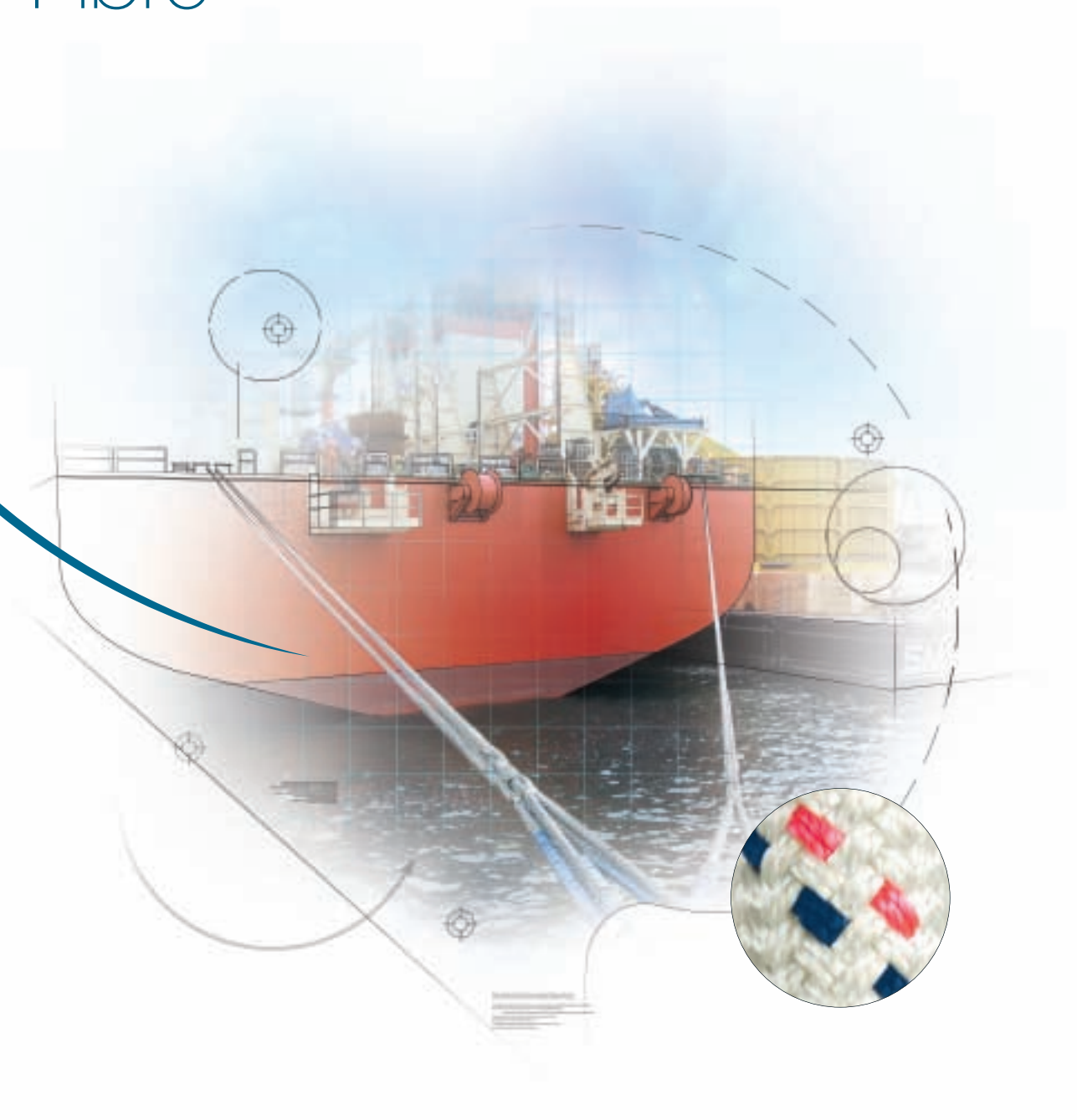


Specialist fibre rope solutions

# Fibre



**BRIDON**



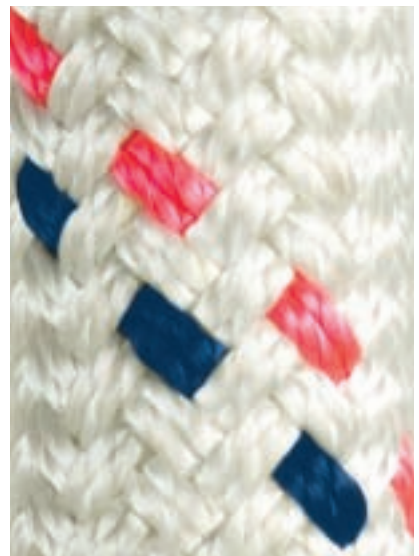
**Bridon - the world's leading specialist in the manufacture of wire and rope solutions for the most demanding applications, delivering reassurance through unrivalled experience.**

## 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.



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

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Product Selection.....	4-7
Products.....	8-23
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Quality and Service.....	26
After Sales & Rigging Service.....	26
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All statements, technical information and recommendations contained herein are believed to be reliable, but no guarantee is given as to their accuracy and/or completeness. The user must determine the suitability of the product for his own particular purpose, either alone or in combination with other products and shall assume all risk and liability in connection therewith.

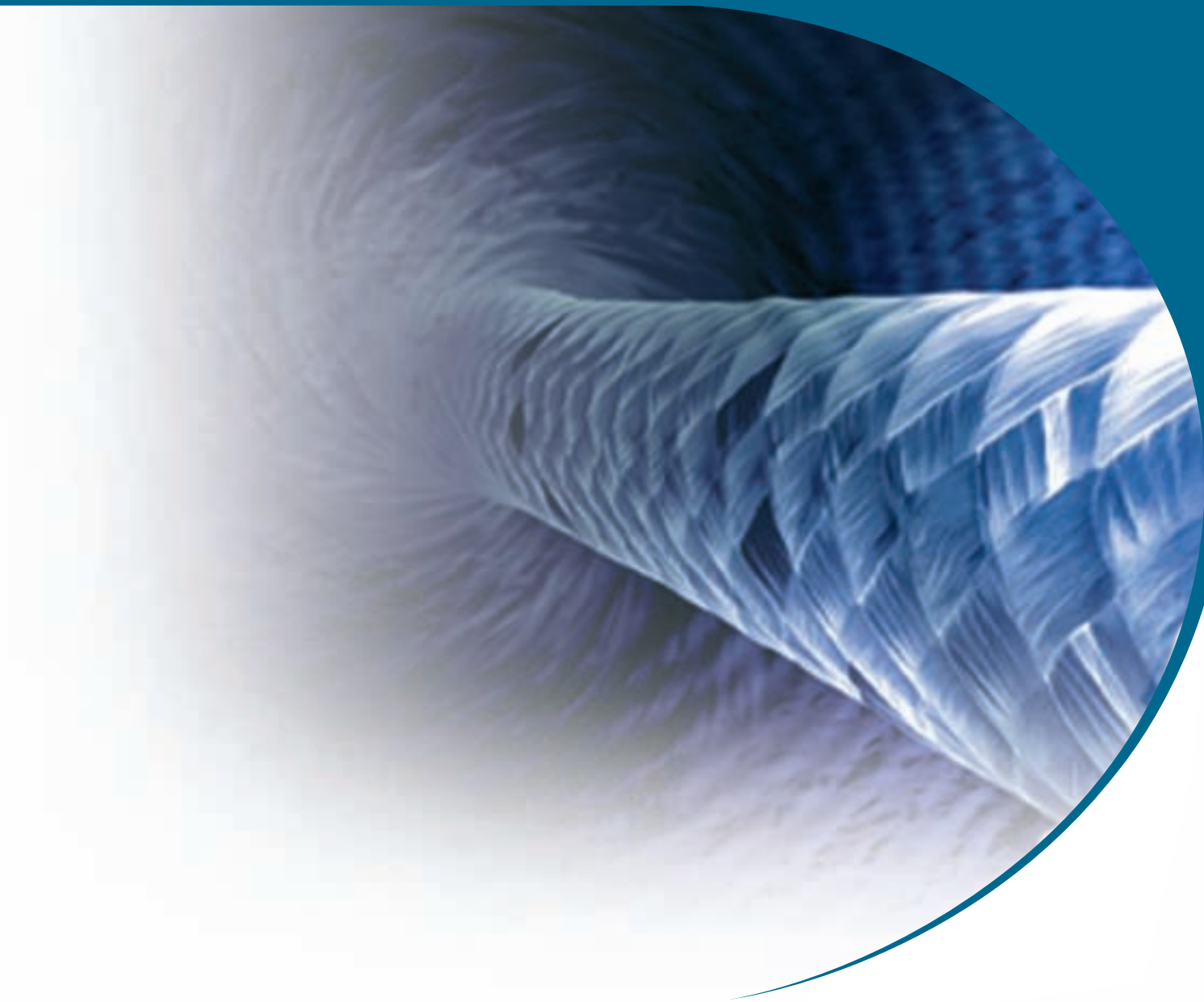
Whilst every attempt has been made to ensure accuracy in the content of the tables, the information contained in this catalogue does not form part of any contract.

## 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.

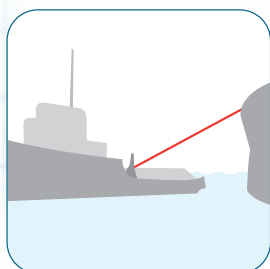
## ISO 14001

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.

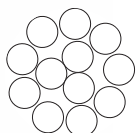


## Harbour, Escort & Ocean Towing

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 tomorrow's challenges.



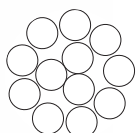
### 12 Strand Steelite / Steelite Xtra Roundline



- Easily spliced
- Torque balanced construction
- Compact circular construction

*(See page 9)*

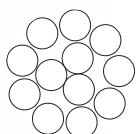
### 12 Strand Roundline Polyester



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

*(See page 14)*

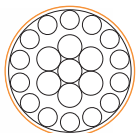
### 12 Strand Roundline Nylon



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

*(See page 15)*

**BRIDON**  
SUPERLINE



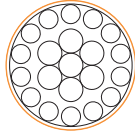
### Steelite / Steelite Xtra

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

*(See page 8)*

## BRIDON

SUPERLINE

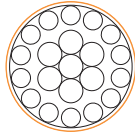


### Polyester

- High strength efficiency
  - Balanced construction
  - Loadbearing cores protected by a Braided jacket
- (See page 10)*

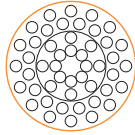
## BRIDON

SUPERLINE



### Nylon

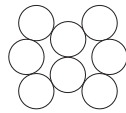
- High strength efficiency
  - Balanced construction
  - Loadbearing cores protected by a Braided jacket
- (See page 12)*



### Nylon

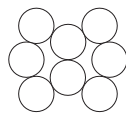
- Flexible and easy to handle
  - Balanced construction
  - 50% of mass in sheath and 50% in core
- (See page 13)*

### Hypamix



- In general accordance with INTERTANKO and OCIMF Guidelines
  - Excellent resistance to repeat loading
  - Good resistance to surface and internal abrasion
  - Easy to splice
- (See page 20)*

### Supermix

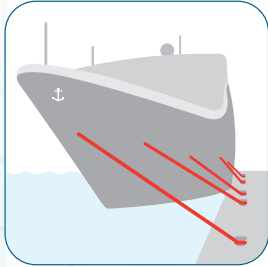


- Excellent grip characteristics
  - Fibre blend maximises resistance to fusion
  - Easy to splice
- (See page 21)*

## Mooring

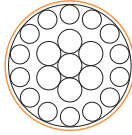
With the continuing increase in size and tonnage, the requirements of today's mooring lines have become even more exacting.

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

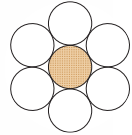


#### Steelite / Steelite Xtra

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

[\(See page 8\)](#)

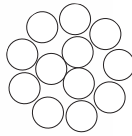
#### Flexiline 6-Strand



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

[\(See page 16\)](#)

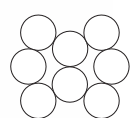
#### TQ12



- 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

[\(See page 18\)](#)

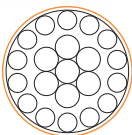
#### Fybaline Xtra



- 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 [\(See page 15\)](#)

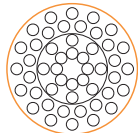
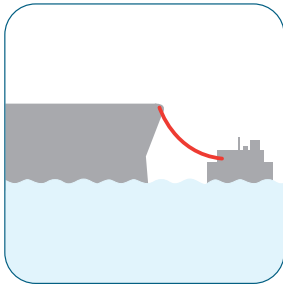
12 Strand Roundline Polyester [\(See page 14\)](#)

Hypamix [\(See page 20\)](#)

Supermix [\(See page 21\)](#)

## Off-take Mooring Systems

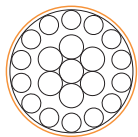
A comprehensive design package tailored to suit individual location requirements for single point moorings and tandem offloading systems. Packages include chafe chains, support buoys, shackles and fittings and are based on our high quality specialist fibre ropes. Bridon Superline Nylon and Viking Braidline 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.



### 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)*



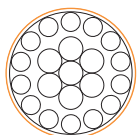
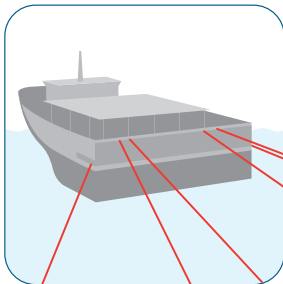
### Nylon OCIMF 2000

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

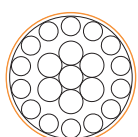
The challenge set by today's seismic market has led Bridon to develop and offer specific ropes tailored to meet these demands.



### Steelite

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

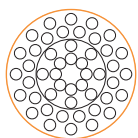
*(See page 8)*



### Polyester

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

*(See page 10)*

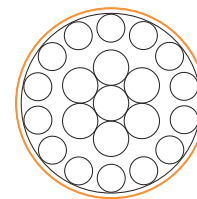


### Polyester

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

*(See page 11)*





## BRIDON

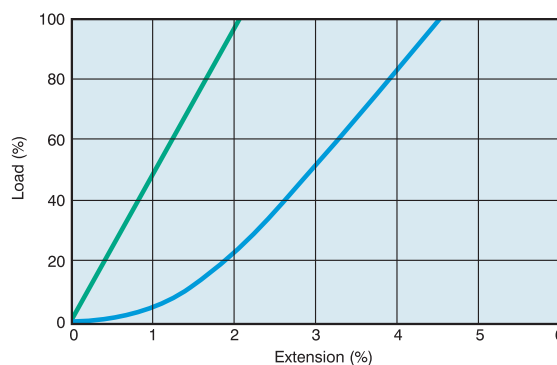
### Steelite / Steelite Xtra

#### SUPERLINE

Nominal diameter		Rope circumference		Nominal mass		Steelite			Steelite Xtra		
						Minimum breaking force (F min)			Minimum breaking force (F min)		
				In air							
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

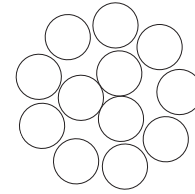
**Load v Extension**



● Worked Superline ● New Superline

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

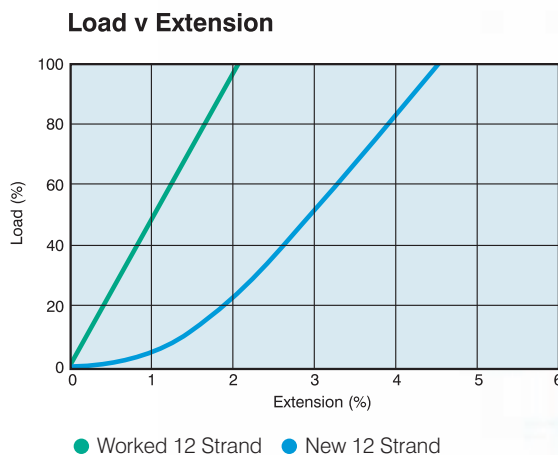
Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon. Dyneema® is a registered trademark of Royal DSM N.V.



## 12 Strand Steelite / Steelite Xtra Roundline

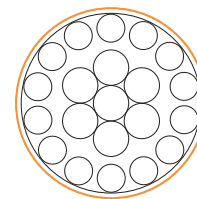
Nominal diameter		Rope circumference		Nominal mass		Steelite			Steelite Xtra		
						Minimum breaking force (F min)			Minimum breaking force (F min)		
				In air							
mm	ins	mm	ins	kg/m	lb/ft	kN	Tonnes	Tons (2000lb)	kN	Tonnes	Tons (2000lb)
12	1/2	38	1 1/2	0.08	0.06	137	14.0	15.4	162	16.5	18.2
14	9/16	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



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



## BRIDON

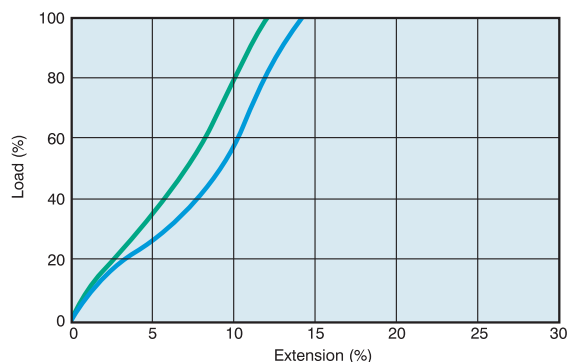
## Polyester

### SUPERLINE

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

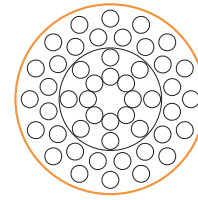
- Material:** High Tenacity Polyester multifilament fibre
- Construction:** Superline
- Colour:** Natural (white)
- Markers:** Blue
- Relative Density:** 1.38
- Melting Point:** 256°C
- Torque Properties:** Torque Balanced
- Shrinkage (Cold Water):** 0%
- Water uptake:** Low
- UV resistance:** Excellent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

**Load v Extension**



● Worked Superline ● New Superline

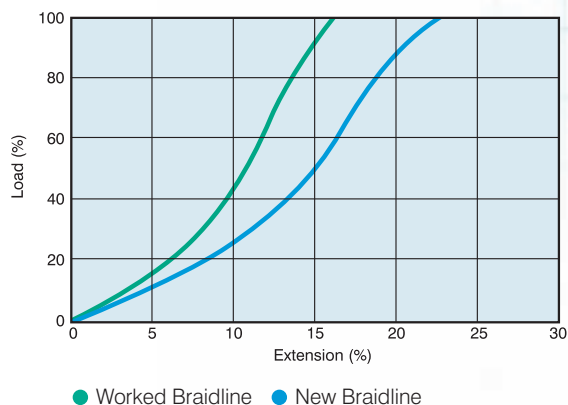
Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.



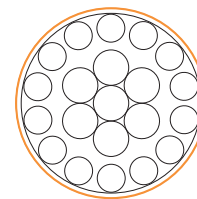
Rope diameter		Rope circumference		Nominal Mass				Minimum breaking force (F min)		
				In air		Submerged				
mm	ins	mm	ins	kg/m	lb/ft	kg/m	lb/ft	kN	Tonnes	Tons (2000lb)
16	5/8	50	2	0.19	0.28	0.05	0.07	61.9	6.31	6.95
18	3/4	57	2 1/4	0.23	0.33	0.06	0.08	77.5	7.90	8.71
21	7/8	66	2 5/8	0.39	0.58	0.10	0.15	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

## Nylon

### SUPERLINE

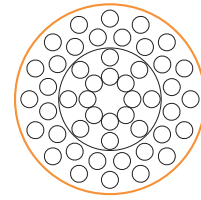
Rope diameter		Rope circumference		Nominal Mass				Minimum breaking force (F min)		
				In air		Submerged				
mm	ins	mm	ins	kg/m	lb/ft	kg/m	lb/ft	kN	Tonnes	Tons (2000lb)
16	5/8	50	2	0.19	0.13	0.02	0.01	71.6	7.30	8.04
18	3/4	57	2 1/4	0.22	0.15	0.02	0.01	82.4	8.40	9.26
20	13/16	63	2 1/2	0.34	0.23	0.03	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



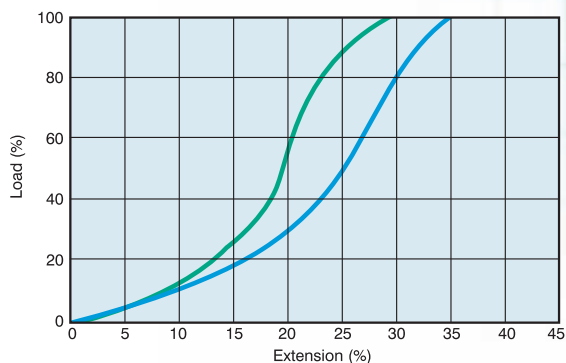
Figures shown are for guidance purposes only. For details specific to your requirement please contact Bridon.



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

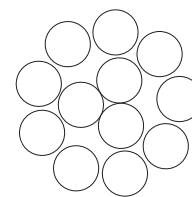
- Material:** High tenacity Nylon multifilament fibre
- Construction:** Braidline
- Colour:** Natural (white)
- Markers:** Blue
- Relative Density:** 1.14
- Melting Point:** 218°C
- Torque Properties:** Torque Balanced
- Shrinkage (Cold Water):** Up to 10%
- Water uptake:** Up to 10%
- UV resistance:**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

**Load v Extension**



● Worked Braidline ● New Braidline

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

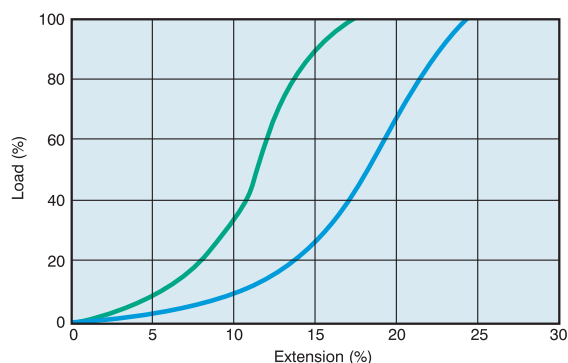


## 12 Strand Roundline Polyester

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

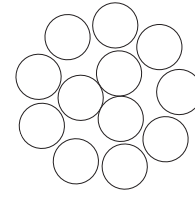
- Material:** High Tenacity Polyester multifilament fibre
- Construction:** 12 strand (12X1)
- Colour:** Natural (white)
- Markers:** Blue
- Relative Density:** 1.38
- Melting Point:** 256°C
- Torque Properties:** Torque Balanced
- Shrinkage (Cold Water):** 0%
- Water uptake:** Low
- UV resistance:**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

### Load v Extension



● Worked 12 Strand ● New 12 Strand

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

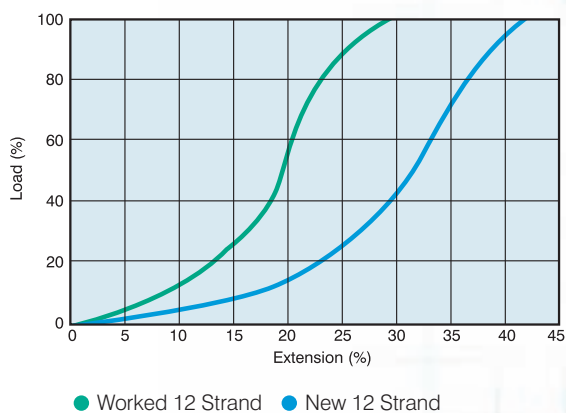


## 12 Strand Roundline Nylon

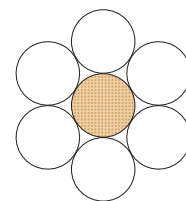
Rope diameter		Rope circumference		Nominal Mass				Minimum breaking force (F min)		
				In air		Submerged				
mm	ins	mm	ins	kg/m	lb/ft	kg/m	lb/ft	kN	Tonnes	Tons (2000lb)
24	1	75	3	0.39	0.3	0.04	0.03	135	13.8	15.2
28	1 1/8	88	3 1/2	0.50	0.3	0.05	0.03	178	18.1	19.9
32	1 5/16	101	4	0.67	0.5	0.06	0.04	230	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.

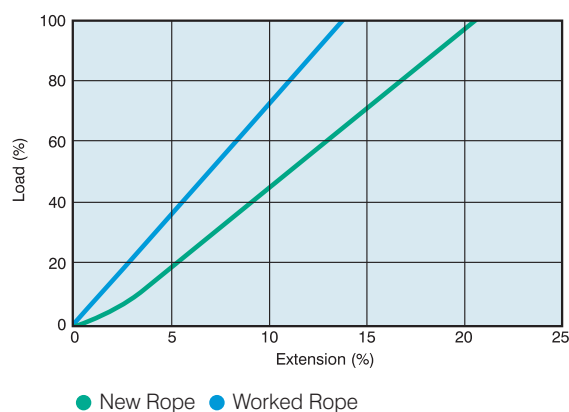


## Flexiline 6-Strand

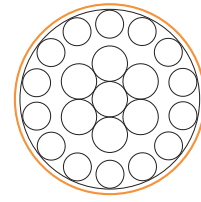
Rope diameter		Rope circumference		Nominal Mass				Minimum breaking force (F min)		
				In air		Submerged				
mm	ins	mm	ins	kg/m	lb/ft	kg/m	lb/ft	kN	Tonnes	Tons (2000lb)
40	1 5/8	126	5	1.10	1.64	0.19	0.29	304	31.0	34.2
44	1 3/4	138	5 1/2	1.37	2.04	0.24	0.36	412	42.0	46.3
48	2	151	6	1.63	2.43	0.29	0.43	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.

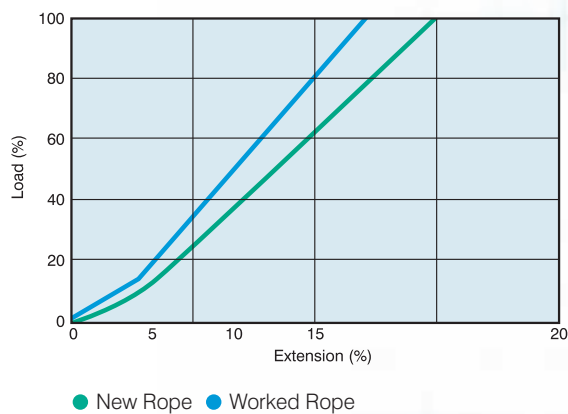


## M-Steel Winchline

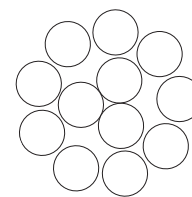
Rope diameter		Rope circumference		Nominal Mass		Minimum breaking force (F min)		
mm	ins	mm	ins	kg/m	lb/ft	kN	Tonnes	Tons (2000lb)
36	1 1/2	113	4 1/2	0.63	0.4	248	25.3	27.9
40	1 5/8	126	5	0.74	0.5	308	31.4	34.6
44	1 3/4	138	5 1/2	0.90	0.6	387	39.4	43.4
48	2	151	6	1.16	0.8	475	48.4	53.3
52	2 1/8	163	6 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

- 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.

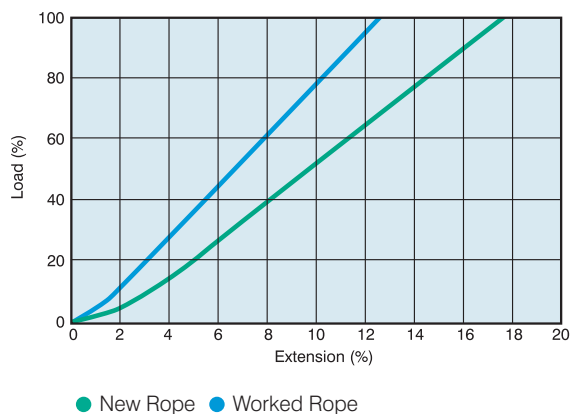


## TQ12

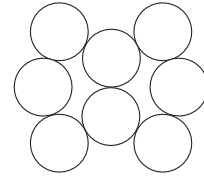
Rope diameter		Rope circumference		Nominal Mass		Minimum breaking force (F min)		
				In air				
mm	ins	mm	ins	kg/m	lb/ft	kN	Tonnes	Tons (2000lb)
36	1 1/2	113	4 1/2	0.59	0.4	278	28.3	31.2
40	1 5/8	126	5	0.72	0.5	319	32.5	35.8
44	1 3/4	138	5 1/2	0.88	0.6	378	38.5	42.4
48	2	151	6	1.04	0.7	442	45.1	49.7
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.

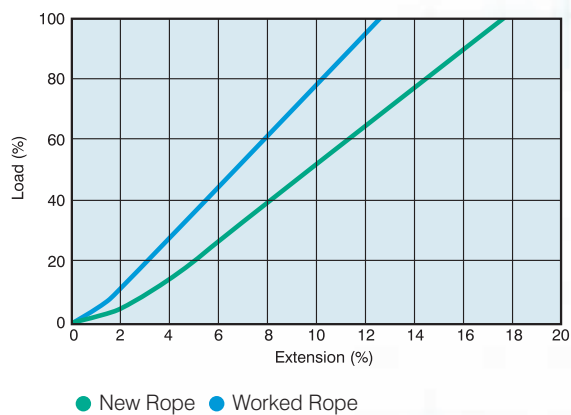


## Fybaline Xtra

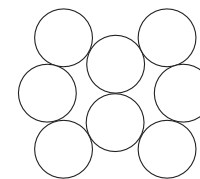
Rope diameter		Rope circumference		Nominal Mass		Minimum breaking force (F min)		
				In air				
mm	ins	mm	ins	kg/m	lb/ft	kN	Tonnes	Tons (2000lb)
36	1 1/2	113	4 1/2	0.62	0.4	259	26.4	29.1
40	1 5/8	126	5	0.77	0.5	320	32.6	35.9
44	1 3/4	138	5 1/2	0.93	0.6	380	38.7	42.6
48	2	151	6	1.10	0.7	444	45.3	49.9
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.

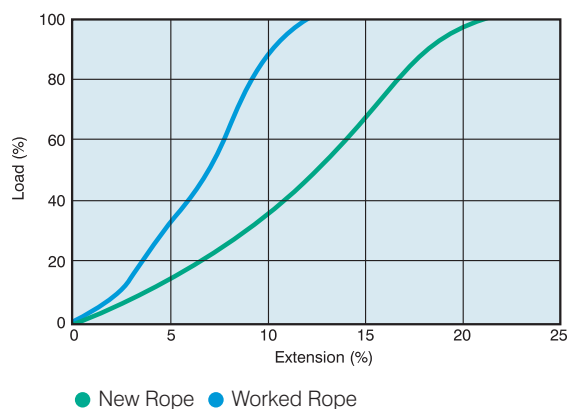


## Hypamix

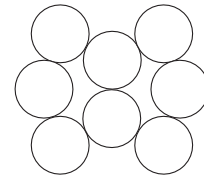
Rope diameter		Rope circumference		Nominal Mass				Minimum breaking force (F min)		
				In air		Submerged				
mm	ins	mm	ins	kg/m	lb/ft	kg/m	lb/ft	kN	Tonnes	Tons (2000lb)
40	1 5/8	126	5	0.98	0.7	0.06	0.04	417	42.5	46.8
44	1 3/4	138	5 1/2	1.19	0.8	0.11	0.08	496	50.6	55.8
48	2	151	6	1.41	0.9	0.14	0.09	564	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



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



## 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

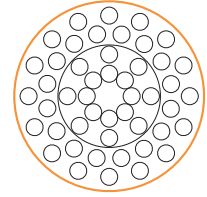
**Load v Extension**



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



## 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

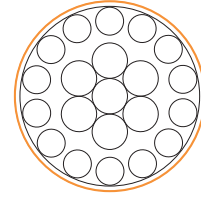
\*Diameters shown in the above table are nominal values and should be used for guidance purposes only. TCLL and extension data can be provided on request

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 6/8	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.

## 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 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)	(%)	(%)	(%)	(%)	(%)
<b>Acids</b>								
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
<b>Alkalis</b>								
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
<b>Solvents</b>								
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
<b>Oxidising Agent</b>								
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.

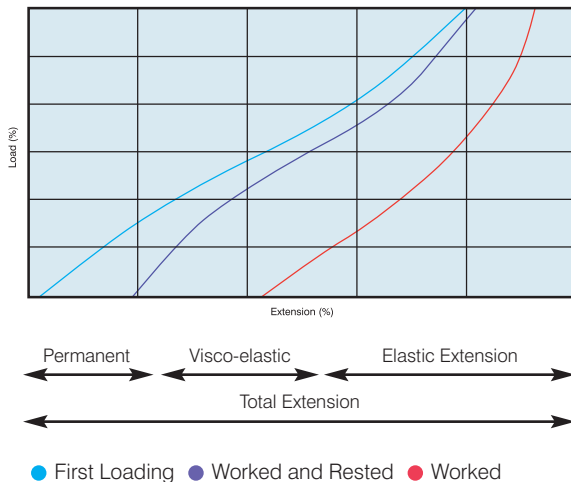
## Visco-elastic Extension

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.

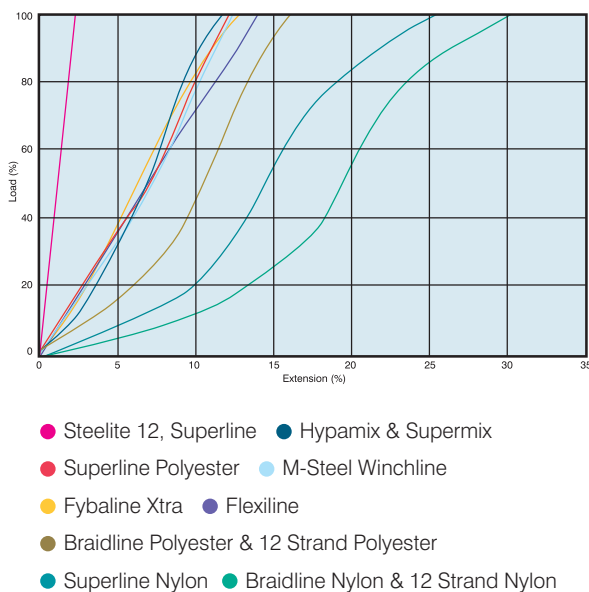
### Permanent Extension

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



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:

$$\text{Reference Load (kg)} = D^2/8$$

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.

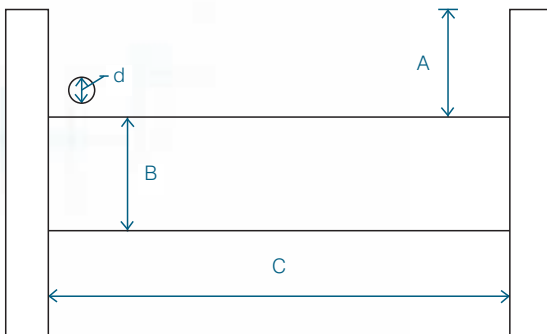
## Capstans and Winches

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 slippage 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



$$\text{Rope Length (metres)} = \frac{(A+B) \times A \times C \times \pi \times 10^3}{d^2}$$

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 substantially 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 preferably 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.

## BRIDON Sales Offices

### UNITED KINGDOM

#### Polegate

3A The Centre  
High Street  
Polegate  
East Sussex  
BN26 6AQ  
United Kingdom  
fibresales@bridon.com  
Phone: +44(0) 1323 487770  
Fax: +44(0) 1323 484666

#### Head Office Doncaster

Carr Hill, Doncaster  
South Yorkshire  
DN4 8DG  
United Kingdom  
sales@bridon.com  
Phone: +44(0) 1302 344010  
Fax: +44(0) 1302 360006

#### Aberdeen

aberdeensales@bridon.com  
Phone: +44(0) 1224 822288  
Fax: +44(0) 1224 708573

### UNITED STATES

#### Bridon American

C280 New Commerce Blvd.  
Wilkes Barre  
PA 18706  
USA  
bridon@bridonamerican.com  
Phone: +1 800 521 5555  
Fax: +1 800 233 8362

### GERMANY

#### Bridon International GmbH

Magdeburger Straße 14a  
D-45881  
Gelsenkirchen  
Germany  
info@bridon.de  
Phone: +49(0) 209 8001 0  
Fax: +49(0) 209 8001 275

### RUSSIA

#### Bridon International Moscow

Ivovaya Street 2/8  
Building 1, Office 215  
129329 Moscow  
Russia  
info@bridon.ru  
Phone: +7 (916) 329 6516

### INDONESIA

#### PT Bridon

Graha Inti Fauzi  
2nd Floor  
Jl. Buncit Raya No.22  
Jakarta 12510  
bridon@cbn.net.id  
Phone: +62 (021) 791 81919  
Fax: +62 (021) 799 2640

### AFRICA

#### Angola

Sonils Base  
Luanda  
Angola  
angolaops@bridon.com  
Phone: +1 713 767 9999  
Fax: +1 713 767 9420  
  
Kwanda Base  
Soyo  
Angola  
angolaops@bridon.com  
Phone: +1 713 767 9250  
Fax: +1 713 767 9257

### MIDDLE EAST

#### Bridon Middle East

PO Box 16931  
Dubai  
United Arab Emirates  
bridonme@emirates.net.ae  
Phone: +971 488 35 129  
Fax: +971 488 35 689

### SINGAPORE

#### Bridon Singapore (Pte) Ltd.

Loyang Offshore Supply Base  
(SOPS Way)  
Box No: 5064  
Loyang Crescent  
Singapore 508988  
bluestrand@bridon.com.sg  
Phone: +65 654 64 611  
Fax: +65 654 64 622

### CHINA

#### Bridon Hong Kong Ltd.

Unit B G/F Roxy Industrial Centre  
58-66 Tai Lin Pai Road  
Kwai Chung  
Northern Territory  
Hong Kong  
sales@bridon.com.hk  
Phone: +852 240 11 166  
Fax: +852 240 11 232

The Difference is  
**BRIDON**

# BRIDON

3A The Centre, High Street  
Polegate, East Sussex, BN26 6AQ United Kingdom

Phone: +44(0) 1323 487770

Fax: +44(0) 1323 484666

Email: [fibresales@bridon.com](mailto:fibresales@bridon.com)

[www.bridon.com](http://www.bridon.com)

