

offshore oil & gas.

Advanced rope solutions for the offshore oil & gas exploration, construction and production industries.



market leading rope solutions for offshore oil & gas.

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

Our oil and gas 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.

BRIDON
ScanRope
BlueStrand

our brands.

a BRIDON · BEKAERT Ropes Group Brand

High Performance Brands

BRIDON[®]

WRI[®]

ScanRope[®]

Value Brands

BlueStrand[®]

CIMAF[®]

PRODINSA[®]

we are active in many markets.



Ropes360 services.

On-Site Services

Bridon-Bekaert services offer an extensive range of options, including the following:

Installation

BBRG Services offer proven procedures and expert consultancy to ensure the installation of your rope is right first time, every time. Our skilled technicians can help with all aspects of rope installation including splicing, socketing, and spooling services (with capacity up to 450t all with back tension capability).

Maintenance

BBRG maintenance packages include termination repair, re-splicing, lubrication and corrosion protection coating. We use purpose designed lubrication systems and specifically formulated, genuine BBRG lubricants to keep your rope in peak condition.

Inspection and Non-Destructive Examination

Our highly trained technicians prepare reports for statutory purposes and provide recommendations based on visual inspection and Non-Destructive Examination (NDE) to give customers information vital to making a decision about whether a rope is fit for continued use, needs further testing, or should be retired.

Guidance on Discard & Feedback

Whether establishing periodic discard criteria or assessing a rope against industry standards, our engineers can help you make the right decision. Combining inspection results with extensive application knowledge allows us to give post-retirement feedback to improve performance via modification of rope design and construction.

Rope Record Management and Rope Certification

Maintaining the service history of rope is imperative to its safe and effective operation, we can help you manage the administration of ropes and certificates of ropes easily and reliably. We have available cloud based software storage for retrieval of historical records.

Relubrication

Relubrication of ropes in service to extend rope life using pressure lubrication and other methods.

Application Engineers

- Rope selection and specification
- Rope life management packages
- Training in rope use and rope life extension
- Troubleshooting and guidance for ropes in use

BBtec

- Post-retirement rope analysis
- Rope condition assessment
- Forensic investigation
- Rope product benchmarking
- Rope mechanical testing
- Condition assessment
- Supply chain integrity management
- Rope torque-turn testing
- Destruction testing and wire tensile testing
- Rope bending fatigue testing
- Multi-layer spooling (MLS) test



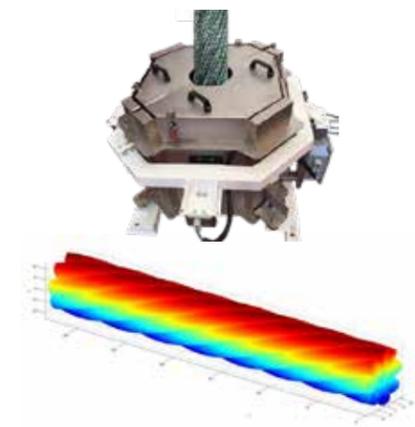
MORE (Maximum Operating Rope Efficiency Program)

MORE (i.e. Maximum Operating Rope Efficiency) is about working very closely with our customers to safely extend the life of their operating ropes, delivering a very effective method of savings without compromising on product, quality and safety.

VisionTek

Safely extending the lifetime of rope

Our customers are increasingly focusing on safety and efficiency while extending the lifetime of their ropes safety. In response, BBRG and VisionTek Engineering developed the world's first mobile optical rope measuring system, designed for continuous monitoring of moving ropes - both steel and synthetic.



technologies.

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.

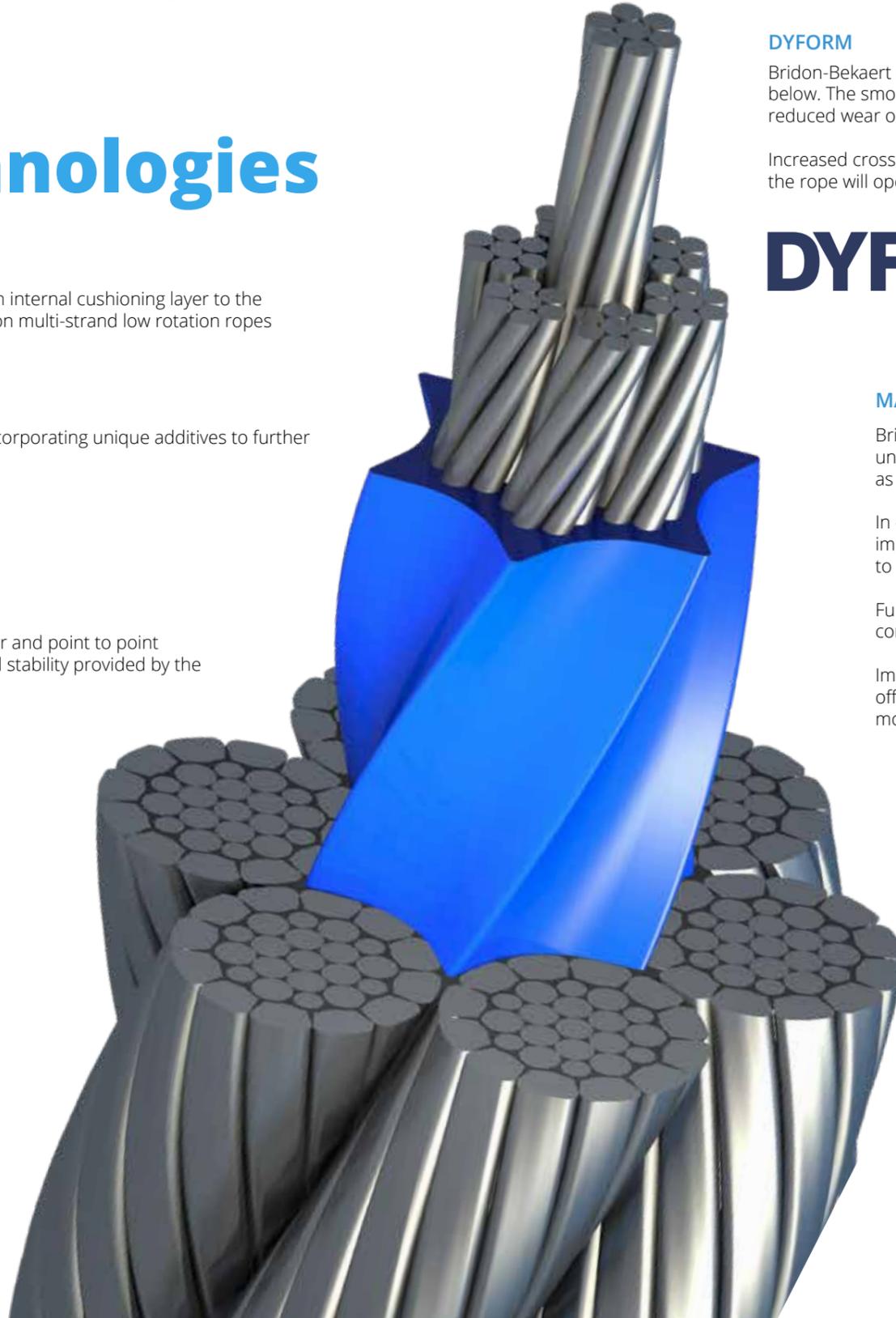
NXG

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



Rope Compaction

DYFORM

Bridon-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 ensuring that the rope will operate with lower internal stress levels resulting in longer bending fatigue life and lower costs.

DYFORM®



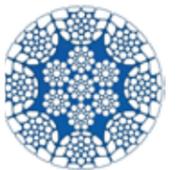
MAX TECHNOLOGY

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

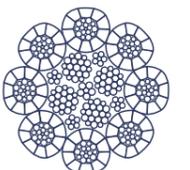
In comparison to traditional Dyform ropes the Max technology further improves rope to sheave contact and improved diameter stability leading to reduced wear on both rope and sheave.

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

Bezinal Coating

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 temperatures.

technologies.

(continued)

NXG

Bridon-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.

1 LUBRICATION
(Blocking Compound)

2 POLYMER CORE
(Blocking Compound)

3 WIRE COATING
(Zinc)

EXTENDED
ROPE LIFE

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.

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.

DYFORM
Bristar NXG

Hydra  **NXG**

lubricants.

BRILUBE® FIT

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

- ✓ 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*

- ✓ 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.

product selection guide.

Offshore exploration



Bridon-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



Bridon-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



Bridon-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.

Application	Crane & Winch Ropes													Anchor Lines		Permanent 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	35LS	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											✓	✓	✓	✓							
PAGE NUMBER	16	17	18 - 19	20 - 21	22	23	24	25	26 - 27	28	29	30 - 31	32	33	34	35	36	37	38	39	

* 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.

DRILLING LINES



6x19 Class

API 9A



- ✓ 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 Air (M)		EIPS / 1960			EEIPS / 2160			MN	Mlbs	mm ²	in ²
in	mm	kg/m	lbs/ft	kN	Tons	Tons	kN	Tons	Tons	MN	Mlbs	mm ²	in ²
1	25.4	2.76	1.85	460	46.9	51.7	506	51.6	56.9	30.1	6.64	290	0.449
1.1/8	28.6	3.49	2.34	579	59.0	65.0	636	64.9	71.5	38.2	8.42	367	0.569
1.1/4	31.8	4.30	2.89	711	72.5	79.9	782	79.7	87.9	47.2	10.4	454	0.704
1.3/8	34.9	5.20	3.49	854	87.1	96.0	943	96.2	106	56.9	12.5	547	0.848
1.1/2	38.1	6.20	4.16	1015	103	114	1113	113	125	67.8	14.9	652	1.010
1.5/8	41.3	7.27	4.88	1175	120	132	1299	132	146	79.6	17.6	766	1.187
1.3/4	44.5	8.43	5.66	1362	139	153	1504	153	169	92.5	20.4	889	1.378
1.7/8	47.6	9.67	6.49	1549	158	174	1709	174	192	106	23.3	1017	1.577
2	50.8	11.01	7.39	1762	180	198	1931	197	217	121	26.6	1159	1.796
2.1/8	54.0	12.42	8.34	1967	200	221	2163	220	243	136	30.0	1309	2.029
2.1/4	57.2	13.93	9.35	2198	224	247	2421	247	272	153	33.7	1469	2.277

Dyform Bristar 6

API 9A



- ✓ 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)		kN	Tonnes	Tons	MN	Mlbs	mm ²	in ²
in	mm	kg/m	lbs/ft	kN	Tonnes	Tons	MN	Mlbs	mm ²	in ²
1 1/8	25.4	2.84	1.91	514	52.4	57.7	34	8	334	0.518
1 1/4	28.6	3.60	2.42	652	66.4	73.2	44	10	424	0.657
1 1/4	31.8	4.45	2.99	805	82.1	90.5	54	12	524	0.812
1 3/8	34.9	5.36	3.60	970	104	109	65	15	631	0.979
1 1/2	38.1	6.39	4.29	1156	123	130	78	17	752	1.17
1 5/8	41.3	7.51	5.04	1359	144	153	91	20	884	1.37
1 3/4	44.5	8.71	5.85	1577	170	177	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	2055	224	231	138	31	1338	2.07
2 1/8	54.0	12.8	8.62	2323	250	261	156	35	1512	2.34
2 1/4	57.2	14.4	9.67	2606	274	293	175	39	1696	2.63
2 1/2	63.5	17.7	11.9	3212	327	361	215	48	2090	3.24
2 3/4	69.9	21.5	14.4	3762	383	423	261	59	2533	3.93

Note: Tonnes = 1000kg; Tons = 2000lbs
This table is 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.

marine riser tensioner lines.

MRT LINES



Dyform Bristar 6



- ✓ 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 Load			Axial stiffness @20% load		Metallic cross section	
in	mm	kg/m	lbs/ft	kN	Tonnes	Tons	MN	Mlbs	mm ²	in ²
1 3/4	44.5	8.79	5.91	1486	172	167	105	24	1024	1.59
2	50.8	11.5	7.72	1941	198	218	138	31	1338	2.07
	52	12.0	8.09	2034	207	228	144	32	1402	2.17
2 1/8	54	13.0	8.72	2194	239	246	156	35	1512	2.34
2 1/4	57.2	14.5	9.77	2370	269	266	174	39	1693	2.62
2 1/2	63.5	17.9	12.1	2926	312	329	215	48	2090	3.24
2 3/4	69.9	21.7	14.6	3546	361	398	261	59	2533	3.93
2 7/8	73.0	23.7	15.9	3867	405	434	285	64	2762	4.28
3	76.2	25.8	17.4	4214	430	473	310	70	3010	4.67

Note: Tonnes = 1000kg Tons = 2000lbs
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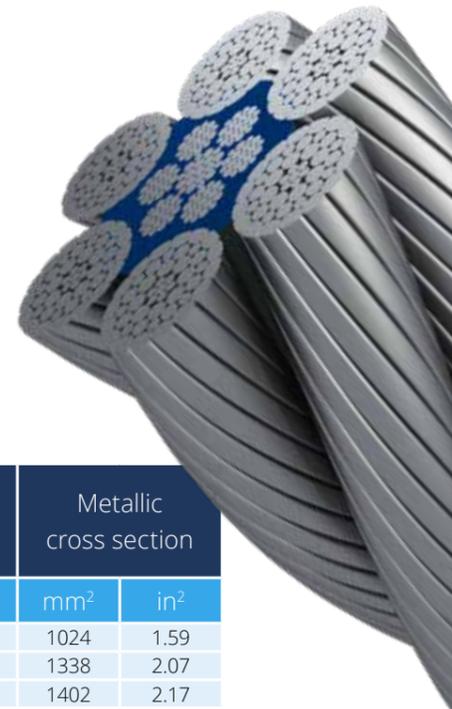
Dyform Bristar 8

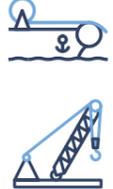


- ✓ Maximum bend fatigue performance
- ✓ Extended rope life for reduced downtime costs
- ✓ Specialist lubrication options
- ✓ Corrosion protected core
- ✓ Optional NXG engineered polymer impregnated core which delivers enhanced bend fatigue resistance
- ✓ Greater reduction in sheave wear

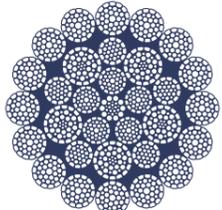
Diameter		Approximate Mass		Minimum Breaking Load			Axial stiffness @20% load		Metallic cross section	
in	mm	kg/m	lbs/ft	kN	Tonnes	Tons	MN	Mlbs	mm ²	in ²
1 3/4	44.5	9.26	6.22	1650	168	185	103	24	1030	1.6
2	50.8	12.1	8.13	2150	219	242	134	31	1342	2.08
	52	12.6	8.47	2260	230	254	141	32	1406	2.18
2 1/8	54	13.6	9.14	2430	248	273	152	35	1517	2.35
2 1/4	57.2	15.3	10.28	2730	278	307	170	39	1702	2.64
2 1/2	63.5	18.9	12.7	3370	344	379	210	48	2097	3.25
2 3/4	69.9	22.9	15.39	4080	416	459	254	58	2541	3.94
2 7/8	73	24.9	16.73	4450	454	500	277	63	2772	4.3
3	76.2	27.14	18.24	4845	494	545	302	69	3020	4.68

Note: Tonnes = 1000kg Tons = 2000lbs
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Hydra Plus / NXG



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.

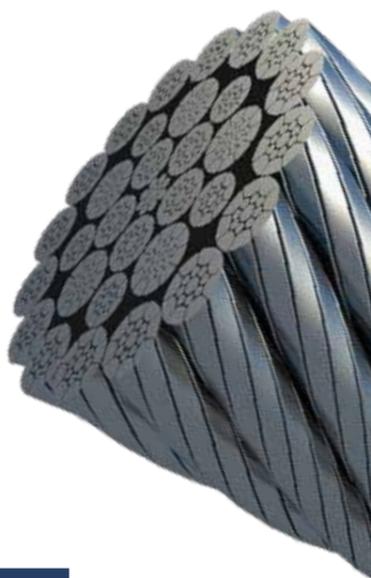
- ✓ Dyform construction for crush & wear resistance
- ✓ Higher fatigue performance



Hydra 7

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

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



BRIDON Hydra Plus

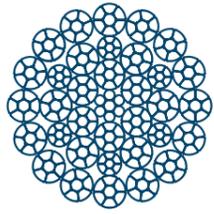
Diameter		Nominal Length Mass		Minimum Breaking Load					
				EIPS / 1960			EEIPS / 2160		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons	kN	Tonnes	Tons
50.8	2	12.8	8.59	2330	237	261.9	2450	249	275.4
52		13.5	9.06	2450	249	275.4	2560	261	287.8
54	2 1/8	14.5	9.74	2640	269	296.7	2760	281	310.2
56		15.6	10.47	2840	289	319.2	2970	302	333.8
60		17.9	12.02	3250	331	365.3	3410	347	383.3
62		19.1	12.82	3480	354	391.2	3640	371	409.1
64		20.4	13.70	3700	377	415.9	3880	395	436.1
66		21.7	14.57	3940	401	442.9	4120	420	463.1
68		23	15.44	4180	426	469.8	4380	446	492.3
70		24.4	16.38	4430	451	497.9	4640	473	521.5
72		25.8	17.32	4680	477	526.0	4910	500	551.9
74		27.2	18.26	4950	504	556.4	5180	528	582.2
76		28.7	19.27	5220	532	586.7	5470	557	614.8
78		30.3	20.34	5490	559	617.1	5760	587	647.4
80		31.8	21.35	5780	589	649.7	6060	617	681.1
82		32.3	21.69	5890	600	662.0	6170	629	693.5
84		33.9	22.76	6180	630	694.6	6480	660	728.4
86		35.6	23.90	6480	660	728.4	6790	692	763.2
88		37.3	25.04	6780	691	762.1	7110	725	799.2
90		39	26.18	7100	724	798.0	7430	757	835.1
92		40.7	27.33	7420	756	834.0	7770	792	873.3
96		44.3	29.74	8070	822	907.1	8450	861	949.8
98		46.2	31.02	8410	857	945.3	8810	898	990.2
102		50.4	33.84	9170	935	1030.7	9600	978	1079.0
106		54.4	36.52	9910	1010	1113.9	10370	1050	1165.6
108	4 1/4	56.5	37.93	10270	1040	1154.3	10760	1090	1209.4
110		58.7	39.41	10660	1080	1198.2	11160	1130	1254.4
116		65.2	43.78	11840	1200	1330.8			
122		72.2	48.48	13100	1330	1472.4			
124		74.5	50.02	13530	1370	1520.8			
128		79.4	53.31	14410	1460	1619.7			
130		81.9	54.99	14870	1510	1671.4			
135		88.4	59.35	15290	1550	1718.6			
138		92.3	61.97	15980	1620	1796.2			
142		97.8	65.66	16910	1720	1900.7			
146	5 3/4	103	69.15	17870	1820	2008.6			
150		109	73.18	18850	1920	2118.7			
152		112	75.20	19350	1970	2174.9			

BRIDON Hydra 7

Diameter		Mass				Minimum Breaking Load		
		In Air		In Water				
mm	in	kg/m	lb/ft	kg/m	lb/ft	kN	Tonnes	lbs
50		12.3	8.27	10.4	6.99	2300	235	259
50.8	2	12.6	8.47	10.7	7.19	2370	242	267
52		13.2	8.87	11.2	7.53	2490	254	280
54	2.125	14.3	9.61	12.2	8.20	2680	273	302
56		15.4	10.3	13.1	8.80	2890	295	325
58	2.25	16.5	11.1	14	9.41	3090	315	348
60	2.375	17.8	12.0	15.2	10.21	3350	342	377
62		18.8	12.6	16	10.75	3540	361	398
64	2.5	20.1	13.5	17.1	11.49	3770	384	424
66		21.4	14.4	18.2	12.23	4010	409	451
66.675	2.625	21.8	14.6	18.5	12.43	4090	417	460
68		22.6	15.2	19.2	12.90	4250	433	479
70	2.75	24	16.1	20.4	13.71	4510	460	507
72		25.4	17.1	21.6	14.52	4770	486	537
73	2.875	26.2	17.6	22.2	14.92	4910	501	552
74		26.9	18.1	22.8	15.32	5040	514	567
76		28.3	19.0	24.1	16.20	5310	542	598
76.2	3	28.4	19.1	24.2	16.26	5340	545	601
77		29	19.5	24.7	16.60	5400	551	607
80	3.125	31.4	21.1	26.7	17.94	5820	593	654
82	3.25	33.4	22.4	28.4	19.08	6060	618	682
84		34.6	23.3	29.4	19.76	6280	640	707
86	3.375	36.3	24.4	30.8	20.70	6580	671	741
88		37.9	25.5	32.2	21.64	6810	694	767
90	3.5	39.7	26.7	33.7	22.65	7130	727	802
92	3.625	41.6	28.0	35.3	23.72	7460	761	839
94		43.3	29.1	36.8	24.73	7690	784	865
95	3.75	44.5	29.9	37.8	25.40	7800	795	878
96		45.2	30.4	38.4	25.80	7830	799	881
98	3.875	47.4	31.9	40.3	27.08	8230	839	926
100		49	32.9	41.7	28.02	8500	867	956
102	4	51	34.3	43.3	29.10	8840	901	995
104		53	35.6	45.1	30.31	9190	937	1033
105	4.125	54	36.3	45.9	30.84	9370	955	1053
106		55.1	37.0	46.8	31.45	9550	974	1074
108	4.25	57.1	38.4	48.6	32.66	9910	1011	1120
109		58.2	39.1	49.5	33.26	10100	1030	1140

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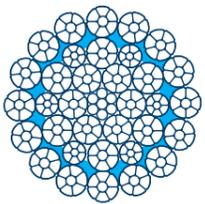
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Dyform 34LR

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.

- ✓ 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.

- ✓ Stable rope construction
- ✓ Higher bending fatigue performance



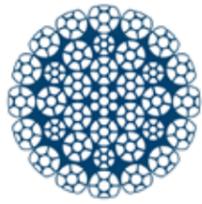
WINCH, DIVING BELL, FLOATING / BARGE, LIFE BOAT ROPES



product table.

BRIDON				Dyform 34LR / PI					
Diameter		Nominal Length Mass		Minimum Breaking Load					
				EIPS / 1960			EEIPS / 2160		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons	kN	Tonnes	Tons
10.0	3/8	0.45	0.305	82	8.36	9.2	86	8.77	9.7
11.0		0.50	0.336	90.8	9.25	10.2	95.3	9.71	10.7
		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
		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
		1.28	0.860	232	23.6	26.1	251	25.6	28.2
16.0	5/8	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			

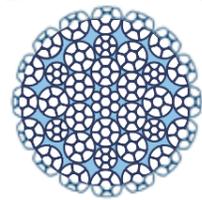
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Dyform 34LR MAX

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.

- ✓ 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.

- ✓ Higher bending fatigue performance
- ✓ Maintenance of internal lubricant



WINCH, DIVING BELL, FLOATING / BARGE, LIFE BOAT ROPES



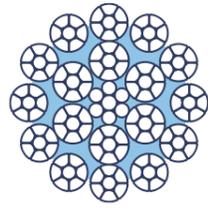
product table.

BRIDON Dyform 34LR MAX / PI						
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

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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.

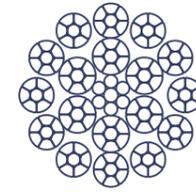
- ✓ Good wear characteristics due to its smooth exterior profile
- ✓ Plastic layer improves bending fatigue performance
- ✓ Robust and stable rope construction
- ✓ Diameter stability, requirement of multi layered spooling



FLOATING / BARGE

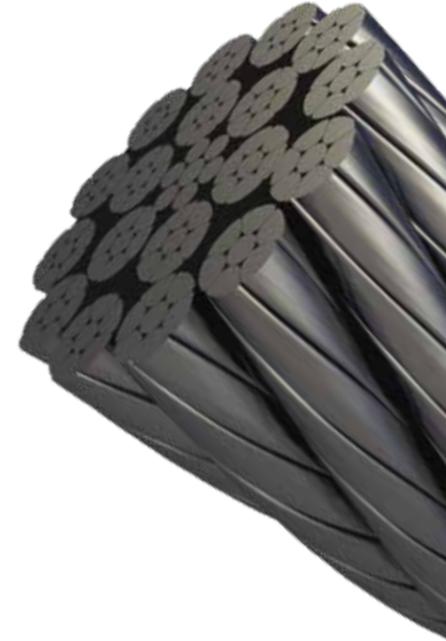


18 Series



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

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



BRIDON		Dyform 18 PI				
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

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BlueStrand		18 Series				
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

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Dyform 50 DB Series

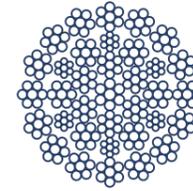


50 DB Series ropes are compacted rotation resistant galvanized constructions consisting of an inner part with an outer layer of strands spun in the opposite direction.

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



35LS



35LS is a conventional low rotation resistant galvanized rope consisting of three layers of strands the inner two layers spun in the opposite direction to the outer layer of strands manufactured in accordance with EN 12385.

- ✓ Rotation resistant
- ✓ Flexible rope construction
- ✓ For use on single layer drums only

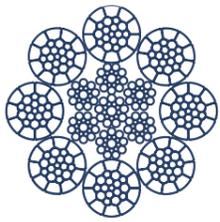


Diameter		Nominal Length Mass		Minimum Breaking Load		
				EIPS / 1960		
mm	in	kg/m	lbs/ft	kN	Tonnes	Tons
8.00	5/16	0.29	0.20	57.2	5.83	6.43
9.00		0.30	0.20	57.2	5.83	6.43
		0.38	0.25	72.4	7.38	8.14
	3/8	0.42	0.28	81.1	8.27	9.12
10.0		0.47	0.31	89.4	9.12	10.0
11.0		0.57	0.38	108	11.0	12.1
	7/16	0.58	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

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Diameter		Nominal Length Mass	Minimum Breaking Load	
			EIPS / 1960	
mm	kg/m	kN	Tonnes	
10	0.45	75.5	7.69	
11	0.54	91.3	9.31	
12	0.65	109	11.1	
13	0.76	128	13.0	
14	0.88	148	15.1	
15	1.01	170	17.3	
16	1.15	193	19.7	
18	1.46	244	24.9	
19	1.62	272	27.8	
20	1.80	302	30.8	
21	1.98	333	33.9	
22	2.18	365	37.2	
23	2.38	399	40.7	
24	2.59	435	44.3	
25	2.81	472	48.1	
26	3.04	510	52.0	
28	3.53	592	60.3	
32	4.61	773	78.8	

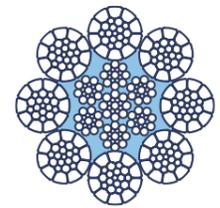
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Dyform 8

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

- ✓ 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.

- ✓ 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.

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



FLOATING / BARGE, A&R LINES



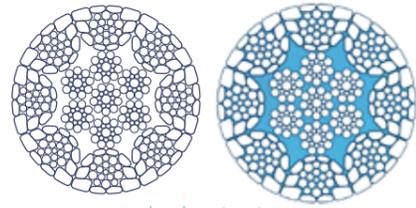
product table.

BRIDON Dyform 8 / PI / Bristar									
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	0.42	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
50.0		11.8	7.91	2080	225	248	2310	236	260
52.0		12.0	8.09	2260	230	254	-	-	-
54.0	2 1/8	13.0	8.72	2430	248	273	-	-	-
57.2	2 1/4	14.5	9.77	2730	278	307	-	-	-
63.5	2 1/2	17.9	12.1	3370	344	379	-	-	-
69.9	2 3/4	21.7	14.6	4080	416	459	-	-	-
73.0	2 7/8	23.7	15.9	4450	454	500	-	-	-
76.2	3	25.8	17.4	4820	492	542	-	-	-

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Dyform 8 MAX / PI

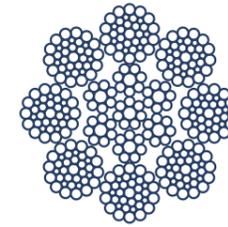


Dyform 8 Max is a high performance compacted single layer constructed galvanized rope with 8 outer strands which has undergone a final rope compaction process and performs excellent in multilayer drum applications. Optionally, it incorporates a plastic layer (PI) between the inner and outer part of the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

- ✓ Very high breaking strength
- ✓ Good crush resistance
- ✓ Accurate rope diameter and tight tolerance

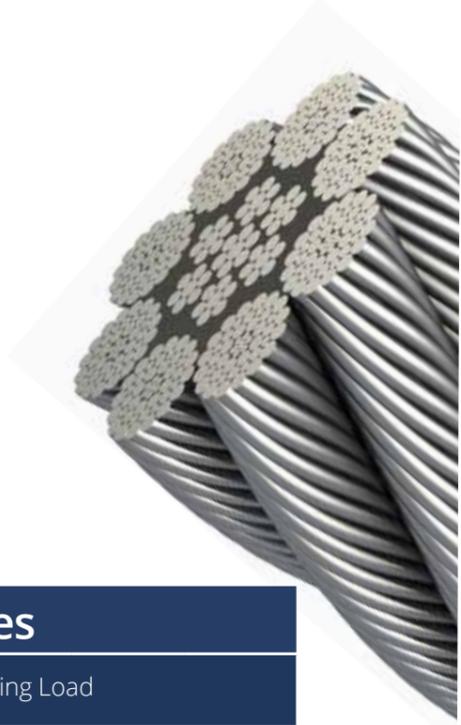


8 Series



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.

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



BRIDON Dyform 8 MAX / PI						
Diameter		Nominal Length Mass		Minimum Breaking Load		
mm	in	kg/m	lbs/ft	EIPS / 1960		
				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

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BlueStrand				8 Series					
Diameter		Nominal Length Mass		Minimum Breaking Load					
mm	in	kg/m	lbs/ft	EIPS / 1960			EEIPS / 2160		
				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
	9/16	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

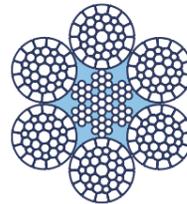
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Dyform 6

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.

- ✓ 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.

- ✓ 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.

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



WINCH, DRILL, MRT, FLOATING / BARGE, LIFTING SLING



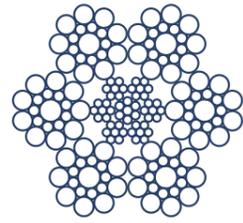
product table.

BRIDON				Dyform 6 / PI / Bristar					
Diameter		Nominal Length Mass		Minimum Breaking Force					
				EIP / 1960			EEIP / 2160		
mm	inch	kg/m	lb/ft	kN	Tons	Tonnes	kN	Tons	Tonnes
7.9	5/16	0.29	0.19	53	5.9	5.4	58	6.5	5.9
8.0		0.29	0.19	53	6.0	5.4	59	6.6	6.0
9.0		0.37	0.25	68	7.6	6.9	75	8.4	7.6
9.5	3/8	0.41	0.28	75	8.5	7.7	83	9.3	8.5
10.0		0.45	0.30	83	9.4	8.5	92	10.3	9.4
11.0		0.56	0.38	100	11.2	10.2	111	12.5	11.3
11.1	7/16	0.57	0.38	102	11.5	10.4	113	12.7	11.5
12.0		0.66	0.44	120	13.4	12.2	131	14.8	13.4
12.7	1/2	0.73	0.49	133	15.0	13.6	147	16.5	15.0
13.0		0.77	0.52	140	15.8	14.3	155	17.4	15.8
14.0		0.90	0.60	163	18.3	16.6	179	20.2	18.3
14.3	9/16	0.94	0.63	170	19.1	17.3	187	21.0	19.1
15.0		1.03	0.69	187	21.0	19.0	207	23.2	21.1
15.9	5/8	1.15	0.77	211	23.7	21.5	231	26.0	23.6
16.0		1.16	0.78	213	23.9	21.7	234	26.3	23.9
17.0		1.32	0.89	240	27.0	24.5	265	29.8	27.0
18.0		1.48	0.99	270	30.3	27.5	297	33.4	30.3
19.0		1.65	1.11	300	33.7	30.6	331	37.2	33.8
19.1	3/4	1.67	1.12	304	34.2	31.0	335	37.6	34.1
20.0		1.82	1.22	333	37.4	33.9	367	41.3	37.5
22.0		2.20	1.48	403	45.3	41.1	444	49.9	45.3
22.2	7/8	2.25	1.51	411	46.2	41.9	452	50.8	46.1
24.0		2.63	1.77	480	53.9	48.9	529	59.4	53.9
25.4	1	2.95	1.98	538	60.4	54.8	593	66.6	60.4
26.0		3.09	2.08	564	63.4	57.5	621	69.8	63.3
28.0		3.57	2.40	653	73.4	66.6	721	81.0	73.5
28.6	1 1/8	3.73	2.51	682	76.6	69.5	752	84.4	76.6
30.0		4.11	2.76	751	84.3	76.5	827	93.0	84.4
31.8	1 1/4	4.61	3.10	844	94.8	86.0	930	104.5	94.8
32.0		4.68	3.14	854	95.9	87.0	941	105.8	96.0
34.0		5.27	3.54	965	108.4	98.4	1059	119.0	108.0
34.9	1 3/8	5.56	3.74	1000	112.4	102.0	1118	125.6	114.0
36.0		5.91	3.97	1079	121.2	110.0	1187	133.3	121.0
38.0		6.59	4.43	1196	134.4	122.0	1314	147.7	134.0
38.1	1 1/2	6.62	4.45	1206	135.5	123.0	1324	148.8	135.0
40.0		7.30	4.91	1324	148.8	135.0	1461	164.2	149.0
41.3	1 5/8	7.79	5.23	1412	158.7	144.0	1559	175.2	159.0
42.0		8.05	5.41	1461	164.2	149.0	1618	181.8	165.0
44.0		8.84	5.94	1608	180.7	164.0	1775	199.5	181.0
44.5	1 3/4	9.03	6.07	1648	185.1	168.0	1814	203.9	185.0
46.0		9.66	6.49	1755	197.3	179.0	1932	217.1	197.0
47.6	1 7/8	10.30	6.92	1883	211.6	192.0	2079	233.6	212.0
48.0		10.50	7.06	1912	214.9	195.0	2108	236.9	215.0
50.0		11.40	7.66	2079	233.6	212.0	2246	252.4	229.0
50.8	2	11.80	7.93	2148	241.3	219.0	-	-	-
52.0		12.30	8.27	2246	252.4	229.0	-	-	-
54.0	2 1/8	13.30	8.94	2422	272.2	247.0	-	-	-
56.0		14.30	9.61	2609	293.1	266.0	-	-	-
57.2	2 1/4	14.90	10.01	2726	306.4	278.0	-	-	-
63.5		18.40	12.36	3354	376.9	342.0	-	-	-
64.0		18.70	12.57	3403	382.4	347.0	-	-	-
69.9	2 3/4	22.30	14.98	4070	457.3	415.0	-	-	-
73.0	2 7/8	24.30	16.33	4433	498.1	452.0	-	-	-
76.2	3	26.50	17.81	4825	542.2	492.0	-	-	-

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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.

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



Steelite 12-S



Steelite-12 is a 12 strand braided construction made with "Steelite" HMPE fibres. Steelite 12's low elongation and high strength to weight ratio makes it a size for size strength match to steel wire rope.

- ✓ High strength (size for size match for steel)
- ✓ Quick and easy to splice and repair
- ✓ Load bearing material is easily visually inspected
- ✓ Does not rotate under load or lose strength when wet
- ✓ Floats

BlueStrand		6 Series										
Dia.	Nominal Length Mass		Minimum Breaking Force									
			IP / 1770			EIP / 1960			EEIP / 2160			
mm	kg/m	lb/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							

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ScanRope		Steelite 12-S									
Diameter*		Linear Weight				Minimum Breaking Force					
		In Air		In Water		Spliced**			Un-Spliced***		
mm	ins	kg/ 100m	lb/ 100ft	kg/ 100m	lb/ 100ft	kN	Tonnes	Tons	kN	Tonnes	Tons
28	1 1/8	38	83.8	-1.5	-3.4	599	61.1	134,640	666	67.9	149,600
32	1 1/3	50	110	-2.0	-4.5	783	79.8	175,860	870	88.7	195,400
36	1 1/2	63	139	-2.6	-5.6	953	97.2	214,200	1059	108	238,000
40	1 5/8	75	165	-3.0	-6.7	1130	115	253,800	1256	128	282,000
44	1 3/4	87	192	-3.5	-7.8	1289	131	289,800	1432	146	322,000
48	2	104	229	-4.2	-9.3	1492	152	334,800	1658	169	372,000
52	2 1/8	116	256	-4.7	-10.4	1669	170	374,400	1854	189	416,000
56	2 1/4	142	313	-5.8	-12.7	1960	200	441,000	2178	222	490,000
60	2 1/2	158	348	-6.4	-14.1	2137	218	480,600	2374	242	534,000
64	2 5/8	174	384	-7.1	-15.6	2410	246	541,800	2678	273	602,000
68	2 3/4	199	439	-8.1	-17.8	2658	271	597,600	2953	301	664,000
72	3	224	494	-9.1	-20.0	3020	308	678,600	3355	342	754,000
76	3 1/8	249	549	-10.1	-22.3	3355	342	754,200	3728	380	838,000

*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

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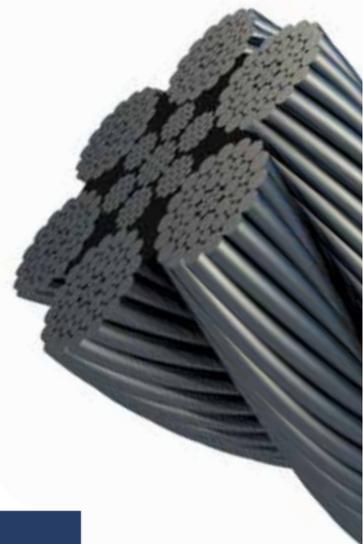


Diamond Blue



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

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



Dyform 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.

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



BlueStrand		Diamond Blue						
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

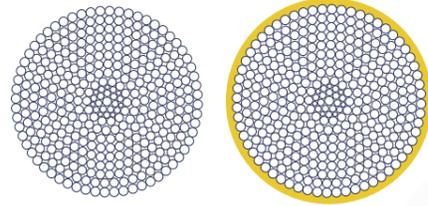
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BRIDON		Dyform DB2K						
Diameter		Nominal Length Mass				Minimum Breaking Load		
		In air		Submerged		EIPS / 1960		
mm	in	kg/m	lbs/ft	kg/m	lbs/ft	kN	Tonnes	Tons
52		12.2	8.22	10.7	7.2	2396	244	269
54	2.1/8	13.2	8.87	11.5	7.7	2583	263	290
56		14.2	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

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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 galvanised Spiral strand is compliant to offshore standard DNV OS E304.

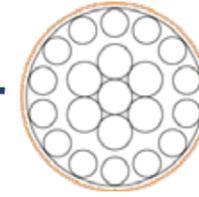
- ✓ High strength to weight ratio
- ✓ Torsionally balanced
- ✓ Excellent fatigue performance
- ✓ Excellent corrosion resistance
- ✓ Design life to suit customer requirements

BRIDON				Spiral Strand			
Diameter	Approximate Weight ¹			Minimum Breaking Load			
	Un-sheathed	Sheathed (air)	Sheathed (seawater)	SPR2+ 1860 Grade		Xtreme 1960 Grade	
mm	kg/m	kg/m	kg/m	kN	Tonnes	kN	Tonnes
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.							
162 ²	130.2	135.8	108.5	25200	-	-	-

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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.

- ✓ 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

ScanRope		Moorline Polyester								
Diameter*		Linear Weight				Minimum Breaking Force			Max Length	
		In Air		In Water		Spliced**			mmSpliced***	
mm	ins	kg/m	lb/ft	kg/m	lb/ft	kN	Tonnes (metric)	Tons (short)	m	ft
138	5 3/8	12.2	8.2	3.1	2.1	4,905	500	1,102,310	8,197	26,893
149	5 7/8	14.3	9.6	3.7	2.5	5,886	600	1,322,772	6,993	22,944
160	6 1/4	16.4	11.0	4.2	2.8	6,867	700	1,543,234	6,098	20,006
169	6 5/8	18.4	12.4	4.7	3.2	7,848	800	1,763,696	5,435	17,832
178	7	20.4	13.7	5.3	3.5	8,829	900	1,984,158	4,900	16,075
187	7 3/8	22.5	15.1	5.8	3.9	9,810	1,000	2,204,620	4,450	14,602
195	7 5/8	24.4	16.4	6.3	4.2	10,791	1,100	2,425,082	4,095	13,436
203	8	26.5	17.8	6.8	4.6	11,772	1,200	2,645,544	3,776	12,390
213	8 3/8	29.4	19.8	7.6	5.1	12,753	1,300	2,866,006	3,397	11,145
219	8 5/8	31.3	21.0	8.1	5.4	13,734	1,400	3,086,468	3,195	10,482
226	8 7/8	33.4	22.4	8.6	5.8	14,715	1,500	3,306,930	2,996	9,829
234	9 1/4	35.6	23.9	9.2	6.2	15,696	1,600	3,527,392	2,809	9,216
240	9 1/2	37.5	25.2	9.7	6.5	16,677	1,700	3,747,854	2,665	8,745
248	9 3/4	39.5	26.5	10.2	6.8	17,658	1,800	3,968,316	2,532	8,306
254	10	42.5	28.6	10.9	7.3	18,639	1,900	4,188,778	2,353	7,720
260	10 1/4	44.6	30.0	11.5	7.7	19,620	2,000	4,409,240	2,242	7,357
266	10 1/2	46.5	31.2	12.0	8.0	20,601	2,100	4,629,702	2,151	7,056
271	10 5/8	48.5	32.6	12.5	8.4	21,582	2,200	4,850,164	2,062	6,765
277	10 7/8	50.7	34.1	13.0	8.8	22,563	2,300	5,070,626	1,972	6,471
282	11 1/8	52.7	35.4	13.6	9.1	23,544	2,400	5,291,088	1,898	6,226
290	11 3/8	55.8	37.5	14.4	9.6	24,525	2,500	5,511,550	1,792	5,880
295	11 5/8	57.9	38.9	14.9	10.0	25,506	2,600	5,732,012	1,727	5,667
300	11 3/4	59.9	40.3	15.4	10.4	26,487	2,700	5,952,474	1,669	5,477
305	12	61.9	41.6	15.9	10.7	27,468	2,800	6,172,936	1,616	5,300
310	12 1/4	64.0	43.0	16.5	11.1	28,449	2,900	6,393,398	1,563	5,127
315	12 3/8	66.0	44.4	17.0	11.4	29,430	3,000	6,613,860	1,515	4,971

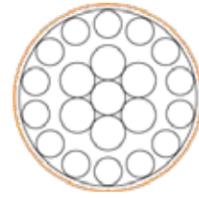
* Diameter and weight values shown at reference load of 1% MBF for a given break load. Other sizes available. Contact fibresales@bridon-bekaert.com

** Tested following CI1500B-2015. Elongations are immediate

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Superline Nylon

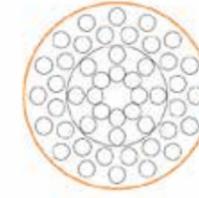


The original "SuperLine" Nylon is constructed with parallel-laid, Nylon sub-ropes encased in a nylon-braided jacket. This product's high strength, high elongation, and parallel laid cores offer an excellent tension-tension fatigue life (TCLL). Superline's unique compact splice make it an ideal choice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

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



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.

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

ScanRope			Superline Nylon											
OCIMF Size Number**	Diameter*		Circumference*		Linear Weight				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
10	88	3 5/8	279	11	5.08	3.42	0.51	0.34	1,934	197	434,797	1,837	187	413,057
11	96	4	305	12	5.91	3.97	0.60	0.40	2,351	240	528,576	2,234	228	502,147
12	104	4 1/4	330	13	7.00	4.70	0.71	0.47	2,810	287	631,747	2,670	272	600,160
13	112	4 5/8	356	14	7.99	5.37	0.81	0.54	3,311	338	744,351	3,145	321	707,133
14	120	5	381	15	9.17	6.17	0.93	0.62	3,854	393	866,423	3,661	373	823,102
14 1/2	128	5 1/4	406	16	9.85	6.62	0.99	0.67	4,141	422	931,021	3,934	401	884,470
15	136	5 5/8	432	17	10.3	6.90	1.04	0.70	4,439	453	998,000	4,217	430	948,100
16	144	6	457	18	11.9	7.99	1.20	0.81	5,067	517	1,139,112	4,814	491	1,082,157
17	152	6 1/4	483	19	13.4	9.01	1.35	0.91	5,737	585	1,289,791	5,450	556	1,225,302
18	160	6 5/8	508	20	14.9	10.0	1.51	1.01	6,450	658	1,450,066	6,128	625	1,377,562
19	168	7	533	21	16.5	11.1	1.67	1.12	7,206	735	1,619,962	6,846	698	1,538,964
20	176	7 1/4	559	22	18.3	12.3	1.85	1.24	8,005	816	1,799,507	7,604	775	1,709,531
21	184	7 5/8	584	23	20.1	13.5	2.03	1.36	8,846	902	1,988,723	8,404	857	1,889,287
22	192	8	610	24	22.1	14.9	2.23	1.50	9,731	992	2,187,635	9,245	943	2,078,253
23	200	8 1/4	635	25	24.1	16.2	2.43	1.64	10,659	1,087	2,396,265	10,126	1,033	2,276,452
24	208	8 5/8	660	26	28.2	18.9	2.84	1.91	11,630	1,186	2,614,633	11,049	1,127	2,483,902

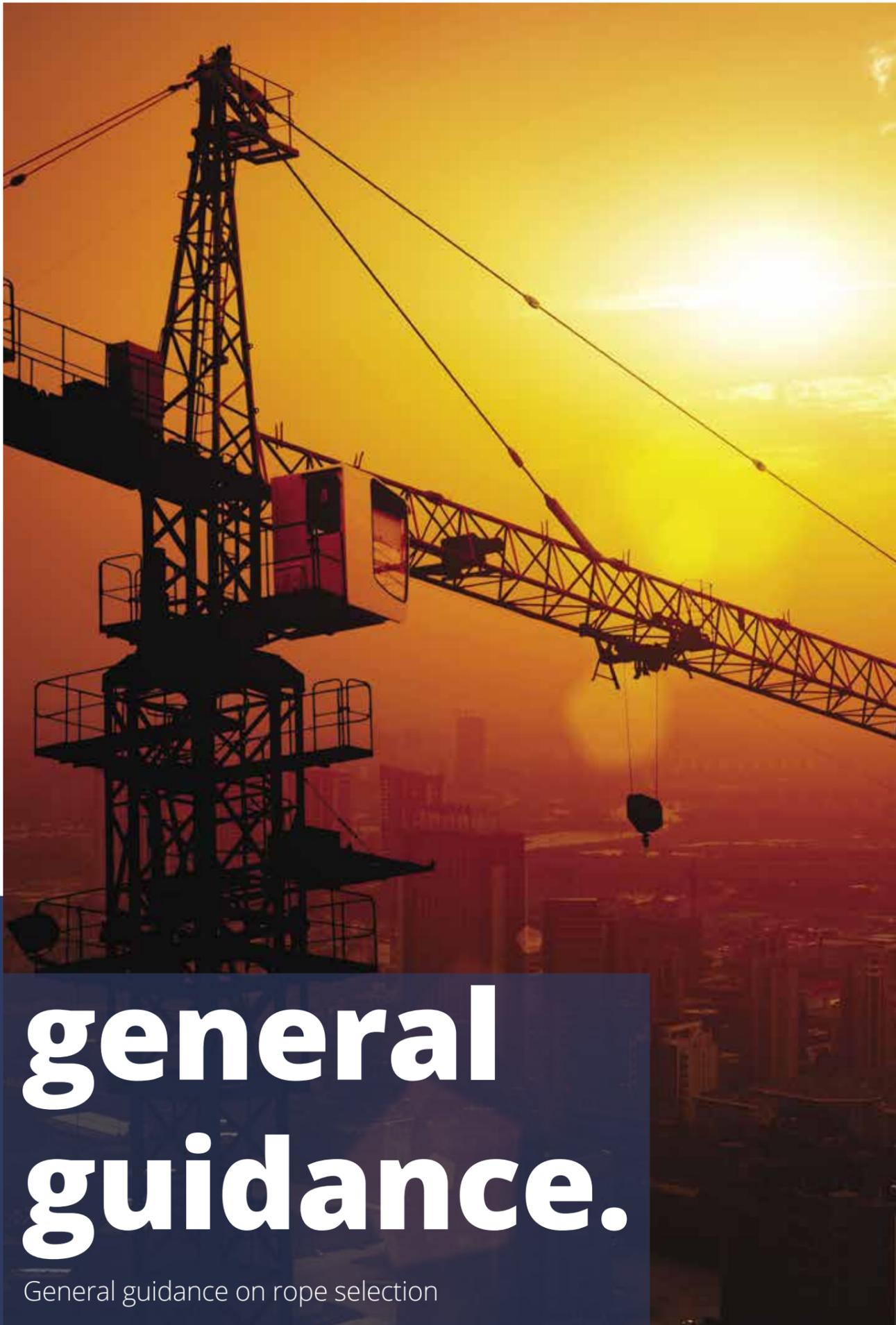
Manufactured, supplied & tested in general accordance with: OCIMF Guidelines for the Purchasing & Testing of SPM Hawsers First Ed. 2000
 *Nominal value. Other diameters are available. Contact fibresales@bridon-bekaert.com
 ** Tested following OCIMF Guidelines for the Purchasing & Testing of SPM Hawsers First Ed. 2000. Elongations are wet immediate

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ScanRope			Viking Braidline Nylon											
OCIMF Size Number**	Diameter*		Circumference*		Linear Weight				Minimum Break Force					
					In Air		In Water		New Dry Breaking			New Wet Breaking		
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	2,059	210	462,970	1,952	199	438,719
13	104	4 5/8	330	13	6.70	4.50	0.68	0.45	2,412	246	542,337	2,305	235	518,086
14	112	5	356	14	7.80	5.24	0.79	0.53	2,805	286	630,521	2,667	272	599,657
15	120	5 5/8	381	15	8.90	5.98	0.90	0.60	3,217	328	723,115	3,060	312	687,841
16	128	6	406	16	10.2	6.85	1.03	0.69	3,658	373	822,323	3,481	355	782,640
17	136	6 1/4	432	17	11.4	7.66	1.15	0.77	4,129	421	928,145	3,932	401	884,053
18	144	6 5/8	457	18	12.8	8.60	1.29	0.87	4,629	472	1,040,581	4,413	450	992,079
19	152	7	483	19	14.3	9.61	1.44	0.97	5,158	526	1,159,630	4,913	501	1,104,515
20	160	7 1/4	508	20	15.8	10.6	1.59	1.07	5,717	583	1,285,293	5,443	555	1,223,564
*** 21	168	7 5/8	533	21	17.4	11.7	1.76	1.18	6,304	643	1,417,130	6,003	612	1,349,448
*** 22	176	8	559	22	19.1	12.8	1.93	1.29	6,918	705	1,555,139	6,587	672	1,480,843
*** 23	184	8 1/4	584	23	20.9	14.0	2.11	1.42	7,561	771	1,699,762	7,200	734	1,618,632
*** 24	192	8 5/8	610	24	22.8	15.3	2.30	1.55	8,233	840	1,850,778	7,839	799	1,762,373

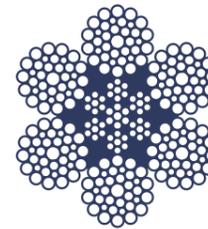
*Nominal value. Other diameters are available. Contact fibresales@bridon-bekaert.com
 ** Tested following C11500B-2015. Elongations are immediate
 *** Tested following ISO2307:2010. A 10% reduction should be applied for spliced terminations

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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

What it means;

6 = numbers of strands

36 = number of wires in each strand

1-7-7+7-14 = Lay-up of wires in the strand

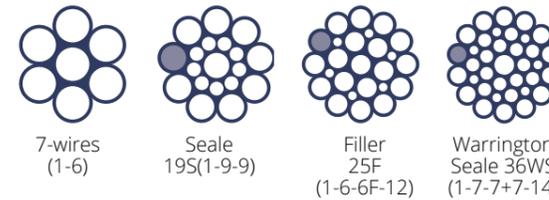
IWRC = Type of core

1960 = Rope grade

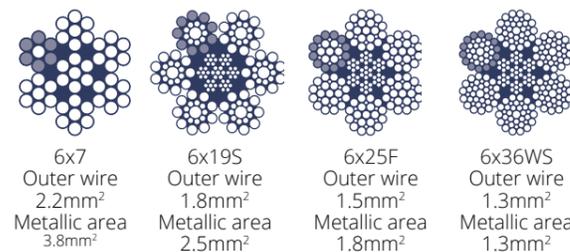
B = Drawn galvanised B(Zn)

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

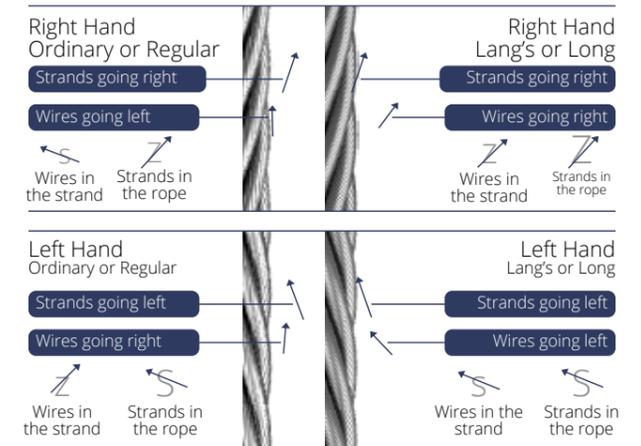
zZ = Right hand lang's lay

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

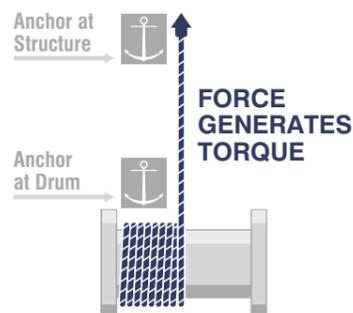
Definition of Breaking Loads and Forces

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

Bridon-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:

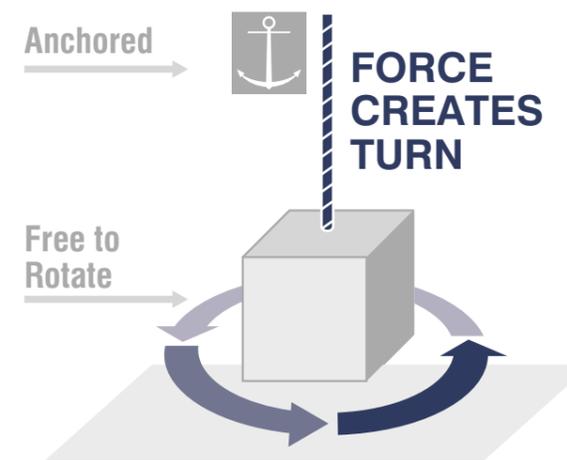
- “Torque” if both ends are fixed
- “Turn” if one end is unrestrained

Torque

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

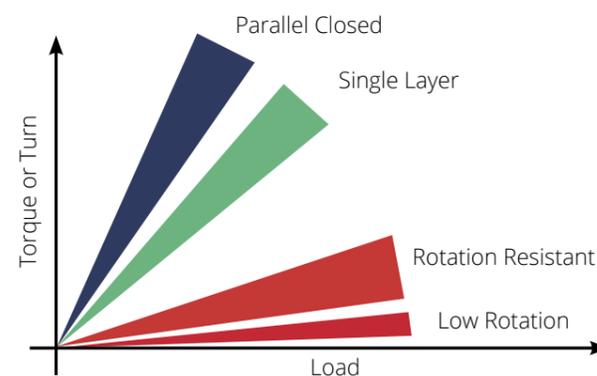
Turn

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.

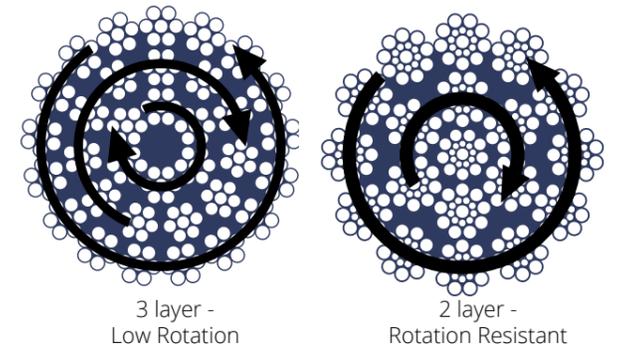
The diagram below serves to illustrate the differences in rotational properties between the four basic types of stranded rope.



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 47.

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

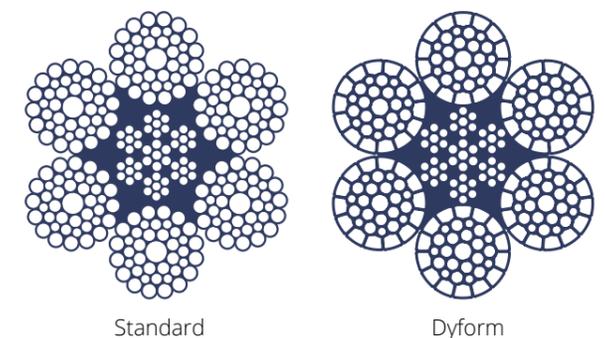
Steel wire ropes are likely to deteriorate due to bend fatigue when subjected to bending around a sheave or drum. The rate of deterioration will be influenced by the number of sheaves in the system, the diameter of the sheaves and drum, and the loading conditions.

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.

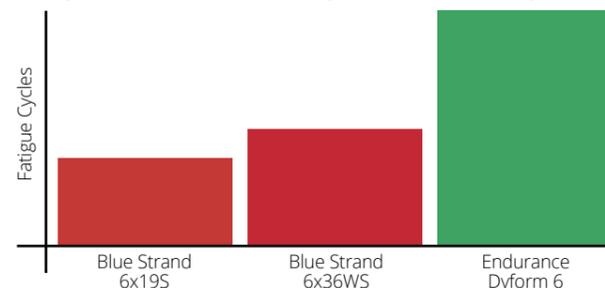
6x36WS(1-7-7+7-14) as opposed to a 6x19S(1-9-9).

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



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

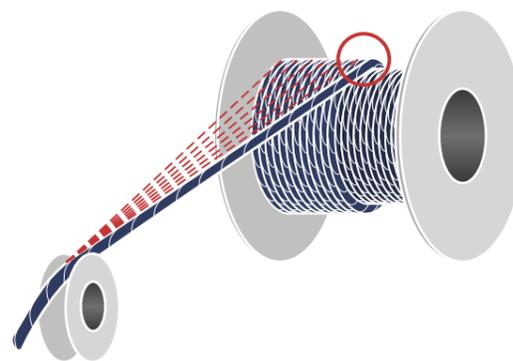


from Blue Strand 6x36 to Endurance Dyform 6. This same relationship can be found when moving from any construction into an equivalent Dyform construction e.g. 18x7 to Endurance Dyform 18 or 35x7 to Endurance Dyform 34LR.

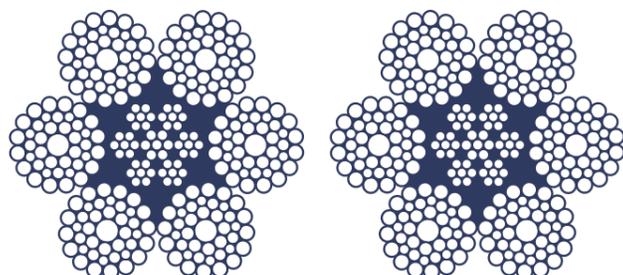
Resistance to Abrasive Wear

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.

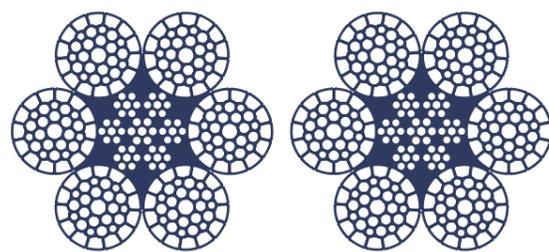


Wire rope on adjacent drum laps can cause point contact and accelerated wear.



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

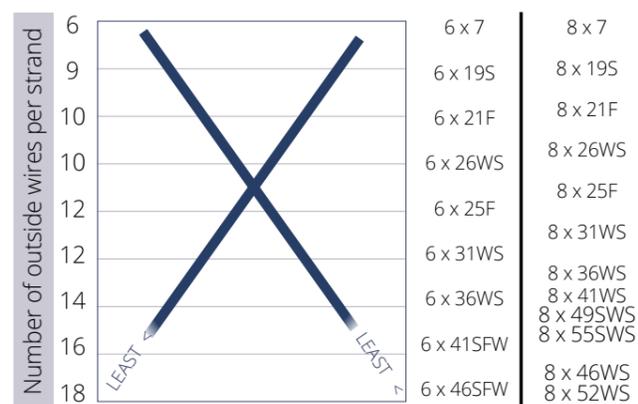
Selection of a Dyform product will reduce abrasion through improved contact conditions.



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.

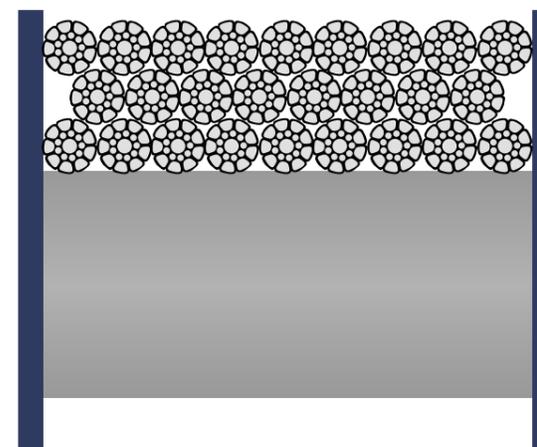


Crush Resistance

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.

	% of rope length	
	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 Hooke's 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.

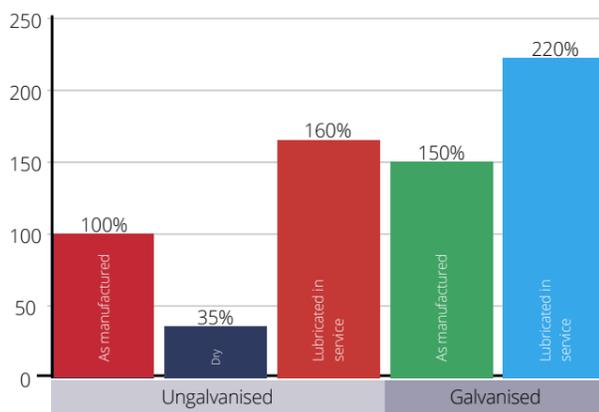
If the load exceeds the Limit of Proportionality, the rate of extension will accelerate as the load is increased, until a loading is reached at which continuous extension will commence, causing the wire rope to fracture without any further increase of load.

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

The Bridon group 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

Bridon-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

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 34LR	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.

Rope category number RCN	Total number of load-bearing wires in the outer layer of strands in the rope (a) (n)	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 (d)	Over a length of 30d (d)	Over a length of 6d (d)	Over a length of 30d (d)
21	4 strands n ≤ 100 3 or 4 strands n ≤ 100 At least 11 outer strands	2	4	2	4
23-1	71 ≤ n ≤ 100	2	4	4	8
23-2	101 ≤ n ≤ 120	3	5	5	10
23-3	121 ≤ n ≤ 140	3	5	6	11
24	141 ≤ n ≤ 160	3	6	6	13
25	161 ≤ n ≤ 180	4	7	7	14
26	181 ≤ n ≤ 200	4	8	8	16
27	121 ≤ n ≤ 220	4	9	9	18
28	221 ≤ n ≤ 240	5	10	10	19
29	241 ≤ n ≤ 260	5	10	10	21
30	261 ≤ n ≤ 280	6	11	11	22
31	281 ≤ n ≤ 300	6	12	12	24
	n > 300	6	12	12	24

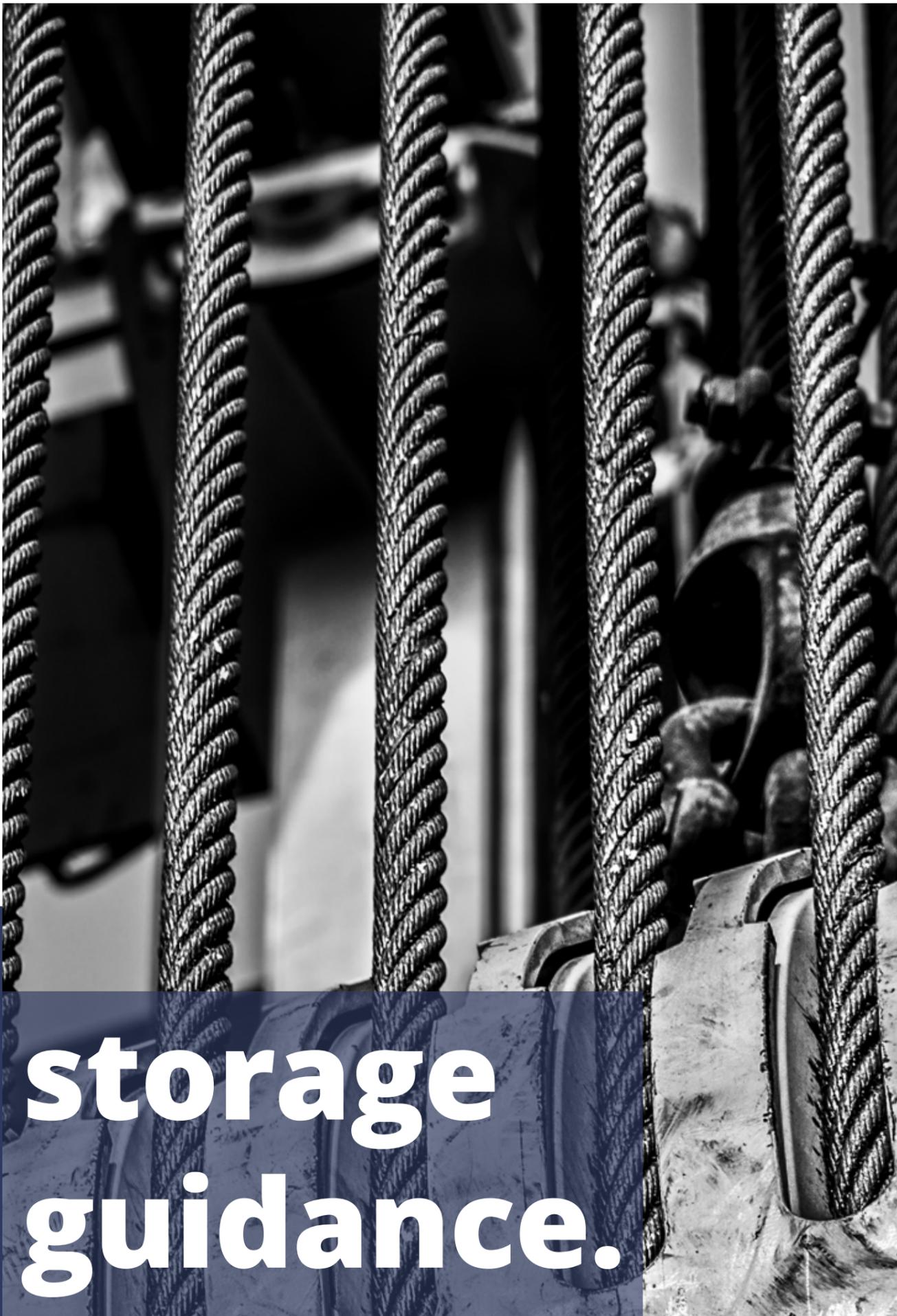
(1) BS ISO 4309 2017 Cranes- Wire Ropes- Care, Maintenance, Installation, Examination, and Discard.

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.

Rope category number RCN	Total number of load-bearing wires in the outer layer of strands in the rope (a) (n)	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)					
		Ordinary Lay		Lang's Lay		Ord & Lang's	
		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)
01	n ≤ 50	2	4	1	2	4	8
02	51 ≤ n ≤ 75	3	6	2	3	6	12
03	76 ≤ n ≤ 100	4	8	2	4	8	16
04	101 ≤ n ≤ 120	5	10	2	5	10	20
05	121 ≤ n ≤ 140	6	11	3	6	12	22
06	141 ≤ n ≤ 160	6	13	3	6	12	26
07	161 ≤ n ≤ 180	7	14	4	7	14	28
08	181 ≤ n ≤ 200	8	16	4	8	16	32
09	201 ≤ n ≤ 220	9	18	4	9	18	36
10	221 ≤ n ≤ 240	10	19	5	10	20	38
11	241 ≤ n ≤ 260	10	21	5	10	20	42
12	261 ≤ n ≤ 280	11	22	6	11	22	44
13	281 ≤ n ≤ 300	12	24	6	12	24	48
	n > 300	0,04 x n	0,08 x n	0,02 x n	0,04 x n	0,08 x n	

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



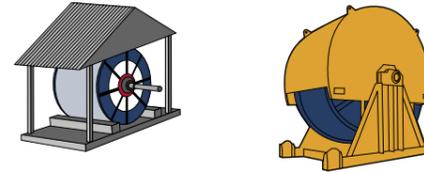
storage guidance.

WIRE ROPE STORAGE

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

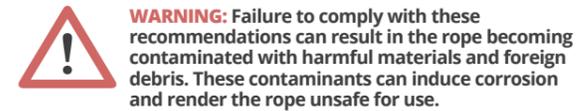
Store the rope off the ground or floor in a clean, dry, well-ventilated, covered location. If it is not possible to store it inside, cover it with waterproof material or a suitable structure to protect the rope from the sun and rain.

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



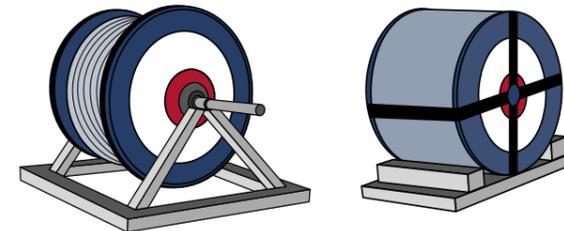
Ensure the floor or ground is level and capable of supporting the total mass of rope and reel. Bearers may be required to distribute the loading, although most steel reels will be supplied on cradles.

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.

Note 1: 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.

Note 2: 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 Bridon-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 Bridon-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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