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an  **usha martin** Group company

www.bruntonwire.com

CRANE ROPES



bruntonwire.com



Brunton Wire

The Wire Rope Specialist

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BRUNTON WIRE - THE MOST RELIABLE WIRE ROPE COMPANY



Brunton Wire Ropes FZCo., is a rope specialist, manufacturing steel wire ropes in Jebel Ali Free Zone, Dubai from the year 2003. It is one of the 5 global plants that the billion-dollar Rope & Specialty steel giant USHA MARTIN GROUP has and is one of the best in the world.

This company, backed by 100 years plus group experience in evolving advanced rope designs, with elaborate manufacturing base globally possessing state-of-the-art machines, rich experience on negotiating the dynamic market forces, has today become a 'REAL SOLUTION PROVIDER' to the markets it serves. Brunton Wire is proud to have the products sold continuously to more than 31 countries in Europe, North America, South America, North Asia, Australia, Africa, and Middle East & South East Asia.

This plant, in Dubai, produces & supplies steel wire ropes for Oil & Gas, Crane, General Engineering, Fishing, Dredging, Mining, Elevator applications having a very wide diameter range between 3mm and 77mm. The capability of producing and selling new generation ropes like the compacted & plasticated ropes have helped the consumers to get a complete solution from a single plant.

The elaborate testing facilities from raw material to final product gives the plant a qualitative edge over many competitors and thus, enjoys the confidence of many major oil giants, mining groups, elevator OEMs, big rigging companies. This plant is QMS certified and additionally has Lloyds & API (American Petroleum Institute) certifications. As a result Brunton Wire Ropes has grown more than 300% in 15 years.

The extensive inventory planning clubbed with a sound logistics leverage due to its Geographical position & supported by a large efficient port like Jebel Ali, have helped Brunton Wire's customers to get ropes faster in all parts of the world.

The group's R&D is continuously helping Brunton Wire to offer new designs to the consumers thereby, gaining a technological leadership.

In short, the backward integration model of the Usha Martin Group in resonance with the quality excellence datum and aided by the experienced executive leadership, have made Brunton Wire Ropes FZCo., to be a name that spells enormous reliability to all sections of wire rope consumers all around the globe.

Certifications



Test house approved by
 Lloyd Register of Shipping



9A - 0070



Intertek



UKAS
 MANUFACTURING
 SYSTEMS



BRUNTON WIRE WIRE ROPES

The "EDGE" over Competition



Quality and Performance

The QUALITY POLICY is a statement relating to a broad spectrum of VALUE ADDED features, which together aim to ensure Quality, Reliability and Customer Delight. The following attributes give insight to the facts which precisely help you to identify what differentiates BRUNTON WIRE from its competitors.

Engineering

Brunton Wire's engineering expertise differentiates itself from the competition. BWR products are manufactured with Raw Materials from USHA MARTIN, world leaders in speciality wire & rope products, using state of art machinery. In-house designed machinery and procedures for selecting and testing raw materials to allow for extra strength, extended fatigue performance and improved rotational resistance have resulted in BRUNTON WIRE being viewed as the STANDARD for the chosen industry, both Nationally and Internationally.

BWR is proud to have its facility awarded certification for our Quality Assurance Program according to BS EN ISO 9001 Standards. The plant has also been approved for API 9A certification.

BWR is one platform which has integrated Product & Process technology, manufacturing excellence and testing standards, application engineering & training know-how of the whole group.

Commitment to Quality

Brunton Wire tests a sample from each production batch to destruction in order to designate each rope by the actual breaking force which is stated on the test certificates. This gives the user a confirmation that the rope has met or exceeded its specified minimum breaking force value. Many of our competitors mention the calculated minimum breaking force value which is not verified until used by the Valued Customer. BWR has also the testing facilities for fatigue life, crush resistance and rotational characteristics for the products within our High Performance Range.

Customer Service

Service at Brunton Wire is second to none. BWR believes that excellence is achieved not only by having the product available when you want it, but by also providing a knowledgeable team of field sales representatives, a fully trained and capable Customer Services Team dealing specifically with enquiries and orders. The expert rope engineers provide a complete solution to the valued end user, with their ability to interpret their special needs from design through to manufacture and application. Brunton Wire realizes that our customers should be knowledgeable about the properties, installation, use, inspection and maintenance of our products. Thus, we provide formal product training through seminars and continuous interaction.



INFRASTRUCTURE



Wire Spooling & Long Stranding Machines (18 Bobbin, 25 Bobbin & 3 no. 36 Bobbin)



Seven Bobbin Skip Strander



6 x 60 Closer



200 T capacity 25 M Tensile Testing Machine



8 Bobbin closer



600 T Press



6+12+18 Planetary Strander for non-rotational Crane Ropes



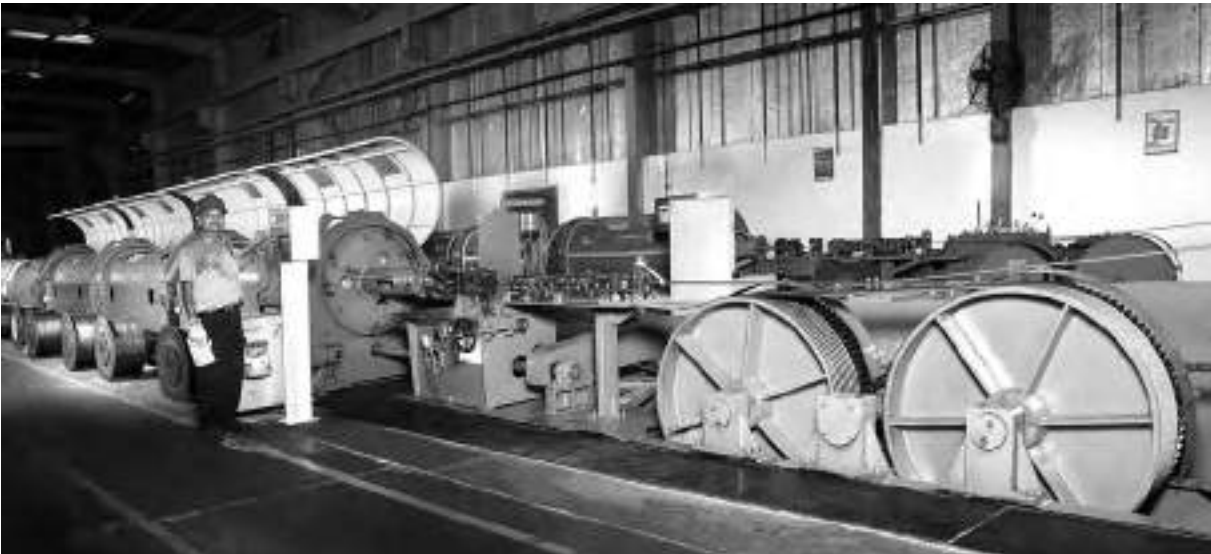
High Speed Wire Rewinders



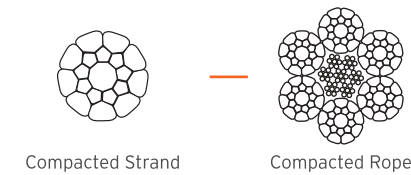
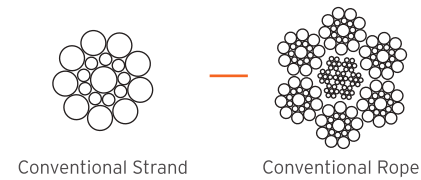
Fatigue Testing Machine

Brunton Wire Ropes FZCo. has comprehensive manufacturing and testing facilities to make a wide range of wire ropes of various Constructions & Applications, starting from wire. At present it has large number of machines, some of them are listed below.

- High Speed Wire Rewinders
- 37 Bobbin Stranding Machines
- 25, 19 & 18 Bobbin Stranding Machines
- Series of 6 & 7 Bobbin Stranding Machines
- High Speed Skip Strander
- 8 & 6 Bobbin Closing Machines
- Wet Drawing Machines
- 37 Bobbin Planetary Closing Machine for Crane Rope
- 50T Planetary Closing Machine
- 'State of the Art' 25 Mtrs long 200 T Tensile Testing Machine
- Wire Tensile Testing Machine
- Fatigue Testing Machine for Elevator Rope
- Rigging shop with 'Hydraulic Presses', Automatic cut to length machine & Rigging Towers

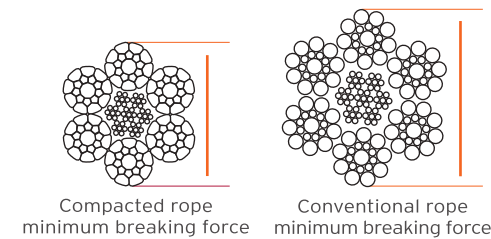


POWERFORM[®] COMPACTED ROPE

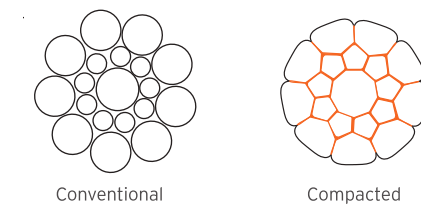


A Powerform[®] compacted rope is a steel wire rope which has been manufactured using individually compacted strands. During the compaction process the outside diameter of the strand is reduced and steel moves into the empty voids between the wires within the strand.

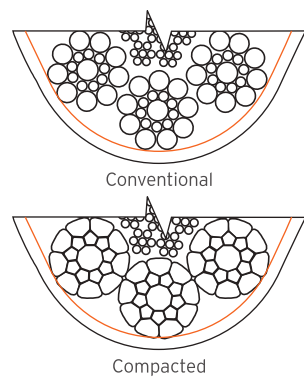
The forming process also produces a very smooth exterior strand surface.



The resultant rope has a very high steel fill factor and consequently a relatively high minimum breaking force for any given diameter when compared with a conventional rope.

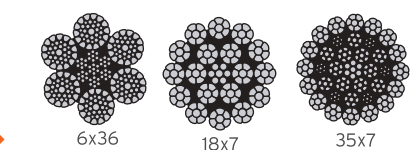


The compacted strand has very favourable internal contact conditions when compared with the point contact of round wires within a normal strand.



Exterior contact conditions are equally favourable. The smooth surface of the compacted rope offers a wider bearing surface to the sheave or drum groove.

Inter strand contact and contact between adjacent laps of rope on the winch drum is also improved.



Brunton Wire compacted ropes are referred to as "Powerform[®]" and are available in a number of constructions.

POWERFORM[®] SELECTION



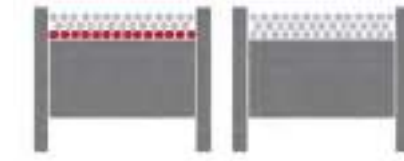
Optimised crane design

The high breaking load to size relationship can allow crane manufacturers to optimise the design of crane components such as the winch drum and sheaves whilst still complying with international crane design standards.



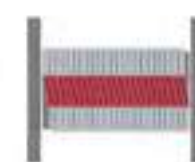
Long life

Laboratory fatigue testing indicates that it is possible to achieve up to two times normal rope life when comparing a Powerform[®] rope with a conventional rope of equivalent construction.



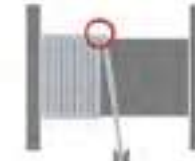
Greater resistance to crushing in multi-layer coiling situations

Powerform[®] ropes are recommended for all multi-layer coiling situations where crushing on lower layers is inevitable. The more solid cross section of the Powerform[®] rope offers much greater resistance to this type of damage.



More effective resistance to crushing at crossover points

Because of the higher steel fill factor Powerform[®] ropes offer much better resistance to crushing damage at crossover points on the winch drum.



Greater resistance to "Interference" at the drum

Abrasive wear between adjacent laps of rope which is normally most severe where the rope moves on and off the drum can be minimised by using a Powerform[®] rope.

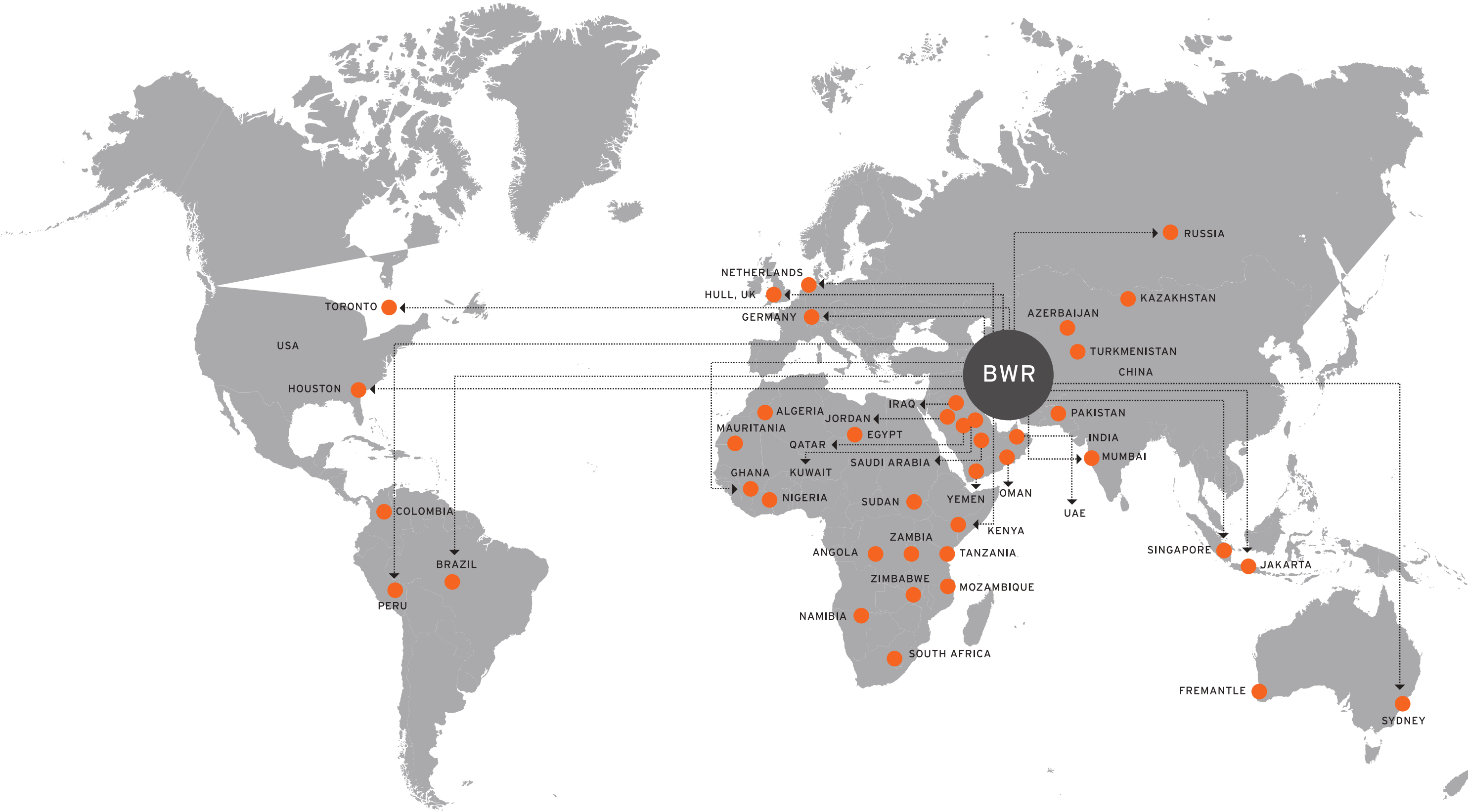


Reduced wear on sheaves

The smooth exterior of the Powerform[®] rope can lead to reduced abrasive wear on both the sheave and rope.

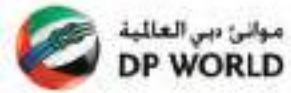
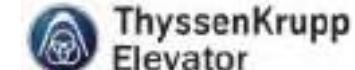


CUSTOMER SPREAD



SOME OF THE CUSTOMERS THIS GROUP SERVES...

					
		 South Asia Gateway Terminals (Pvt.) Ltd. Port of Colombo, Sri Lanka		 Korabeli Drilling Company P.S.C.	
					
					
					



ROPE CALCULATOR

POWERFORM

*The Symbol of
Strength*

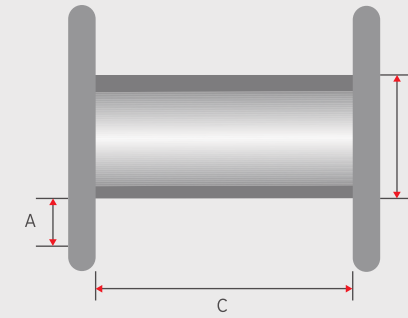
Rope Calculator

MBF [kN] = $K \cdot d^2$ (d = nominal diameter [mm])
 Mass [kg/m] = $Km \cdot d^2$
 Metallic area (A) [mm²] = $0.785 \cdot f \cdot d^2$
 Axial stiffness (EA) [MN] = $E \cdot 0.785 \cdot f \cdot d^2 / 1000$
 Elastic elongation [$\frac{\Delta L}{L}$] = Load [kN] / (EA · 1000)
 Rope torque [Nm] = $t \cdot d \cdot \text{load}$ [kN]

Maximum Lifting Height for Block Stability

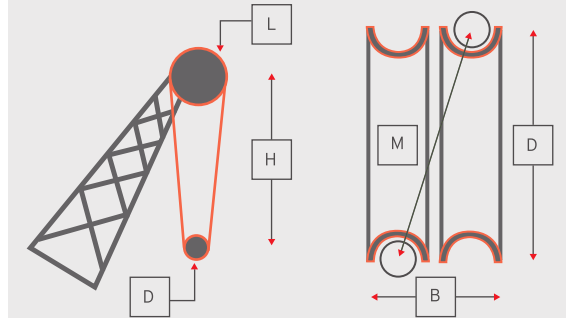
Approximate calculation
 in case of number of falls higher than 2
 $H = L \cdot M / (4 \cdot d \cdot t)$

where $M = \sqrt{B^2 + D^2}$



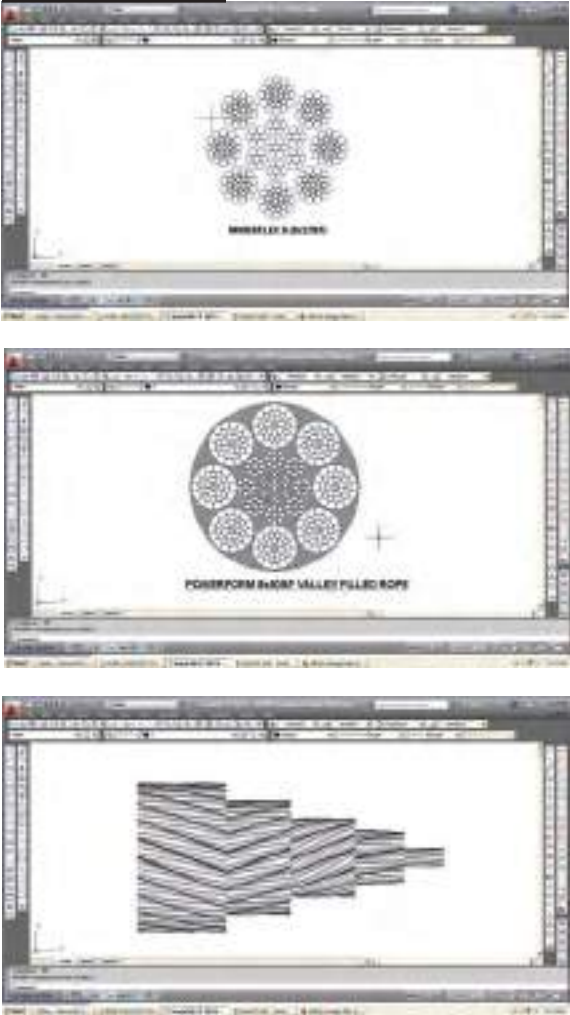
$$L = \frac{\pi \cdot A \cdot C}{d^2} (A + B)$$

A, B, C [m] | L [m] | d [mm]



$$H = L \cdot D / (4 \cdot d \cdot t)$$

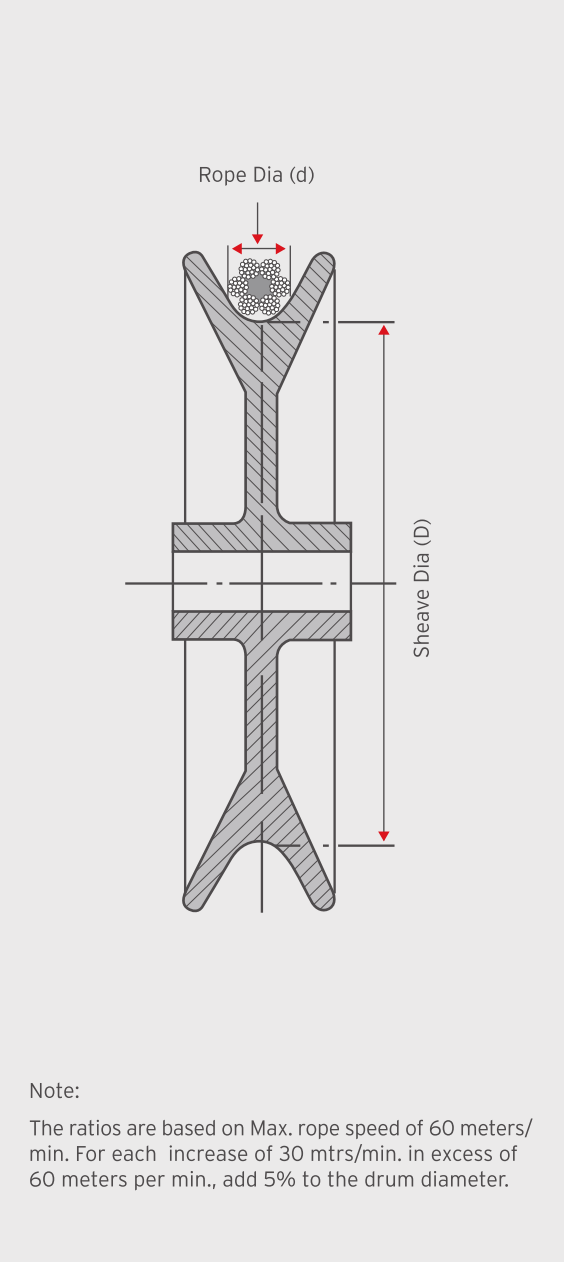
MINIMUM ROPE INFORMATION



When providing an enquiry or a purchase order, at least the following information should be supplied:

- Reference standard, i.e. EN 12385-4
- Quantity and length
- Nominal diameter
- Rope class or construction
- Core type
- Rope grade
- Wire finish or coating
- Lay direction and type (single layer ropes are normally manufactured right hand ordinary lay unless otherwise stated by the purchaser)
- Preformation (outer strands of single layer and parallel-closed ropes are normally preformed during manufacture. The purchaser should specify any particular preformation requirements)
- Lubrication (at least the strands are lubricated during manufacture. The purchaser should specify any particular lubrication requirements).
- Type of inspection document - refer EN 12385-1
- Any particular marking requirements
- Any particular packaging requirements
- Required minimum breaking force
- Application of the rope

PULLEY / ROPE BENDING RATIO (D/d RATIO)



Sheave Or Drum/Rope Diameter Ratio (D:d)

Sl. No.	Construction	D : d Ratio	
		Recommended	Minimum
1	6x7 (6-1)	53	43
2	6x19S (9-9-1)	40	32
3	6x26SW (10-5+5-5-1)	37	29
4	6x25F (12-6F-6-1)	32	26
5	6x31SW (12-6+6-6-1)	32	26
6	6x37SF (12-12-6F-6-1)	32	26
7	6x36SW (14-7+7-7-1)	28	22
8	6x43SF (14-14-7F-7-1)	28	22
9	6x50SFS (14-14-7F-7-7-1)	28	22
10	6x41SW (16-8+8-8-1)	25	20
11	6x49SW (16-8+8-8-8-1)	25	20
12	6x49SF (16+16+8F-8-1)	25	20
13	6x46SW (18-9+9-9-1)	22	18
14	6x52SW (18-9+9-9/6-1)	22	18
15	6x55SF (18-18-9F-9/6-1)	23	18
16	8x19S (9-9-1)	33	26
17	8x26SW (10-5+5-5-1)	30	24
18	8x25F (12-6F-6-1)	26	21
19	8x31SW (12-6+6-6-1)	26	21
20	8x37SF (12-12-6F-6-1)	26	21
21	8x36SW (14-7+7-7-1)	23	18
22	8x50SFS (14-14-7F-7-7-1)	23	18
23	17x7 (11:6-1)	34	27
24	18x7 (12:6-FC)	32	25
25	19x7 (12:6-1)	32	25
26	34x7 (17:11/6-FC)	24	19
27	35x7 (16:6+6-6-1)	25	20
28	6x25FS (12/12/▲)	42	35
29	6x8FS (7/▲)	63	53
30	6x28FS (15/12/▲)	36	30
31	Locked Coil Winding Rope	152	100



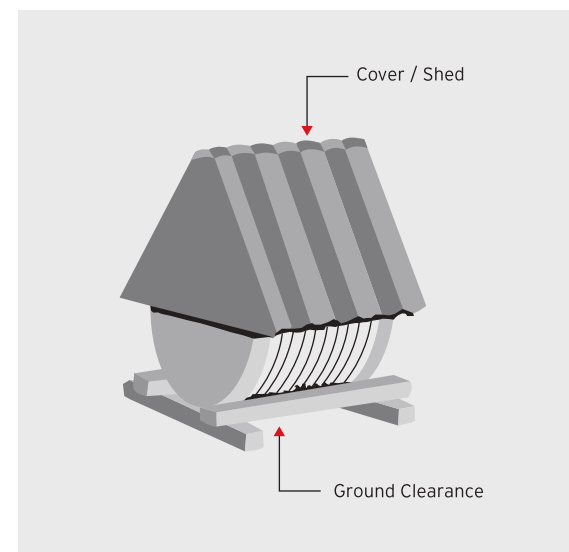
STORAGE

Crane Ropes, like any machine or spares, deteriorate during storage as well as in service. Therefore, the assurance of safety and economy in use of the equipment, dictates the requirement for a procedure of proper storage, handling & installation of Crane ropes.

Storage

- Store rope in a clean, dry, well ventilated, dust free undercover location.
- Cover the rope with waterproof material and/or canopy, if not stored inside.
- Storage should be free from steam, chemical fumes or any other corrosive agent.
- Avoid direct contact of rope with floor.
- Place reels, preferably over A-frame or cradle and allow flow of air under the reel.
- Avoid rope exposure to elevated temperatures.
- Avoid handling damages to wire ropes.
- Ensure that tag/markings is intact and follow 'first in, first out' principle.

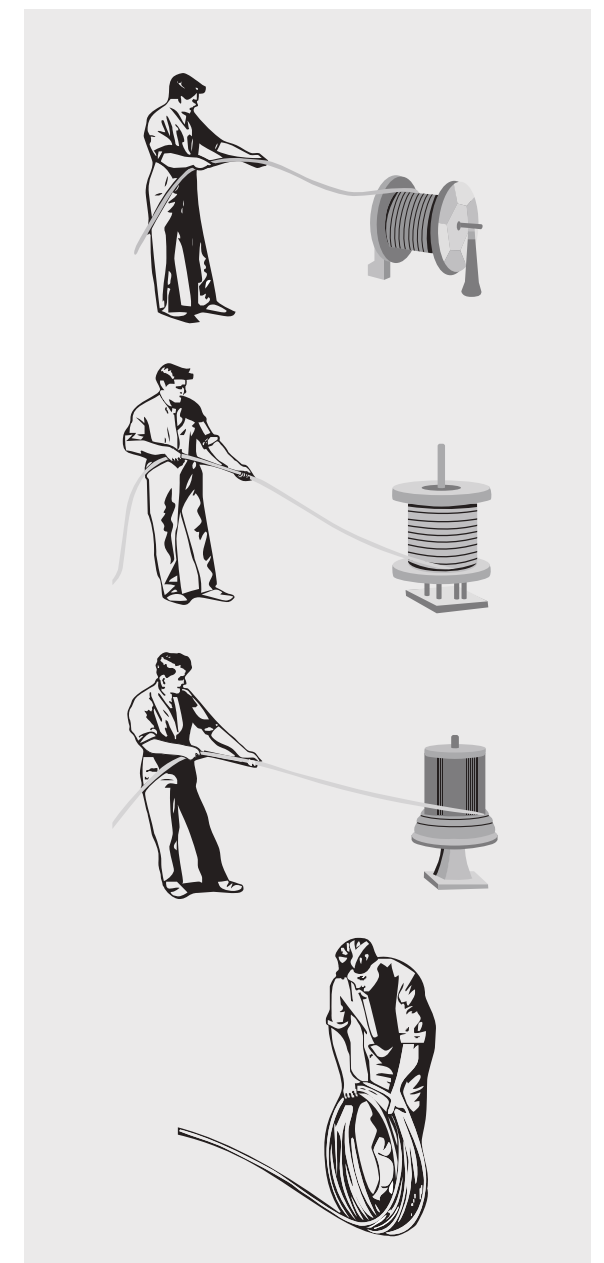
- Inspect rope periodically and, apply suitable rope dressing compatible with manufactured lubricant, whenever necessary.
- Rotate reel periodically, say after every 3 months, particularly in warm environment.



HANDLING & INSTALLATION

Handling & Installation

- Never pull out rope from stationary coil.
- Place rope coil on ground and roll out straight.
- If heavy, place coil on turntable and pull the end away from coil.
- Prevent contamination with dust, grit, moisture, chemicals and other harmful material.
- Put a shaft, of adequate strength, through reel bore and place the reel in a suitable stand.
- Allow reel to rotate freely and be braked to avoid overrun.
- Provide back-tension for multi-layer spooling and ensure to wind tightly, particularly the bottom layer.
- Maintain constant tension while reeving and avoid layer cross-over.
- Avoid formation of loops and / or kinks.
- Avoid reverse bend during reeving. Wind / unwind 'top to top' or 'bottom to bottom'.
- Take special care while releasing the outboard end of rope from supplied reel or coil.
- Maintain fleet angle at minimum during installation.
- Check that grooves of all sheaves are as recommended and sheaves are free to rotate.
- Check the diameter and pitch of drum grooves and ensure that these are as recommended.
- 'Run in' the new rope by running the equipment slowly, with a low load for a number of cycles.
- Inspect that the rope spools correctly on the drum and no slackness or cross-over occurs.

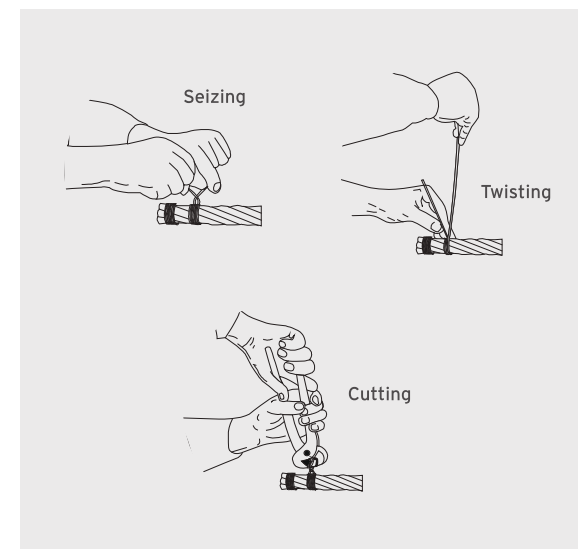


HANDLING & INSTALLATION

Cutting the rope

- Apply one serving on either side of cut mark for preformed ropes.
- Apply two servings on either side of cut mark for non-preformed, parallel-closed and rotation-resistant ropes.
- Length of each serving should be at least equal to two rope diameters.
- Cut the rope with a high-speed abrasive disc cutter, flame cutting is not recommended.
- Maintain ventilation during cutting, use mask while cutting special ropes having synthetic material.

Ungalvanized Wire Rope	Galvanized Wire Rope
Soft, Galvanized Wire	
For 6.0 mm to 24.0 mm wire rope, use 1.0 mm wire	
For 25.0 mm to 36.0 mm wire rope, use 1.6 mm wire	
For 37.0 mm to 56.0 mm wire rope, use 2.0 mm wire	
Seizing Length 2 x drope dia	
Seizing Length 2 x drope dia	

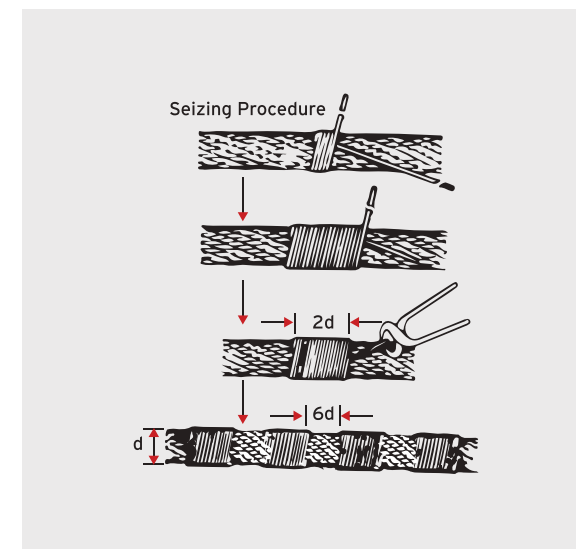


Seizing procedure

The purpose of seizing a rotation-resistant wire rope is to prevent relative movement of individual strands of inner core as well as outer layer and thereby preserving its designed integrity and rotational balance. Therefore, before cutting any rotation-resistant wire rope, tightly double seize with soft steel wire of suitable size, on either side of the intended cut. The length of each seizing should be at least equal to 2 x drope dia. and each of these seizing should be spaced approximately 6 x d rope dia.

- Use of adhesive tape in lieu of seizing is strictly prohibited.
- Fusing of cut ends is strongly recommended.

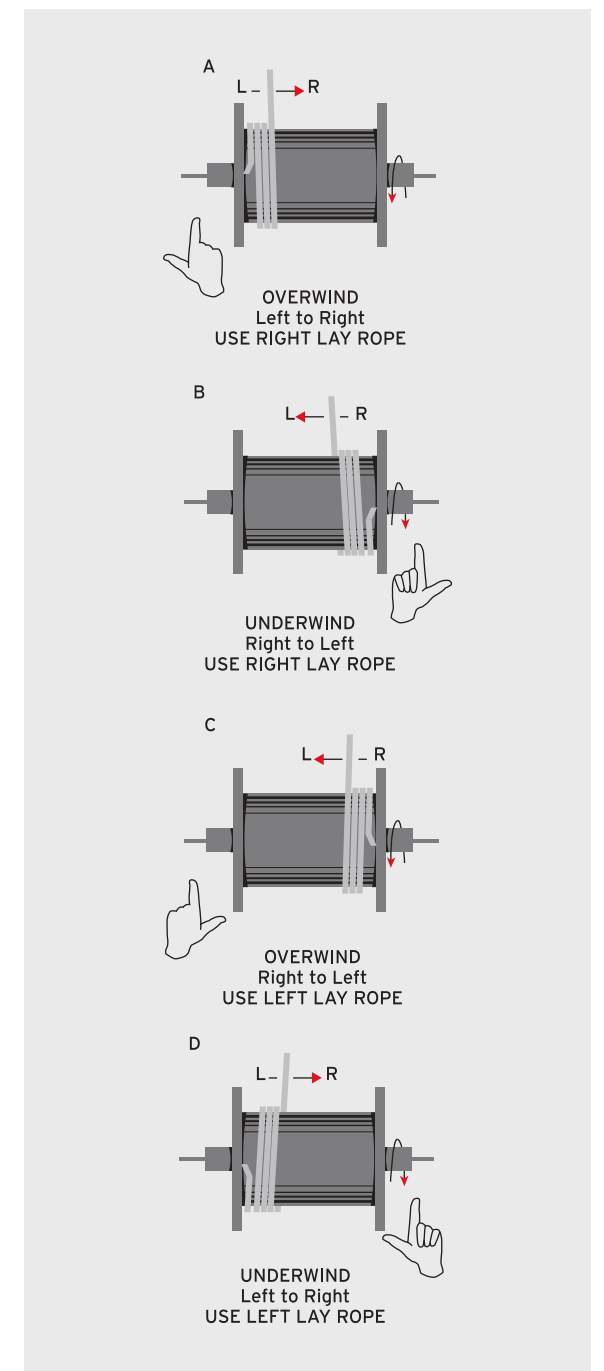
Powerform 18/Hyflex 18	Powerform 35/Hyflex 35
6.0 mm to 24.0 mm wire rope, use 1.0 mm wire	
25.0 mm to 36.0 mm wire rope, use 1.6 mm wire	
37.0 mm to 56.0 mm wire rope, use 2.0 mm wire	
Double seizing & end fusing mandatory	



Handling & installation

Since rotation-resistant wire ropes have special layering and arrangement of strands they are very sensitive and therefore, they require careful handling and installation in order to avoid deterioration, hoisting problems and premature removal of wire rope. The recommendations given below should be followed in addition to the general ones mentioned overleaf.

- Always wind 'top to top' or 'bottom to bottom' to avoid reverse bends.
- Ensure that wire rope anchorage point corresponds correctly with wire rope lay.
- Provide back-tension and maintain constant winding tension.
- The first and all subsequent layers should be wound tightly and correctly.
- There should not be any rope layer cross-over.
- There should not be any formation of loop or kink.
- Do not weld the old and the new rope during installation.
- Do not induce twist in the new rope, remove if induced.
- A swivel may be used during installation to prevent transfer of torque to new rope.
- Swivels may be used with Hyflex 35 and Powerform 35 ropes but are not recommended for use with Hyflex 18 and Powerform 18, and should never be used with non rotation-resistant wire ropes.
- To adjust to operating condition, 'run in' the wire rope, after proper installation, at reduced speed and load (up to approximately 10% of Working Load Limit) for a number of operational cycles.
- Remove any accumulated torque or turn which is induced during initial stage of operation.



DISCARD CRITERIA

Crane Ropes, must be removed from service if the examination reveals that the rope deterioration has exceeded limits of certain criteria. A general retirement plan states that any one of the factors listed below, severe enough and can cause rope discard. However, rope deterioration and decision to discard, almost always, is the result of cumulative effect of combination of these factors.

- Broken Wires
- Diameter Reduction
- Corrosion
- Deformation

Number & Characteristic of Broken Wire

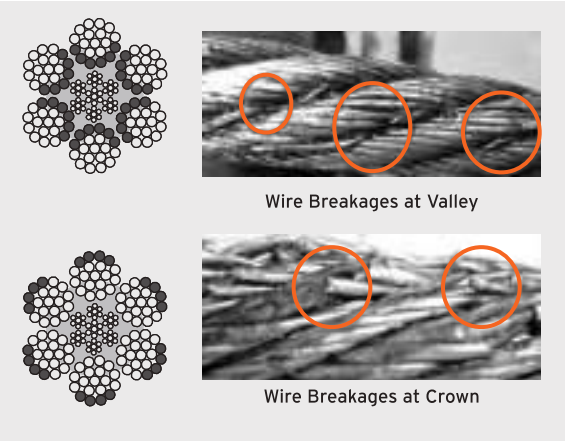
Crane rope must be considered for discard if number of visible broken wires equals or exceeds the allowable limit. For 6 and 8 strand wire ropes, occurrence of wire breakages, to a large extent is on the outer surface,

Product	Construction	No. of visible broken wires in wire rope length equals	
		6 x d	30 x d
Hyflex 4	4x39	2	4
	6x25 F	5	10
	6x29 F	6	11
Hyflex 6/ Powerform 6	6x26 SW	6	13
	6x31 SW	8	16
	6x36 SW	9	18
	6x41 SW	10	21
	8x25 F	6	13
Hyflex 8/ Powerform 8	8x26 SW	9	18
	8x31 SW	10	21
	8x36 SW	12	24
	8x41 SW	14	28
Hyflex 18/ Powerform 18	18x7		
	18x19 S	2	4
	18x26 SW		
Hyflex 35/ Powerform 35	35x7		
	35x19 S	2	4
	35x26 SW		

whereas for rotation-resistant wire ropes, majority of wire breakages are expected to occur internally and require specialized examination techniques to reveal.

The table specifies the number of visible broken wires, which when equalled or exceeded requires mandatory discard of ropes working on steel sheaves.

- Wire breaks in the strand valley, generally, indicate internal rope deterioration and require closer inspection of the rope. It should be considered for discard if there are two or more such breaks in a length of rope equal to 6 x d.



- Broken wires at, or adjacent to, the termination, require the termination to be remade by shortening the rope, otherwise the rope should be discarded.
- Concentrated close group of broken wires in a rope length of 6 x d or in any one strand, require discard of the rope even if the numbers given above are not reached.
- Complete fracture of one strand or collapse of core requires immediate discard of the wire rope.

Rope diameter reduction

Rope diameter may reduce due to one or a combination of these factors:

- Internal wear and/or wire indentation
- External wear due to abrasion of crowns of outer wires
- Deterioration or collapse of core (fibre/steel) or internal layers of multi-layer rotation-resistant ropes.

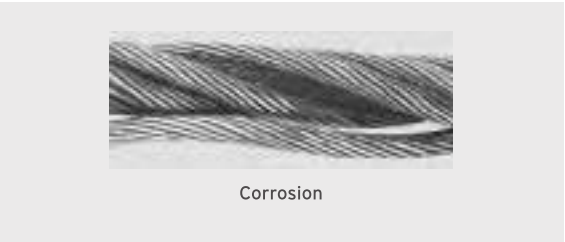
The rope should be discarded :

- If rope diameter reduction exceeds 7% of nominal rope diameter, only due to external wear.
- If rope diameter reduction exceeds 3% of nominal rope diameter for rotation resistant ropes and exceeds 10% for other 6 and 8 strand wire ropes, due to reasons other than external wear.

Corrosion

Corrosion may occur on the outer surface of the wire rope, which can be detected visually, or on the internal layers of the wire rope, which is more difficult to detect. The following conditions justify immediate discard of wire rope:

- Wire slackness due to corrosion of external wires
- Confirmation of severe internal corrosion



Deformation

Permanent distortion from its original shape and orientation is termed as deformation.

The following common forms of distortion, require immediate discard of the wire rope:

- Birdcage or Basket formation
- Wire, Strand or Core Protrusion and/or Distortion
- Kink or Loop formation
- Localized diameter increase in excess of 5% of actual rope diameter
- Localized rope diameter reduction and lay length variation associated with severe waviness



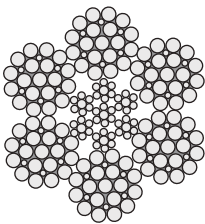
PREMIER DESIGNS



HYFLEX 6X19



- High quality flexible 6x19 class crane rope
- Good resistance to abrasion
- Consistent performance



NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX. MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1770 N/mm ²		1960 N/mm ²	
			kN	tonnes	kN	tonnes
6		14.3	22.7	2.3	25.1	2.6
7		19.5	30.9	3.1	34.2	3.5
8		25.5	40.3	4.1	44.7	4.6
9		32.2	51.0	5.2	56.5	5.8
10		39.8	63.0	6.4	69.8	7.1
11		48.2	76.2	7.8	84.4	8.6
12		57.3	90.7	9.3	101.0	10.3
	1/2	64.2	102.0	10.4	113.0	11.5
13		67.3	107.0	10.9	118.0	12.0
14		78.0	124.0	12.6	137.0	14.0
16	5/8	102.0	161.0	16.4	179.0	18.3
18		129.0	204.0	20.8	226.0	23.0
20		159.0	252.0	25.7	279.0	28.4
22		193.0	305.0	31.1	338.0	34.5
	7/8	197.0	311.0	31.7	345.0	35.2
24	15/16	229.0	363.0	37.0	402.0	41.0
	1	257.0	407.0	41.5	450.0	45.9
26		269.0	426.0	43.4	472.0	48.1
28		312.0	494.0	50.4	547.0	55.8
32	1 1/4	408.0	645.0	65.8	715.0	72.9
36		516.0	817.0	83.3	904.0	92.2
40		637.0	1010.0	103.0	1120.0	114.0
44		771.0	1220.0	124.0	1350.0	138.0
48	1 7/8	917.0	1450.0	148.0	1610.0	164.0
52		1076.0	1700.0	173.0	1890.0	193.0
56		1248.0	1980.0	202.0	2190.0	223.0
60		1433.0	2270.0	231.0	2510.0	256.0

Note: Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.
Fibre core ropes can be produced against specific request.

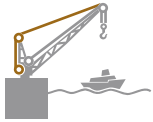
Typical Applications

LATTICE BOOM



BOOM HOIST

DOCKSIDE



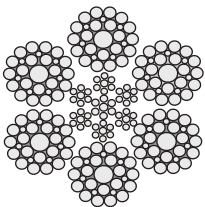
BOOM HOIST

BOOM HOIST ■

HYFLEX 6X29Fi



- High quality flexible crane rope
- Consistent performance
- Independent wire rope core

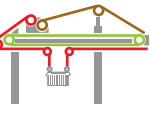


NOM. ROPE DIA. mm	APPROX. MASS kg/100m	MINIMUM BREAKING FORCE	
		GALVANISED & UNGALVANISED	
		1620 N/mm ²	1770 N/mm ²
		GRADE A	GRADE B
		kN	kN
10	44	63.6	67.7
11.2	55.2	79.8	84.9
12.5	68.8	99.4	106.0
14	86.3	125.0	133.0
16	113.0	163.0	173.0
18	143.0	206.0	219.0
20	176.0	254.0	271.0
22.4	221.0	319.0	340.0
25	275.0	398.0	423.0
28	345.0	499.0	531.0
30	396.0	573.0	609.0
31.5	437.0	631.0	672.0
33.5	494.0	714.0	760.0
35.5	555.0	802.0	853.0
37.5	619.0	895.0	952.0
40	704.0	1020.0	1080.0
42.5	795.0	1150.0	1220.0
45	891.0	1290.0	1370.0
47.5	993.0	1440.0	1530.0
50	1100.0	1590.0	1690.0
53	1240.0	1790.0	1900.0
56	1380.0	2000.0	2120.0
60	1580.0	2290.0	2440.0

Note: Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

Typical Applications

CONTAINER



MAIN HOIST

BOOM HOIST

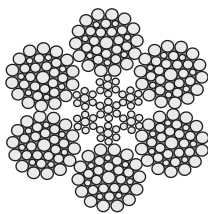
TROLLEY

BOOM HOIST ■
MAIN HOIST ■
TROLLEY ■

Abbreviated terms used in this brochure
XS - Lower Breaking Load | M - Medium Breaking Load | L - High Breaking Load | XL - Very High Breaking Load
F - Fibre Core | S - Steel Core | P - Plasticated Core | K - Compacted | SW - Seale Warrington Construction



HYFLEX 6X36



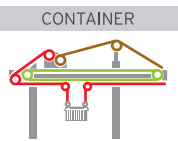
- High quality flexible 6x36 class crane rope
- Consistent performance
- Fully lubricated in manufacturing
- Independent wire rope core

NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX.* MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1770 N/mm ²		1960 N/mm ²	
			kN	tonnes	kN	tonnes
8		26.1	40.3	4.1	44.7	4.6
9		33.2	51.0	5.2	56.5	5.8
10		40.8	63.0	6.4	69.8	7.1
11		49.4	76.2	7.8	84.4	8.6
12		58.8	90.7	9.2	101.0	10.3
	1/2	66.0	102.0	10.4	113.0	11.5
13		69.2	107.0	10.9	118.0	12.0
14		80.2	124.0	12.6	137.0	14.0
16	5/8	104.0	161.0	16.4	179.0	18.3
18		132.0	204.0	20.8	226.0	23.0
20		163.0	252.0	25.7	279.0	28.4
22		197.0	305.0	31.1	338.0	34.5
	7/8	201.0	311.0	31.7	345.0	35.2
24	15/16	235.0	363.0	37.0	402.0	41.0
	1	263.0	407.0	41.5	450.0	45.9
26		276.0	426.0	43.4	472.0	48.1
28		320.0	494.0	50.4	547.0	55.8
32	1 1/4	418.0	645.0	65.8	715.0	72.9
36		531.0	817.0	83.3	904.0	92.2
40		655.0	1010.0	103.0	1120.0	114.0
44		793.0	1220.0	124.0	1350.0	138.0
48	1 7/8	943.0	1450.0	148.0	1610.0	164.0
52		1111.0	1700.0	173.0	1890.0	193.0
56		1281.0	1980.0	202.0	2190.0	223.0
60	2 3/8	1471.0	2270.0	231.0	2510.0	256.0

Note: Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.
Fibre core ropes can be produced against specific request.

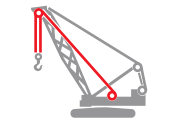
Abbreviated terms used in this brochure
XS - Lower Breaking Load | M - Medium Breaking Load | L - High Breaking Load | XL - Very High Breaking Load
F - Fibre Core | S - Steel Core | P - Plasticated Core | K - Compacted | SW - Seale Warrington Construction

Typical Applications



CONTAINER
MAIN HOIST
BOOM HOIST
TROLLEY

LATTICE BOOM



MAIN HOIST*



STEELWORKS LADLE
MAIN HOIST

UNLOADER

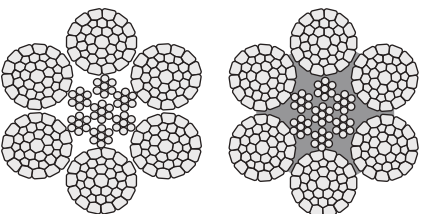


MAIN HOIST
BOOM HOIST
RACKING

BOOM HOIST ■
MAIN HOIST ■
RACKING/
TROLLEY ■

* For higher lifting heights a rotation resistant rope should be selected.

POWERFORM® 6/6P

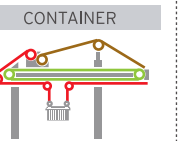


- Powerform® 6 is a high strength rugged six strand rope ideal for situations where longer service life is required.
- Powerform® 6 can be substituted for any six strand construction to improve service life and reduce total cost.
- High fatigue life resulting from the unique compaction process
- Optional plastic impregnation (P) signifies full plastic impregnation of the steel core.

NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX. MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1770 N/mm ²		1960 N/mm ²	
			kN	tonnes	kN	tonnes
10		46.4	69.5	7.1	85.7	8.7
11		56.1	83.8	8.5	98.6	10.1
12		66.8	100.0	10.2	114.0	11.6
	1/2	74.8	113.0	11.5	140.0	14.3
13		78.4	118.0	12.0	147.0	15.0
14		90.9	137.0	14.0	170.0	17.3
15		104.0	157.0	16.0	195.0	19.9
16	5/8	119.0	178.0	18.1	218.0	22.2
17		134.0	201.0	20.5	246.0	25.1
18		150.0	225.0	22.9	276.0	28.1
19	3/4	168.0	251.0	25.6	304.0	31.0
20		186.0	278.0	28.3	335.0	34.1
22		225.0	336.0	34.3	400.0	40.8
	7/8	229.0	343.0	35.0	408.0	41.6
24		267.0	400.0	40.8	489.0	49.8
	1	299.0	449.0	45.8	552.0	56.3
26		314.0	470.0	47.9	578.0	58.9
28		364.0	545.0	55.6	657.0	67.0
30		418.0	626.0	63.8	757.0	77.2
32	1 1/4	475.0	712.0	72.6	846.0	86.2
34		518.0	804.0	82.0	916.0	93.4
36		581.0	901.0	91.8	1065.0	109.0
38	1 1/2	647.0	1004.0	102.0	1165.0	119.0
40		717.0	1112.0	113.0	1295.0	132.0
42		790.0	1226.0	125.0	1425.0	145.0
44		867.0	1246.0	127.0	1505.0	153.0
46		948.0	1362.0	139.0	1665.0	170.0
48		1032.0	1483.0	151.0	1885.0	192.0
50		1120.0	1609.0	164.0	1975.0	201.0
52		1211.0	1741.0	177.0	2135.0	218.0
54		1306.0	1877.0	191.0	2325.0	237.0
56		1405.0	2019.0	206.0	2475.0	252.0
58		1507.0	2166.0	221.0	2650.0	270.0
60		1613.0	2317.0	236.0	2810.0	286.0

* Mass per unit length of POWERFORM 6P increases by approx. 3%
Note: • Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.
• POWERFORM 6P ia available only for 16 mm and above on special request and prior confirmation.

Typical Applications



CONTAINER
MAIN HOIST
BOOM HOIST
TROLLEY

LATTICE BOOM

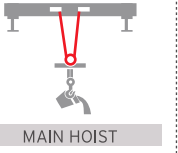


MAIN HOIST
BOOM HOIST

DOCKSIDE



BOOM HOIST



STEELWORKS LADLE
MAIN HOIST

OFFSHORE PEDESTAL



BOOM HOIST

UNLOADER



MAIN HOIST
BOOM HOIST
RACKING

BOOM HOIST ■
MAIN HOIST ■
RACKING/
TROLLEY ■

* For higher lifting heights a rotation resistant rope should be selected.



HYFLEX 8/8P



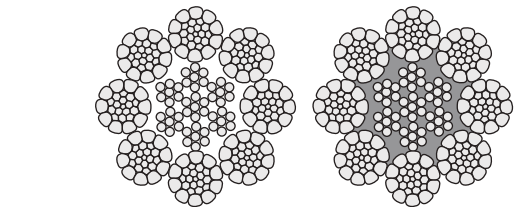
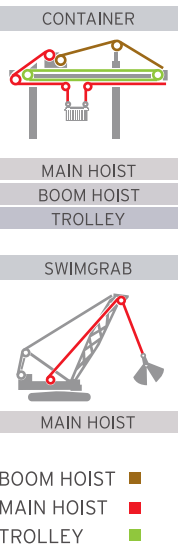
- Hyflex 8P is a flexible high strength eight strand steel wire rope with plastic impregnated core
- Good bending fatigue life
- Greater surface contact area resulting from the eight strand construction
- Optional plastic impregnation of the steel core. (P) signifies full plastic impregnation of the steel core

NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX. MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1960 N/mm ²		2160 N/mm ²	
			kN	tonnes	kN	tonnes
10		43.5	72.9	7.4	81.4	8.3
11		52.6	86.1	8.8	96.5	9.8
12		62.6	105	10.7	117.0	11.9
13	1/2	70.2	123	12.5	131.0	13.4
14		73.5	124	12.6	138.0	14.1
15		85.3	143	14.6	160.0	16.3
16	5/8	97.9	164	16.7	183.0	18.7
17		111.0	187	19.1	208.0	21.2
18		126.0	211	21.5	239.0	24.4
19		141.0	239	24.4	267.0	27.2
20	3/4	157.0	269	27.4	300.0	30.6
22		174.0	295	30.1	331.0	33.7
24		211.0	356	36.3	400.0	40.8
26	7/8	215.0	360	36.7	402.0	41.0
28		251.0	423	43.1	475.0	48.4
30	1	281.0	470	47.9	525.0	53.5
32		297.0	500	51.0	562.0	57.3
34		345.0	572	58.3	642.0	65.4
36	1 1/8	359.0	596	60.8	665.0	67.8
38		396.0	656	66.9	733.0	74.7
40	1 1/4	451.0	747	76.1	836.0	85.2
42		509.0	843	85.9	945.0	96.3
44		570.0	935	95.3	1053.0	107.0
46	1 1/2	635.0	1043	106.0	1172.0	119.0
48		704.0	1162	118.0	1313.0	134.0
50		785.0	1305	133.0	1462.0	149.0
52	1 3/4	862.0	1412	144.0	1577.0	161.0
		879.0	1441	147.0	1613.0	164.0
		942.0	1543	157.0	1731.0	176.0
		1025.0	1680	171.0	1885.0	192.0
		1113.0	1833	187.0	2065.0	210.0
	2	1148.0	1882	192.0	2101.0	214.0
		1203.0	1972	201.0	2202.0	224.0

* Mass per unit length of HYFLEX 8P increases by approx. 3%

- Note:
- Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.
 - HYFLEX 8P is available for rope diameter 16 mm and above on special request and prior confirmation.

Typical Applications



POWERFORM® 8/8P

- Powerform® 8P is a high strength eight strand rope with plastic impregnated core ideal for situations where longer service life is required.
- High fatigue life resulting from the unique compaction process
- Increased abrasion resistance resulting from the unique compaction process

NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX. MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1960 N/mm ²		2160 N/mm ²	
			kN	tonnes	kN	tonnes
10		46.0	87.8	9.0	94	9.6
11		55.7	106.0	10.8	114	11.6
12		66.2	126.0	12.8	135	13.8
13	1/2	74.2	142.0	14.5	152	15.5
14		77.7	148.0	15.1	159	16.2
15		90.2	172.0	17.5	184	18.8
16	5/8	104.0	198.0	20.2	211	21.5
17		118.0	225.0	22.9	241	24.6
18		133.0	254.0	25.9	272	27.7
19		149.0	284.0	29.0	304	31.0
20	3/4	166.0	317.0	32.3	339	34.6
22		184.0	351.0	35.8	376	38.3
24		223.0	425.0	43.3	455	46.4
26	7/8	227.0	434.0	44.2	464	47.3
28		265.0	506.0	51.6	541	55.1
30	1	297.0	567.0	57.8	606	61.8
32		318.0	594.0	60.6	635	64.7
34		368.0	688.0	70.1	737	75.1
36	1 1/8	384.0	717.0	73.1	767	78.2
38		423.0	790.0	80.5	846	86.2
40	1 1/4	481.0	899.0	91.6	960	97.9
42		543.0	1013.0	103.0	1083	110.0
44		609.0	1138.0	116.0	1218	124.0
46	1 1/2	679.0	1268.0	129.0	1357	138.0
48		752.0	1405.0	143.0	1503	153.0
50		847.0	1535.0	156.0	1651	168.0
52	1 3/4	929.0	1700.0	173.0	1819	185.0
		948.0	1735.0	177.0	1856	189.0
		1016.0	1858.0	189.0	1985	202.0
		1106.0	2023.0	206.0	2162	220.0
	2	1200.0	2200.0	224.0	2349	239.0
		1239.0	2266.0	231.0	2425	247.0
		1298.0	2374.0	242.0	2541	259.0

* Mass per unit length of POWERFORM 8P increases by 3%

- Note:
- Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.
 - POWERFORM 8P is available for rope diameter 16 mm and above on special request and prior confirmation.

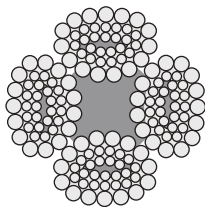
Typical Applications



HYFLEX 4



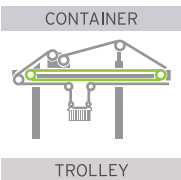
- Rugged 4 strand steel wire rope
- Good rotation resistance
- Recommended for severe applications
- Fully lubricated in manufacturing



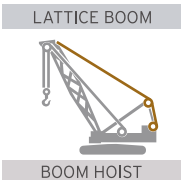
NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX.* MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1770 N/mm ²		1960 N/mm ²	
			kN	tonnes	kN	tonnes
10		44.8	64.0	6.5	69.4	7.1
12		65.4	92.3	9.4	99.9	10.2
14		88.8	125.5	12.8	136.5	13.9
16	5/8	117.0	164.5	16.8	177.4	18.1
18		149.0	207.5	21.2	224.5	22.9
19	3/4	167.0	231.5	23.6	250.5	25.5
20		183.0	256.5	26.2	277.5	28.3
22		214.0	310.0	31.6	336.0	34.3
	7/8	218.0	317.0	32.3	343.0	35.0
24		253.0	369.0	37.6	400.0	40.8
25		275.0	399.0	40.7	432.0	44.1
	1	284.0	413.0	42.1	448.0	45.7
26		298.0	433.0	44.2	469.0	47.8
28		346.0	502.0	51.2	544.0	55.5
30		398.0	576.0	58.7	624.0	63.6
32	1 1/4	456.0	656.0	66.9	689.0	70.3
34		512.0	740.0	75.5	802.0	81.8
36		574.0	830.0	84.6	898.0	91.6
38	1 1/2	640.0	924.0	94.2	1002.0	102.0
40		709.0	1002.0	102.0	1082.0	110.0
42		782.0	1102.0	112.0	1192.0	122.0
44		859.0	1212.0	124.0	1312.0	134.0
45		898.0	1272.0	130.0	1372.0	140.0

Note: Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

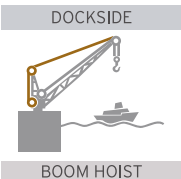
Typical Applications



TROLLEY



BOOM HOIST



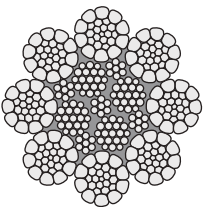
BOOM HOIST



BOOM HOIST

BOOM HOIST ■
TROLLEY ■

POWERFORM® 8PC

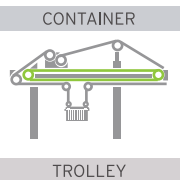


- Powerform® 8PC is a high strength parallel closed steel wire rope
- High fatigue life resulting from the unique compaction process and the parallel closed construction
- Maximum resistance to crushing. Recommended for multi-layer spooling operations.

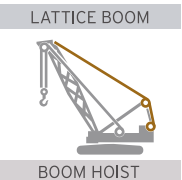
NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX. MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1960 N/mm ²		2160 N/mm ²	
			kN	tonnes	kN	tonnes
8		31.7	60.5	6.2	66.5	6.8
9		40.1	76.6	7.8	84.2	8.6
10		49.5	94.7	9.7	103.0	10.5
11		59.9	112.0	11.4	121.0	12.3
12		71.3	138.0	14.1	150.0	15.3
	1/2	79.8	152.0	15.5	164.0	16.7
13		83.7	159.0	16.2	172.0	17.5
14		97.0	181.0	18.5	197.0	20.1
15		111.0	213.0	21.7	232.0	23.6
16	5/8	127.0	239.0	24.4	260.0	26.5
17		143.0	269.0	27.4	292.0	29.8
18		160.0	300.0	30.6	326.0	33.2
19	3/4	179.0	341.0	34.8	371.0	37.8
20		198.0	375.0	38.2	408.0	41.6
22		240.0	448.0	45.7	487.0	49.6
	7/8	245.0	457.0	46.6	497.0	50.7
24		285.0	527.0	53.7	574.0	58.5
	1	319.0	592.0	60.3	646.0	65.9
26		335.0	620.0	63.2	677.0	69.0
28		388.0	735.0	74.9	801.0	81.7

Note: Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

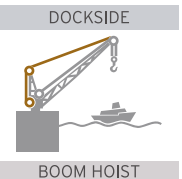
Typical Applications



TROLLEY



BOOM HOIST



BOOM HOIST



BOOM HOIST

BOOM HOIST ■
TROLLEY ■

Abbreviated terms used in this brochure
XS - Lower Breaking Load | M - Medium Breaking Load | L - High Breaking Load | XL - Very High Breaking Load
F - Fibre Core | S - Steel Core | P - Plasticated Core | K - Compacted | SW - Seale Warrington Construction



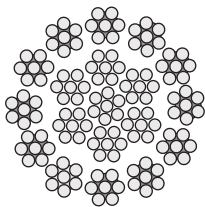
HYFLEX 18



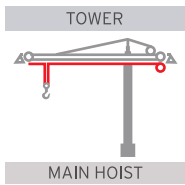
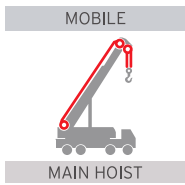
- Hyflex 18 is a high quality rotation resistant hoist rope
- Good resistance to rotation verified by testing on the in-house torque/turn machine
- Consistent performance

NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX. MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1960 N/mm ²		2160 N/mm ²	
			kN	tonnes	kN	tonnes
6		14.6	25.0	2.5	27.0	2.8
7		19.9	34.0	3.5	36.7	3.7
8		26.0	45.0	4.6	48.6	5.0
9		32.9	56.5	5.8	61.0	6.2
10		40.6	70.0	7.1	75.6	7.7
11		49.1	84.0	8.6	90.7	9.2
12		58.5	101	10.3	109	11.1
	1/2	65.5	113	11.5	121	12.3
13		68.6	118	12.0	127	12.9
14		79.6	137	14.0	148	15.1
15		91.4	157	16.0	169	17.2
16	5/8	104	180	18.3	194	19.8
17		117	203	20.7	219	22.3
18		132	226	23.0	244	24.9
	3/4	147	253	25.8	273	27.8
20		162	279	28.4	301	30.7
22		197	339	34.6	366	37.3
	7/8	201	346	35.3	374	38.1

Note: Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.



Typical Applications



MAIN HOIST ■

Note : For higher lifting heights, consideration should be given to using a 35x7 construction with improved rotational characteristics.

POWERFORM® 18

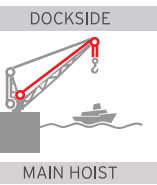


- Powerform® 18 is a high strength rotation resistant hoist rope
- A sample of rope from each production batch is tested to destruction in order to confirm
- Good resistance to rotation verified by testing on the in-house torque/turn machine
- High fatigue life resulting from the unique compaction process

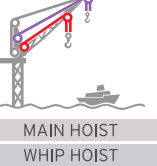
NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX. MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1960 N/mm ²		2160 N/mm ²	
			kN	tonnes	kN	tonnes
6		17.5	29.4	3.0		
7		23.8	38.0	3.9		
8		31.0	51.8	5.3		
9		39.3	64.6	6.6		
10		48.5	80.8	8.2		
11		58.7	101.0	10.3	111	11.3
12		69.8	116.0	11.8	127	12.9
	1/2	78.2	135.0	13.8	148	15.1
13		82.0	141.0	14.4	155	15.8
14		95.1	160.0	16.3	177	18.0
15		109.0	182.0	18.6	201	20.5
16	5/8	124.0	209.0	21.3	232	23.6
17		140.0	237.0	24.2	262	26.7
18		157.0	266.0	27.1	295	30.1
	3/4	175.0	291.0	29.7	322	32.8
20		194.0	320.0	32.6	359	36.6
22		235.0	379.0	38.6	424	43.2
	7/8	240.0	387.0	39.4	433	44.1
24		279.0	462.0	47.1	523	53.3
	1	313.0	517.0	52.7	585	59.6
26		328.0	542.0	55.2	613	62.5
28		380.0	632.0	64.4	710	72.4
30		437.0	721.0	73.5	809	82.5
32	1 1/4	497.0	820.0	83.6	920	93.8

Note: Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

Typical Applications

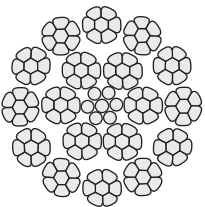


OFFSHORE PEDESTAL



MAIN HOIST ■
WHIP HOIST ■

Note : For higher lifting heights consideration should be given to using a 35x7 construction with improved rotational characteristics.



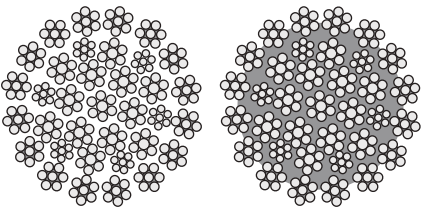
Abbreviated terms used in this brochure
XS - Lower Breaking Load | M - Medium Breaking Load | L - High Breaking Load | XL - Very High Breaking Load
F - Fibre Core | S - Steel Core | P - Plasticated Core | K - Compacted | SW - Seale Warrington Construction



HYFLEX 35/35P



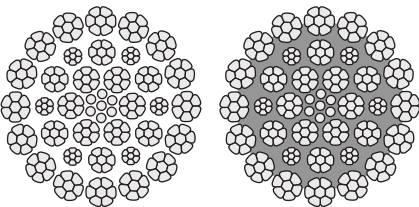
- Hyflex 35 is a high strength flexible hoist rope
- Maximum resistance to rotation verified by testing on the in-house torque/turn machine
- Suitable for use on single part and multi-part hoist reeving systems



NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX.* MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1960 N/mm ²		2160 N/mm ²	
			kN	tonnes	kN	tonnes
10		44.8	76	7.7	86.5	8.8
11		54.2	91	9.3	104.0	10.6
12		64.5	107	10.9	125.0	12.7
	1/2	72.0	123	12.5	137.0	14.0
13		76.0	128	13.0	146.0	14.9
14		88.0	148	15.1	168.0	17.1
16	5/8	115.0	194	19.8	221.0	22.5
18		145.0	242	24.7	277.0	28.2
19	3/4	162.0	277	28.2	312.0	31.8
20		179.0	301	30.7	337.0	34.4
21		198.0	335	34.1	370.0	37.7
22		217.0	370	37.7	412.0	42.0
	7/8	221.0	376	38.3	418.0	42.6
24		258.0	441	45.0	498.0	50.8
	1	289.0	491	50.1	546.0	55.7
26		303.0	517	52.7	581.0	59.2
28		351.0	599	61.1	681.0	69.4
	1 1/8	366.0	621	63.3	704.0	71.8
30		403.0	679	69.2	775.0	79.0
32	1 1/4	459.0	769	78.4	865.0	88.2
35	1 3/8	549.0	945	96.3	1044.0	106.0
36		581.0	983	100.0	1085.0	111.0
38	1 1/2	647.0	1078	110.0	1205.0	123.0
40		717.0	1202	123.0	1335.0	136.0
42		790.0	1227	125.0		
44		867.0	1347	137.0		
	1 3/4	885.0	1375	140.0		
46		948.0	1472	150.0		
48		1032.0	1603	163.0		
50		1120.0	1740	177.0		
	2	1156.0	1796	183.0		
52		1211.0	1881	192.0		

* Mass per unit length of HYFLEX 35P increases by approx. 3%
Note: • HYFLEX 35P is available on special request and prior confirmation.
• Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

POWERFORM® 35/35P



- Powerform® 35/35P has the highest strength of all low rotation hoist ropes
- Increased abrasion resistance resulting from the unique compaction process
- Maximum resistance to rotation

NOM. ROPE DIA. mm	NOM. ROPE DIA. in	APPROX.* MASS kg/100m	MINIMUM BREAKING FORCE			
			GALVANISED & UNGALVANISED			
			ROPE GRADE			
			1960 N/mm ²		2160 N/mm ²	
			kN	tonnes	kN	tonnes
	1/2	81.1	148	15.1	160	16.3
13		85.0	155	15.8	167	17.0
14		98.6	180	18.3	192	19.6
16	5/8	129	233	23.8	252	25.7
18		163	300	30.6	321	32.7
19	3/4	182	331	33.7	358	36.0
20		201	372	37.9	399	40.7
21		222	402	41.0	434	44.2
22		243	444	45.3	484	49.3
	7/8	249	453	46.2	490	49.9
24		290	531	54.1	572	58.3
	1	325	591	60.2	640	65.2
26		340	621	63.3	661	67.4
28		394	720	73.4	788	80.3
	1 1/8	411	748	76.2	810	82.6
30		453	827	84.3	904	92.2
32	1 1/4	515	944	96.2	1035	106.0
35	1 3/8	616	1125	115.0	1216	124.0
36		652	1185	121.0	1286	131.0
38	1 1/2	726	1326	135.0	1437	146.0
40		805	1477	151.0	1588	162.0
42		887	1485	151.0		
44		974	1618	165.0		
	1 3/4	994	1646	168.0		
46		1064	1765	180.0		
48		1159	1935	197.0		
50		1258	2078	212.0		
	2	1298	2150	219.0		
52		1360	2256	230.0		

* Mass per unit length of POWERFORM 35P increases by approx. 3%
Note: • POWERFORM 35P is available on special request and prior confirmation.
• Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

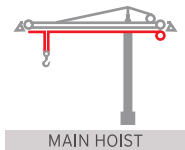
Typical Applications

MOBILE



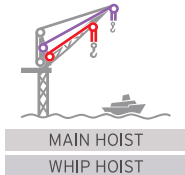
MAIN HOIST

TOWER



MAIN HOIST

OFFSHORE PEDESTAL



MAIN HOIST

WHIP HOIST

MAIN HOIST ■
WHIP HOIST ■

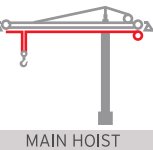
Typical Applications

MOBILE



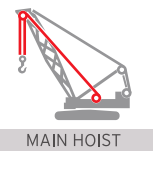
MAIN HOIST

TOWER



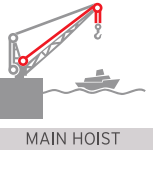
MAIN HOIST

LATTICE BOOM



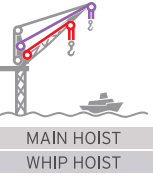
MAIN HOIST

DOCKSIDE



MAIN HOIST

OFFSHORE PEDESTAL



MAIN HOIST

WHIP HOIST

MAIN HOIST ■
WHIP HOIST ■



CONTEMPORARY DESIGNS



WIRE ROPE APPLICATION SELECTOR

Key ✓ Recommended ! Allowed ✗ Not recommended	GRAB Unloaders				Rotary Drilling Machines			Tower Cranes			Crawler Cranes	
	Boom	Hoist	Grab Closing	Racking	Auxiliary Hoist	Pull Down	Drilling	Hoist	Trolley	Stay	Boom	Hoist
POWERFORM 6XSPF/6PFS HYFLEX 6S/6PS/8PFS	✗	✗	✓	✓	✗	✓	✗	✗	✓	✗	✗	✗
POWERFORM 35MS/35MPS	✗	✗	✗	✗	✓	✗	✓	✓	✗	✗	✗	✓
POWERFORM 6MS	✓	✓	✓	✓	✗	✓	!	✗	✓	✓	✓	✗
POWERFORM 8LS / 8LPS / 8XLS / 10LS / 10LFS / 10XLS	✓	!	✗	✗	✗	!	✗	✗	!	✓	✓	✗
POWERFORM 10MS/10MFS	✗	!	✗	✗	✗	✗	✗	!	✗	!	✓	!
HYFLEX 35XSS POWERFORM 19S / 19LS / 24LS / 24LSF	✗	✗	✗	✗	!	✗	✗	✓	✗	✗	✗	✓
POWERFORM 35XLS/35XLPS	✗	✗	✗	✗	✓	✗	!	✓	✗	✗	✗	✓
POWERFORM 8LS/10XLS/10XLF	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

ROPE PROPERTIES	FILL FACTOR (f)	MBF FACTOR (k)	MASS FACTOR (km) in air	TYPICAL LAY TYPE	MODULUS (E)* [Kn/mm ²]	TORQUE FACTOR (t)*	REFERENCE LAY FACTOR (K _L)*	ROTATION (R)* [deg./lay]
POWERFORM 6XSPF	0.57	0.78	0.0039	Reg	85	0.080	6	70
HYFLEX 6S/6PS	0.59	0.83	0.0041	Reg	95	0.080	5.5	70
HYFLEX 8PFS	0.59	0.81	0.0039	Reg	90	0.012	5.5	120
POWERFORM 6PFS	0.66	0.86	0.0045	Reg	100	0.090	5.5	80
POWERFORM 35MS/35MPS	0.72	0.93	0.0048	Lang	110	0.012	6.5	1
POWERFORM 6MS	0.68	0.92	0.0045	Reg	120	0.075	6.5	60
POWERFORM 8LS/8LPS	0.69	0.96	0.0047	Reg	120	0.085	6.5	60
POWERFORM 10LS/10LFS	0.71	0.94	0.0048	Reg	120	0.090	6.75	70
POWERFORM 8XLS	0.74	1.02	0.0049	Reg	130	0.085	6.5	60
POWERFORM 10XLS	0.78	1.02	0.0051	Reg	130	0.100	6.75	90
HYFLEX 35XSS	0.60	0.78	0.0040	Lang	105	0.012	6.25	1
POWERFORM 19S	0.70	0.85	0.0047	Reg	110	0.040	6.25	5
POWERFORM 10MS/10MFS	0.71	0.93	0.0048	Reg	120	0.045	6.5	4
POWERFORM 19LS/24LS/24LF	0.70	0.94	0.0046	Lang	120	0.035	6.5	4
POWERFORM 35XLS/35XLPS	0.74	1.00	0.0049	Lang	130	0.012	7	1
POWERFORM 8LS	0.68	0.98	0.0046	Reg	125	0.085	6.5	60
POWERFORM 10XLS/10XLF	0.75	1.05	0.0048	Reg	130	0.100	6.5	90

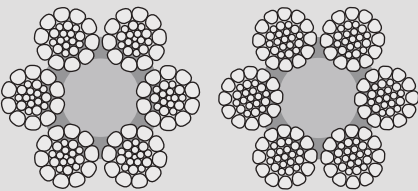
*Nominal values @ 20% MBF for trained rope.

Harbour Cranes			Container Cranes			Overhead & Gantry Launching Cranes	Mobile Cranes	Electric Winches
Boom	Hoist	Luffing	Boom	Hoist	Trolley	Hoist	Hoist	Hoist
✗	✗	✗	✗	✗	✓	✓	✗	✗
✗	✓	✗	✗	✗	✗	✗	✓	✗
✓	✗	✓	✓	✓	✓	✓	✗	✗
✓	!	✓	✓	✓	!	✓	✗	✗
✓	!	✓	✗	✓	✗	!	!	✗
✗	✓	✗	✗	✗	✗	✗	✓	✗
✗	✓	✗	✗	✗	✗	✗	✓	✗
✗	✗	✗	✗	✗	✗	✗	✗	✓



POWERFORM® 6XSPF

- Excellent shock resistance
- Good resistance to fleet angle
- Improved MBF in respect to conventional hoist ropes



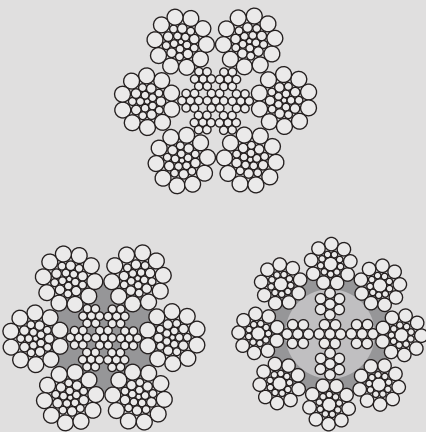
Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
	5/8	112	0.173	1.01	0.677	197	20.0	44.2
16		113	0.176	1.02	0.688	200	20.4	44.9
17		128	0.198	1.16	0.777	225	23.0	50.7
18		144	0.222	1.30	0.871	253	25.8	56.9
19	3/4	160	0.248	1.44	0.970	282	28.7	63.4
20		177	0.275	1.60	1.08	312	31.8	70.2
22		214	0.332	1.94	1.30	378	38.5	85.0
	7/8	219	0.339	1.98	1.33	385	39.3	86.7
24		255	0.395	2.30	1.55	449	45.8	101
25		277	0.429	2.50	1.68	488	49.7	110
	1	286	0.443	2.58	1.73	503	51.3	113
26		299	0.464	2.70	1.82	527	53.7	119
28		347	0.538	3.14	2.11	612	62.3	138
	1 1/8	362	0.561	3.27	2.19	637	64.9	143
30		399	0.618	3.60	2.42	702	71.6	158
	1 1/4	450	0.698	4.03	2.71	786	80.2	177
32		458	0.709	4.10	2.75	799	81.4	180
34		516	0.801	4.62	3.11	902	91.9	203
35	1 3/8	545	0.845	4.88	3.28	951	97.0	214
36		579	0.897	5.18	3.48	1010	103	227
38	1 1/2	645	1.00	5.78	3.88	1130	115	253
40		715	1.11	6.40	4.30	1250	127	281

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

MBF values are referred to 2160 grade, custom values are available on demand.

Abbreviated terms used in this brochure
XS - Lower Breaking Load | M - Medium Breaking Load | L - High Breaking Load | XL - Very High Breaking Load
F - Fibre Core | S - Steel Core | P - Plasticated Core | K - Compacted | SW - Seale Warrington Construction

HYFLEX 6S/PS & 8PFS



- Excellent shock resistance
- Enhanced resistance to fleet angle if plastic impregnated
- High radial stability with special core construction

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
	5/8	117	0.182	1.08	0.728	209	21.3	47.1
16		119	0.185	1.10	0.740	212	21.7	47.8
17		134	0.208	1.24	0.835	3240	24.5	54.0
18		151	0.234	1.39	0.936	269	27.4	60.5
19	3/4	168	0.260	1.55	1.04	300	30.5	67.4
20		186	0.289	1.72	1.16	332	33.8	74.7
22		225	0.349	2.08	1.40	402	41.0	90.4
	7/8	230	0.356	2.12	1.43	410	41.8	92.3
24		268	0.415	2.48	1.66	478	48.7	108
25		291	0.451	2.69	1.81	519	52.9	117
	1	300	0.465	2.77	1.86	535	54.6	120
26		315	0.488	2.91	1.95	561	57.2	126
28		365	0.566	3.37	2.27	651	66.3	146
	1 1/8	380	0.589	3.51	2.36	678	69.1	153
30		419	0.649	3.87	2.60	747	76.1	168
	1 1/4	471	0.730	4.33	2.91	837	85.3	188
32		478	0.741	4.40	2.96	850	86.6	191

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

MBF values are referred to 2160 grade, custom values are available on demand.

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
20		186	0.289	1.76	1.18	324	33.0	72.9
22		225	0.349	2.13	1.43	392	40.4	88.2
	7/8	230	0.356	2.17	1.46	400	40.8	90.0
24		268	0.416	2.53	1.70	467	47.6	105
25		291	0.451	2.75	1.85	506	51.6	114
	1	300	0.466	2.84	1.91	523	53.3	118
26		315	0.488	2.97	2.00	548	55.8	123
28		365	0.566	3.45	2.32	635	64.7	143
	1 1/8	380	0.589	3.59	2.41	661	67.4	149
30		419	0.649	3.96	2.66	729	74.3	164

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

MBF values are referred to 2160 grade, custom values are available on demand.



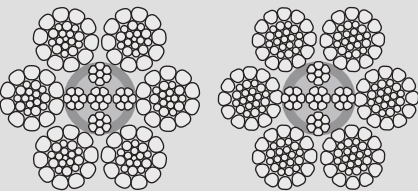
POWERFORM® 6PFS



- Excellent shock resistance
- Excellent fleet angle resistance
- High radial stability due to special core construction

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
	5/8	129	0.200	1.13	0.762	217	22.1	48.8
16		131	0.203	1.15	0.774	220	22.4	49.5
17		148	0.229	1.30	0.874	249	25.3	55.9
18		165	0.256	1.46	0.980	279	28.4	62.7
19	3/4	184	0.286	1.62	1.09	310	31.6	69.9
20		204	0.317	1.80	1.21	344	35.1	77.4
22		247	0.383	2.18	1.46	416	42.4	93.7
	7/8	252	0.391	2.22	1.49	425	43.3	95.6
24		294	0.456	2.59	1.74	495	50.5	111
25		319	0.495	2.81	1.89	538	54.8	121
	1	330	0.511	2.90	1.95	555	56.6	125
26		345	0.535	3.04	2.04	581	59.3	131
28		400	0.621	3.53	2.37	674	68.7	152
	1 1/8	417	0.646	3.67	2.47	702	71.6	158
30		460	0.712	4.05	2.72	774	78.9	174
	1 1/4	520	0.805	4.54	3.05	867	88.4	195
32		528	0.818	4.61	3.10	881	89.8	198

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.
MBF values are referred to 2160 grade, custom values are available on demand.



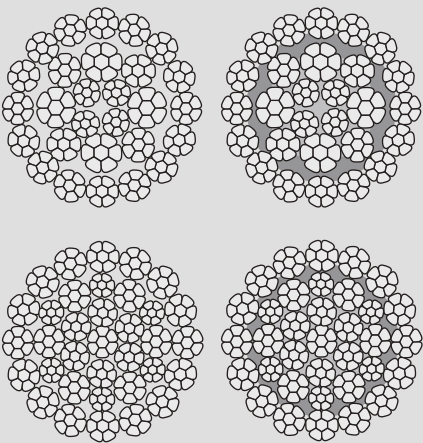
POWERFORM® 35MS/MPS



- Good shock resistance
- High radial stiffness and rotational stability
- Enhanced resistance to fleet angle if plastic impregnated

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
	5/8	143	0.221	1.23	0.830	234	23.9	52.7
16		145	0.224	1.25	0.843	238	24.3	53.6
17		163	0.253	1.42	0.952	269	27.4	60.5
18		183	0.284	1.59	1.07	301	30.7	67.8
19	3/4	204	0.316	1.77	1.19	336	34.2	75.5
20		226	0.351	1.96	1.32	372	37.9	83.7
22		274	0.424	2.37	1.59	450	45.9	101
	7/8	279	0.433	2.42	1.63	459	46.8	103
24		326	0.505	2.82	1.90	536	54.6	121
25		353	0.548	3.06	2.06	581	59.3	131
	1	365	0.565	3.16	2.12	600	61.2	135
26		382	0.593	3.31	2.23	629	64.1	141
28		443	0.687	3.84	2.58	729	74.3	164
	1 1/8	462	0.716	4.00	2.69	759	77.4	171
30		509	0.789	4.41	2.96	837	85.3	188
	1 1/4	570	0.884	4.94	3.32	937	95.6	211
32		579	0.898	5.02	3.37	952	97.1	214
34		654	1.01	5.66	3.81	1080	110	242
35	1 3/8	690	1.07	5.98	4.02	1130	116	255
36		733	1.14	6.35	4.27	1210	123	271
38	1 1/2	817	1.27	7.08	4.75	1340	137	302
40		905	1.40	7.84	5.27	1490	152	335

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.
MBF values are referred to 1960 grade, custom values are available on demand.



Abbreviated terms used in this brochure
XS - Lower Breaking Load | M - Medium Breaking Load | L - High Breaking Load | XL - Very High Breaking Load
F - Fibre Core | S - Steel Core | P - Plasticated Core | K - Compacted | SW - Seale Warrington Construction



POWERFORM® 6MS



- Improved MBF in respect to conventional hoist ropes
- High dimensional stability
- Good resistance to side pressure and crushing

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
10		53.3	0.083	0.460	0.309	92.0	9.38	20.7
11		64.5	0.100	0.557	0.374	111	11.3	25.0
12		76.7	0.119	0.662	0.445	132	13.5	29.8
	1/2	86.0	0.133	0.742	0.499	148	15.1	33.4
13		90.1	0.140	0.777	0.522	155	15.8	35.0
14		104	0.162	0.902	0.606	180	18.4	40.6
15		120	0.186	1.04	0.696	207	21.1	46.6
	5/8	134	0.208	1.16	0.779	232	23.6	52.2
16		136	0.211	1.18	0.791	236	24.0	53.0
17		154	0.239	1.33	0.893	266	27.1	59.8
18		173	0.268	1.49	1.00	298	30.4	67.1
19	3/4	192	0.298	1.66	1.12	332	33.9	74.7
20		213	0.330	1.84	1.24	368	37.5	82.8
22		254	0.393	2.23	1.50	445	45.4	100
	7/8	259	0.401	2.27	1.53	454	46.3	102
24		302	0.468	2.65	1.78	530	54.0	119
25		328	0.508	2.88	1.93	575	58.6	129
	1	338	0.524	2.97	1.99	594	60.5	134
26		354	0.549	3.11	2.09	622	63.4	140
28		411	0.637	3.61	2.42	721	73.5	162
	1 1/8	428	0.664	3.76	2.52	751	76.6	169
30		472	0.732	4.14	2.78	828	84.4	186
	1 1/4	529	0.819	4.54	3.05	927	94.5	209
32		546	0.846	4.61	3.10	932	95.0	210
34		616	0.955	5.20	3.50	1050	107	237
35	1 3/8	650	1.01	5.49	3.69	1110	113	250
36		691	1.07	5.83	3.92	1180	120	265
38	1 1/2	770	1.19	6.50	4.37	1310	134	296
40		853	1.32	7.20	4.84	1460	148	328
41	1 5/8	886	1.37	7.67	5.15	1550	158	349
42		917	1.42	7.94	5.33	1610	164	361
44		1010	1.56	8.71	5.85	1760	180	396
	1 3/4	1030	1.59	8.89	5.98	1800	183	405
46		1100	1.71	9.52	6.40	1930	196	433
48	1 7/8	120	1.86	10.4	6.97	2100	214	472
50		1300	2.02	11.3	7.56	2280	232	512
	2	1340	2.08	11.6	7.80	2350	240	528
52		1410	2.18	12.2	8.18	2460	251	554
54	2 1/8	1520	2.35	13.1	8.82	2650	271	597
56	2 1/4	1630	2.53	14.1	9.48	2850	291	642
58		1750	2.71	15.1	10.2	3060	312	689
60	2 3/8	1890	2.93	16.4	11.0	3310	338	745

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

MBF values are referred to 2160 grade, custom values are available on demand.



POWERFORM® 8LS/8LPS

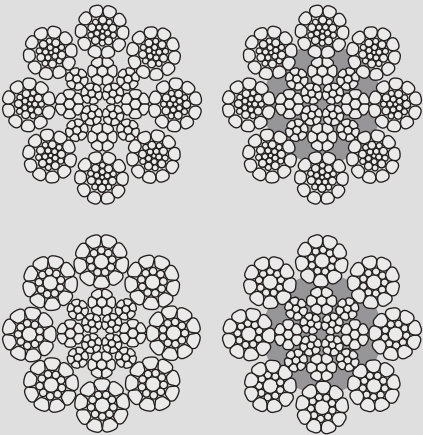


- Smoother contact surface in respect to conventional hoist ropes
- High resistance to side pressure and crushing
- Enhanced resistance to fleet angle if plastic impregnated

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
13		92.1	0.143	0.761	0.511	162	16.5	36.5
14		107	0.166	0.882	0.593	188	19.2	42.3
15		123	0.190	1.01	0.680	216	22.0	48.6
	5/8	137	0.213	1.13	0.762	242	24.7	54.4
16		140	0.216	1.15	0.774	246	25.1	55.3
17		158	0.244	1.30	0.874	277	28.3	62.4
18		177	0.274	1.46	0.980	311	31.7	70.0
19	3/4	197	0.305	1.62	1.09	347	35.3	78.0
20		218	0.338	1.80	1.21	384	39.1	86.4
22		264	0.409	2.18	1.46	465	47.4	105
	7/8	269	0.417	2.22	1.49	474	48.3	107
24		314	0.487	2.59	1.74	553	56.4	124
25		335	0.520	2.81	1.89	594	60.5	134
	1	346	0.537	2.90	1.95	613	62.5	138
26		363	0.562	3.04	2.04	642	65.5	145
28		421	0.652	3.53	2.37	745	75.9	168
	1 1/8	438	0.679	3.67	2.47	776	79.1	175
30		483	0.749	4.05	2.72	855	87.2	192
	1 1/4	541	0.839	4.54	3.05	958	97.6	215

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

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POWERFORM® 10LS/10LPS

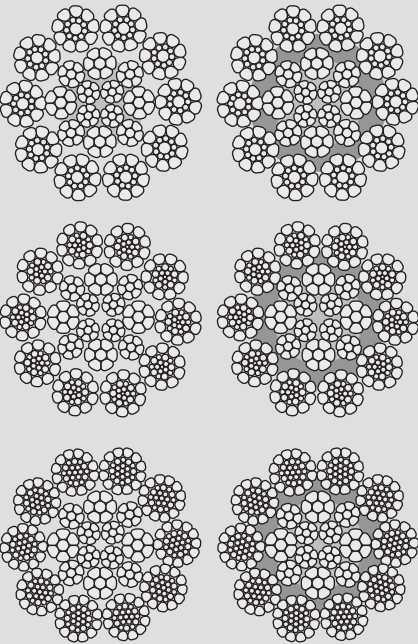


- Lower torque factor in respect to traditional hoist ropes
- Enhanced radial stiffness and diameter stability
- High resistance to side pressure and crushing
- Enhanced resistance to fleet angle if plastic impregnated

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
32		572	0.887	4.61	3.10	963	98.1	217
34		646	1.00	5.20	3.50	1090	111	245
35	1 3/8	682	1.06	5.49	3.69	1150	117	258
36		724	1.12	5.83	3.92	1220	124	274
38	1 1/2	807	1.25	6.50	4.37	1360	138	305
40		894	1.39	7.20	4.84	1500	153	338
41	1 5/8	938	1.45	7.67	5.15	1600	163	360
42		971	1.51	7.94	5.33	1660	169	373
44		1070	1.65	8.71	5.85	1820	186	410
	1 3/4	1090	1.69	8.87	5.98	1860	189	418
46		1170	1.81	9.52	6.40	1990	203	448
48	1 7/8	1270	1.97	10.4	6.97	2170	221	487
50		1390	2.15	12.0	8.06	2350	240	529
	2	1430	2.22	12.4	8.32	2430	247	546
52		1500	2.33	13.0	8.72	2540	259	572
54	2 1/8	1620	2.51	14.0	9.41	2710	276	610
56		1740	2.70	15.1	10.1	2920	297	656
58	2 1/4	1870	2.89	16.2	10.9	3130	319	704
60	2 3/8	2020	3.13	17.5	11.7	3380	345	762

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

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POWERFORM® 8XLS

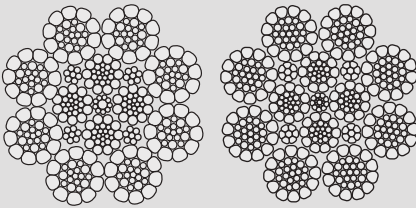


- Smoother contact surface in respect to conventional hoist ropes
- High resistance to side pressure and crushing
- Enhanced resistance to fleet angle if plastic impregnated
- Extremely high MBF
- Enhanced radial stiffness and diameter stability
- High resistance to side pressure and crushing

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
10		57.7	0.089	0.490	0.329	102	10.4	23.0
11		69.8	0.108	0.593	0.398	123	12.6	27.8
12		83.1	0.129	0.706	0.474	147	15.0	33.1
	1/2	93.1	0.144	0.790	0.531	165	16.8	37.0
13		97.5	0.151	0.828	0.556	172	17.6	38.8
14		113	0.175	0.960	0.645	200	20.4	45.0
15		130	0.201	1.10	0.741	230	23.4	51.6
	5/8	145	0.225	1.23	0.830	257	26.2	57.8
16		148	0.229	1.25	0.843	261	26.6	58.8
17		167	0.259	1.42	0.952	295	30.0	66.3
18		187	0.290	1.59	1.07	331	33.7	74.4
19	3/4	208	0.323	1.77	1.19	368	37.5	82.9
20		231	0.358	1.96	1.32	408	41.6	91.8
22		279	0.433	2.37	1.59	494	50.3	111
	7/8	285	0.442	2.42	1.63	504	51.4	113
24		332	0.515	2.82	1.90	588	59.5	132
25		364	0.564	3.06	2.06	638	65.0	143
	1	375	0.582	3.16	2.12	658	67.1	148
26		393	0.610	3.31	2.23	690	70.3	155
28		456	0.707	3.84	2.58	800	81.5	180
	1 1/8	475	0.736	4.00	2.69	833	84.9	187
30		524	0.812	4.41	2.96	918	93.6	207
	1 1/4	586	0.909	4.94	3.32	1030	105	231

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

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Abbreviated terms used in this brochure
XS - Lower Breaking Load | M - Medium Breaking Load | L - High Breaking Load | XL - Very High Breaking Load
F - Fibre Core | S - Steel Core | P - Plasticated Core | K - Compacted | SW - Seale Warrington Construction





POWERFORM® 10XLS/10XLF

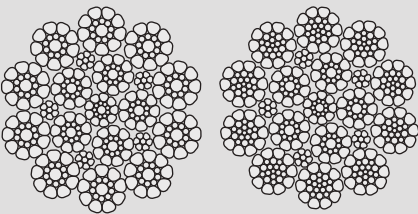


- Extremely high MBF and E modulus
- Enhanced radial stiffness and diameter stability
- High resistance to side pressure and crushing

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
32		627	0.971	5.12	3.44	1040	107	235
34		707	1.10	5.78	3.88	1180	120	265
35	1 3/8	746	1.16	6.10	4.10	1240	127	280
36		793	1.23	6.48	4.36	1320	135	297
38	1 1/2	884	1.37	7.22	4.85	1470	150	331
40		979	1.52	8.00	5.38	1630	166	367
41	1 5/8	1030	1.59	8.52	5.72	1740	177	391
42		1070	1.65	8.82	5.93	1800	183	405
44		1170	1.81	9.68	6.51	1970	201	444
	1 3/4	1190	1.85	9.88	6.64	2020	205	454
46		1280	1.98	10.6	7.11	2160	220	486
48	1 7/8	1390	2.16	11.5	7.74	2350	240	529
50		1510	2.34	12.5	8.40	2550	260	574
	2	1560	2.41	12.9	8.67	2630	268	592
52		1630	2.53	13.5	9.09	2730	278	615
54	2 1/8	1760	2.73	14.6	9.80	2920	297	656
56		1890	2.93	15.7	10.5	3140	320	706
58	2 1/4	2030	3.15	16.8	11.3	3330	339	749
60	2 3/8	2200	3.41	18.2	12.2	3600	367	811

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

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HYFLEX 35XSS

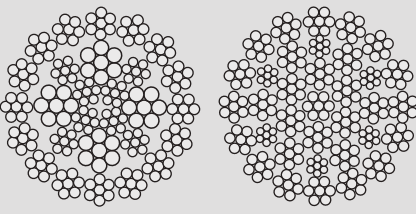


- Excellent rotational properties
- High flexibility and handling properties
- High resistance to side pressure and crushing

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
10		47.2	0.073	0.410	0.276	78.0	7.95	17.6
11		57.1	0.089	0.496	0.333	94.4	9.62	21.2
12		68.0	0.105	0.590	0.397	112	11.4	25.3
	1/2	76.2	0.118	0.661	0.444	126	12.8	28.3
13		79.8	0.124	0.693	0.466	132	13.4	29.7
14		92.6	0.143	0.804	0.540	153	15.6	34.4
15		106	0.165	0.923	0.620	176	17.9	39.5
	5/8	119	0.184	1.03	0.694	197	20.4	44.2
16		121	0.187	1.05	0.705	200	20.4	44.9
17		136	0.212	1.18	0.796	225	23.0	50.7
18		153	0.237	1.33	0.890	253	25.8	56.9
19	3/4	170	0.264	1.48	0.990	282	28.7	63.4
20		189	0.292	1.64	1.10	312	31.8	70.2
22		228	0.354	1.98	1.33	378	38.5	85.0
	7/8	233	0.361	2.03	1.36	385	39.3	87.0
24		272	0.421	2.36	1.59	449	45.8	101
25		295	0.457	2.56	1.72	488	49.7	110
	1	304	0.472	2.65	1.78	503	51.3	113
26		319	0.494	2.77	1.86	527	53.7	119
28		370	0.573	3.21	2.16	612	62.3	138
	1 1/8	385	0.597	3.35	2.25	637	64.9	143
30		424	0.658	3.69	2.48	702	71.6	158
	1 1/4	475	0.737	4.13	2.78	786	80.2	177
32		483	0.748	4.20	2.82	799	81.4	180

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

MBF values are referred to 2160 grade, custom values are available on demand.



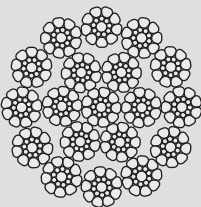
Abbreviated terms used in this brochure
XS - Lower Breaking Load | M - Medium Breaking Load | L - High Breaking Load | XL - Very High Breaking Load
F - Fibre Core | S - Steel Core | P - Plasticated Core | K - Compacted | SW - Seale Warrington Construction



POWERFORM® 19S



- Good rotational stability
- Good radial stiffness and and diameter stability
- Good resistance to side pressure and crushing



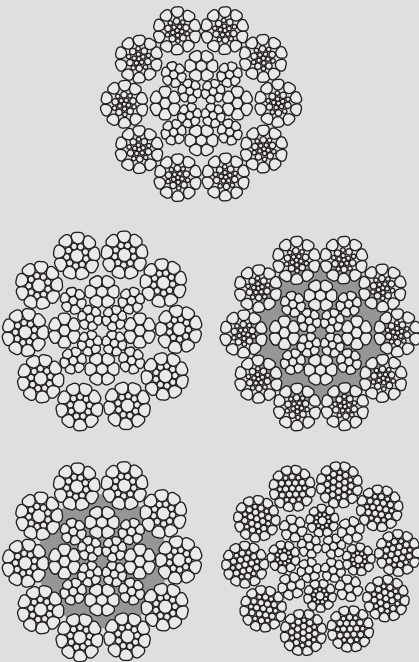
Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
17		159	0.247	1.30	0.874	246	25.0	55.3
18		178	0.276	1.46	0.980	275	28.1	62.0
19	3/4	199	0.308	1.62	1.09	307	31.3	69.0
20		220	0.341	1.80	1.21	340	34.7	76.5
22		266	0.413	2.18	1.46	411	41.9	92.6
	7/8	272	0.421	2.22	1.49	420	42.8	94.5
24		317	0.491	2.59	1.74	490	49.9	110
25		344	0.533	2.81	1.89	531	54.2	120
	1	355	0.550	2.90	1.95	548	55.9	123
26		372	0.577	3.04	2.04	575	58.6	129
28		432	0.669	3.53	2.73	666	67.9	150
	1 1/8	449	0.697	3.67	2.47	694	70.7	156
30		495	0.768	4.05	2.72	765	78.0	172
	1 1/4	555	0.860	4.54	3.05	857	87.3	193
32		564	0.874	4.61	3.10	870	88.7	196

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.
MBF values are referred to 2160 grade, custom values are available on demand.

POWERFORM® 10MS/10MFS



- Smoother contact surface in respect to conventional hoist ropes
- High resistance to side pressure and crushing
- Enhanced resistance to fleet angle if plastic impregnated
- Lower torque factor in respect to traditional hoist ropes
- High radial stiffness
- Excellent resistance to side pressure and crushing
- Enhanced resistance to fleet angles if plastic impregnated



Diameter		Mass				MBF			
Metric	Imperial	Metric		Imperial		Force		Load	
mm	in.	Air kg/m	Water kg/m	Air lb/ft	Water lb/ft	1770 kN	1960 kN	1770 tonnes	1960 tonnes
	1	3.03	2.58	2.04	1.74	568	619	57.9	63.1
26		3.18	2.70	2.14	1.82	595	649	60.7	66.2
28		3.68	3.13	2.48	2.11	690	753	70.3	76.8
	1 1/8	3.84	3.26	2.58	2.20	719	784	73.3	79.9
30		4.23	3.60	2.85	2.42	792	864	80.7	88.1
	1 1/4	4.74	4.03	3.19	2.71	887	968	90.4	98.7
32		4.81	4.09	3.24	2.75	901	983	91.8	100
34		5.43	4.62	3.66	3.11	1020	1110	104	113
35	1 3/8	5.73	4.87	3.86	3.28	1070	1170	109	119
36		6.09	5.18	4.10	3.49	1140	1240	116	126
38	1 1/2	6.79	5.77	4.57	3.88	1270	1390	129	142
40		7.52	6.39	5.06	4.30	1410	1540	144	157
41	1 5/8	8.01	6.81	5.39	4.58	1500	1620	153	165
42		8.29	7.05	5.58	4.74	1550	1680	158	171
44		9.10	7.73	6.13	5.21	1700	1840	173	188
	1 3/4	9.29	7.89	6.25	5.31	1740	1880	177	192
46		9.95	8.45	6.70	5.69	1860	2010	190	205
48	1 7/8	10.8	9.20	7.29	6.20	2030	2170	207	221
50		11.8	10.0	7.91	6.72	2200	2350	224	240
	2	12.1	10.3	8.17	6.94	2270	2430	231	248
52		12.7	10.8	8.56	7.27	2380	2540	243	259
54	2 1/8	13.7	11.6	9.23	7.84	2570	2740	262	279
56		14.7	12.5	9.92	8.44	2760	2950	281	301
58	2 1/4	15.8	13.4	10.6	9.05	2960	3130	302	319
60	2 3/8	17.1	14.5	11.5	9.79	3200	3380	326	345

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

Abbreviated terms used in this brochure
XS - Lower Breaking Load | M - Medium Breaking Load | L - High Breaking Load | XL - Very High Breaking Load
F - Fibre Core | S - Steel Core | P - Plasticated Core | K - Compacted | SW - Seale Warrington Construction





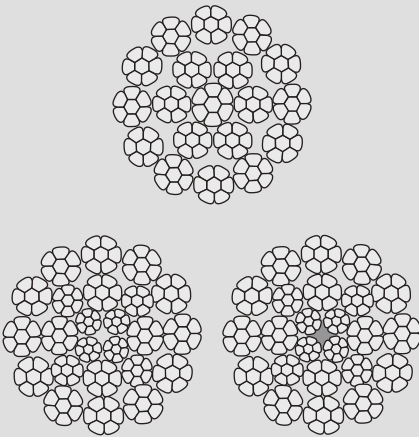
POWERFORM® 10MS/10MFS



Diameter		Mass				MBF			
Metric	Imperial	Metric		Imperial		Force		Load	
mm	in.	Air	Water	Air	Water	1770	1960	1770	1960
		kg/m	kg/m	lb/ft	lb/ft	kN	kN	tonnes	tonnes
62		18.1	15.4	12.2	10.3	3150	3570	321	364
64	2 1/2	19.3	16.4	13.0	11.0	3360	3810	343	388
66		20.5	17.4	13.8	11.7	3570	4050	364	413
	2 5/8	20.9	17.8	14.1	12.0	3650	4130	372	421
68		21.7	18.5	14.6	12.4	3790	4300	386	438
70	2 3/4	23.0	19.6	15.5	13.2	4020	4560	410	465
72		24.4	20.7	16.4	13.9	4250	4770	433	486
73	2 7/8	25.1	21.3	16.9	14.3	4370	4910	445	501
74		25.7	21.9	17.3	14.7	4490	5040	458	514
76		27.1	23.1	18.3	15.5	4740	5310	483	541
	3	27.3	23.2	18.4	15.6	4760	5340	485	544
77		27.9	23.7	18.8	15.9	4860	5450	495	556
80	3 1/8	30.1	25.6	20.3	17.2	5250	5890	535	600
82	3 1/4	32.0	27.2	21.6	18.3	5590	6270	570	639
84		33.2	28.2	22.3	19.0	5790	6490	590	662
86	3 3/8	34.8	29.5	23.4	19.9	6060	6800	618	693
88		36.4	30.9	24.5	20.8	6350	7050	647	719
90	3 1/2	38.1	32.4	25.6	21.8	6640	7370	677	751
92	3 5/8	39.8	33.9	26.8	22.8	6950	7710	708	786
94		41.5	35.3	28.0	23.8	7250	8040	739	820
95	3 3/4	42.6	36.2	28.7	24.4	7440	8170	758	833
96		43.3	36.8	29.2	24.8	7560	8290	771	845
98	3 7/8	45.5	38.7	30.7	26.1	7940	8620	809	879
100		47.0	40.0	31.6	26.9	8200	8900	836	907
102	4	48.9	41.6	32.9	28.0	8530	9260	870	944
104		50.8	43.2	34.2	29.1	8870	9410	904	959
105	4 1/8	51.8	44.0	34.9	29.7	9040	9590	922	978
106		52.8	44.9	35.6	30.2	9210	9780	939	997
108	4 1/4	54.8	46.6	36.9	31.4	9560	10000	975	1020
109		55.8	47.5	37.6	32.0	9740	10200	993	1040
110		56.9	48.3	38.3	32.5	9920	10400	1010	1060
112	4 3/8	59.0	50.1	39.7	33.7	10300	10700	1050	1090
114	4 1/2	61.4	52.2	41.3	35.1	10700	11000	1090	1120
115		62.2	52.8	41.8	35.6	10800	11100	1100	1130
117	4 5/8	64.9	55.1	43.7	37.1	11300	11600	1150	1180
119		66.6	56.6	44.8	38.1	11600	11900	1180	1210
120	4 3/4	68.4	58.2	46.1	39.2	11900	12100	1210	1230
122		70.0	59.5	47.1	40.0	12200	12400	1240	1260
124	4 7/8	72.3	61.4	48.7	41.4	12600	12800	1280	1300
125		73.4	62.4	49.4	42.0	12800	13000	1300	1330
126		74.6	63.4	50.2	42.7	13000		1330	
127	5	75.8	64.4	51.0	43.4	13200		1350	
128		77.0	65.5	51.8	44.1	13400		1370	
130	5 1/8	79.6	67.7	53.6	45.6	13900		1420	

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

POWERFORM® 19LS/24LS/24LF



- High rotational stability
- Good radial stiffness and diameter stability
- High resistance to side pressure and crushing

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
6		19.8	0.031	0.169	0.114	33.8	3.45	7.61
7		27.0	0.042	0.230	0.155	46.1	4.70	10.4
8	5/16	35.2	0.055	0.301	0.202	60.2	6.13	13.5
9		44.6	0.069	0.381	0.256	76.1	7.76	17.1
	3/8	49.9	0.077	0.426	0.287	85.3	8.69	19.2
10		55.0	0.085	0.470	0.316	94.0	9.58	21.2
11		66.6	0.103	0.569	0.382	114	11.6	25.6
12		79.2	0.123	0.677	0.455	135	13.8	30.5
	1/2	88.7	0.138	0.758	0.509	152	15.5	34.1
13		93.0	0.144	0.794	0.534	159	16.2	35.7
14		108	0.167	0.921	0.619	184	18.8	41.5
15		124	0.192	1.06	0.711	212	21.6	47.6
	5/8	139	0.215	1.18	0.796	237	24.1	53.3
16		141	0.218	1.20	0.809	241	24.5	54.2
17		159	0.246	1.36	0.913	272	27.7	61.1
18		178	0.276	1.52	1.02	305	31.0	68.5
19	3/4	199	0.308	1.70	1.14	339	34.6	76.4
20		220	0.341	1.88	1.26	376	38.3	84.6
22		266	0.413	2.27	1.53	455	46.4	102
	7/8	272	0.421	2.32	1.56	464	47.3	104
24		317	0.491	2.71	1.82	541	55.2	122

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

MBF values are referred to 2160 grade, custom values are available on demand.





POWERFORM® 35XLPS/XLS



- Excellent rotational properties
- Extremely high MBF
- Enhanced resistance to fleet angle if plastic impregnated

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
10		56.0	0.087	0.490	0.329	100	10.2	22.5
11		67.8	0.105	0.593	0.398	121	12.3	27.2
12		80.6	0.125	0.706	0.474	144	14.7	32.4
	1/2	90.3	0.140	0.790	0.531	161	16.4	36.3
13		94.6	0.147	0.828	0.556	169	17.2	38.0
14		110	0.170	0.960	0.645	196	20.0	44.1
15		126	0.195	1.10	0.741	225	22.9	50.6
	5/8	141	0.219	1.23	0.830	252	25.7	56.7
16		143	0.222	1.25	0.843	256	26.1	57.6
17		162	0.251	1.42	0.952	289	29.5	65.0
18		181	0.281	1.59	1.07	324	33.0	72.9
19	3/4	210	0.326	1.81	1.21	361	36.8	81.2
20		233	0.361	2.00	1.34	400	40.8	90.0
22		282	0.437	2.42	1.63	484	49.3	109
	7/8	288	0.446	2.47	1.66	494	50.4	111
24		336	0.520	2.88	1.94	576	58.7	130
25		364	0.564	3.13	2.10	625	63.7	141
	1	376	0.582	3.23	2.17	645	65.8	145
26		394	0.610	3.38	2.27	676	68.9	152
28		457	0.708	3.92	2.63	784	79.9	176
	1 1/8	476	0.737	4.08	2.74	817	83.2	184
30		524	0.813	4.50	3.02	900	91.7	203
	1 1/4	587	0.910	5.04	3.39	1010	103	227
32		596	0.925	5.12	3.44	1020	104	230
34		673	1.04	5.78	3.88	1160	118	260
35	1 3/8	710	1.10	6.10	4.10	1220	124	274
36		755	1.17	6.48	4.36	1300	132	292
38	1 1/2	841	1.30	7.22	4.85	1440	147	325
40		932	1.44	8.00	5.38	1600	163	360

These figures are for guidance only. Other features, such as MBF, dimensions, lay type and plastic fill can be designed on request.

MBF values are referred to 2160 grade, custom values are available on demand.

Abbreviated terms used in this brochure
XS - Lower Breaking Load | M - Medium Breaking Load | L - High Breaking Load | XL - Very High Breaking Load
F - Fibre Core | S - Steel Core | P - Plasticated Core | K - Compacted | SW - Seale Warrington Construction

POWERFORM® 8LS (Eh)



- Specifically designed for electric winches
- High flexibility and handling properties

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
6		19.2	0.030	0.158	0.106	35.3	3.60	7.94
7		26.1	0.040	0.216	0.145	48.0	4.90	10.8
8	5/16	34.1	0.053	0.282	0.189	62.7	6.39	14.1
9		43.1	0.067	0.356	0.240	79.4	8.09	17.9
	3/8	48.3	0.075	0.399	0.268	88.9	9.06	20.0
10		53.3	0.083	0.440	0.296	98.0	10.0	22.1
11		64.7	0.100	0.545	0.366	116	11.8	26.1
12		77.0	0.119	0.648	0.435	138	14.1	31.1
	1/2	86.3	0.134	0.726	0.488	155	15.8	34.8
13		90.4	0.140	0.761	0.511	162	16.5	36.5
14		105	0.163	0.882	0.593	188	19.2	42.3
15		120	0.187	1.01	0.680	216	22.0	48.6
	5/8	135	0.209	1.13	0.762	242	24.7	54.4
16		137	0.213	1.15	0.774	246	25.1	55.3
17		155	0.240	1.30	0.874	277	28.3	62.4
18		174	0.269	1.46	0.980	311	31.7	70.0

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POWERFORM® 10XLS (Eh)/ XLF (Eh)

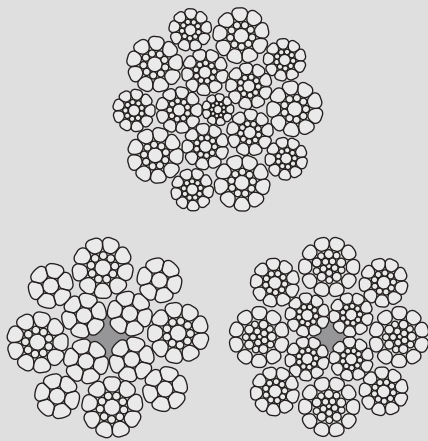


- Specifically designed for electric winches
- Extremely high MBF
- High flexibility and handling properties

Diameter		Metallic area		Mass		MBF		
mm	in.	MM ²	in. ²	kg/m	lb/ft	kN	tonnes	kips
6		21.1	0.033	0.173	0.116	37.8	3.85	8.51
7		28.7	0.045	0.235	0.158	51.5	5.24	11.6
	5/16	37.5	0.058	0.307	0.206	67.2	6.85	15.1
9		47.5	0.074	0.389	0.261	85.1	8.67	19.1
	3/8	53.2	0.082	0.435	0.293	95.3	9.71	21.4
10		58.7	0.091	0.480	0.323	105	10.7	23.6
11		71.0	0.110	0.581	0.390	125	12.7	28.0
12		84.5	0.131	0.691	0.464	148	15.1	33.4
	1/2	94.6	0.147	0.774	0.520	166	16.9	37.4
13		99.1	0.154	0.811	0.545	174	17.7	39.2
14		115	0.178	0.941	0.632	202	20.6	45.4
15		132	0.205	1.08	0.726	232	23.6	52.1
	5/8	148	0.229	1.21	0.813	260	26.5	58.4
16		150	0.233	1.23	0.826	264	26.9	59.3
17		170	0.263	1.39	0.932	298	30.3	67.0
18		190	0.295	1.56	1.05	334	34.0	75.1

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SAFETY INFORMATION

- Wire rope will fail if worn out, shock loaded, overloaded, misused, damaged, improperly maintained or abused.
- Always inspect wire rope for wear, damage or abuse before use.
- Never use a wire rope which is worn out, damaged, corroded or abused.
- Never overload or shock load a wire rope.
- Use the correct design factor for the application.
- Inform yourself : Read and understand the machinery manufacturers handbook and guidance from the wire rope manufacturer.
- Refer to applicable directives, regulations, standards and codes concerning inspection, examination and rope removal criteria.

All statements, technical information and recommendations contained herein are believed to be reliable, but no guarantee is given as to their accuracy and/or completeness. The user must determine the suitability of the product for his own particular purpose, either alone or in combination with other products and shall assume all risk and liability in connection therewith.

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

METRIC - IMPERIAL DIAMETER CONVERSION											
in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
5/32	3.97	1/2	12.7	15/16	23.8	1 1/2	38.1	2 1/2	63.5	4 1/4	108.0
3/16	4.76	9/16	14.3	1	25.4	1 5/16	41.3	2 3/4	69.9	4 1/2	114.3
7/32	5.56	5/8	15.9	1 1/16	27.0	1 3/4	44.5	3	76.2	4 3/4	120.7
1/4	6.35	11/16	17.5	1 1/8	28.6	1 7/8	47.6	3 1/4	82.6	5	127.0
5/16	7.94	3/4	19.0	1 3/16	30.2	2	50.8	3 1/2	88.9		
3/8	9.53	13/16	20.6	1 1/4	31.8	2 1/8	54.0	3 3/4	95.3		
7/16	11.1	7/8	22.2	1 3/8	34.9	2 1/4	57.2	4	101.6		

CONVERSION TABLE				
Length	1m	= 1000 mm	= 3,281ft	= 39,37 inch
Force	1kN	= 101,97kp	= 0,10197 t metric-f	= 224lbs-f
Tensile Strength	1N/mm ²	= 0,10197 kp/mm ²	= 145,04 p.s.i.	= 10 bar
Cross Section	1 mm ²	= 0,00155 sq.inch		
Weight	1 metric t	= 1000 kg = 1,102 short t	= 0,9842 long t	= 2204,6 lbs
Weight per Unit Length	1 kg/m	= 0,672 lbs/ft		

