

Bridon®

Advanced Rope Solutions and Services for the offshore energy industry



**market
leading steel
wire and
synthetic
ropes, and
services for
offshore
energy.**

Bekaert is the world leader in advanced rope solutions for the offshore oil and gas industry.

Our offshore ropes are designed to withstand the most abusive and demanding oil and gas applications, leading to cost savings through less rope changes and reduced downtime.

We create value for you by selecting and producing the rope that best suits your needs and providing you with technical support and service afterwards.



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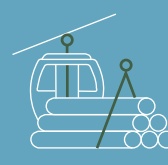
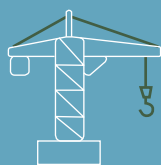
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A brief introduction

Bekaert's ambition is to be the leading partner for shaping the way we live and move, and to always do this in a way that is safe, smart, and sustainable. As a global market and technology leader in material science of steel wire transformation and coating technologies, Bekaert also applies its expertise beyond steel to create new solutions with innovative materials and services for markets including new mobility, low-carbon construction, and green energy. Founded in 1880, with its headquarters in Belgium, Bekaert (Euronext Brussels, BEKB) is a global company whose 27 000 employees worldwide together generated almost € 7 billion in combined revenue in 2022.

we are active in many markets.





Services

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Ropes 360 services



Our offerings

Ropes 360 is a rope & system solution provider offering services from the development stage extending to equipment discard. We assist in monitoring and improving safety and efficiency on systems. Our solutions cover rope maintenance projects, encompassing part sourcing, installation of ropes or parts, inspections, and guidance. We develop tailored solutions for our



Installation

We offer proven procedures and expert consultancy to ensure the installation of your rope is right first time, every time. Correct installation is vital for ropes to work to their full potential. We offer supervision services, on-site rope connections, and have spooling capabilities up to 450T weight capacity.



Training

Training is essential for understanding ropes and how to maintain them. Bekaert offers a variety of courses across many applications.



Inspection and Non-Destructive Examination

Our team of certified rope inspection specialists are dedicated to ensuring the safety and longevity of your ropes and systems. Using a combination of visual and non-destructive examination techniques, we gather detailed data on the condition of your equipment. This information is vital to making recommendations for maintenance and replacement, which helps to control safety and advance the lifetime of your ropes and systems.



Maintenance

Maintenance encompasses a wide range of tasks aimed at extending the product's lifespan. It is a vital element in ensuring safety and efficiency of your equipment, and includes monitoring, splicing, and tools to maintain your system including sheave gauges, verniers, lubricants, and relubrication devices.



Rope Record Management and Rope Certification

Maintaining the service history of your ropes is imperative to ensure safe and effective operation. With our cloud-based software system, we can help you manage all aspects of your rope service history, from inspections and testing to certifications and repairs. Our system is user-friendly and customizable, providing a complete service history for each rope that is easily accessible.



Lubrication

Lubrication is essential for the safe and effective operation of your ropes. At Ropes 360, we offer both advice and actual lubricants to ensure that your ropes are well-lubricated with the correct compatible lubricant.

Application Engineers

Our Applications team specializes in understanding how wire ropes integrate onto a wide range of end-user equipment, including cranes, Drill lines, winches, and more. By using a combination of investigative techniques, including on-site assessments, data analysis, and collaboration with end-users, our team ensures that wire ropes are properly integrated and optimized for your specific equipment. We have a deep understanding of wire rope design, construction, and performance, enabling us to recommend the most appropriate wire rope for your specific application. Our team's expertise improves performance, reliability, and safety, giving you the confidence to tackle even the most demanding applications.

Bekaert Ropes Technology Center

The Bekaert Ropes Technology Center is a world leading centre of excellence for rope technology development, testing, analysis, and verification. Bekaert Ropes Technology Center is equipped with unique equipment capable of testing steel/synthetic ropes and wires. With extensive forensic analysis laboratory facilities and specialists capable of conducting detailed forensic evaluation of new, retired or samples of in-service ropes, Bekaert Ropes Technology Center is an integral part of the Ropes 360 program.

Forensic Services

Bekaert Ropes Technology Center can perform detailed forensic examinations on wire ropes returned from the field to support customers with "slip and cut" activities or to provide a post service assessment.

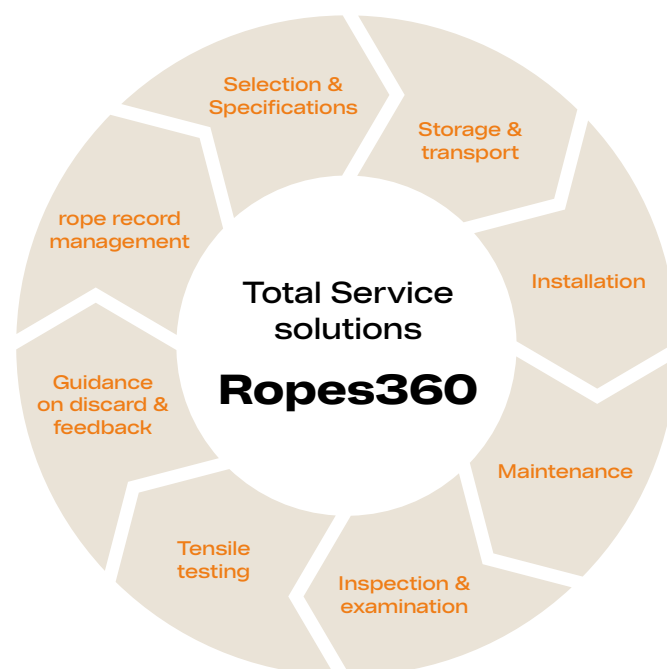
Inspection

Inspection is both a preventative measure and a problem identifier aiding in the reduction of issues and improving safety.

Visual inspections are performed by an expert inspecting the rope, sheaves, and drums using traditional tools. Experts measure system issues such as fleet angles or sockets and can sometimes reach areas that advanced measurements cannot. Our visual inspections can be complimented with additional aids, to help get the correct images in order to make a judgement on condition of the rope.

Remote inspection offers a quick expert opinion on rope issues, and drone inspection allows for the ability to inspect hard to reach or confined areas safely.

We also offer highly accurate advanced inspection methods to meet our customers' needs. Our advanced service portfolio is always growing with bespoke solutions. The main methods of advanced rope



Controlled rope disassembly provides qualitative and quantitative information on rope performance including evaluation of lubrication, corrosion, wear, and other degradation mechanisms. Results from the evaluation can be assessed against international (such as ISO4309) or customer standards to provide valuable information on the service life and performance of the rope.

Mechanical Testing

Bekaert Ropes Technology Center is equipped with mechanical testing equipment to determine test data in accordance with international standards. Destruction tests can be conducted to determine the actual breaking load of the rope; modulus tests and load diameter data can also be recorded. Mechanical testing of individual wires (post spin testing) determines the residual properties of the individual elements of the wire rope.

inspection we offer are Magnetic rope testing and VisionTek, These devices can be offered as one-time inspections, or as permanent continuous testing devices.

Magnetic rope testing (MRT) is a method of checking for defects and deterioration in steel wire ropes. Many ropes deteriorate from the inside, which means a traditional visual examination is not sufficient. MRT uses Magnetic Flux Leakage techniques to identify loss of metallic area or wire breaks as local faults in ropes in service.

VisionTek inspects rope parameters and the external surface of both synthetic fibre and steel wire ropes. The rope passes through a camera system where diameter and lay length are measured. Algorithms are used to detect defects such as lubrication amount, wire breaks, and heavy abrasion. VisionTek has the capability to remove the need for visual inspections with a highly accurate and quick solution, creating a safer and more efficient asset.



Technologies

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Polymer Technologies

PLASTIC IMPREGNATION

High performance plastic impregnation is designed to offer an internal cushioning layer to the inter-strand contact points especially between core to cover on multi-strand low rotation ropes improving bend fatigue and core service life.

NXG

Advanced next generation low friction polymer technology incorporating unique additives to further enhance fatigue life of plasticated ropes.

Bristar®

DYFORM BRISTAR® ropes construction reduces sheave wear and point to point loading, which combined with the superior dynamic structural stability provided by the Bristar® core, ensures exceptional performance.

High performance construction

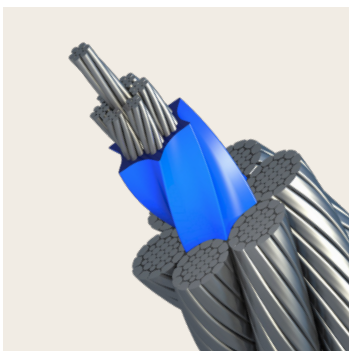
Improved strand positioning significantly increases fatigue life and wear resistance

Greater internal rope protection

Enhanced core life

Increased rope stability

Enhanced diameter stability under load improves drum spooling performance and reduces rope crushing



Coating

Bezinal®

To further maximize the service-life of your application, a range of advanced zinc aluminum coatings can be applied as well as traditional zinc.

Bekaert's Bezinal® 3000 coating: superior protection against corrosion, abrasion and thermal degradation. The Bezinal® coating range consists of two high-performance zinc aluminum coatings: Bezinal® and Bezinal® 3000.

Compared to zinc, Bezinal® 3000 provides a more sustainable corrosion and abrasion protection.

The smooth surface and excellent thermal resistance of both Bezinal® coatings allows a safe operation of ropes and cables when exposed to high temperature.

Galvanized®

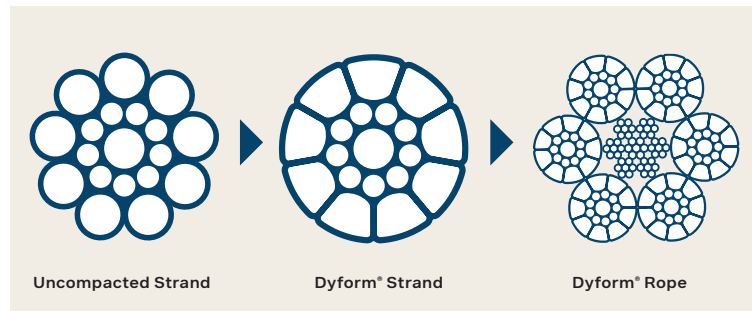
Galvanized coatings provide protection by serving as a sacrificial anode; even if the coating becomes damaged in service, the zinc will preferentially corrode, providing protection for the steel.

Rope Compaction

Dyform®

Bekaert manufactures ropes using a unique Dyforming process that compacts the strands as shown below. The smooth surface of the “Dyform” product provides improved rope to sheave contact leading to reduced wear on both rope and sheave.

Increased cross-sectional steel area increases breaking load and improves inter - wire contact ensures that the rope will operate with lower internal stress levels resulting in longer bending fatigue life and lower costs.



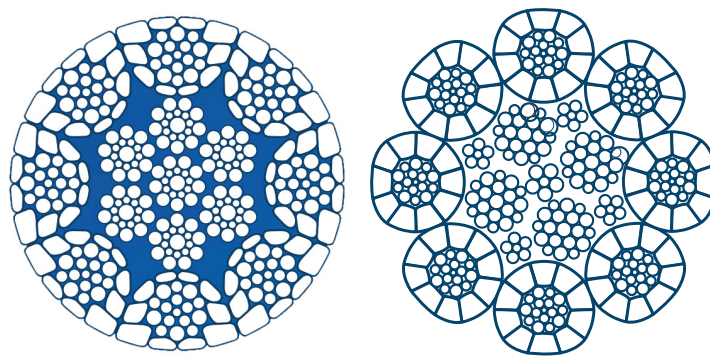
MAX TECHNOLOGY

Bekaert manufactures ropes using rotary hammer swaging and a unique roller compaction process that compacts the outer rope surface as shown.

In comparison to traditional Dyform® ropes the Max technology further improves rope to sheave contact and improved diameter stability leading to reduced wear on both rope and sheave.

Further increased cross-sectional steel area provides a robust construction with high breaking force and excellent crush resistance.

Improved inter-wire contact ensures optimum spooling performance offering maximum resistance to damage for exceptional service life in the most demanding multi-layer drum applications.



DYFORM 8 MAX

DYFORM DSC8 MAX

NXG

Bekaert specialist rope technology utilises Brilube Ultra® lubricant specifically formulated for flow resistance at high pressure, further supported by NXG engineered polymer core offering additional friction-reducing additives.

The NXG technology package achieves superior rope performance, including extended bend fatigue life and corrosion resistance, offering considerable operational savings.

Optionally available with EU Ecolabel Certification for EAL compliance with VGP 2013.

LUBRICATION (Blocking Compound)

Synthetic hybrid grease specifically engineered for ultra deep water applications with extreme pressure resistant additives, enhanced wash off resistance, & improved corrosion protection additives, which extend rope life.

POLYMER CORE (Blocking Compound)

NXG polymer core promotes the retention of lubricant inside the core whilst reducing seawater and abrasive particle ingress from outside. NXG low friction polymer technology extends fatigue life performance.

WIRE COATING (Zinc)



lubricants.

Brilube Fit®

Brilube offers the best in class traditional wire rope lubrication for high performance offshore applications.

Product benefits

- Traditional wire rope lubricants suitable for a wide range of offshore applications
- Corrosion protection
- Wear resistant

Brilube Ultra®

Advanced hybrid grease suitable for operation in ultra deep waters. Offers a 3 stage corrosion protection system with a wide temperature of operation for AHC and tropical climates. Unsurpassed water wash off performance for frequent subsea operation.

Ultra is a VGP Compliant Environmentally Acceptable Lubricant (EAL)

* Also offered with NXG polymer products

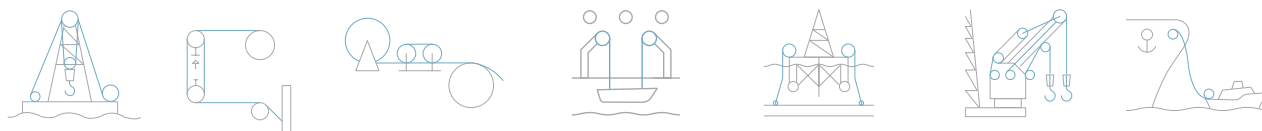
Product benefits

- Developed to perform in more challenging environments
- Enhanced rope lubricant, manufactured with a unique hybrid grease.
- A wide operating temperature range suitable for active heave compensation systems and warmer tropical climates.
- Along with a three stage corrosion protection system with a unique 'water wash off' performance.

offshore segments

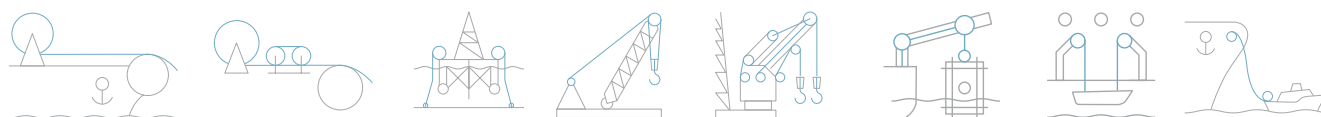
Offshore exploration

Bekaert is the world leader in advanced rope solutions for the offshore oil and gas exploration industry. We offer both superior steel wire and synthetic ropes and a wide range of drilling lines, marine riser tensioner lines (MRTs), offshore crane ropes, winch lines, anchor lines and life boat ropes. We create value for you by increasing the uptime of your rig fleet across the globe through maximizing the operating life of our ropes. We do so by producing the best performing ropes and providing you with technical support and service afterwards.



Offshore construction

Bekaert is the world leader in advanced rope solutions for the offshore oil and gas marine construction industry. We offer both superior steel wire and synthetic ropes and a wide range of abandon and recovery (A&R) lines, winch lines, offshore crane ropes, anchor lines, diving bell ropes and life boat ropes. We provide offshore vessels globally with the most reliable ropes to maximize productivity and minimize operational costs. We do so by selecting and producing the rope that best suits your needs and providing you with technical support and service afterwards.



Offshore production

Bekaert is the world leader in advanced rope solutions for the offshore oil and gas production industry. We offer both superior steel wire and synthetic ropes and a wide range of offshore crane ropes, winch lines, permanent mooring lines, and life boat ropes. We provide production platforms globally with the best performing ropes to maximize productivity and minimize operational costs. We do so by selecting and producing the rope that best suits your needs and providing you with technical support and service afterwards.



Offshore Mooring

Bekaert is the world leader in advanced rope solutions for the offshore mooring industry. We offer both superior steel wire and synthetic ropes and a wide range of temporary mooring/anchoring lines, permanent mooring lines and single point mooring systems. We provide mooring lines with the best performing ropes to maximize productivity and minimize operational costs. We do so by selecting and producing the rope that best suits your needs and providing you with technical support and service afterwards.

product selection guide

Application	Crane & Winch Ropes														Anchor Lines		Perma- nent Mooring Lines		Single Point Mooring	
	Hydra Plus NXG®	Hydra 7®	Dyform 34LR®/PI®	Dyform 34LR MAX® / PI®	Dyform 18® / PI®	18 Series	Dyform 50 DB®	35 LS®	Dyform 8 / PI / Bristar®	Dyform 8 MAX®	8 Series	Dyform 6 / PI / Bristar®	6 Series	Steelite 12-S®	Diamond Blue®	DB2K®	Spiral Strand	Moorline Polyester	Superline Nylon	Viking Braidline Nylon
Floating & Barge Cranes																				
Main Hoist	■	■	■	■		■		■	■			■								
Whip Hoist	■		■	■																
Boom Hoist									■	■		■								
Boom Pendant									■			■								
A&R Lines	■	■							■							■				
Winch Lines			■	■	■		■					■								
Drilling Lines											■	■	■							
Marine Riser Tensioner Lines									■			■								
Permanent Mooring Lines																	■	■		
Anchor Lines															■	■				
Single Point Mooring Lines																			■	■
Diving Bell Ropes			■	■																
Life Boat Ropes			■	■	■						■		■							
Lifting Sling											■	■	■	■						

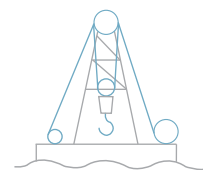
- * all ropes available in different lays
- * other grades available on request
- * custom rope can be made available upon request
- * every rope available in bright and galvanized



Drilling Lines

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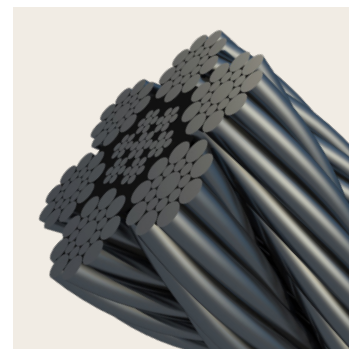
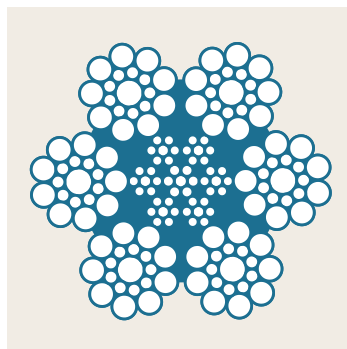
Drilling Lines



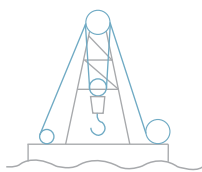
6X19 CLASS API 9A

Product benefits

- High quality six strand rope
- Excellent resistance to wear
- Good ton-mile performance



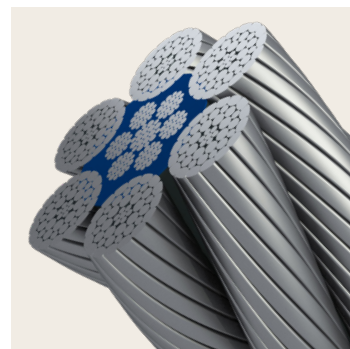
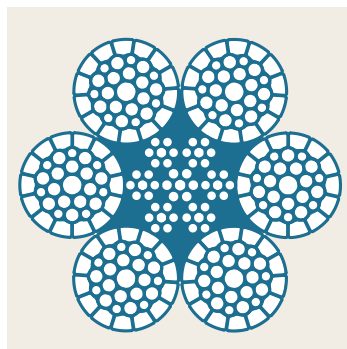
Diameter		Approximate Mass		Minimum Breaking Force						Axial stiffness @20% load		Metallic cross section	
in	mm	kg/m	lbs/ft	kN	Tonnes	Tons	kN	Tonnes	Tons	MN	MIbs	mm²	in²
7/8	22.2	2.10	1.41	354	36.1	39.8	390	39.8	43.9	23.0	5.2	221	0.343
1	25.4	2.75	1.84	460	46.9	51.7	506	51.6	56.9	30.1	6.8	290	0.449
1 1/8	28.6	3.48	2.34	579	59.0	65.0	637	64.9	71.5	38.2	8.6	367	0.569
1 1/4	31.8	4.30	2.89	711	72.5	79.9	782	79.7	87.9	47.2	10.6	454	0.704
1 3/8	34.9	5.18	3.48	854	87.1	96.0	944	96.2	106	56.9	12.8	547	0.848
1 1/2	38.1	6.18	4.15	1010	103	114	1109	113	125	67.8	15.2	652	1.010
1 5/8	41.3	7.26	4.88	1177	120	132	1295	132	146	79.6	17.9	766	1.187
1 3/4	44.5	8.43	5.66	1364	139	153	1501	153	169	92.5	20.8	889	1.378
1 7/8	47.6	9.64	6.48	1550	158	174	1707	174	192	106	23.8	1017	1.577
2	50.8	10.98	7.38	1766	180	198	1933	197	217	120	27.1	1159	1.796
2 1/8	54	12.41	8.34	1972	201	222	2158	220	243	136	30.6	1309	2.029
2 1/4	57.2	13.92	9.35	2197	224	247	2423	247	272	153	34.3	1469	2.277



Dyform Bristar 6®

Product benefits

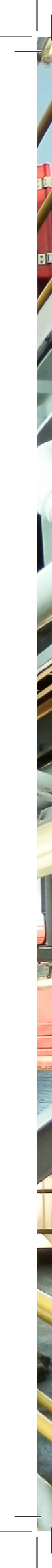
- Superior abrasion and wear resistance
- Crush resistant
- Reduced internal friction
- Increased bend fatigue resistance
- Improved ton-mile performance



Diameter		Approximate Mass		Minimum Breaking Force			Axial stiffness @20% load		Metallic cross section	
		in Air (M)								
in	mm	kg/m	lbs/ft	kN	Tonnes	Tons	MN	Mlbs	mm²	in²
1	25.4	2.84	1.91	514	52.4	57.8	34	8	334	0.518
1 1/8	28.6	3.60	2.42	652	66.5	73.3	44	10	424	0.657
1 1/4	31.8	4.45	2.99	824	84.0	92.6	54	12	524	0.812
1 3/8	34.9	5.36	3.60	1023	104.3	115.0	65	15	631	0.979
1 1/2	38.1	6.39	4.29	1213	123.6	136	78	17	752	1.17
1 5/8	41.3	7.50	5.04	1413	144	159	91	20	884	1.37
1 3/4	44.5	8.71	5.85	1668	170	187	106	24	1026	1.59
1 7/8	47.6	9.97	6.70	1805	184	203	121	27	1174	1.82
2	50.8	11.4	7.63	2197	224	247	138	31	1338	2.07
2 1/8	54.0	12.8	8.62	2453	250	276	156	35	1512	2.34
2 1/4	57.2	14.4	9.67	2766	282	311	175	39	1696	2.63
2 1/2	63.5	17.7	11.9	3208	327	360	215	48	2090	3.24
2 3/4	69.9	21.5	14.4	3757	383	422	261	59	2533	3.93

Note: Tonnes = 1000kg Tons = 2000lbs

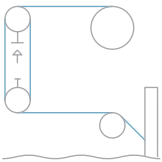




Marine riser tensioner lines

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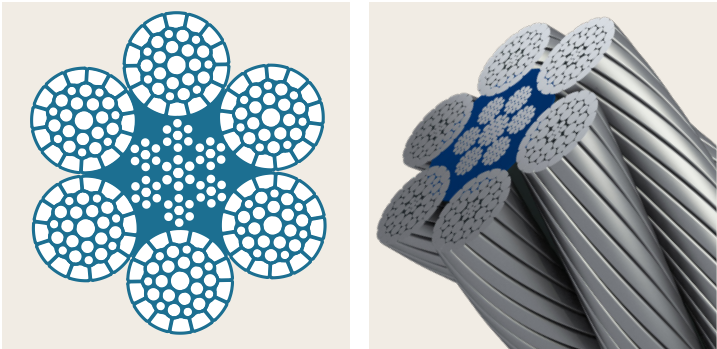
MRT Lines



Dyform Bristar 6®

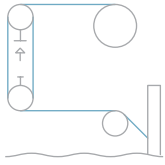
Product benefits

- Enhanced bend fatigue performance
- Extended rope life for reduced downtime costs
- Specialist lubrication options
- Corrosion protected core
- Optional NXG engineered polymer impregnated core which delivers enhanced bend fatigue resistance
- Reduction in sheave wear



Diameter		Approximate Mass		Minimum Breaking Force			Axial stiffness @20% load		Metallic cross section	
		in Air (M)								
in	mm	kg/m	lbs/ft	kN	Tonnes	Tons	MN	MIbs	mm²	in²
1 1/2	38.1	6.46	4.34	1079	110	121	78	17	752	1.17
1 3/4	44.5	8.82	5.92	1687	172	190	106	24	1026	1.59
2	50.8	11.5	7.72	2001	204	225	138	31	1338	2.07
2 1/8	54	13.0	8.72	2354	240	265	156	35	1512	2.34
2 1/4	57.2	14.6	9.79	2639	269	297	175	39	1696	2.63
2 1/2	63.5	18.0	12.06	3061	312	344	215	48	2090	3.24
2 3/4	69.9	21.8	14.62	3541	361	398	261	59	2533	3.93
2 7/8	73.0	23.7	15.94	3973	405	446	285	64	2762	4.28
3	76.2	25.8	17.37	4218	430	474	310	70	3010	4.67

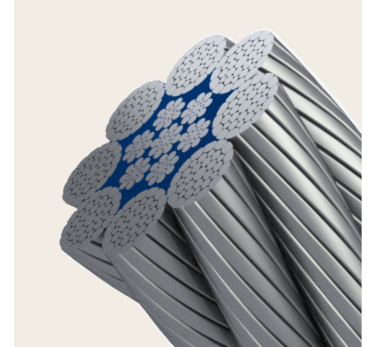
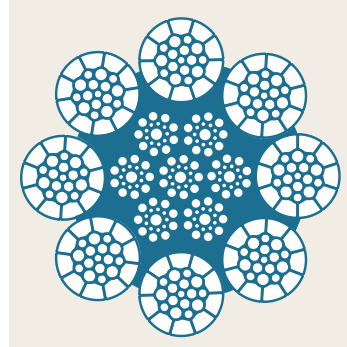
Note: Tonnes = 1000kg Tons = 2000lbs



Dyform Bristar 8®

Product benefits

- Maximum bend fatigue performance
- Extended rope life for reduced downtime costs
- Specialist lubrication options
- Corrosion protected core
- Optional NXG engineered polymer impregnated core which delivers enhanced bend fatigue resistance
- Greater reduction in sheave wear



Diameter		Approximate Mass		Minimum Breaking Force			Axial stiffness @20% load		Metallic cross section	
		in Air (M)								
in	mm	kg/m	lbs/ft	kN	Tonnes	Tons	MN	MIbs	mm²	in²
1 3/4	44.5	9.27	6.23	1650	168	185	103	23	1030	1.60
2	50.8	12.1	8.11	2150	219	242	134	30	1342	2.08
2 1/8	54	13.6	9.17	2430	248	273	152	34	1517	2.35
2 1/4	57.2	15.3	10.29	2730	278	307	170	38	1702	2.64
2 1/2	63.5	18.9	12.68	3370	344	379	210	47	2097	3.25
2 3/4	69.9	22.9	15.36	4080	416	458	254	57	2541	3.94
2 7/8	73.0	24.9	16.75	4450	454	500	277	62	2772	4.30
3	76.2	27.2	18.26	4845	494	544	302	68	3020	4.68

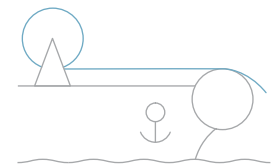
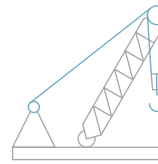
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Offshore Lifting

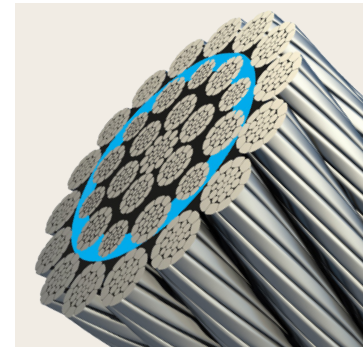
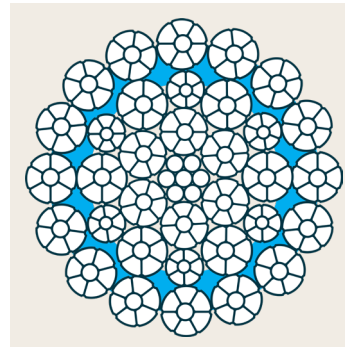
All tables in this brochure are for guidance purposes only with no guarantee or warranty (express or implied) as to its accuracy. The products described may be subject to change without notice, and should not be relied on without further advice from Bridon-Bekaert. The cross section image is for reference only. Actual cross sections vary due to diameter. Visit www.bridon-bekaert.com for the most up-to-date data.

Rotation Resistant Ropes



Hydra Plus® / NGX

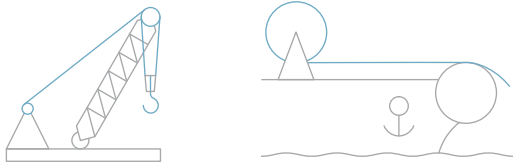
The Hydra is a range of high performance multi strand low rotational galvanized ropes for offshore oil and gas applications including offshore cranes, winches, and A&R lines.



Product benefits

- Dyform® construction for crush & wear resistance
- Higher fatigue performance

Diameter		Nominal Length Mass		Minimum Breaking Force					
				EIPS / 1960			EEIPS / 2160		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons	kN	Tonnes	Tons
50.8	2	12.9	8.64	2330	238	262	2450	250	275
52	-	13.5	9.06	2450	250	275	2560	261	288
54	-	14.5	9.77	2640	269	297	2760	281	310
56	-	15.6	10.50	2840	290	319	2970	303	334
60	-	17.9	12.06	3250	331	365.3	3410	348	383
62	-	19.2	12.87	3480	355	391	3640	371	409
64	-	20.4	13.72	3700	377	416	3880	396	436
66	-	21.7	14.59	3940	402	443	4120	420	463
68	-	23	15.49	4180	426	470	4380	446	492
70	-	24.4	16.41	4430	452	498	4640	473	521
72	-	25.8	17.36	4680	477	526	4910	501	552
74	-	27.2	18.34	4950	505	556	5180	528	582
76	-	28.7	19.34	5220	532	587	5470	558	615
78	-	30.3	20.38	5490	560	617	5760	587	647
80	-	31.9	21.43	5780	589	649	6060	618	681
82	-	32.3	21.68	5890	600	662	6170	629	693
84	-	33.9	22.75	6180	630	694	6480	661	728
86	-	35.5	23.85	6480	661	728	6790	692	763
88	-	37.2	24.97	6780	691	762	7110	725	799
90	-	38.9	26.12	7100	724	798	7430	757	835
92	-	40.6	27.29	7420	756	834	7770	792	873
96	-	44.2	29.74	8070	823	907	8450	861	949
98	-	46.1	30.97	8410	857	945	8810	898	990
102	-	50.4	33.88	9170	935	1030	9600	979	1079
106	-	54.5	36.59	9910	1010	1114	10370	1057	1165
108	-	56.5	37.99	10270	1047	1154	10760	1097	1209
110	-	58.6	39.41	10660	1087	1198	11160	1138	1254
116	-	65.2	43.82	11840	1207	1330	-	-	-
122	-	72.1	48.47	13100	1335	1472	-	-	-
124	-	74.5	50.07	13530	1379	1520	-	-	-
128	-	79.4	53.36	14410	1469	1619	-	-	-
130	-	81.9	55.04	14870	1516	1671	-	-	-
135	-	88.3	59.35	15290	1559	1718	-	-	-
138	-	92.3	62.02	15980	1629	1796	-	-	-
142	-	97.7	65.67	16910	1724	1900	-	-	-
146	-	103.3	69.42	17870	1822	2008	-	-	-
150	-	109.0	73.27	18850	1922	2118	-	-	-
152	-	112.0	75.24	19350	1972	2174	-	-	-

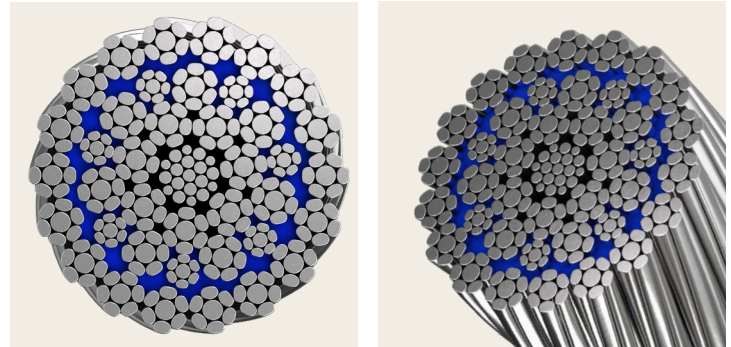


Hydra 7®

A robust, highly compacted, multi-strand low rotational rope with large 7 wire strand construction which meets OEM requirements.

Product benefits

- High strength
- Excellent spooling performance
- High strand compaction for superior crush & wear resistance



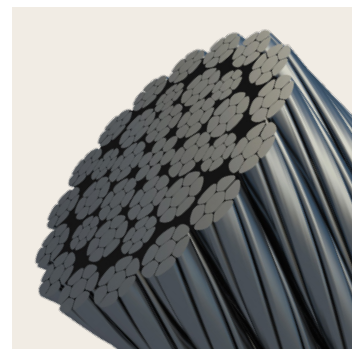
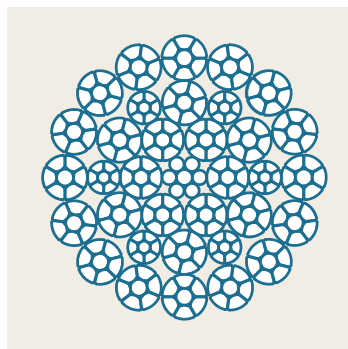
Diameter		Mass In Air		Minimum Breaking Force		
mm	in	kg/m	lb/ft	kN	Tonnes	Tons
50	-	12.2	8.23	2305	235	259
50.8	2	12.6	8.50	2374	242	266.8
52	-	13.2	8.90	2492	254	280
54	-	14.3	9.60	2678	273	300.9
56	-	15.4	10.32	2894	295	325
58	-	16.5	11.07	3090	315	347
60	-	17.6	11.85	3355	342	377
62	-	18.8	12.65	3541	361	398
64	-	20.1	13.48	3767	384	423
66	-	21.3	14.34	4012	409	451
66.675	-	21.8	14.63	4091	417	460
68	-	22.7	15.22	4248	433	477
70	2 3/4	24	16.13	4513	460	507
72	-	25.4	17.07	4768	486	536
73	-	26.1	17.54	4915	501	552
74	-	26.8	18.03	5042	514	567
76	3	28.3	19.01	5317	542	597
76.2	-	28.4	19.11	5346	545	601
77	-	29	19.52	5405	551	607
80	3 1/7	31.4	21.07	5817	593	654
82	-	32.9	22.14	6063	618	681
84	-	34.6	23.23	6278	640	705
86	-	36.2	24.35	6583	671	740
88	-	37.9	25.49	6808	694	765
90	3 1/2	39.7	26.66	7132	727	801
92	3 5/8	41.5	27.86	7465	761	839
94	-	43.3	29.09	7691	784	864
95	3 3/4	44.2	29.71	7799	795	876
96	-	45.1	30.34	7838	799	881
98	-	47	31.62	8231	839	925
100	-	49	32.92	8505	867	956
102	4	51	34.25	8839	901	993
104	-	53	35.61	9192	937	1033
105	-	54	36.29	9369	955	1053
106	-	55	36.99	9555	974	1074
108	-	57.1	38.40	9918	1011	1114
109	-	58.2	39.11	10104	1030	1135

Dyform 34LR®

The Dyform 34 LR® is a high performance compacted low rotational galvanized rope that combines varying multistrand rope designs to achieve excellent rotation resistance in offshore operations.

Product benefits

- Excellent rotation resistance
- Highly efficient due to its flexibility
- Suitable for single part and multi part reeving
- Suitable for single part reeving of an unguided load

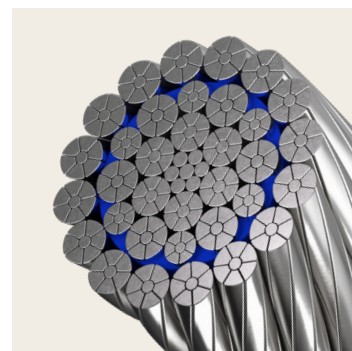
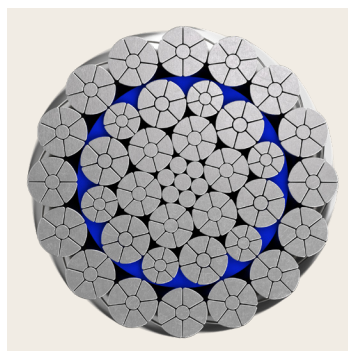


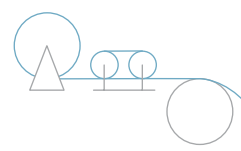
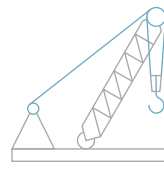
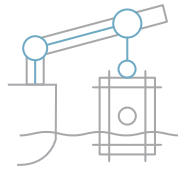
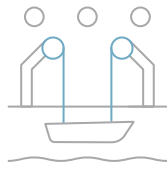
Dyform 34LR PI®

The Dyform 34 LR PI® is a high performance compacted low rotational galvanized rope that combines varying multistrand rope designs to achieve excellent rotation resistance in offshore operations. It incorporates a plastic layer (PI) between the inner and outer part of the rope.

Product benefits

- Stable rope construction
- Higher bending fatigue performance





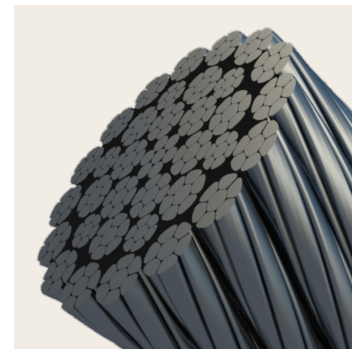
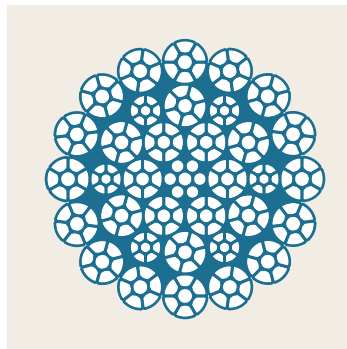
Diameter		Nominal Length Mass		Minimum Breaking Load					
				EIPS / 1960			EEIPS / 2160		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons	kN	Tonnes	Tons
-	3/8	0.45	0.305	82	8.36	9.2	86	8.77	9.7
10.0	-	0.50	0.336	90.8	9.25	10.2	95.3	9.71	10.7
11.0	-	0.61	0.410	109	11.1	12.3	115	11.7	12.9
-	7/16	0.61	0.410	111	11.3	12.5	117	11.9	13.2
12.0	-	0.72	0.484	130	13.2	14.6	137	13.9	15.4
-	1/2	0.81	0.543	146	14.8	16.4	153	15.6	17.2
13.0	-	0.85	0.571	153	15.6	17.2	161	16.4	18.1
14.0	-	0.98	0.659	179	18.2	20.1	191	19.5	21.5
-	9/16	1.02	0.687	185	18.8	20.8	201	20.5	22.6
15.0	-	1.13	0.759	204	20.8	22.9	214	21.8	24.1
-	5/8	1.28	0.860	232	23.6	26.1	251	25.6	28.2
16.0	-	1.28	0.860	232	23.6	26.1	251	25.6	28.2
17.0	-	1.45	0.974	262	26.7	29.4	275	28	30.9
18.0	-	1.62	1.09	298	30.4	33.5	319	32.5	35.9
19.0	-	1.81	1.22	331	33.7	37.2	356	36.3	40.0
-	3/4	1.81	1.22	331	33.7	37.2	356	36.3	40.0
20.0	-	2.00	1.34	370	37.7	41.6	397	40.5	44.6
21.0	-	2.21	1.49	400	40.7	45.0	420	42.8	47.2
22.0	-	2.42	1.63	442	45.1	49.7	482	49.1	54.2
-	7/8	2.42	1.63	448	45.7	50.4	487	49.6	54.7
23.0	-	2.65	1.78	480	48.9	54.0	504	51.3	56.7
24.0	-	2.88	1.94	528	53.8	59.3	569	58.0	64.0
25.0	-	3.13	2.10	568	57.9	63.8	595	60.6	66.9
-	1	3.23	2.17	586	59.7	65.9	623	63.5	70.0
26.0	-	3.38	2.27	618	63.0	69.5	660	67.3	74.2
27.0	-	3.65	2.45	662	67.5	74.4	694	70.7	78.0
28.0	-	3.92	2.63	712	72.6	80.0	758	77.3	85.2
-	1 1/8	4.09	2.75	743	75.7	83.5	779	79.4	87.6
29.0	-	4.21	2.83	764	77.9	85.9	801	81.6	90.0
30.0	-	4.50	3.02	823	83.9	92.5	857	87.3	96.3
-	1 1/4	5.12	3.44	919	93.7	103.3	1008	102.8	113.3
32.0	-	5.12	3.44	919	93.7	103.3	1008	102.8	113.3
34.0	-	5.87	3.94	1050	107	118.0	1151	117.3	129.4
-	1 3/8	6.18	4.15	1100	112	123.6	1214	123.8	136.5
35.0	-	6.22	4.18	1110	113	124.8	1214	123.8	136.5
36.0	-	6.58	4.42	1170	119	131.5	1287	131.2	144.7
38.0	-	7.33	4.93	1310	133	147.2	1444	147.2	162.3
-	1 1/2	7.36	4.95	1310	133	147.2	1444	147.2	162.3
40.0	-	8.12	5.46	1450	147	163.0	1590	162.1	178.7
-	1 5/8	8.66	5.82	1550	158	174.2	1695	172.8	190.5
42.0	-	8.95	6.01	1600	163	179.8	1758	179.2	197.6
44.0	-	9.83	6.61	1750	178	196.7	1925	196.2	216.4
46.0	-	10.7	7.19	1920	195	215.8	-	-	-
-	1 7/8	11.5	7.73	2050	209	230.4	-	-	-
48.0	-	11.7	7.86	2090	213	234.9	-	-	-
50.0	-	12.7	8.53	2270	231	255.2	-	-	-
50.8	2	13.1	8.80	2340	238	263.0	-	-	-

Dyform 34LR MAX®

Dyform 34 LR MAX® is a high performance compacted low rotational rope that consists of varying multistrand rope designs which have undergone a final rope compacting process.

Product benefits

- Highest breaking strength
- Excellent rotation resistance
- Improved crush resistance
- Accurate diameter and tight diameter tolerance

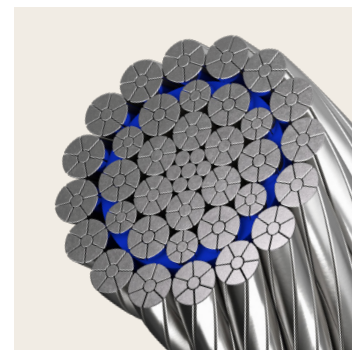
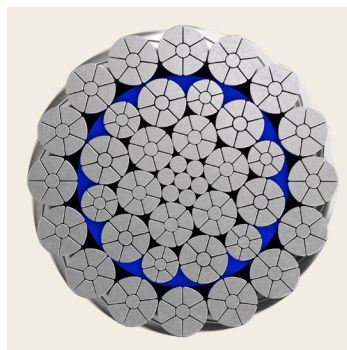


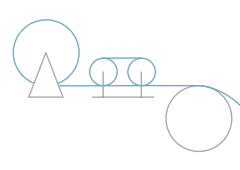
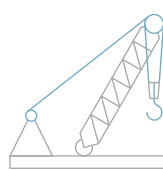
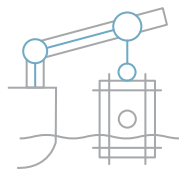
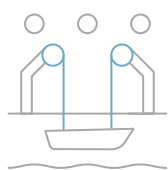
Dyform 34LR PI MAX®

Dyform 34 LR PI MAX® is a high performance compacted low rotational rope that consists of varying multistrand rope designs which have undergone a final rope compacting process. It incorporates a plastic layer (PI) between the inner and outer part of the rope.

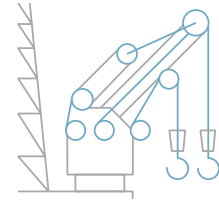
Product benefits

- Higher bending fatigue performance
- Maintenance of internal lubricant





Diameter		Nominal Length Mass		Minimum Breaking Load		
				EEIPS / 2160		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons
12.0	-	.740	.498	153	15.6	17.2
-	1/2	.842	.566	171	17.4	19.2
13.0	-	.887	.596	179	18.3	20.1
14.0	-	1.04	.702	208	21.2	23.4
-	9/16	1.09	.733	216	22.0	24.3
15.0	-	1.21	.814	239	24.4	26.9
-	5/8	1.37	.919	272	27.7	30.6
16.0	-	1.37	.919	272	27.7	30.6
17.0	-	1.58	1.06	307	31.3	34.5
18.0	-	1.78	1.20	344	35.1	38.7
19.0	-	1.99	1.34	385	39.3	43.3
-	3/4	1.99	1.34	385	39.3	43.3
20.0	-	2.21	1.49	424	43.2	47.7
22.0	-	2.69	1.81	524	53.4	58.9
-	7/8	2.69	1.81	524	53.4	58.9
24.0	-	3.20	2.15	611	62.3	68.7
-	1	3.36	2.26	684	69.7	76.9
26.0	-	3.56	2.39	705	71.9	79.3
28.0	-	4.11	2.76	818	83.0	91.9
-	1 1/8	4.55	3.06	848	86.5	95.3
30.0	-	5.02	3.37	935	95.3	105
-	1 1/4	5.57	3.74	1085	111	122
32.0	-	5.57	3.74	1085	111	122
34.0	-	6.32	4.25	1180	120	133
-	1 3/8	6.79	4.56	1240	126	139
36.0	-	7.11	4.78	1320	135	148
38.0	-	7.95	5.34	1480	151	166
-	1 1/2	8.07	5.42	1480	151	166
40.0	-	8.82	5.93	1630	166	183
-	1 5/8	9.46	6.36	1730	176	194
42.0	-	9.72	6.53	1780	182	200
44.0	-	10.6	7.12	1930	197	217
-	1 3/4	10.8	7.29	1930	197	217
46.0	-	11.6	7.77	2120	216	238
-	1 7/8	12.4	8.30	2300	235	259
48.0	-	12.6	8.44	2300	235	259
50.0	-	13.6	9.17	2500	255	281
-	2	14.0	9.43	2560	261	288
52.0	-	14.9	10.0	2720	277	306

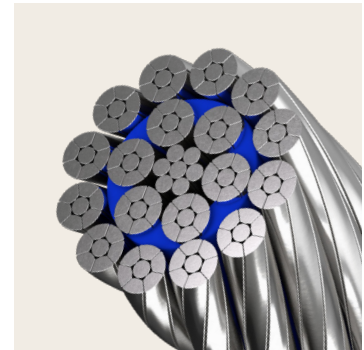
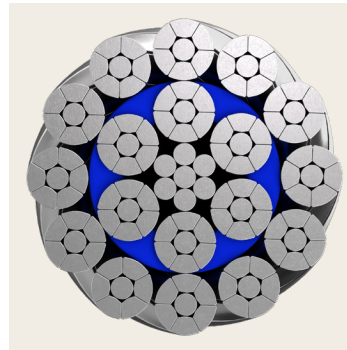


Dyform 18 PI®

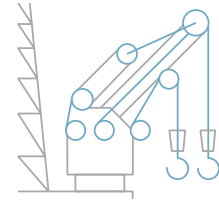
Dyform 18 PI® is a high performance compacted rotational resistant galvanized rope which incorporates a plastic layer between the inner and outer part of the rope.

Product benefits

- Good wear characteristics due to its smooth exterior profile
- Plastic layer improves bending fatigue performance
- Robust and stable rope construction
- Diameter stability, requirement of multi layered spooling



Diameter		Nominal Length Mass		Minimum Breaking Load		
				EIPS / 2160		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons
-	3/8	0.45	0.30	76.6	7.81	8.61
10.0	-	0.50	0.33	84.4	8.61	9.49
11.0	-	0.60	0.40	104	10.6	11.7
-	7/16	0.61	0.41	104	10.6	11.7
12.0	-	0.72	0.48	122	12.4	13.7
-	1/2	0.80	0.54	136	13.9	15.3
13.0	-	0.84	0.56	143	14.6	16.1
14.0	-	0.98	0.65	165	16.8	18.5
-	9/16	1.02	0.68	172	17.5	19.3
15.0	-	1.13	0.75	190	19.4	21.4
-	5/8	1.26	0.84	216	22.0	24.3
16.0	-	1.28	0.86	216	22.0	24.3
17.0	-	1.45	0.97	244	24.9	27.4
18.0	-	1.62	1.09	274	27.9	30.8
19.0	-	1.81	1.21	306	31.2	34.4
-	3/4	1.81	1.22	306	31.2	34.4
20.0	-	2.00	1.34	337	34.4	37.9
21.0	-	2.21	1.48	372	37.9	41.8
22.0	-	2.42	1.63	416	42.4	46.8
-	7/8	2.47	1.66	416	42.4	46.8
23.0	-	2.65	1.78	446	45.5	50.1
24.0	-	2.88	1.94	486	49.6	54.6
25.0	-	3.13	2.10	527	53.7	59.2
-	1	3.23	2.17	544	55.5	61.1
26.0	-	3.38	2.27	570	58.1	64.1
27.0	-	3.65	2.45	615	62.7	69.1
28.0	-	3.92	2.63	661	67.4	74.3
-	1 1/8	4.08	2.74	688	70.2	77.3
29.0	-	4.21	2.83	709	72.3	79.7
30.0	-	4.50	3.02	759	77.4	85.3
-	1 1/4	5.04	3.39	863	88.0	97.0
32.0	-	5.12	3.44	863	88.0	97.0
34.0	-	5.78	3.88	975	99.4	110
-	1 3/8	6.10	4.10	1030	105	116
36.0	-	6.48	4.35	1090	111	123
38.0	-	7.22	4.85	1210	123	136
-	1 1/2	7.26	4.88	1210	123	136

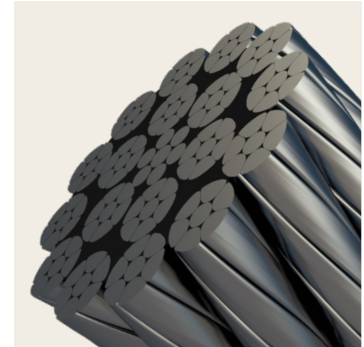
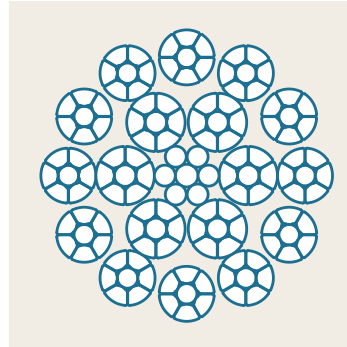


18 series

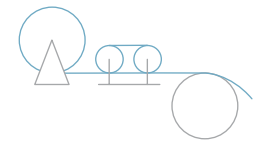
The 18 series is a compacted rotation resistant galvanized rope construction consisting of a inner part with an outer layer of strands spun in the opposite direction.

Product benefits

- Rotation resistant
- Good wear characteristics due to its smooth exterior profile
- High category breaking strength
- Recommended for limited lifting heights only

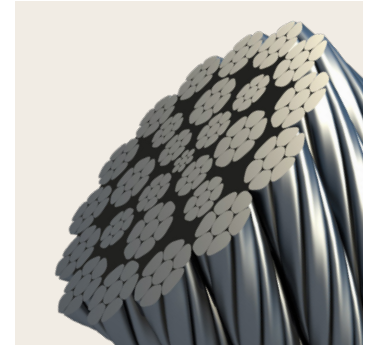
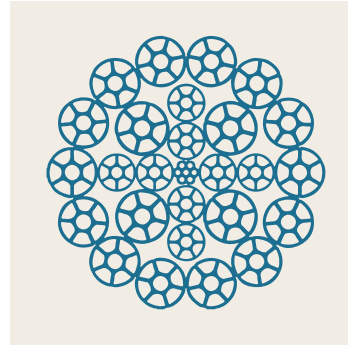


Diameter		Nominal Length Mass		Minimum Breaking Load		
				EIPS / 1960		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons
-	3/8	0.45	0.30	76.6	7.81	8.61
10.0	-	0.50	0.33	84.4	8.61	9.49
11.0	-	0.60	0.40	104	10.6	11.7
-	7/16	0.61	0.41	104	10.6	11.7
12.0	-	0.72	0.48	122	12.4	13.7
-	1/2	0.80	0.54	136	13.9	15.3
13.0	-	0.84	0.56	143	14.6	16.1
14.0	-	0.98	0.65	165	16.8	18.5
-	9/16	1.02	0.68	172	17.5	19.3
15.0	-	1.13	0.75	190	19.4	21.4
-	5/8	1.26	0.84	216	22.0	24.3
16.0	-	1.28	0.86	216	22.0	24.3
17.0	-	1.45	0.97	244	24.9	27.4
18.0	-	1.62	1.09	274	27.9	30.8
19.0	-	1.81	1.21	306	31.2	34.4
-	3/4	1.81	1.22	306	31.2	34.4
20.0	-	2.00	1.34	337	34.4	37.9
21.0	-	2.21	1.48	372	37.9	41.8
22.0	-	2.42	1.63	416	42.4	46.8
-	7/8	2.47	1.66	416	42.4	46.8
23.0	-	2.65	1.78	446	45.5	50.1
24.0	-	2.88	1.94	486	49.6	54.6
25.0	-	3.13	2.10	527	53.7	59.2
-	1	3.23	2.17	544	55.5	61.1
26.0	-	3.38	2.27	570	58.1	64.1
27.0	-	3.65	2.45	615	62.7	69.1
28.0	-	3.92	2.63	661	67.4	74.3
-	1 1/8	4.08	2.74	688	70.2	77.3
29.0	-	4.21	2.83	709	72.3	79.7
30.0	-	4.50	3.02	759	77.4	85.3
-	1 1/4	5.04	3.39	863	88.0	97.0
32.0	-	5.12	3.44	863	88.0	97.0
34.0	-	5.78	3.88	975	99.4	110
-	1 3/8	6.10	4.10	1030	105	116
36.0	-	6.48	4.35	1090	111	123
38.0	-	7.22	4.85	1210	123	136
-	1 1/2	7.26	4.88	1210	123	136



Dyform 50 DB® Series

50 DB® Series ropes are compacted rotation resistant galvanized constructions consisting of a inner part with an outer layer of strands spun in the opposite direction.



Product benefits

- Rotation resistant
- Good wear characteristics due to its smooth exterior profile
- High category breaking strength
- Recommended for limited lifting heights only

Diameter		Nominal Length Mass		Minimum Breaking Load		
				EIPS / 1960		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons
-	5/16	0.29	0.20	57.2	5.83	6.43
8.00	-	0.30	0.20	57.2	5.83	6.43
9.00	-	0.38	0.25	72.4	7.38	8.14
-	3/8	0.42	0.28	81.1	8.27	9.12
10.0	-	0.47	0.31	89.4	9.12	10.0
11.0	-	0.57	0.38	108	11.0	12.1
-	7/16	0.58	0.39	108	11.0	12.1
12.0	-	0.68	0.45	129	13.2	14.5
-	1/2	0.76	0.51	144	14.7	16.2
13.0	-	0.79	0.53	151	15.4	17.0
14.0	-	0.92	0.62	175	17.8	19.7
-	9/16	0.96	0.64	183	18.7	20.6
15.0	-	1.06	0.71	201	20.5	22.6
-	5/8	1.19	0.79	229	23.4	25.7
16.0	-	1.21	0.81	229	23.4	25.7
17.0	-	1.36	0.91	258	26.3	29.0
18.0	-	1.53	1.03	289	29.5	32.5
19.0	-	1.70	1.14	323	32.9	36.3
-	3/4	1.71	1.15	323	32.9	36.3
20.0	-	1.89	1.27	357	36.4	40.1
21.0	-	2.08	1.40	393	40.1	44.2
22.0	-	2.28	1.54	432	44.1	48.6
-	7/8	2.33	1.57	422	43.0	47.4
23.0	-	2.50	1.68	473	48.2	53.2
24.0	-	2.72	1.83	515	52.5	57.9
25.0	-	2.95	1.98	559	57.0	62.8
-	1	3.05	2.05	576	58.7	64.7
26.0	-	3.19	2.14	604	61.6	67.9





Single Layer Dyform Ropes

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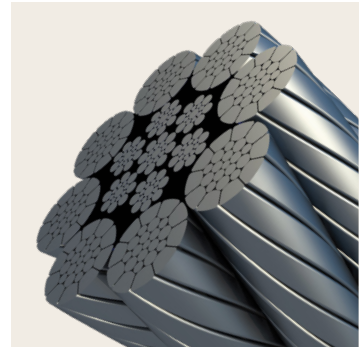
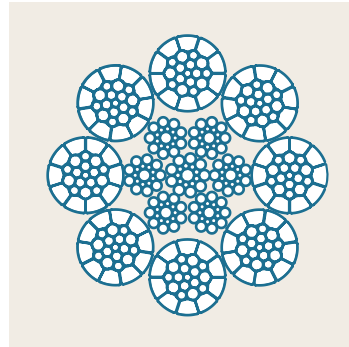
Single Layer Dyform Ropes

Dyform 8®

Dyform 8® is a high performance compacted single layer constructed galvanized rope with 8 outer strands.

Product benefits

- Good bending fatigue performance
- Very flexible rope construction
- Smooth profile created by the number of outer strands

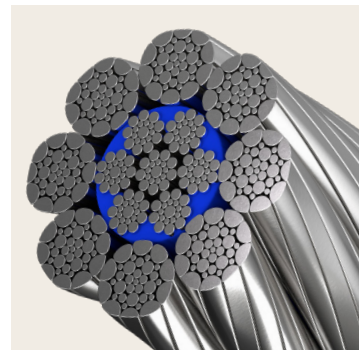
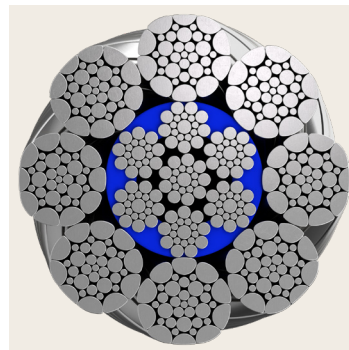


Dyform 8 PI®

Dyform 8 PI® is a high performance compacted single layer constructed galvanized rope which incorporates a plastic layer below the 8 outer strands.

Product benefits

- Improved bending fatigue performance
- Stable rope construction
- Diameter stability, requirement of multi-layered spooling

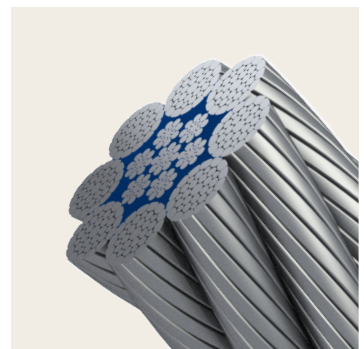
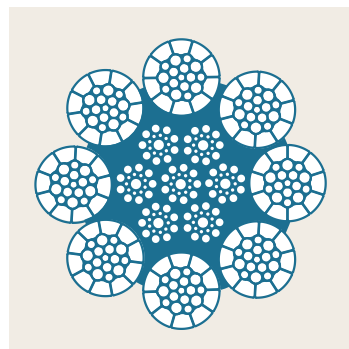


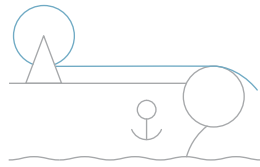
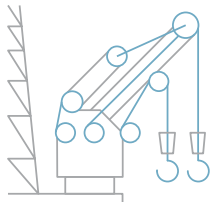
Dyform Bristar 8®

Dyform Bristar 8® is a high performance compacted single layer constructed galvanized rope which incorporates an engineered extruded plastic profile between the 8 outer strands and the rope core.

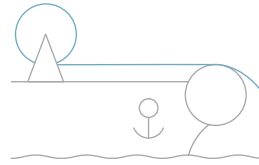
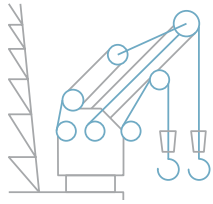
Product benefits

- Outstanding bending fatigue performance
- Very stable rope construction
- Improved support of outer strands in service

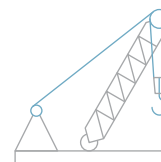




Diameter		Nominal Length Mass		Minimum Breaking Force					
				EIPS / 1960			EEIPS / 2160		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons	kN	Tonnes	Tons
-	3/8	0.42	0.28	86.2	8.79	9.69	90.1	9.19	10.1
10.0	-	0.47	0.31	89.2	9.10	10.00	93.2	9.50	10.5
11.0	-	0.57	0.38	110	11.2	12.4	115	11.7	12.9
-	7/16	0.58	0.39	110	11.2	12.4	115	11.7	12.9
12.0	-	0.67	0.45	128	13.1	14.4	134	13.7	15.1
-	1/2	0.76	0.51	144	14.7	16.2	150	15.3	16.9
13.0	-	0.79	0.53	150	15.3	16.9	157	16.0	17.6
14.0	-	0.92	0.62	174	17.7	19.6	182	18.6	20.5
-	9/16	0.96	0.64	181	18.5	20.3	189	19.3	21.2
15.0	-	1.06	0.71	198	20.2	22.3	207	21.1	23.3
-	5/8	1.19	0.79	226	23.0	25.4	236	24.1	26.5
16.0	-	1.21	0.81	226	23.0	25.4	236	24.1	26.5
17.0	-	1.36	0.91	255	26.0	28.7	267	27.2	30
18.0	-	1.53	1.03	286	29.2	32.1	299	30.5	33.6
19.0	-	1.70	1.14	318	32.4	35.7	333	34	37.4
-	3/4	1.71	1.15	318	32.4	35.7	333	34	37.4
20.0	-	1.88	1.27	353	36.0	39.7	369	37.6	41.5
22.0	-	2.28	1.53	427	43.5	48.0	446	45.5	50.1
-	7/8	2.33	1.56	427	43.5	48.0	446	45.5	50.1
24.0	-	2.71	1.82	508	51.8	57.1	531	54.1	59.7
-	1	3.04	2.04	569	58.0	64.0	595	60.7	66.9
26.0	-	3.18	2.14	596	60.8	67.0	623	63.5	70
28.0	-	3.69	2.48	691	70.5	77.7	723	73.7	81.3
-	1 1/8	3.85	2.58	720	73.4	80.9	753	76.8	84.6
30.0	-	4.24	2.85	794	81.0	89.2	830	84.6	93.3
-	1 1/4	4.75	3.19	903	92.1	102	944	96.3	106
32.0	-	4.82	3.24	903	92.1	102	944	96.3	106
34.0	-	5.44	3.66	1020	104	115	1070	109	120
-	1 3/8	5.75	3.86	1080	110	121	1130	115	127
36.0	-	6.10	4.10		116	128	1200	122	135
38.0	-	6.80	4.57	1270	130	143	1330	136	149
-	1 1/2	6.84	4.59	1270	130	143	1330	136	149
40.0	-	7.54	5.06	1410	144	158	1480	151	166
-	1 5/8	8.02	5.39	1500	153	169	1570	160	176
42.0	-	8.31	5.58	1560	159	175	1630	166	183
44.0	-	9.12	6.13	1710	174	192	1790	183	201
-	1 3/4	9.31	6.25	1710	174	192	1790	183	201
46.0	-	9.97	6.70	1870	191	210	1950	199	219
-	1 7/8	10.7	7.18	2030	207	228	2130	217	239
48.0	-	10.9	7.29	2030	207	228	2130	217	239

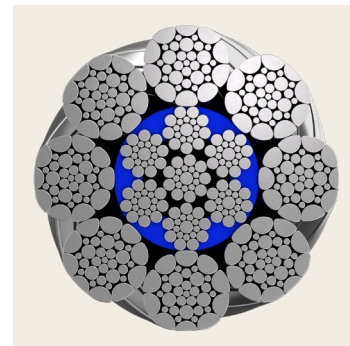
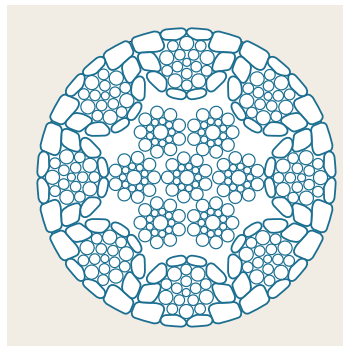


Diameter		Nominal Length		Minimum Breaking Force		
				EIPS / 1960		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons
50	2	11.1	7.45	2089.9	213	235
52	-	12.0	8.06	2260.4	230	254
54	-	12.9	8.69	2437.6	248	274
56	-	13.9	9.35	2621.5	267	295
57.2	-	14.5	9.75	2735.1	279	307
58	-	14.9	10.03	2812.1	287	316
60	-	16.0	10.73	3009.4	307	338
62	-	17.1	11.46	3213.4	328	361
63.5	2 1/2	17.9	12.02	3370.8	344	379
64	-	18.2	12.21	3424.1	349	385
66	-	19.3	12.99	3641.4	371	409
68	-	20.5	13.78	3865.4	394	434
69.9	-	21.7	14.57	4084.5	416	459
70	2 3/4	21.7	14.61	4096.2	418	460
72	-	23.0	15.45	4333.6	442	487
73	-	23.6	15.89	4454.8	454	501
74	-	24.3	16.32	4577.7	467	514
76	3	25.6	17.22	4828.5	492	
76.2	-	25.8	17.31	4853.9	495	545
78	-	27.0	18.14	5085.9	518	571
80	-	28.4	19.08	5350.1	545	601
82	-	29.8	20.05	5620.9	573	632
84	-	31.3	21.04	5898.5	601	663
86	-	32.8	22.05	6182.7	630	695
88	-	34.4	23.09	6473.6	660	727
90	-	35.9	24.15	6771.2	690	761
92	-	37.6	25.23	7075.5	721	795
94	-	39.2	26.34	7386.5	753	830
96	-	40.9	27.47	7704.1	785	866
98	-	42.6	28.63	8028.5	818	902
100	-	44.4	29.81	8359.5	852	939
102	-	46.2	31.02	8697.2	887	977
104	-	48.0	32.24	9041.6	922	1016
106	-	49.8	33.50	9392.7	957	1055
108	4 1/4	51.7	34.77	9750.5	994	1096
110	-	53.7	36.07	10115.0	1031	1137
112	-	55.7	37.40	10486.2	1069	1178
114	-	57.7	38.74	10864.0	1107	1221
116	-	59.7	40.11	11248.6	1147	1264
118	-	61.8	41.51	11639.8	1187	1308
120	-	63.9	42.93	12037.7	1227	1353



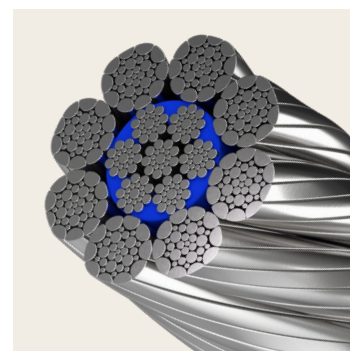
Dyform 8 MAX® / MAX PI®

Dyform 8 Max® is a high performance compacted single layer constructed galvanized rope with 8 outer strands which has undergone a final rope compaction process and performs excellent in multilayer drum applications. Optionally, it incorporates a plastic layer (PI) between the inner and outer part of the rope.



Product benefits

- Very high breaking strength
- Good crush resistance
- Accurate rope diameter and tight tolerance
- High category breaking strength
- Recommended for limited lifting heights only



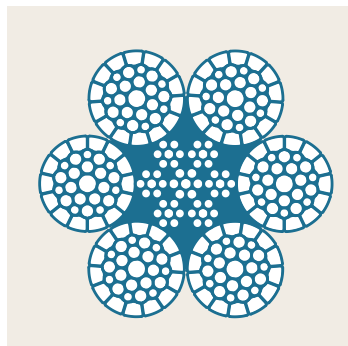
Diameter		Nominal Length Mass		Minimum Breaking Load		
				EIP / 1960		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons
22	-	2.42	1.63	512	52.2	57.6
24	-	2.88	1.94	544	55.5	61.1
-	1	3.23	2.17	610	62.2	68.6
26	-	3.38	2.27	639	65.2	71.8
28	-	3.92	2.64	741	75.6	83.3
-	1 1/8	4.09	2.75	773	78.8	86.9
30	-	4.5	3.03	851	86.8	95.7
-	1 1/4	5.04	3.39	968	98.7	109
32	-	5.12	3.44	968	98.7	109

Dyform 6®

Dyform 6® is a high performance compacted single layer constructed rope for various oil and gas applications such as winch lines, offshore cranes and floating cranes.

Product benefits

- High strength
- Robust crush resistant rope construction

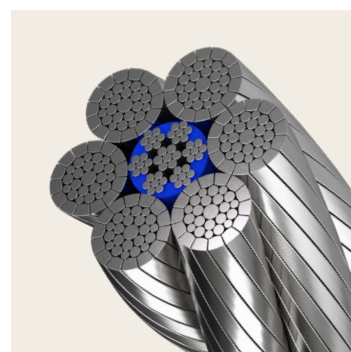
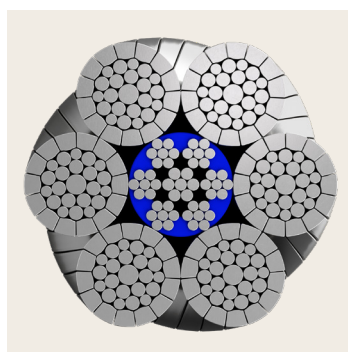


Dyform 6 PI®

Dyform 6 PI® is a high performance compacted single layer constructed rope with a plastic layer (PI) between the 6 outer strands and the rope core for offshore cranes.

Product benefits

- Improved bending fatigue performance
- Better retention of internal lubrication

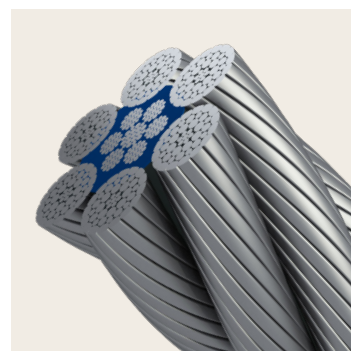
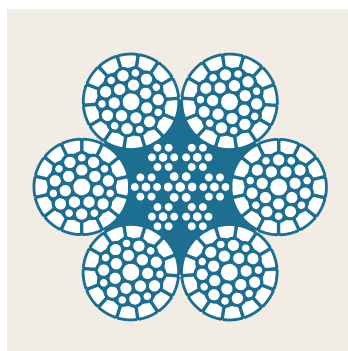


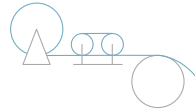
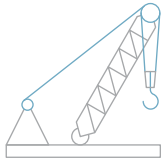
Dyform Bristar 6®

Dyform Bristar 6® is a high performance compacted single layer constructed rope which incorporates an engineered extruded plastic profile between the 6 outer strands and the rope core for various oil and gas applications including drilling lines and marine riser tensioner lines.

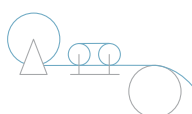
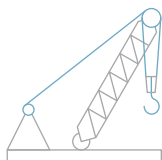
Product benefits

- Outstanding bending fatigue performance
- Improved support of outer strands in service





Diameter		Nominal Length		Minimum Breaking Force					
				EIP / 1960			EEIP / 2160		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons	kN	Tonnes	Tons
7.9	5/16	0.29	0.19	53	5.4	5.9	58	5.9	6.5
8.0	-	0.29	0.19	53	5.4	6.0	59	6.0	6.6
9.0	-	0.37	0.25	68	6.9	7.6	75	7.6	8.4
9.5	3/8	0.41	0.28	75	7.7	8.5	83	8.5	9.3
10.0	-	0.45	0.30	83	8.5	9.4	92	9.4	10.3
11.0	-	0.56	0.38	100	10.2	11.2	111	11.3	12.5
11.1	7/16	0.57	0.38	102	10.4	11.5	113	11.5	12.7
12.0	-	0.66	0.44	120	12.2	13.4	131	13.4	14.8
12.7	1/2	0.73	0.49	133	13.6	15.0	147	15.0	16.5
13.0	-	0.77	0.52	140	14.3	15.8	155	15.8	17.4
14.0	-	0.90	0.60	163	16.6	18.3	179	18.3	20.2
14.3	9/16	0.94	0.63	170	17.3	19.1	187	19.1	21.0
15.0	-	1.03	0.69	187	19.0	21.0	207	21.1	23.2
15.9	5/8	1.15	0.77	211	21.5	23.7	231	23.6	26.0
16.0	-	1.16	0.78	213	21.7	23.9	234	23.9	26.3
17.0	-	1.32	0.89	240	24.5	27.0	265	27.0	29.8
18.0	-	1.48	0.99	270	27.5	30.3	297	30.3	33.4
19.0	-	1.65	1.11	300	30.6	33.7	331	33.8	37.2
19.1	3/4	1.67	1.12	304	31.0	34.2	335	34.1	37.6
20.0	-	1.82	1.22	333	33.9	37.4	367	37.5	41.3
22.0	-	2.20	1.48	403	41.1	45.3	444	45.3	49.9
22.2	7/8	2.25	1.51	411	41.9	46.2	452	46.1	50.8
24.0	-	2.63	1.77	480	48.9	53.9	529	53.9	59.4
25.4	1	2.95	1.98	538	54.8	60.4	593	60.4	66.6
26.0	-	3.09	2.08	564	57.5	63.4	621	63.3	69.8
28.0	-	3.57	2.40	653	66.6	73.4	721	73.5	81.0
28.6	1 1/8	3.73	2.51	682	69.5	76.6	752	76.6	84.4
30.0	-	4.11	2.76	751	76.5	84.3	827	84.4	93.0
31.8	1 1/4	4.61	3.10	844	86.0	94.8	930	94.8	104.5
32.0	-	4.68	3.14	854	87.0	95.9	941	96.0	105.8
34.0	-	5.27	3.54	965	98.4	108.4	1059	108.0	119.0
34.9	1 3/8	5.56	3.74	1000	102.0	112.4	1118	114.0	125.6
36.0	-	5.91	3.97	1079	110.0	121.2	1187	121.0	133.3
38.0	-	6.59	4.43	1196	122.0	134.4	1314	134.0	147.7
38.1	1 1/2	6.62	4.45	1206	123.0	135.5	1324	135.0	148.8
40.0	-	7.30	4.91	1324	135.0	148.8	1461	149.0	164.2
41.3	1 5/8	7.79	5.23	1412	144.0	158.7	1559	159.0	175.2
42.0	-	8.05	5.41	1461	149.0	164.2	1618	165.0	181.8
44.0	-	8.84	5.94	1608	164.0	180.7	1775	181.0	199.5
44.5	1 3/4	9.03	6.07	1648	168.0	185.1	1814	185.0	203.9
46.0	-	9.66	6.49	1755	179.0	197.3	1932	197.0	217.1
47.6	1 7/8	10.30	6.92	1883	192.0	211.6	2079	212.0	233.6
48.0	-	10.50	7.06	1912	195.0	214.9	2108	215.0	236.9
50.0	2	11.40	7.66	2079	212.0	233.6	2246	229.0	252.4



		Nominal Length		Minimum Breaking Force		
		Mass		EIPS / 1960		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons
50.8	2	11.8	7.93	2151	219	242
52	-	12.4	8.31	2254	230	253
54	-	13.3	8.96	2430	248	273
56	-	14.3	9.63	2614	266	294
57.2	-	15.0	10.05	2727	278	306
58	-	15.4	10.33	2804	286	315
60	-	16.5	11.06	3001	306	337
62	-	17.6	11.81	3204	327	360
63.5	2 1/2	18.4	12.39	3361	343	378
64	-	18.7	12.58	3414	348	384
66	-	19.9	13.38	3631	370	408
68	-	21.1	14.20	3854	393	433
69.9	-	22.3	15.01	4072	415	458
70	2 3/4	22.4	15.05	4084	416	459
72	-	23.7	15.92	4321	440	486
73	-	24.4	16.37	4442	453	499
74	-	25.0	16.82	4564	465	513
76	3	26.4	17.74	4814	491	541
76.2	-	26.5	17.84	4840	493	544
78	-	27.8	18.69	5071	517	570
80	-	29.3	19.66	5334	544	599
82	-	30.7	20.66	5604	571	630
84	-	32.3	21.68	5881	599	661
86	-	33.8	22.72	6164	628	693
88	-	35.4	23.79	6455	658	725
90	-	37.0	24.88	6751	688	759
92	-	38.7	26.00	7055	719	793
94	-	40.4	27.14	7365	751	828
96	-	42.1	28.31	7681	783	863
98	-	43.9	29.50	8005	816	899
100	-	45.7	30.72	8335	850	937
102	-	47.6	31.96	8672	884	974
104	-	49.4	33.23	9015	919	1013
106	-	51.4	34.52	9365	955	1052
108	4 1/4	53.3	35.83	9722	991	1092
110	-	55.3	37.17	10085	1028	1133
112	-	57.3	38.53	10455	1066	1175
114	-	59.4	39.92	10832	1104	1217
116	-	61.5	41.34	11215	1143	1260
118	-	63.7	42.77	11605	1183	1304
120	-	65.8	44.24	12002	1223	1349
122	-	68.0	45.72	12406	1265	1394
124	-	70.3	47.23	12816	1306	1440
126	-	72.6	48.77	13232	1349	1487
128	-	74.9	50.33	13656	1392	1534
130	-	77.3	51.91	14086	1436	1583

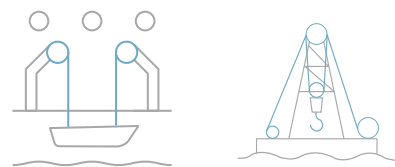




6 & 8 Series

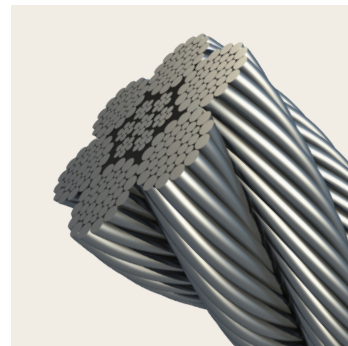
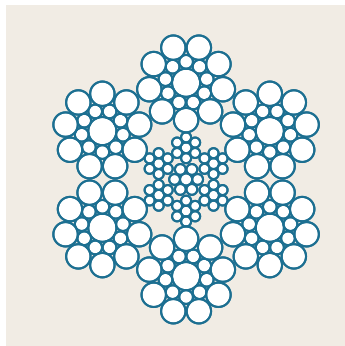
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6 & 8 series



6 Series

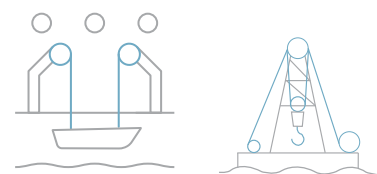
The 6 Series is a range of general purpose 6 stranded ropes produced with a steel core, fully lubricated during manufacture producing in accordance with EN 12385 and API 9A.



Product benefits

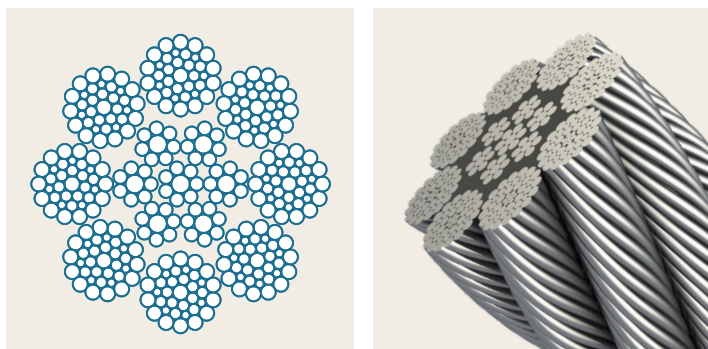
- Fit-for-purpose, robust rope construction
- Fully lubricated during manufacture
- For use on single layer drums only

Dia	Nominal Length		Minimum Breaking Force								
	Mass		IP/1770			EIP / 1960			EEIP / 2160		
in	kg/m	lbs/ft	kN	Tonnes	Tons	kN	Tonnes	Tons	kN	Tonnes	Tons
10	0.42	0.28	69.90	7.13	7.86	77.40	7.89	8.70	85.30	8.70	9.59
12	0.61	0.41	100.00	10.19	11.24	111.00	11.31	12.48	122.00	12.44	13.71
14	0.83	0.56	137.00	13.97	15.40	151.00	15.39	16.97	167.00	17.02	18.77
16	1.08	0.73	179.00	18.25	20.12	198.00	20.18	22.26	218.00	22.22	24.50
18	1.37	0.92	226.00	23.04	25.40	250.00	25.48	28.10	276.00	28.13	31.02
20	1.69	1.13	279.00	28.44	31.36	309.00	31.50	34.73	341.00	34.76	38.33
22	2.05	1.38	338.00	34.45	37.99	374.00	38.12	42.04	413.00	42.10	46.42
24	2.44	1.64	402.00	40.98	45.18	446.00	45.46	50.13	491.00	50.05	55.19
26	2.88	1.93	476.00	48.52	53.50	527.00	53.72	59.23	581.00	59.23	65.30
32	4.37	2.93	721.00	73.50	81.04	799.00	81.45	89.81	881.00	89.81	99.02
38	6.16	4.14	1010.00	102.96	113.52	1120.00	114.17	125.89	1240.00	126.40	139.38
44	8.26	5.55	1360.00	138.63	152.86	1510.00	153.92	169.72	1660.00	169.22	186.58
48	9.90	6.65	1630.00	166.16	183.21	1810.00	184.51	203.44	1900.00	193.68	213.56
52	11.60	7.79	1910.00	194.70	214.68	2120.00	216.11	238.29	2230.00	227.32	250.65
60	15.50	10.41	2550.00	259.94	286.62	2820.00	287.46	316.97	2970.00	302.75	333.83
64	17.60	11.82	2900.00	295.62	325.96	3210.00	327.22	360.80	-	-	-
72	22.30	14.97	3670.00	374.11	412.51	4070.00	414.88	457.47	-	-	-
76	24.80	16.65	4090.00	416.92	459.72	4530.00	461.77	509.17	-	-	-
80	27.50	18.46	4540.00	462.79	510.30	5020.00	511.72	564.25	-	-	-
88	33.10	22.22	5450.00	555.56	612.58	6040.00	615.70	678.90	-	-	-
92	36.20	24.30	5960.00	607.54	669.90	-	-	-	-	-	-
96	39.40	26.45	6490.00	661.57	729.48	-	-	-	-	-	-



8 Series

The 8 Series is a range of general purpose 8 stranded galvanized ropes produced with a steel core, fully lubricated during manufacture producing in accordance with EN 12385.



Product benefits

- Flexible and solid rope construction
- Higher performance level compared to 6 series
- For use on single layer drums only

Diameter		Nominal Length		Minimum Breaking Force					
				EIPS / 1960			EEIPS / 2160		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons	kN	Tonnes	Tons
12.0	-	0.58	0.39	100	10.2	11.2	111	11.3	12.5
-	1/2	0.65	0.44	113	11.5	12.7	124	12.6	13.9
13.0	-	0.68	0.46	118	12.0	13.3	130	13.3	14.6
14.0	-	0.79	0.53	137	14.0	15.4	151	15.4	17.0
-	-	0.83	0.55	142	14.5	16.0	157	16.0	17.6
-	5/8	1.03	0.68	179	18.3	20.1	197	20.1	22.1
16.0	-	1.04	0.70	179	18.3	20.1	197	20.1	22.1
18.0	-	1.32	0.88	226	23.0	25.4	249	25.4	28.0
19.0	-	1.47	0.98	252	25.7	28.3	278	28.3	31.2
-	3/4	1.48	0.99	252	25.7	28.3	278	28.3	31.2
20.0	-	1.63	1.09	279	28.4	31.4	308	31.4	34.6
22.0	-	1.97	1.32	338	34.5	38.0	372	37.9	41.8
-	7/8	2.01	1.35	338	34.5	38.0	372	37.9	41.8
24.0	-	2.34	1.58	402	41.0	45.2	443	45.2	49.8
-	1	2.63	1.76	450	45.9	50.6	496	50.6	55.8
26.0	-	2.75	1.85	472	48.1	53.1	520	53.0	58.5
28.0	-	3.19	2.14	547	55.8	61.5	603	61.5	67.8
-	1 1/8	3.32	2.23	570	58.1	64.1	628	64.0	70.6
30.0	-	3.66	2.46	628	64.0	70.6	692	70.6	77.8
-	1 1/4	4.10	2.76	715	72.9	80.4	787	80.3	88.5
32.0	-	4.17	2.80	715	72.9	80.4	787	80.3	88.5
34.0	-	4.70	3.16	807	82.3	90.7	889	90.7	100
-	1 3/8	4.96	3.34	851	86.8	95.7	938	95.6	105
36.0	-	5.27	3.54	904	92.2	102	997	102	112
38.0	-	5.88	3.95	1010	103	114	1110	113	125
-	1 1/2	5.91	3.97	1010	103	114	1110	113	125

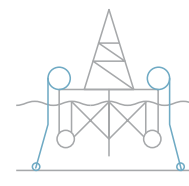


Offshore Mooring

Mooring lines connect an anchor on the seafloor to a floating structure. Bekaert offers both steel and synthetic solutions for temporary mooring/anchoring lines, permanent mooring lines and single point mooring systems.

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Anchor lines

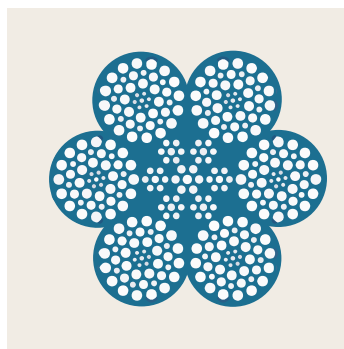


Diamond blue®

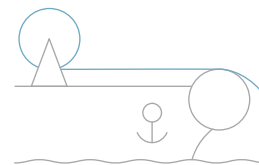
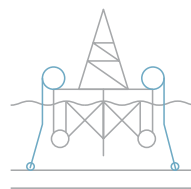
The Diamond Blue® is a 6 strand galvanized conventional rope produced with a steel core fully lubricated during production process.

Product benefits

- Good strength to weight ratio
- Corrosion resistance
- Good fatigue performance



Diameter		Nominal Length Mass				Minimum Breaking Load		
		in Air		Submerged		EIPS/1960		
mm	in	kg/m	lbs/ft	kg/m	lbs/ft	kN	Tonnes	Tons
52	-	11.7	7.86	10.2	6.84	2231	227	251
54	2 1/8	12.6	8.48	11.0	7.38	2406	245	270
56	-	13.6	9.12	11.8	7.93	2587	264	291
57.2	2 1/4	14.2	9.51	12.3	8.28	2699	275	303
60	-	15.6	10.5	13.6	9.11	2970	303	334
60.3	2 3/8	15.7	10.6	13.7	9.20	3000	306	337
63.5	2 1/2	17.5	11.7	15.2	10.2	3326	339	374
64	-	17.7	11.9	15.4	10.4	3379	344	380
66.7	2 5/8	19.3	12.9	16.8	11.3	3670	374	413
68	-	20.0	13.4	17.4	11.7	3815	389	429
69.9	2 3/4	21.2	14.2	18.4	12.4	4031	411	453
72	-	22.4	15.1	19.5	13.1	4277	436	481
76	-	25.0	16.8	21.8	14.6	4765	486	536
76.2	3	25.1	16.9	21.9	14.7	4790	488	538
80	-	27.7	18.6	24.1	16.2	5280	538	593
82.6	3 1/4	29.5	19.8	25.7	17.3	5629	574	633
84	-	30.6	20.5	26.6	17.8	5821	593	654
88	-	33.5	22.5	29.2	19.6	6389	651	718
88.9	3 1/2	34.2	23.0	29.8	20.0	6520	665	733
92	-	36.6	24.6	31.9	21.4	6559	669	737
95.3	3 3/4	39.3	26.4	34.2	23.0	7038	717	791
96	-	39.9	26.8	34.7	23.3	7142	728	803
100	-	43.3	29.1	37.7	25.3	7750	790	871
101.6	4	44.7	30.0	38.9	26.1	8000	815	899
108	4 1/4	50.5	33.9	43.9	29.5	8306	847	934
114.3	4 1/2	56.6	38.0	49.2	33.0	9303	948	1046
120.7	4 3/4	63.1	42.4	54.9	36.8	10374	1057	1166
127	5	69.8	46.9	60.8	40.8	11485	1171	1291

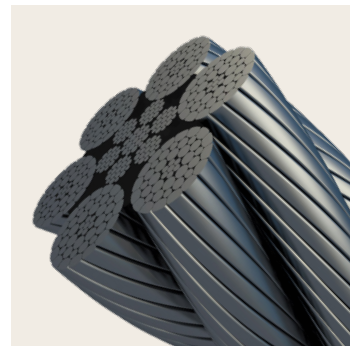
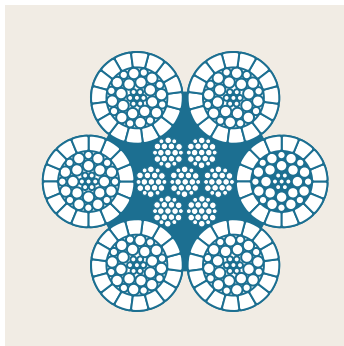


DB2K®

The Dyform DB2K® is a 6 strand compacted galvanized high performance rope with a steel core. Dyform DB2K® is also available with PI and Bristar® technologies.

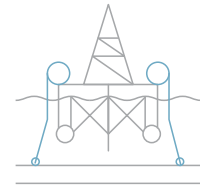
Product benefits

- Better fatigue resistance
- Reduced elongation in service
- Better strength to diameter ratio (strongest size for size rope)
- Superior crush and abrasion resistance



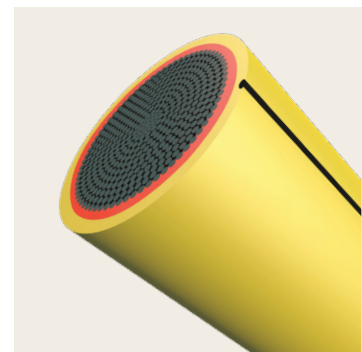
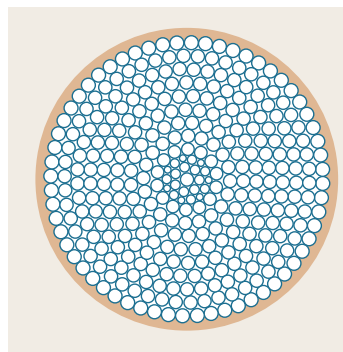
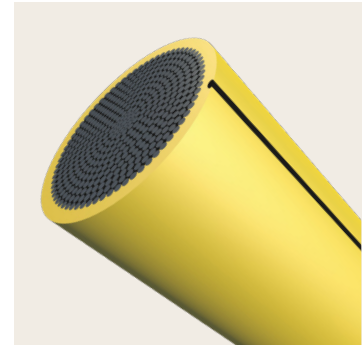
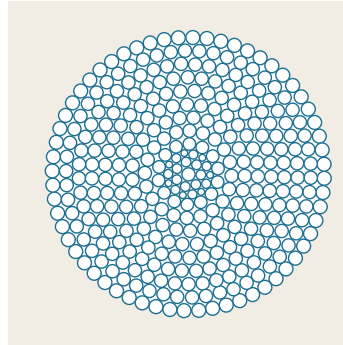
Diameter		Nominal Length Mass				Minimum Breaking Load		
		in Air		Submerged		EIPS/1960		
mm	in	kg/m	lbs/ft	kg/m	lbs/ft	kN	Tonnes	Tons
52	-	12.2	8.22	10.7	7.2	2396	244	269
54	2 1/8	13.2	8.87	11.5	7.7	2583	263	290
56	-	14.2	9.54	12.4	8.3	2778	283	312
57.2	2 1/4	14.8	10.0	12.9	8.7	2899	295	326
60	-	16.3	10.9	14.2	9.5	3189	325	358
60.3	2 3/8	16.5	11.1	14.3	9.6	3221	328	362
63.5	2 1/2	18.3	12.3	15.9	10.7	3572	364	402
64	-	18.6	12.5	16.1	10.8	3629	370	408
66.7	2 5/8	20.2	13.5	17.5	11.8	3941	402	443
68	-	20.9	14.1	18.2	12.2	4096	418	460
69.9	2 3/4	22.1	14.9	19.3	12.9	4329	441	487
72	-	23.5	15.8	20.4	13.7	4593	468	516
76	-	26.2	17.6	22.8	15.3	5117	522	575
76.2	3	26.3	17.7	22.9	15.4	5144	524	578
80	-	29.0	19.5	25.2	16.9	5670	578	637
82.6	3 1/4	30.9	20.8	26.9	18.1	6044	616	679
84	-	32.0	21.5	27.8	18.7	6251	637	703
88	-	35.1	23.6	30.5	20.5	6861	699	771
88.9	3 1/2	35.8	24.0	31.1	20.9	7002	714	787
92	-	38.3	25.7	33.4	22.4	7321	746	823
95.3	3 3/4	41.1	27.6	35.8	24.0	7856	801	883
96	-	41.7	28.0	36.3	24.4	7971	813	896
100	-	45.3	30.4	39.4	26.5	8430	859	948
101.6	4	46.8	31.4	40.7	27.3	8702	887	978

Permanent Mooring lines



Spiral Strand

The Spiral Strand offers a torsionally balanced construction and high strength permanent mooring solution. With corrosion protection using galvanised wire and specialist lubricant/ blocking compound, Brilube 2, the Spiral strand is ideal for systems with design lives of up to 15 years. The addition of polyethylene sheathing increases the design life to 25 years and above . We also offer spiral strands with double sheathing, which is used as a safety and inspection feature to identify damage to the outer coating The galvanized Spiral strand is compliant to offshore standard DNV OS E304.

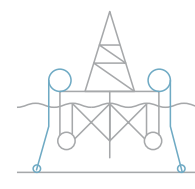
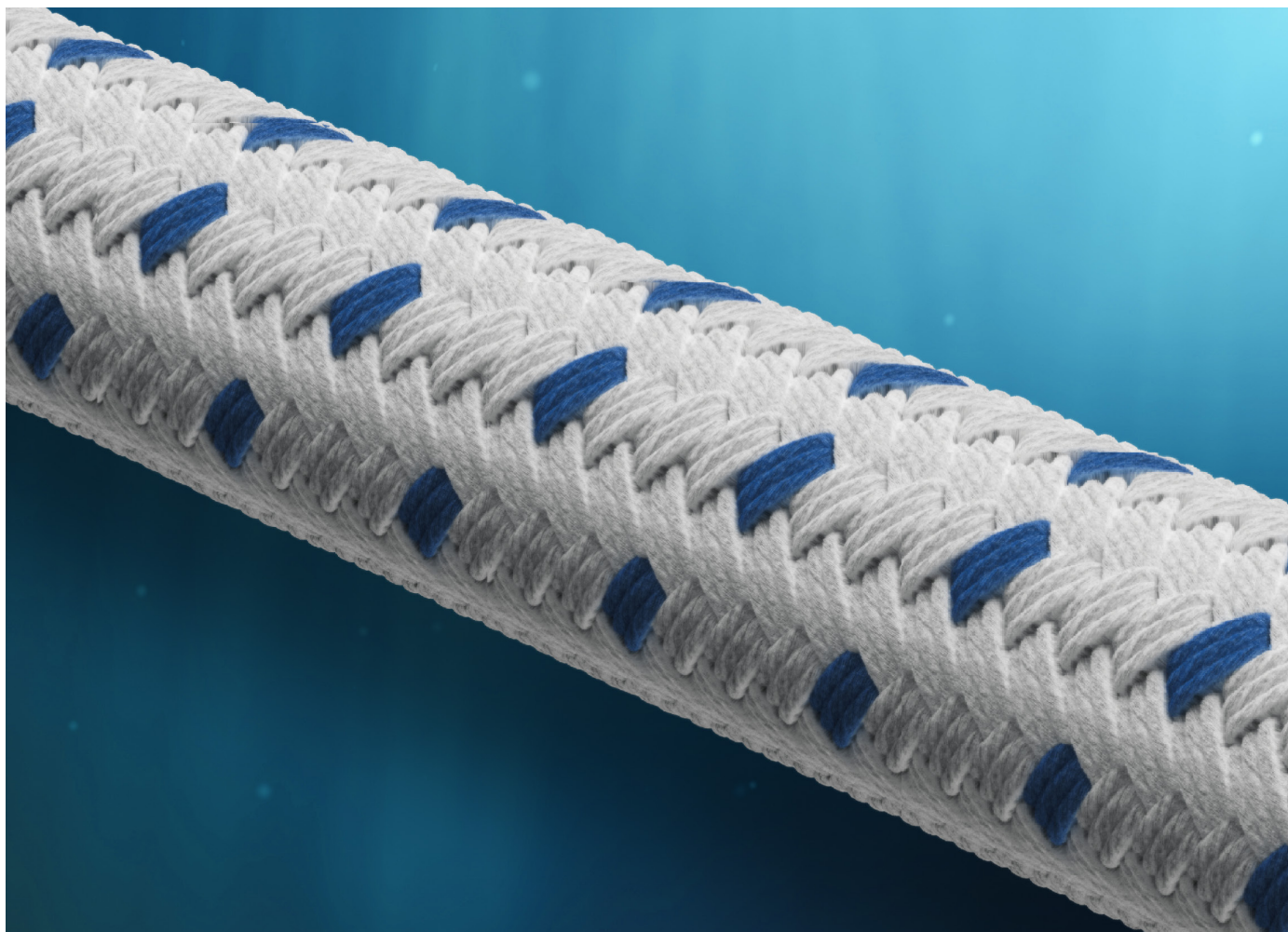


Product benefits

- High strength to weight ratio
- Torsionally balanced
- Excellent fatigue performance
- Excellent corrosion resistance
- Design life to suit customer requirements



	Approximate Weight			Minimum Breaking Load			
Diameter	Unsheathed	Sheathed (air)	Sheathed (seawater)	SPR2+ 1860 Grade		Xtreme 1960 Grade	
mm	kg/m	kg/m	kg/m	kN	Tons	kN	Tons
60	18.7	19.9	15.6	3820	390	4010	409
66	22.5	23.8	18.7	4590	468	4820	492
72	26.7	28.6	22.2	5470	558	5740	585
78	31.3	33.4	26.0	6410	654	6690	682
84	36.3	38.6	30.3	7450	760	7820	797
87	39.2	41.4	32.6	8010	817	8410	858
90	41.9	44.9	34.9	8580	875	8990	917
96	47.0	50.2	39.0	9590	978	10060	1026
102	53.7	57.4	44.6	10790	1100	11320	1154
108	59.6	63.5	49.5	12000	1224	12640	1289
114	67.0	71.2	55.8	13420	1368	14170	1445
120	73.8	78.1	61.4	14720	1501	15480	1579
126	81.4	86.0	67.8	16270	1659	17100	1744
132	89.3	94.0	74.3	17890	1824	18760	1913
138	97.7	102.6	81.3	19500	1988	20510	2091
144	106.2	111.3	88.4	21090	2151	22200	2264
147	110.7	115.9	92.2	21930	2236	23170	2363
For diameters above 147mm, please contact Bridon-Bekaert to discuss your requirements.							

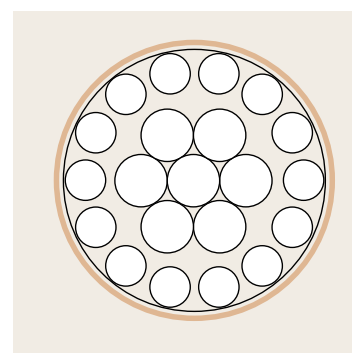


MoorLine Polyester

MoorLine Polyester is the original standard for long-term fibre rope mooring systems. Made from parallel laid, polyester sub-ropes encased in a polyester jacket with an integrated particle filter system, its design is optimized for operating life up to 25 years and beyond.

Product benefits

- High strength efficiency
- Damage and abrasion resistant protective braided jacket
- Patented filter system - provides protection from particles down to 5 microns in diameter
- Compact splice for fatigue life and damage integrity
- Low maintenance

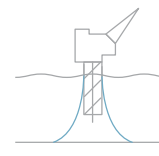


Nominal Diameter*	Linear Density				Minimum Breaking Strength		
	in Air		in Water		Spliced**		
mm	kg/m	lb/ft Tons	kg/m	lb/ft Tons	kN	Tons	lbs
74	4.19	2.81	1.07	0.72	1681	171	377791
82	5.20	3.49	1.33	0.89	2040	208	458543
90	6.28	4.22	1.60	1.08	2463	251	553637
98	7.47	5.02	1.91	1.28	2921	298	656554
106	8.73	5.86	2.23	1.50	3390	346	762080
114	9.84	6.62	2.52	1.69	3911	339	879318
122	11.02	7.40	2.82	1.89	4433	452	996555
130	12.38	8.32	3.17	2.13	5065	516	1138545
138	13.77	9.25	3.52	2.37	5702	581	1281838
146	15.25	10.25	3.90	2.62	6374	650	1432954
154	16.72	11.23	4.28	2.87	7041	718	1582767
162	18.47	12.41	4.73	3.18	7823	798	1758635
170	20.11	13.51	5.15	3.46	8605	878	1934503
178	21.67	14.56	5.55	3.73	9329	951	2097332
186	23.77	15.97	6.08	4.09	10326	1053	2321399
194	25.62	17.21	6.56	4.41	11195	1142	2516803
202	27.35	18.38	7.00	4.71	11195	1142	2516803
210	29.53	19.84	7.56	5.08	13038	1330	2931058
218	31.74	21.33	8.13	5.46	14081	1436	3165534
226	33.98	22.83	8.70	5.85	15137	1544	3402955
234	36.25	24.36	9.28	6.24	16193	1651	3640376
242	38.64	25.96	9.90	6.65	17326	1767	3895039
250	40.85	27.45	10.46	7.03	18392	1876	4134753
258	43.59	29.29	11.16	7.50	19713	2010	4431748
266	46.15	31.01	11.82	7.94	20930	2134	4705318
274	48.80	32.79	12.50	8.40	22178	2262	4985722
282	51.37	34.52	13.16	8.84	23390	2385	5258303
290	53.90	36.22	13.81	9.28	24642	2513	5539696
298	57.02	38.31	14.61	9.82	26122	2664	5872526
306	60.40	40.59	15.47	10.40	27722	2827	6232085
314	63.34	42.56	16.23	10.90	29205	2978	6565566
322	66.14	44.45	16.95	11.39	30509	3111	6858672

* Diameter and weight values shown at reference load of 1% MBF for a given break load. Other sizes available.
Contact fibresales@bridon-bekaert.com

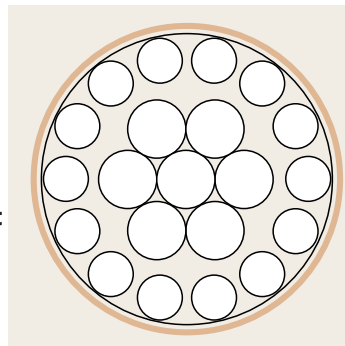
** Tested following CI1500B-2015. Elongations are immediate

Single Point Mooring lines



Superline Nylon

The original “SuperLine” Nylon is constructed with parallel-laid, Nylon sub-ropes encased in a nylon-braided jacket. This product’s high strength, high elongation, and parallel laid cores offer an excellent tension-tension fatigue life (TCLL). Superline’s unique compact splice make it an ideal choice for shorter lengths in pendants.



Product benefits

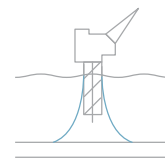
- High rope elongation
- Excellent tension-tension fatigue performance translating to longer life
- Non load bearing sacrificial jacket
- High resistance to damage
- Easily repaired

OCIMF Size Number **	Diameter*		Circum- ference*		Linear Density				New Break Strength**					
					in Air		In Water		New Dry Breaking Strength			New Wet Breaking Strength		
Unitless	mm	in	mm	in	kg/m	lb/ft	kg/m	lb/ft	kN	Tons	lbs	kN	Tons	lbs
10	88	3 5/8	279	11	5.08	3.42	0.51	0.34	1934	197	434797	1837	187	413057
11	96	4	305	12	5.91	3.97	0.60	0.40	2351	240	528576	2234	228	502147
12	104	4 1/4	330	13	7.00	4.70	0.71	0.47	2810	287	631747	2670	272	600160
13	112	4 5/8	356	14	7.99	5.37	0.81	0.54	3311	338	744351	3145	321	707133
14	120	5	381	15	9.17	6.17	0.93	0.62	3854	393	866423	3661	373	823102
14 1/2	128	5 1/4	406	16	9.85	6.62	0.99	0.67	4141	422	931021	3934	401	884470
15	136	5 5/8	432	17	10.30	6.90	1.04	0.70	4439	453	998000	4217	430	948100
16	144	6	457	18	11.90	7.99	1.20	0.81	5067	517	1139112	4814	491	1082157
17	152	6 1/4	483	19	13.40	9.01	1.35	0.91	5737	585	1289791	5450	556	1225302
18	160	6 5/8	508	20	14.90	10.00	1.51	1.01	6450	658	1450066	6128	625	1377562
19	168	7	533	21	16.50	11.10	1.67	1.12	7206	735	1619962	6846	698	1538964
20	176	7 1/4	559	22	18.30	12.30	1.85	1.24	8005	816	1799507	7604	775	1709531
21	184	7 5/8	584	23	20.10	13.50	2.03	1.36	8846	902	1988723	8404	857	1889287
22	192	8	610	24	22.10	14.90	2.23	1.50	9731	992	2187635	9245	943	2078253
23	200	8 1/4	635	25	24.10	16.20	2.43	1.64	10659	1087	2396265	10126	1033	2276452
24	208	8 5/8	660	26	28.20	18.90	2.84	1.91	11630	1186	2614633	11049	1127	2483902

Manufactured, supplied & tested in general accordance with: OCIMF Guidelines for the Purchasing & Testing of SPM Hawsers First Ed. 2000

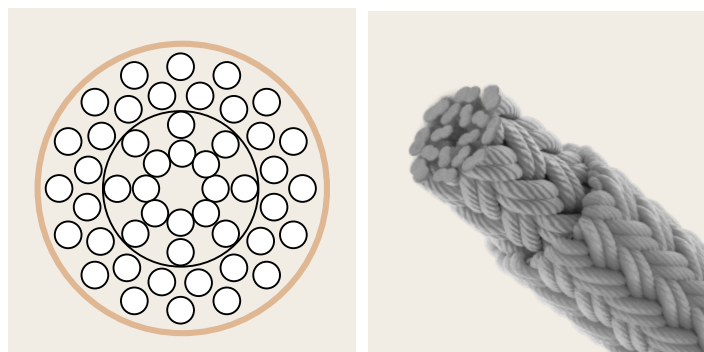
* Nominal value. Other diameters are available. Contact fibresales@bridon-bekaert.com

** Tested following OCIMF Guidelines for the Purchasing & Testing of SPM Hawsers First Ed. 2000. Elongations are wet immediate



Viking Braidline Nylon

The original Viking BraidLine Nylon set the standard for safety and reliability. A true double braided construction per ISO 10554, the core and cover share the load 50/50, and is OCIMF compliant with continually upgraded materials. The rope is torque neutral and will not rotate under load.



Product benefits

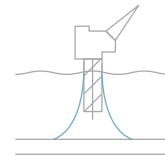
- True double braid per ISO 10554: 50/50 load sharing
- Highest rope elongation
- Highly flexible construction
- Load bearing material easily visually inspected

OCIMF Size Number **	Diameter*		Circum- ference*		Linear Density				New Break Strength**					
					in Air		In Water		New Dry Breaking Strength			New Wet Breaking Strength		
Unitless	mm	in	mm	in	kg/m	lb/ft	kg/m	lb/ft	kN	Tonnes	lbs	kN	Tonnes	lbs
12	96	4 1/4	305	12	5.70	3.83	0.58	0.39	2059	210	462970	1952	199	438719
13	104	4 5/8	330	13	6.70	4.50	0.68	0.45	2412	246	542337	2305	235	518086
14	112	5	356	14	7.80	5.24	0.79	0.53	2805	286	630521	2667	272	599657
15	120	5 5/8	381	15	8.90	5.98	0.90	0.60	3217	328	723115	3060	312	687841
16	128	6	406	16	10.20	6.85	1.03	0.69	3658	373	822323	3481	355	782640
17	136	6 1/4	432	17	11.40	7.66	1.15	0.77	4129	421	928145	3932	401	884053
18	144	6 5/8	457	18	12.80	8.60	1.29	0.87	4629	472	1040581	4413	450	992079
19	152	7	483	19	14.30	9.61	1.44	0.97	5158	526	1159630	4913	501	1104515
20	160	7 1/4	508	20	15.80	10.6	1.59	1.07	5717	583	1285293	5443	555	1223564
*** 21	168	7 5/8	533	21	17.40	11.7	1.76	1.18	6304	643	1417130	6003	612	1349448
*** 22	176	8	559	22	19.10	12.8	1.93	1.29	6918	705	1555139	6587	672	1480843
*** 23	184	8 1/4	584	23	20.90	14.0	2.11	1.42	7561	771	1699762	7200	734	1618632
*** 24	192	8 5/8	610	24	22.80	15.3	2.30	1.55	8233	840	1850778	7839	799	1762373

* Nominal value. Other diameters are available Contact fibresales@bridon-bekaert.com

** Tested following C11500B-2015. Elongations are immediate

*** Tested following ISO2307:2010. A 10% reduction should be applied for spliced terminations

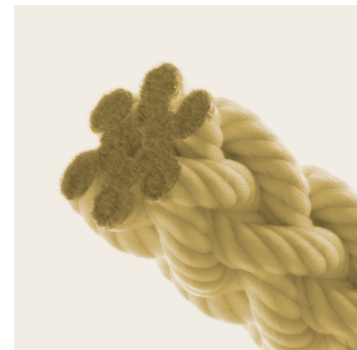


TQ12

TQ12 is a 12 strand high strength polypropylene rope, offering an economical, floating, flexible, and lightweight mooring line, with excellent stretch characteristics, UV stabilization, and does not absorb water. Its construction allows for easy splicing, load bearing material inspection, and offers excellent abrasion resistance for a durable mooring rope.

Product benefits

- Floating material
- Easy to handle and splice
- Flexible
- Easily visually inspected
- Good abrasion resistance



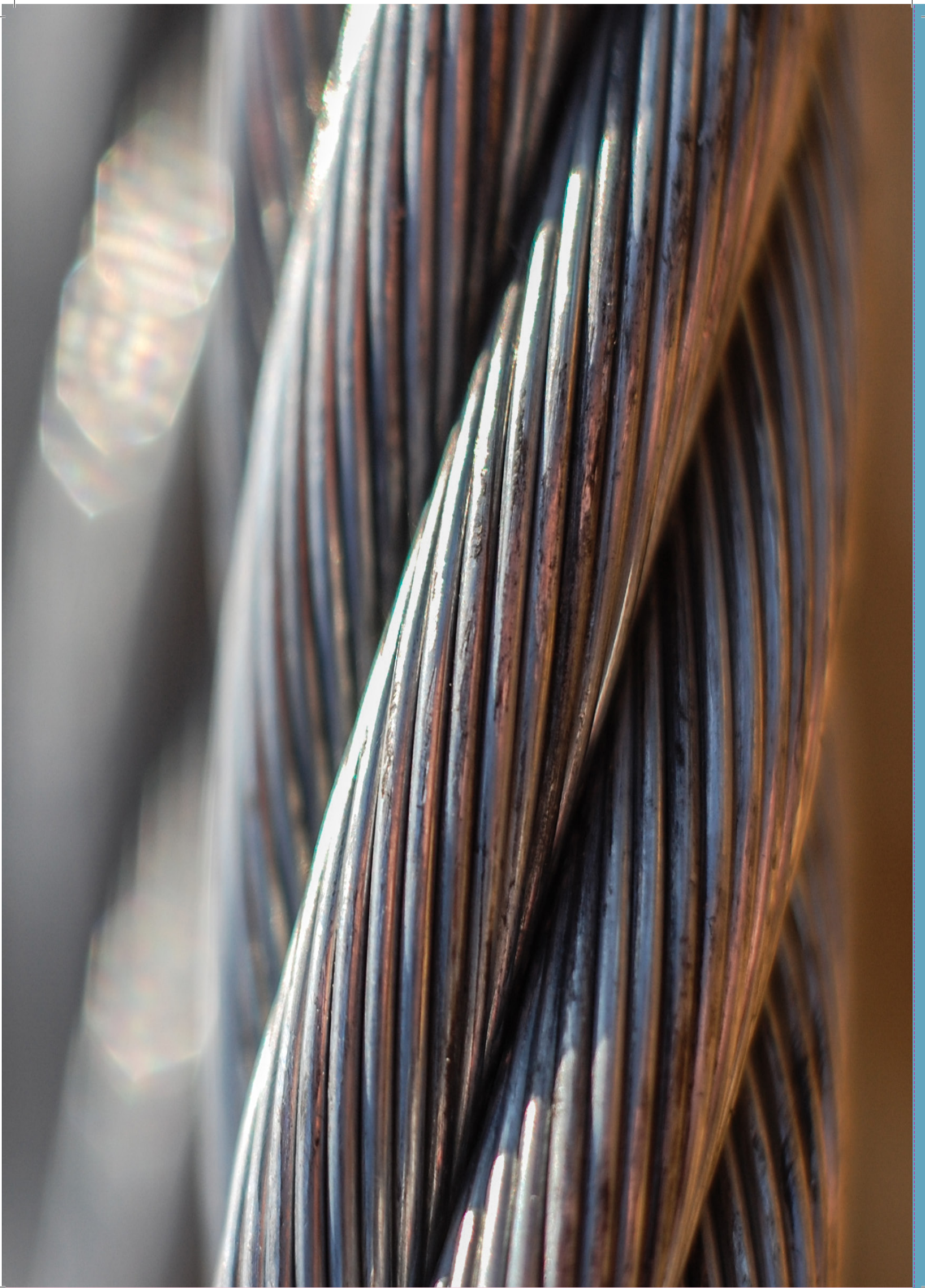
Nominal Diameter*	Linear Density				Minimum Breaking Strength (MBS)					
	in Air		In Water		Spliced**			Un-Spliced***		
mm	kg/100m	lb/100ft	kg/100m	lb/100ft	kN	Tons	lbs	kN	Tons	lbs
36	59	130	-	-16	250	25.5	56152	-	-	-
40	72	158	-	-20	287	29.3	64485	-	-	-
44	88	194	-	-24	340	34.7	76390	-	-	-
48	104	229	-	-29	398	40.6	89486	-	-	-
52	122	268	-	-34	466	47.5	104764	-	-	-
56	142	312	-	-39	534	54.5	120042	-	-	-
60	163	359	-	-45	612	62.4	137502	-	-	-
64	185	407	-	-51	690	70.3	154963	-	-	-
68	209	460	-	-58	777	79.2	174606	-	-	-
72	234	515	-	-65	864	88.1	194249	-	-	-
76	261	574	-	-73	962	98.1	216273	-	-	-
80	289	636	-	-80	1068	109	240083	-	-	-
88	350	770	-	-97	1263	129	283735	-	-	-
96	416	915	-	-116	1474	150	331354	-	-	-

* Nominal value, other diameters are available upon request.

** Tested following CI1500B-2015 / ISO2307:2010. Elongations are immediate

*** Tests & strength definition as per ISO2307:2010

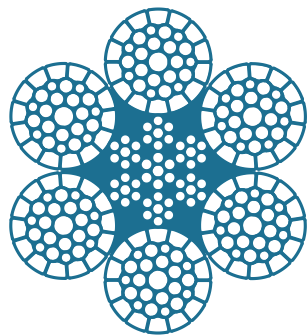
Diameter refers to the nominal diameter and not the actual diameter if the rope (this will change depending on the condition, tension, and historical highest tension of the rope.)



General guidance on steel rope selection

Wire rope guidance

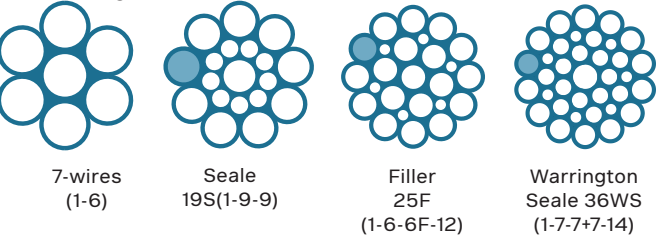
To help you understand the complex nature of wire rope this guide aims to impart an understanding of the key factors that need to be considered and correctly balanced when choosing which type of rope will provide optimum service life and safety for a specific task, type of machinery and working environment.



An example rope nomenclature for the rope shown above is given below;

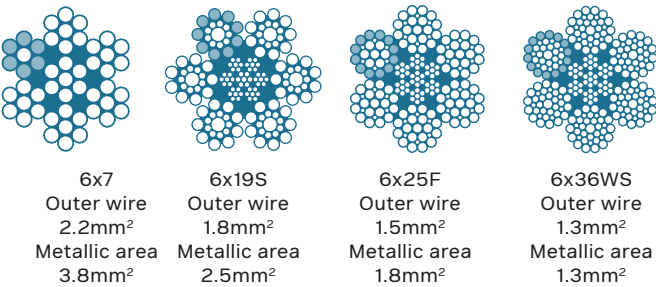
6 x 36WS - IWRC 1960 B sZ	
6	numbers of strands
36	number of wires in each strand
1-7-7+7-14	Lay-up of wires in the strand
IWRC	Type of core
1960	Rope grade
B	Drawn galvanised B(Zn)
sZ	Right Hand Ordinary (RHO) Lay

Equal lay strand constructions

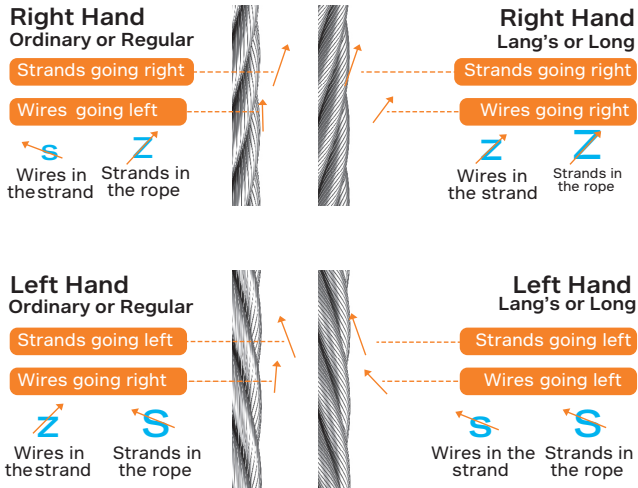


6-stranded rope constructions

(for example nominal diameter 22mm)



The rope lay of a wire rope may be described as;
sZ = Right hand ordinary/regular lay
zZ = Right hand lang's lay
aZ = Right hand alternate lay
zS = Left hand ordinary/regular lay
sS = Left hand lang's lay
aS = Left hand alternate lay



Lang's lay ropes offer greater wear resistance and minimise spooling damage at the cross-over zones when multi-layer wound on winch drum.

Wire ropes can also be swaged or Dyformed after completion, further increasing the steel fill factor, whilst creating a smooth surface to the exterior of the rope.

Cores

Steel Wire ropes are supplied with either fibre or steel cores, the choice being largely dependent on the use for which the rope is intended. The principal function of the core is to provide support to the strands and maintain them in the correct positions under working conditions.

Steel Cores

Steel cores comprise an independent wire rope (IWRC) or in the case of small ropes, a wire strand (WSC). Such cores prove advantageous in severe working conditions involving low factors of safety, high operating speeds, wide fleet angles and are more resistant to crushing on drums and pulleys. The steel core provides better support for the outer strands, so that the rope retains its shape, resulting in a more effective distribution of stress in the individual wires.

Preforming

Generally, ropes are supplied preformed. In a preformed rope the wires and strands are given the helix they take up in the completed rope.

Coatings

Zinc Coated Wire Ropes – Galvanising

Zinc coatings provide sacrificial protection to the underlying steel wire for protection against corrosion where the rope is exposed to corrosive agents – salt, water, moisture, weather etc.

Various coat weights of zinc are available for particular application; Bridon is ready to advise on the alternative procedures for achieving corrosion protection of wire rope appropriate to the particular environment and manner of usage.

Rope Grades

Rope Grade	Approximate Equivalent API 9A Grade
1770	IPS
1860	EIPS
1960	EIPS
2160	EEIP

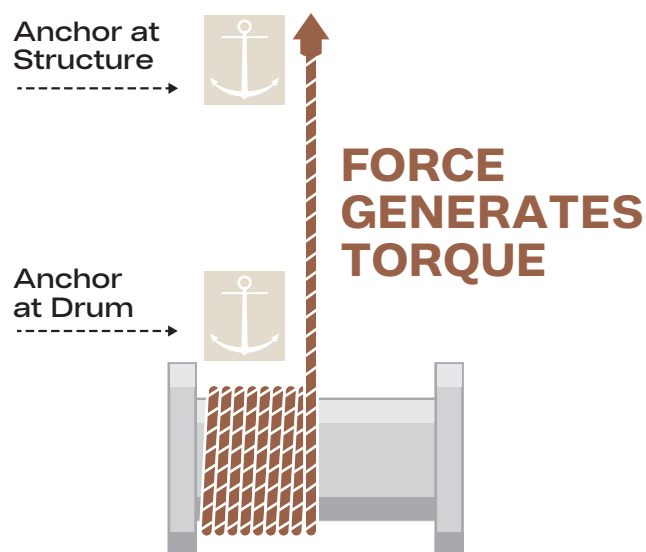
Definition of Breaking Loads and Forces

1. Minimum Breaking Force: The force, in kilonewtons or pounds force below which the rope shall not break when tested to destruction.
2. Minimum Breaking Load: The load in tonnes or tons corresponding to the minimum breaking force.
3. Minimum aggregate breaking force: The value calculated from the product of the sum of the cross-sectional metallic areas of all the individual wires in the rope and the tensile strength grades(s) of the wires.

Note: The minimum aggregate breaking force is sometimes used when Regulations permit, particularly in Europe. There is a direct relationship between minimum aggregate breaking force and minimum breaking force (through the spinning loss) and users must be absolutely sure that they are comparing like for like when ordering replacement ropes.

When selecting a steel wire rope to suit a particular application the following characteristics should be taken into consideration.

- Strength
- Rotation resistance
- Fatigue resistance
- Resistance to wear and abrasion
- Resistance to crushing
- Resistance to corrosion
- Rope extension



Strength

The responsibility for determining the minimum strength of a rope for use in a given system rests with the manufacturer of the machine, appliance, or lifting equipment. As part of this process the manufacturer of the machine, appliance or lifting equipment will need to be aware of any local regulations, standards or codes of practice which might govern the design factor of the rope (often referred to nowadays as the coefficient of utilisation), and other factors which might influence the design of sheaves and drums, the shape of the groove profiles and corresponding radius, the drum pitch and the angle of fleet, all of which have an effect on rope performance.

Once the strength (referred to as minimum breaking force or minimum breaking load) of the rope has been determined it is then necessary to consider which type of rope will be suitable for the intended duty. It is important therefore for the designer to be fully aware of the properties, characteristics and limitations on use of the many different kinds of steel wire ropes which are available.

IMPORTANT NOTE FOR CRANE OPERATORS

Bekaert recommends that once the machine, appliance or lifting equipment has been taken into service, any replacement rope should possess the required characteristics for the duty in question and should, as a minimum, at least comply with the minimum guaranteed breaking force stated by the original equipment manufacturer.

Resistance to Rotation

It is important to determine whether there is a requirement to use a low rotation or rotation resistant rope. Such ropes are often referred to as multi - strand ropes.

Six or eight strand rope constructions are usually selected unless load rotation on a single part system or "cabling" on a multi - part reeving system are likely to cause operational problems.

When loaded, steel wire ropes will generate:

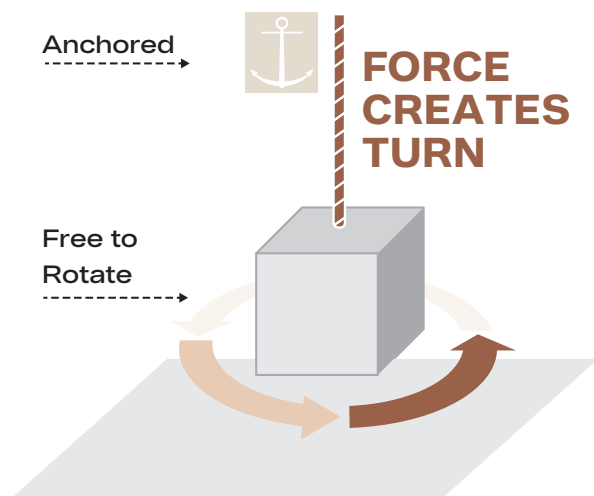
- "Torque" if both ends are fixed
- "Turn" if one end is unrestrained

Torque

When both ends of a rope are fixed, the applied force generates "torque" at the fixing points.

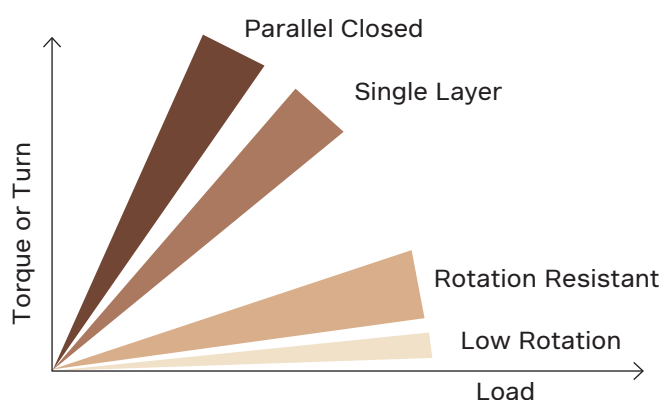
Turn

When one end of a rope is free to rotate, the applied load causes the rope to turn.



The torque or turn generated will increase as the load applied increases. The degree to which a wire rope generates torque or turn will be influenced by the construction of the rope. Having recognised what can happen when a rope is loaded it is necessary to select the correct type of rope. It should be noted that all ropes will rotate to some degree when loaded.

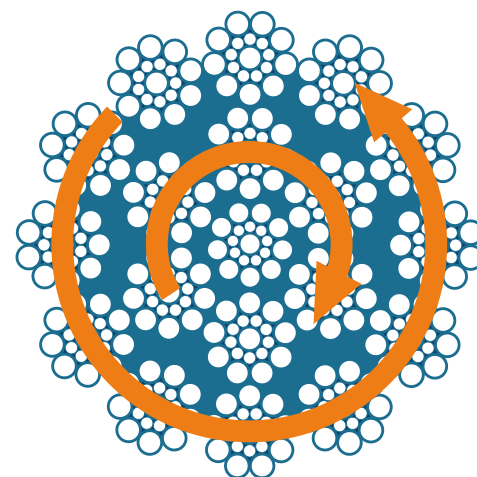
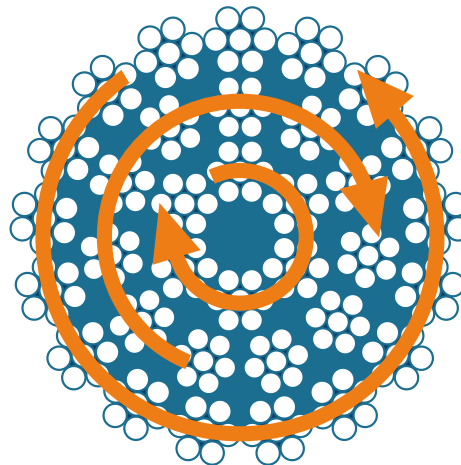
The diagram below serves to illustrate the differences in rotational properties between the four basic types of stranded rope.



Specific information including the torque factor and the turn value expressed in degrees per lay length for individual rope constructions can be found on page xx.

The tendency for any rope to turn will increase as the height of lift increases. In a multi - part reeving system the tendency for the rope to cable will increase as the spacing between the parts of rope decreases. Selection of the correct rope will help to prevent "cabling" and rotation of the load.

"Endurance" low rotation and rotation resistant ropes ensure that problems associated with cabling and load rotation are minimised.



Bridon is pleased to offer advice on any specific problems associated with rope rotation.

Fatigue Resistance

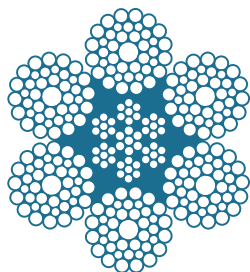
Steel wire ropes are likely to deteriorate due to bend fatigue when subjected to bending around a sheave or drum. The rate of deterioration will be influenced by the number of sheaves in the system, the diameter of the sheaves and drum, and the loading conditions.

Bridon carries out extensive testing on their products, providing comparative fatigue data to allow customers to make an informed choice.

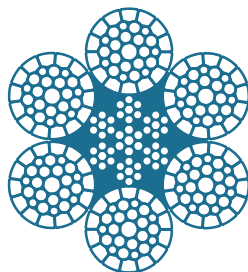
When selecting a wire rope for an application where bending fatigue is a principal cause of deterioration it is important to select a rope containing small wires e.g.

6x36WS(1-7-7+7-14) as opposed to a 6x19S(1-9-9).

Additional resistance to fatigue leading to real cost savings can be achieved by selecting a “Dyform” wire rope.



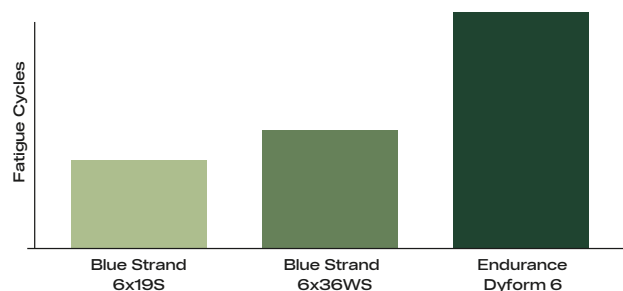
Standard



Dyform

The smooth surface of the “Dyform” product provides improved rope to sheave contact leading to reduced wear on both rope and sheave. Increased cross-sectional steel area and improved inter-wire contact ensures that the rope will operate with lower internal stress levels resulting in longer bending fatigue life and lower costs.

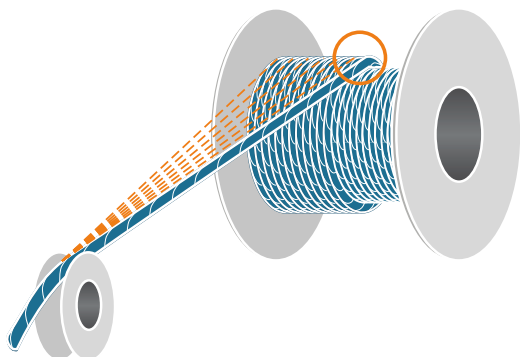
This graph illustrates a “doubling” in life when moving from Blue Strand 6x36 to Endurance Dyform 6. This same relationship can be found when moving from any construction into an equivalent Dyform construction e.g. 18x7 to Endurance Dyform 18 or 35x7 to Endurance Dyform 34LR.



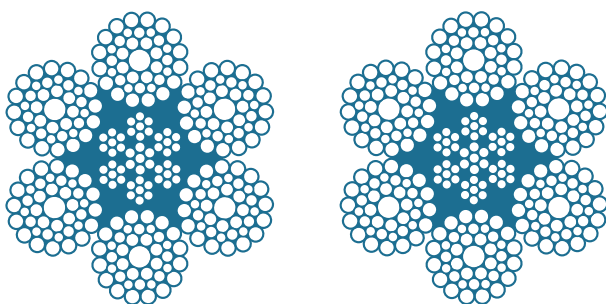
Resistance to Abrasive Wear

Abrasive wear can take place between rope and sheave and between rope and drum but the greatest cause of abrasion is often through “interference” at the drum.

If abrasion is determined to be a major factor in rope deterioration then a wire rope with relatively large outer wires should be selected.

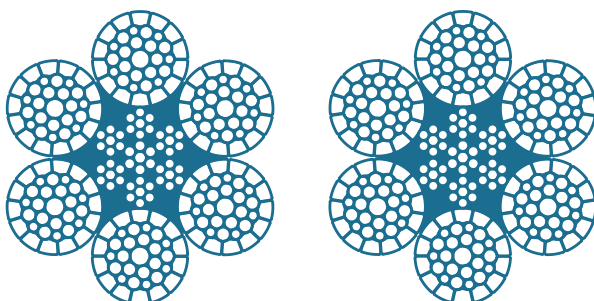


Wire rope on adjacent drum laps can cause point contact and accelerated wear .



Non Dyform wire rope on adjacent drum laps can cause point contact and accelerated wear.

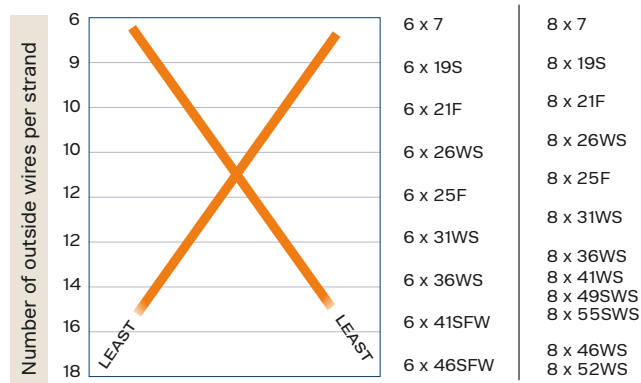
Selection of a Dyform product will reduce abrasion through improved contact conditions.



The smooth surface of Dyform rope creates better contact and leads to longer life.

Abrasion Resistance vs Bending Fatigue Resistance

When choosing a rope for a specific application it is often necessary to reach a balance between the two important rope characteristics of abrasion resistance and the resistance to bending fatigue. An established method of determining the best construction for the rope for the particular operating conditions is by use of the “X- Chart”. By referring to this chart when selecting a rope, the mid-point of the “X” comes closest to a balance between resistance to abrasion and resistance to bending fatigue. As with most engineering challenges, some degree of compromise and trade off of the two properties may be required in order to choose the best rope for the application. This will ultimately depend on the prevailing conditions under which the rope will be expected to operate in and the need to reach an efficient, economical solution.

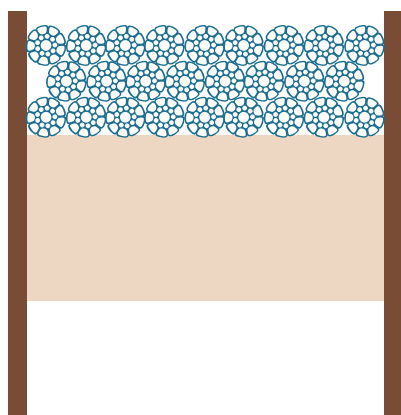


Crush Resistance

In multi - layer coiling applications where there is more than one layer of rope on the drum it is essential to install the rope with some back tension. Bridon recommends a minimum installation tension of between 2.5% and 10% of the minimum breaking force of the rope. If this is not achieved, or in certain applications where high pressure on underlying rope layers is inevitable e.g. a boom hoist rope raising a boom from the horizontal position, severe crushing damage can be caused to underlying layers. Selection of a steel core as opposed to a fibre core will help this situation. Additional resistance to crushing is offered by a Dyform rope resulting from its high steel fill-factor.

Dyform ropes are recommended for multi - layer coiling operations where crushing on lower layers is inevitable.

Rotary hammer swaged Constructex ropes excel to combat problem spooling to minimise damage and crushing on the drum.



Corrosion resistance

If the wire rope is to be used in a corrosive environment then a galvanised coating is recommended. If corrosion is not a significant issue then a bright rope can be selected.

Where moisture can penetrate the rope and attack the core, plastic impregnation (PI) can be considered.

In order to minimise the effects of corrosion it is important to select a wire rope with a suitable manufacturing lubricant. Further advantages can be gained by lubricating the rope regularly whilst it is in service.

Properties of Extension of Steel Wire Ropes

Any assembly of steel wires spun into a helical formation either as a strand or wire rope, when subjected to a tensile load, can extend in three separate phases, depending on the magnitude of the applied load.

There are also other factors which produce rope extension which are very small and can normally be ignored.

Phase 1 - Initial or Permanent Constructional Extension

At the commencement of loading a new rope, extension is created by the bedding down of the assembled wires with a corresponding reduction in overall diameter. This reduction in diameter creates an excess length of wire which is accommodated by a lengthening of the helical lay. When sufficiently large bearing areas have been generated on adjacent wires to withstand the circumferential compressive loads, this mechanically created extension ceases and the extension in Phase 2 commences. The Initial Extension of any rope cannot be accurately determined by calculation and has no elastic properties.

The practical value of this characteristic depends upon many factors, the most important being the type and construction of rope, the range of loads and the number and frequency of the cycles of operation. It is not possible to quote exact values for the various constructions of rope in use, but the following approximate values may be employed to give reasonably accurate results.

Brand Name	Fibre Core	Steel Core
Lightly loaded Factor of safety about 8:1	0.25	0.125
Normally loaded Factor of safety about 5:1	0.50	0.25
Heavily loaded Factor of Safety about 3:1	0.75	0.50
Heavily loaded with many bends and/or deflections	Up to 2.00	up to 1.00

The above figures are for guidance purposes. More precise figures are available upon request.

Phase 2 - Elastic Extension

Following Phase 1, the rope extends in a manner which complies approximately with Hookes Law (stress is proportional to strain) until the Limit of Proportionality or Elastic Limit is reached.

It is important to note that wire ropes do not possess a Young's Modulus of Elasticity, but an 'apparent' Modulus of Elasticity can be determined between two fixed loads.

The Modulus of Elasticity also varies with different rope constructions, but generally increases as the cross-sectional area of steel increases.

By using the values given, it is possible to make a reasonable estimate of elastic extension, but if greater accuracy is required it is advisable to carry out a modulus test on an actual sample of the rope.

$$\text{Elastic Extension} = \frac{WL}{EA} \text{ mm}$$

W = load applied (kN)
L = rope length (m)
EA = axial stiffness MN

Phase 3 - Permanent Extension

The permanent, non-elastic extension of the steel caused by tensile loads exceeding the yield point of the material.

If the load exceeds the Limit of Proportionality, the rate of extension will accelerate as the load is increased, until a loading is reached at which continuous extension will commence, causing the wire rope to fracture without any further increase of load.

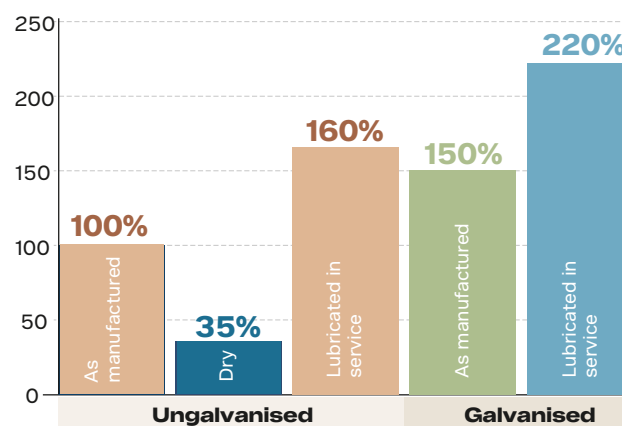
Lubrication

During the wire rope manufacturing process, the space between the wires is normally filled with petroleum based grease, these greases having a temperature operating range typically of 0°C to +60°C. Synthetic grease with an operating temperature range of -40°C to +90°C may be incorporated. It is important when specifying a particular rope to consider the type of lubricant required for the application and the amount of lubricant required on the exterior of the rope, as the tendency is to produce ropes with less grease on their exterior.

Lubricants may be applied to wire ropes during service to both increase their fatigue performance and protect the ropes from corrosion.

Typical wire rope bend fatigue results

(Bridon Endurance Dyform 34LR)



General Notes

Galvanized

Bekaert has the capability to offer any crane product in either Bright or Galvanized finish. Typically, cranes use Bright ropes in North American and Galvanized ropes in the European Union and the GOM. Globally, local usage standards, application conditions and preference may define the actual rope finish selected.

Smooth Drum

“When using multi-strand, rotation resistant products in multi-layer applications, the use of Lebus type grooved drums may provide superior spooling performance over smooth faced drums.”

Minimum Breaking Force

Many wire rope applications, mobile cranes and deep water mooring systems in particular benefit from very high strength to weight ratios. As a result, designers are constantly pushing the specific strength envelope of the wire rope used in their products. Bridon and many other rope companies

have responded to these requirements with innovative materials and manufacturing techniques to push rope strengths past the highest values listed in national and international standards.

Properties like strength, fatigue life, crush resistance and stability of physical properties are a function of the materials used, geometry of the design and manufacturing processes employed in the specific rope configuration. Optimizing the configuration to produce highest strength is not achieved without effecting other properties. Fatigue life and long term stability of physical properties are most affected by the techniques employed to produce extremely high strength wire rope. Because of these effects, characteristics of extremely high strength rope need to be understood for specific applications. Please contact Bridon Technical sales to review your specific use.

Cross Sections

The cross section image is for reference only. Actual cross sections vary due to diameter.



Assessing the safe operating condition of steel wire ropes

Bekaert recommends that the condition assessment of wire rope be carried out by a suitably qualified competent person against the requirements of BS ISO 4309.

Table 1: Rope Category Numbers for Non-Rotation Resistant Rope

Brand Name	Rope	Strand	RCN
6 Series 6x19	6 x 19S-IWRC	1-9-9	02
	6 x 25F-IWRC	1-6-6F-12	04
	6 x 26WS-IWRC	1-5-5+5-10	06
6 Series 6x36	6 x 31WS-IWRC	1-6-6+6-12	08
	6 x 36WS-IWRC	1-7-7+7-14	09
	6 x 41WS-IWRC	1-8-8+8-16	11
Dyform 6 Series Dyform 6	6 x K19S-IWRC	1-9-9	02
	6 x K26WS-IWRC	1-5-5+5-10	06
	6 x K36WS-IWRC	1-7-7+7-14	09
	6 x K41WS-IWRC	1-8-8+8-16	11
Dyform 6 Series Dyform Bristar 6	6 x K19S-EPIWRC	1-9-9	02
	6 x K26WS-EPIWRC	1-5-5+5-10	06
	6 x K36WS-EPIWRC	1-7-7+7-14	09
	6 x K41WS-EPIWRC	1-8-8+8-16	11
Dyform 8 Series Dyform 8	8 x K19S-IWRC	1-9-9	04
	8 x K26WS-IWRC	1-5-5+5-10	09
	8 x K36WS-IWRC	1-7-7+7-14	13
Dyform 8 Series Dyform 8PI	8 x K19S-EPIWRC	1-9-9	04
	8 x K26WS-EPIWRC	1-5-5+5-10	09
	8 x K36WS-EPIWRC	1-7-7+7-14	13
Dyform 8 Series Dyform DSC8	8 x K19S-PWRC	1-9-9	04
	8 x K26WS-PWRC	1-5-5+5-10	09
8 Series	8 x 19S-IWRC	1-9-9	04
	8 x 25F-IWRC	1-6-6F-12	06
	8 x 36WS-IWRC	1-7-7+7-14	13

Discard Criteria: Single-layer and parallel closed ropes

For guidance on discard of steel wire ropes, the tables below taken from ⁽¹⁾ should be used. When using this information in an official capacity, the latest version of the standard should be checked.

Table 3 - Single-layer and Parallel-closed Ropes

Rope Category number	Total number of load-bearing wires in the outer layer of strands in the rope (a)	Number of visible outer broken wires (b)					
		Sections of rope working in steel sheaves and/or spooling on a single-layer spooling drum Wire breaks randomly distributed				Sections of rope spooling on a multi-layer spooling drum (c)	
		Classes M1 to M4 or class unknown (d)				All Classes	
		Ordinary Lay		Lang's Lay		Ord & Lang's	
RCN	(n)	Over a length of 6d (e)	Over a length of 30d (e)	Over a length of 6d (e)	Over a length of 30d (e)	Over a length of 6d (e)	Over a length of 30d (e)
1	$n \leq 50$	2	4	1	2	4	8
2	$51 \leq n \leq 75$	3	6	2	3	6	12
3	$76 \leq n \leq 100$	4	8	2	4	8	16
4	$101 \leq n \leq 120$	5	10	2	5	10	20
5	$121 \leq n \leq 140$	6	11	3	6	12	22
6	$141 \leq n \leq 160$	6	13	3	6	12	26
7	$161 \leq n \leq 180$	7	14	4	7	14	28
8	$181 \leq n \leq 200$	8	16	4	8	16	32
9	$201 \leq n \leq 220$	9	18	4	9	18	36
10	$221 \leq n \leq 240$	10	19	5	10	20	38
11	$241 \leq n \leq 260$	10	21	5	10	20	42
12	$261 \leq n \leq 280$	11	22	6	11	22	44
13	$281 \leq n \leq 300$	12	24	6	12	24	48
	$n > 300$	$0,04 \times n$	$0,08 \times n$	$0,02 \times n$	$0,04 \times n$	$0,08 \times n$	

(1) BS ISO 4309 2017 Cranes- Wire Ropes- Care, Maintenance, Installation, Examination, and Discard.

Table 2: Rope Category Numbers for Rotation Resistant Rope

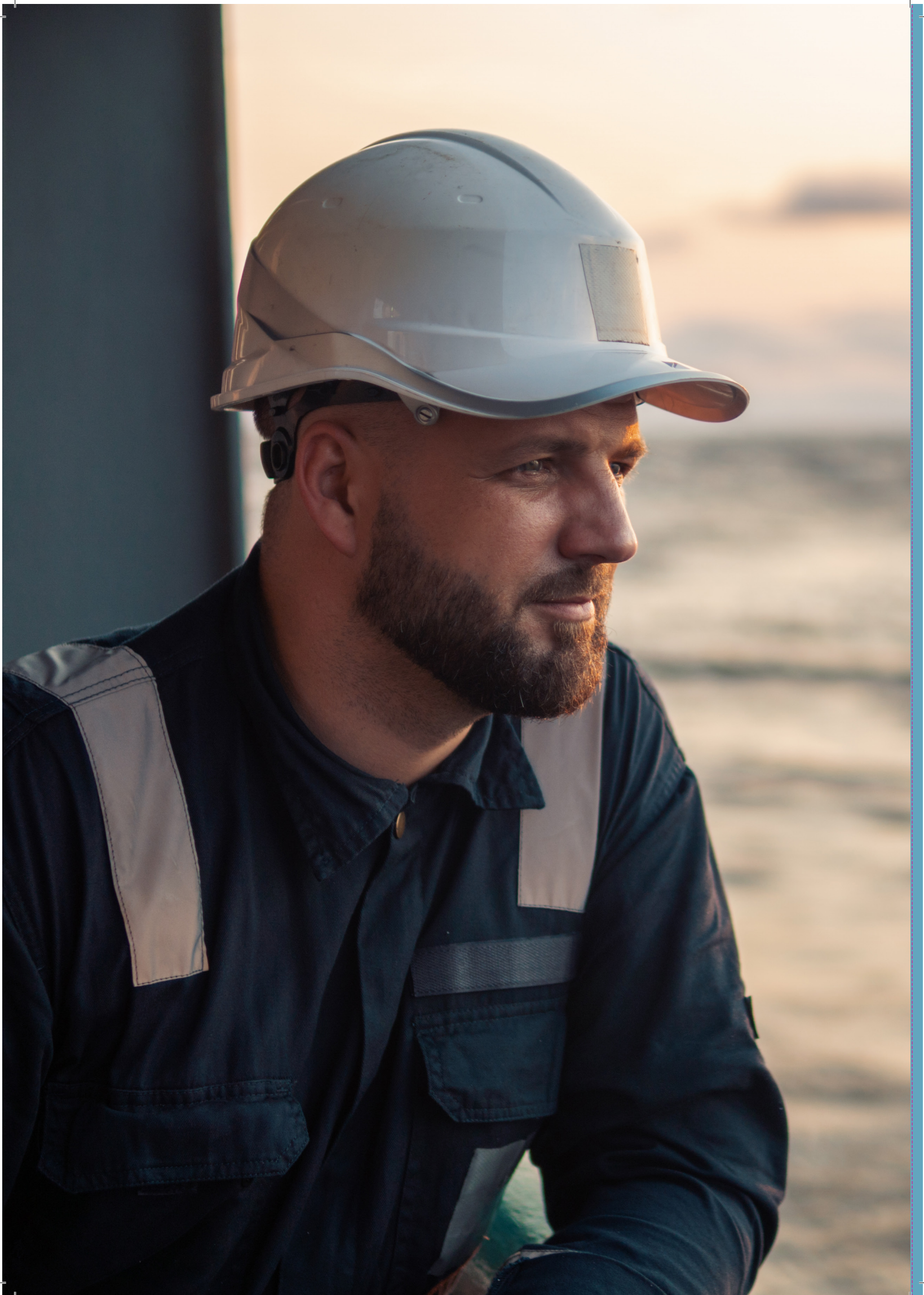
Brand Name	Rope	Strand	RCN
18 Series	18 x K7-WSC	1-6	23-1
50DB Series	26 x K7-WSC	1-6	23-1
Dyform 34 LR	35(W) x K7-WSC	1-6	23-2
	35(W) x K19S-WSC	1-9-9	30
35LS	35(W) x 7-WSC	1-6	23-2
	35(W) x 19S-WSC	1-9-9	30

Discard criteria: Rotation-resistant ropes

For guidance on discard of steel wire ropes, the tables below taken from (1) should be used. When using this information in an official capacity, the latest version of the standard should be checked.

Table 4 - Rotation-Resistant Ropes

Rope Category number	Total number of load-bearing wires in the outer layer of strands in the rope (a)	Number of visible outer broken wires (b)			
		Sections of rope working in steel sheaves and/or spooling on a single-layer spooling drum Wire breaks randomly distributed		Sections of rope spooling on a multi-layer spooling drum (c)	
		Over a length of 6d (e)	Over a length of 30d (e)	Over a length of 6d (e)	Over a length of 30d (e)
RCN	(n)				
21	4 strands $n \leq 100$	2	4	2	4
	3 or 4 strands $n \leq 100$	2	4	4	8
	At least 11 outer strands				
23-1	$71 \leq n \leq 100$	2	4	4	8
23-2	$101 \leq n \leq 120$	3	5	5	10
23-3	$121 \leq n \leq 140$	3	5	6	11
24	$141 \leq n \leq 160$	3	6	6	13
25	$161 \leq n \leq 180$	4	7	7	14
26	$181 \leq n \leq 200$	4	8	8	16
27	$121 \leq n \leq 220$	4	9	9	18
28	$221 \leq n \leq 240$	5	10	10	19
29	$241 \leq n \leq 260$	5	10	10	21
30	$261 \leq n \leq 280$	6	11	11	22
31	$281 \leq n \leq 300$	6	12	12	24
	$n > 300$	6	12	12	24



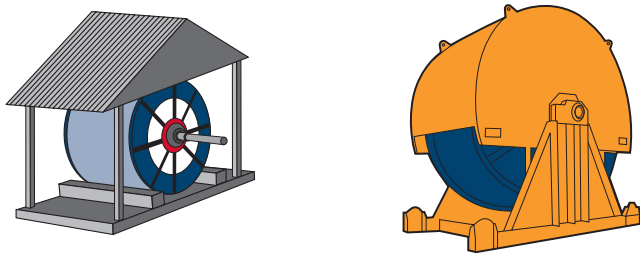
Storage guidance

WIRE ROPE STORAGE

Ensure all ropes being taken into storage are clearly identified and are accompanied with a manufacturers certificate.

Store the rope off the ground or floor in a clean, dry, well-ventilated, covered location. If it is not possible to store it inside, cover it with waterproof material or a suitable structure to protect the rope from the sun and rain

Note: Coverings should be such that water drains away, not become trapped.



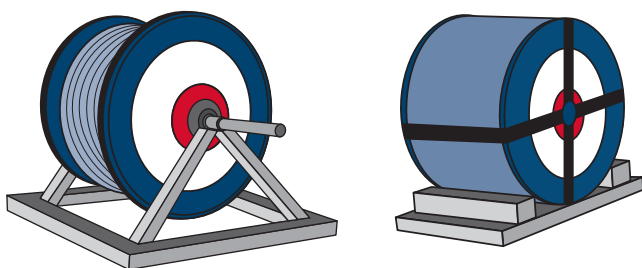
Ensure the floor or ground is level and capable of supporting the total mass of rope and reel. Bearers may be required to distribute the loading, although most steel reels will be supplied on cradles.

Make sure that there is a free flow of air around the rope and that it is isolated from direct contact with the floor or ground, chemical fumes, moisture, steam and other corrosive agents.

WARNING:

Failure to comply with these recommendations can result in the rope becoming contaminated with harmful materials and foreign debris. These contaminants can induce corrosion and render the rope unsafe for use.

If supplied on a reel without a cradle, the whole package should be supported on a simple frame or cradle that is located on the ground and is capable of supporting the total mass of rope plus reel.



WARNING: Under no circumstances should the reel be lifted with the aid of the cradle, unless the cradle has been specifically designed, clearly identified and rated that it may be used for lifting purposes.

Rotate the reel periodically during long periods of storage, particularly in warm environments and climates, to minimise the migration of lubricant from the rope.

For very large reels of rope, where storing undercover is not practical, the reels will have been supplied on a cradle and the reel should be covered particularly for long term storage, with special protective sheet/tarpaulin to provide protection from the sun, wind, rain, etc.

WARNING:

Properties of the rope may be affected i.e. reduction in breaking strength, if the rope is stored for long periods at elevated temperatures e.g. none temperature controlled warehouse; bottom of mine shaft, etc.

To minimise the possibility of condensation being trapped between the rope and the packaging, the covering may be secured direct to the cradle. This will allow air to the underside of the reel and rope.

Note1:

The picture illustrates packaging provided by Bridon-Bekaert where the wrapping on the supply reel is already anchored to the cradle and provision for ventilation is provided.

Note2:

The packaging material can be supplied with reflective outer coating and/or insulation to aid temperature control.

Reels which have been supplied fully wrapped may suffer from a build up of condensation between the rope and the packaging material, which can result in corrosion and deterioration of the rope. In these situations it may be necessary to replace the packaging or to ventilate the packaging.

Wire ropes in storage should not be exposed to temperatures above 90°C.

Note:

Extended exposure to high ambient temperatures can result in a significant higher rope temperature. Hence, where possible to optimise the service life of the rope, ambient temperatures should be maintained below 50°C

Make sure that the rope is protected in such a manner that it will not be exposed to any accidental damage either during storage or when placing the rope in, or taking the rope out of storage.

Wire ropes should be protected from windblown debris (sand, shot blast grit, etc) and stored away from welding activities.

Wire ropes in storage should routinely (ideally every six months) and prior to being taken into use/service be inspected by a competent person for signs of damage/deterioration to either the rope or packaging. During the inspection, if signs of migration and/or deterioration of manufacturing lubricant are evident a suitable rope dressing which is compatible with the manufacturing lubricant should be applied.

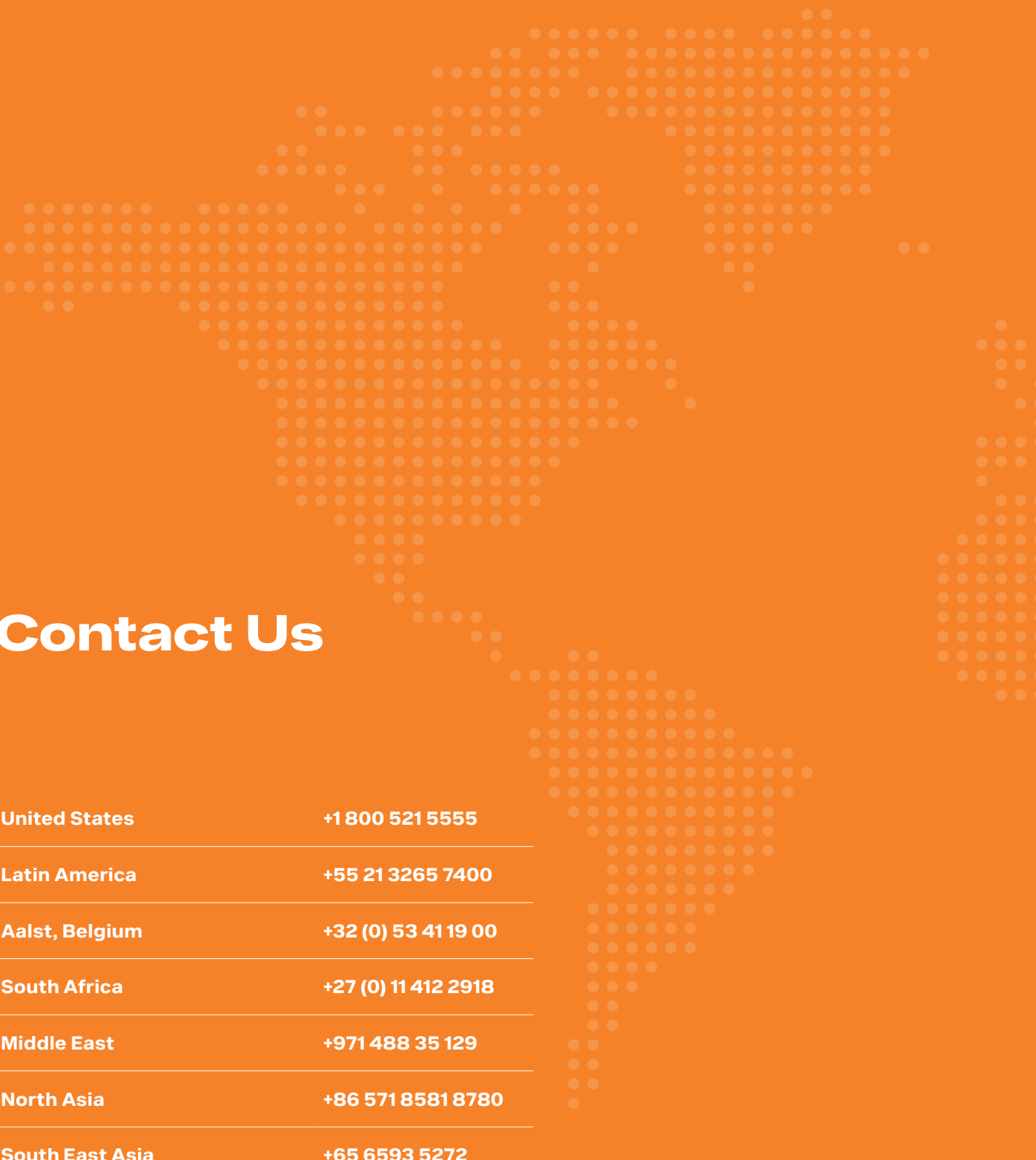
Contact Bekaert or the rope supplier and follow the original equipment manufacturers instruction

manual for guidance on recommended products or types of rope dressings, methods of application and equipment necessary to apply the dressing. Please contact Bekaert for further advice on limitations to the storage of wire ropes.

Note: It is good practice to remove rope from the store on a 'first in, first out' basis, to minimise the time held in storage.

WARNING: Failure to apply the correct rope dressing can render the original manufacturing lubricant ineffective and reduce rope performance.





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