




### Load-Extension Characteristics of Worked Ropes




- Steelite 12, Superline
- Hypamix & Supermix
- Superline Polyester
- M-Steel Winchline
- Fybaline Xtra
- Flexiline
- Braidline Polyester & 12 Strand Polyester
- Superline Nylon
- Braidline Nylon & 12 Strand Nylon

The graph above compares the load-extension characteristics of worked ropes but does not include permanent extension.

### Tensile Strength

Strengths are determined on new ropes under laboratory conditions according to Bridons' QA25 quality procedures. Ropes can be supplied and tested to a number of international quality standards including EN 919, US Mil Specifications and Cordage Institute specifications.

### Weight

Rope mass is determined by weighing a rope sample that has been measured at a reference load.
For most ropes this is calculated as:
Reference Load (kg) = $D^2/8$
Where D = Rope diameter (mm)

## Care in use

### Storage

Ropes should be stored, where possible under deck or under a suitable cover. The area should be clean, dry and cool out of direct sunlight. Rope should be stored off the ground, to allow adequate ventilation, and away from metal walls or steam pipes. Never store rope on concrete or dirty floors, or drag over rough ground - dirt and grit picked up by the rope can work into the strands cutting the inside fibres. Keep away from chemicals of all types. In the case of long term storage used ropes should be hosed down with fresh water to reduce salt crystals that can affect the life and efficiency of the ropes.

### Handling

When a rope is supplied in a coil it should always be un-coiled from the inside so the first turn comes from the bottom in a counterclockwise direction. If a rope is supplied on a reel this must be allowed to freely rotate on a central pin or pipe so that the rope can be drawn off the top layer. Never take rope from a reel lying on its side.

Braided ropes can not be kinked or hockled, however, twist can be imparted into the ropes in service. Excessive twist can cause an imbalance between the right and left hand strands and should therefore be removed as soon as possible by counter-rotating the rope when it is relaxed. The best method for storing a braided rope is in a figure of eight fashion.

### Rope Safety

Never stand in line with a rope under tension. If a rope fails it can recoil with sufficient force to cause serious injury or even death. Ensure all end terminations are adequate to take shock loads. Use correct safety factors. Remember to de-rate rope strengths for incorrect end fitting and wear.

### Rope Inspection

In use, rope should be inspected regularly for evidence of chemical attack (discolouration other than operational soiling), kinking (hockles), surface abrasion (chafe) including major yarn or strand cuts and both external and internal strand heat fusion indicated by glazed areas or heavy fluffing and powdering.

Braided ropes should be examined along their entire length for areas of stiffening or inconsistent diameter, where the rope has either flattened (necking) or has an unusual lump or surface hernia. This can indicate internal damage or core failure due to overloading or severe shock loads. If limited to one small section the damaged area may be cut out and re-spliced, otherwise the rope should be discarded.

Check splices and tucks for evidence of movement or misalignment. If in doubt cut off and re-splice.

### Rope installation and handling equipment

Full guidelines for rope installation and operation are available on request from Bridon.

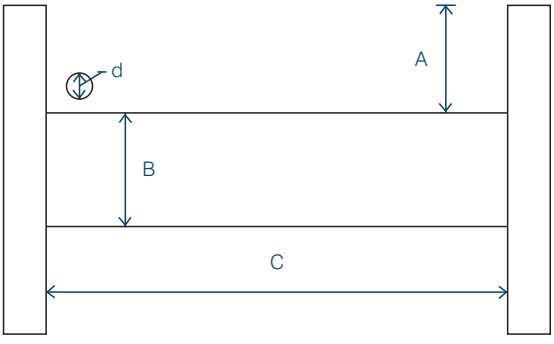
### Capstans and Winches

Ropes used on single drum or split drum winches should be installed under tension and the initial layers should be a close tight fit between the flanges to prevent burying into the lower layers. A minimum of eight wraps of rope should be maintained on the drum at all times.

Care should be exercised to avoid surging while the capstan or winch head is rotating. Excessive surging or slipage causes localised over heating which can melt or fuse synthetic fibres with resulting loss of strength.

Where possible the working or bearing position of a rope should be moved frequently to spread wear. The "furry" look of a well used synthetic fibre rope is not necessarily an indication of weakness. In fact the "furry" or hairy surface can serve to protect the rope.

### Winch/Reel Capacity




$$\text{Rope Length (metres)} = \frac{(A+B)xAxCx\pi x10^{6}}{d^{2}}$$

Where A, B, C are in metres and d is millimetres

### Pulleys and Sheaves

The ratio between rope diameter and sheave diameter is critical to the safe usage of a rope. As a general guide a ratio of 8:1 minimum should be used for 8-strand, 12-strand and Braidline (Double Braid) ropes and 12:1 minimum should be used for Superline ropes. The groove of the pulley should be "U" shaped and the groove width 10% greater than the rope diameter. The depth of the groove should be approximately half the rope diameter.

"V" shaped grooves should not be used as they tend to pinch and damage the rope by increasing friction and crushing the fibres. Sheave surfaces should be smooth and free from burs. Sheaves should be maintained regularly so that they are free to rotate at all times.

### Sharp Bends

Sharp bends around any piece of equipment should be avoided. Where a static rope passes around any surface with a deflection of 10 degrees or more then the diameter of the surface should be a minimum of three times the rope diameter. Any sharp bend in a rope under load will substsntially decrease its strength and may cause premature damage or failure.

### Eye Splices

The length of an eye in a rope should be a minimum of three times, and prefereably five times, the diameter of the item around which it is to be passed. This will ensure that the angle between the two legs of the eye will not cause a tearing action at the throat of the eye. For instance if the eye of a mooring line is passing around a 600mm diameter bollard then the eye should be a minimum of 1.8 metres and preferably 3 metres.

### Retiring Ropes

Apart from rejecting your rope when obviously damaged, it is wise to establish lifetimes of your rope within the parameters of the use for which it was selected. This will allow you to retire your rope on a regular scheduled basis, provided of course, that your conditions of usage remain unchanged. Remember to re-establish your discard criteria if changing rope type, rope material or rope breaking load. Safety of life and property is the prime consideration. If in doubt ask Bridon for recommendations.

## Quality & Service

### QA/Certification

Bridon operate a strict quality system accredited to BS EN ISO 9001 approval by Bureau Veritas Quality International. In addition, recognised classification bodies such as Lloyds, ABS, BV and DNV can also certify products and systems. For offshore applications, ropes can be manufactured and certified in accordance with OCIMF guidelines where applicable.

### Design Services

For specific jobs and applications our Research and Development department has extensive laboratory facilities and is available to design products tailored to individual requirements. Bridon can also offer advice and help in specifying ancillary equipment and developing operating procedures.

## After Sales & Rigging Services

Bridon International Services are able to offer a full technical and rigging after sales service utilising our own dedicated trained personnel and approved distributors/stockists giving world wide coverage.
Bridon supply a wide spectrum of services whether your requirements are onshore or offshore including the capability of offering emergency rigging, rope training and rigging courses, rope installation, visual inspection and destructive testing ensuring that our customers obtain maximum performance from our products.