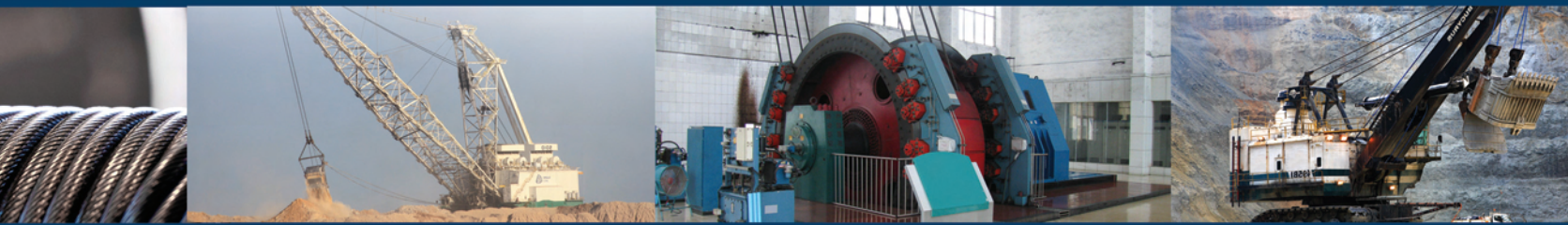


MINING CATALOGUE



QUALITY
INNOVATION PERFORMANCE
125 YEARS
EXPERTISE

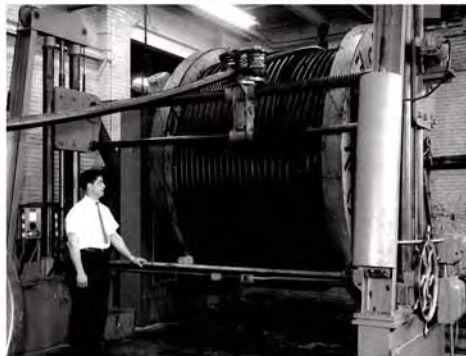
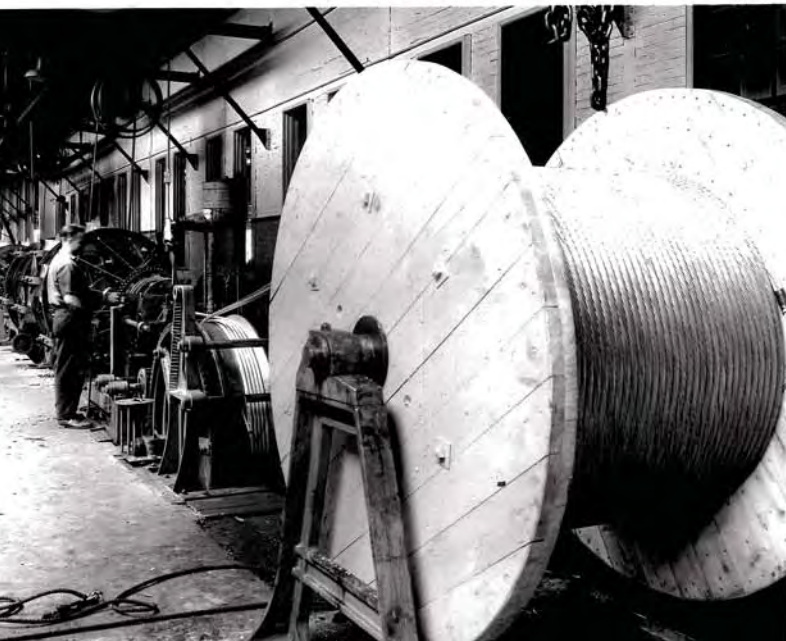
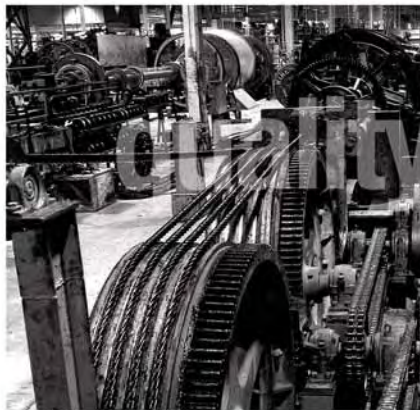


TM

WIRE ROPE
INDUSTRIES

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COMPANY INTRODUCTION

WIRE ROPE INDUSTRIES

Founded in 1886, Wire Rope Industries (WRI) has been providing customers around the world with high-quality wire ropes for over 125 years. With headquarters and production facility in Montreal, WRI is one of the most respected solution providers in the industry.

WRI of today is a high-end supplier for specialized market segments where rope performance is critical and directly contributes to the bottom line. Our mission is to create value for our customers.

We recently developed and successfully launched several revolutionary products, including patented Ultra ropes for shovels and draglines, and Cushion-Pac 35™ hoist ropes for underground mining. Another cutting edge invention is the new Oil Sands Rope™, which is outperforming the competitors by a large margin in the harshest surface mining environment in the world.

Continuous innovation has helped WRI establish itself as a market leader in the Americas. The key part of our success is how our clients view us today – as a reliable partner that enables them to bring their productivity and safety to another level.

In order to support our customers' growth and continue exceeding their expectations, we initiated a series of major investments in specialized machinery and human resources. Our new capabilities enable us to continue adding major accounts in all geographies. Through cooperation with our parent company, Bekaert Group, the world leader in wire products, we continuously push the boundaries of technology to offer the best quality wire with exceptional corrosion resistance.

We recognize that our future depends on the success of our customers. Our team of experts is at your disposal to assist you in assessing your industrial operations and demonstrate how you can push the boundaries of productivity and increase your bottom line.

AT A GLANCE

- » Head Office: Montreal, Canada
- » Founded in 1886
- » Employees: 200+
- » Parent Company: Bekaert (27,000 employees)



125 years
expertise

MANUFACTURING

Our production is centralized at a specially designed 365,000ft² (34,000m²) factory in Montreal, Canada. Operating a single production facility allows WRI to maximize manufacturing efficiencies and employ high level of quality control. Our facility is ISO9001 and API certified.

WRI operates the largest 8-bobbin closer in the Americas, with a capacity of 120 metric tons, as well as a range of sophisticated stranders, including one of the fastest machines in the world. We also employ industry-leading extrusion lines, with a proprietary process developed over two decades of making large plasticized ropes.

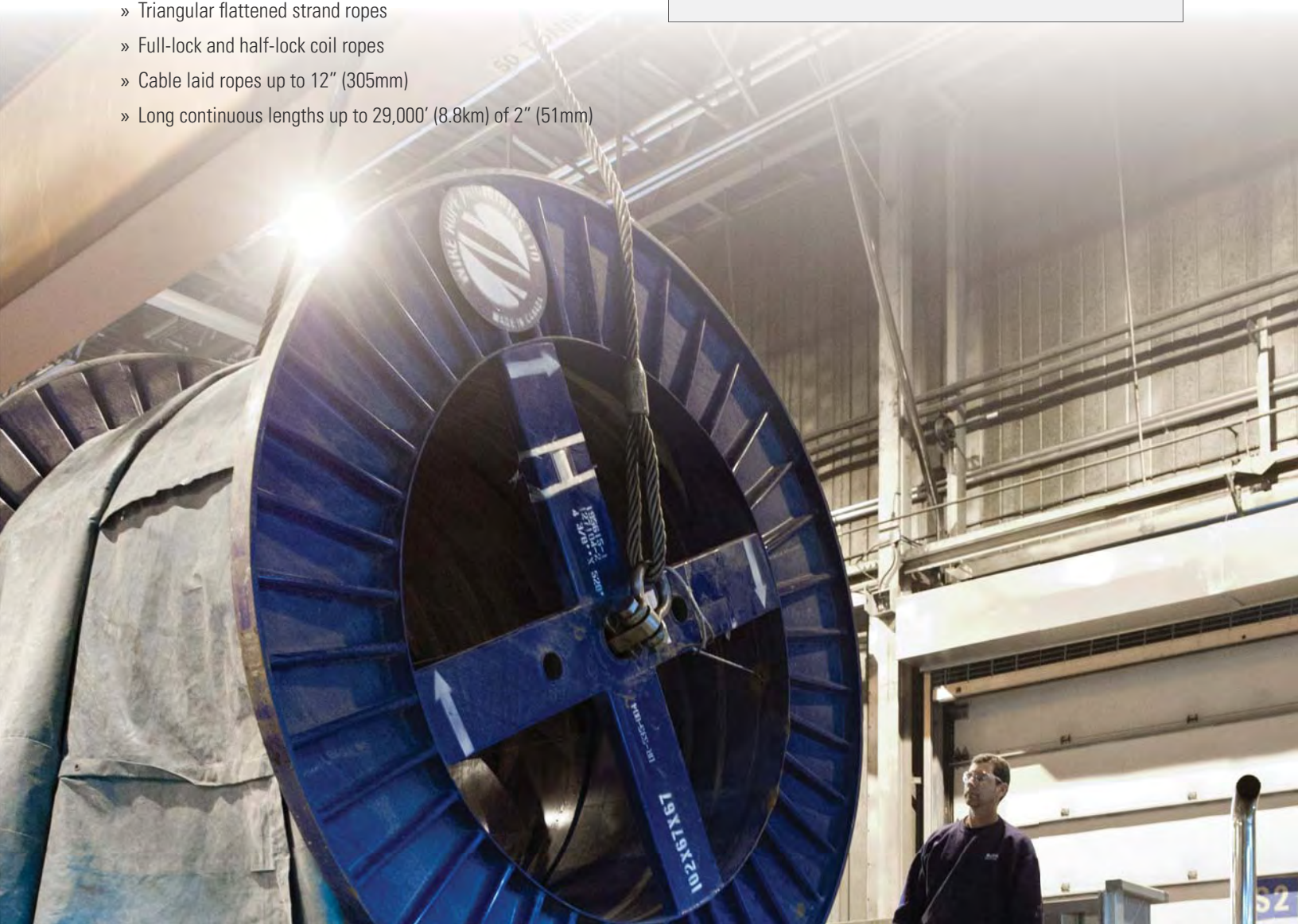
A combination of versatile machinery and more than 125 years of experience gives WRI ability to manufacture an unmatched range of high-end products under one roof:

- » 6 or 8-strand ropes up to 8" (203mm)
- » Large plasticized ropes up to 6" (152mm)
- » Structural strand up to 6" (152mm)
- » Triangular flattened strand ropes
- » Full-lock and half-lock coil ropes
- » Cable laid ropes up to 12" (305mm)
- » Long continuous lengths up to 29,000' (8.8km) of 2" (51mm)

These capabilities allow us to supply ropes for some of the largest equipment in use today, including dragline excavators and long cable belt conveyor systems. We regularly supply major supported roof structures, suspension bridges and communication tower projects around the globe. In addition to our current lineup, we can custom design and manufacture unique ropes to the specific requirements of your application.

INVESTMENTS PROGRAM

- » New world-class stranding machine
- » New versatile closing machine
- » Multiple projects for equipment upgrades
- » New IT infrastructure to support productivity projects



ISO 9001 Certified

Wire Rope Industries is committed to quality assurance. All employees are working under a ISO 9001:2008 registered quality management system, from the shop floor to the executive office.

At WRI, we strive to:

- ✓ Fulfill the customer's quality requirements
- ✓ Conform to applicable regulatory requirements
- ✓ Enhance customer satisfaction
- ✓ Achieve continuous improvement



API Certified

For more than 75 years, API has specialized in the development of petroleum and petrochemical equipment and operating standards. As an authority for modern Oil & Gas industrial equipment, API maintains more than 500 standards and recommended practices, of which many have been incorporated into state and federal regulations.

For more information, visit www.api.org

API Quality Certification applies to:

- ✓ Material supplier qualification
- ✓ Employee training and education
- ✓ Coordinated and planned inspections
- ✓ Audit and corrective actions
- ✓ Document verification
- ✓ Consistency through procedures
- ✓ Equipment calibration and maintenance



Lloyds Register

Lloyds Register provides independent assurance to companies operating high-risk, capital-intensive assets in the energy and transportation sectors, to enhance the safety of life, property and the environment. This helps Wire Rope Industries to create safe, responsible and sustainable supply chains.

The Lloyd's Register Group is one of the world leaders in assessing business processes and products to internationally recognized standards.

For more information on this, please visit <http://www.lr.org>



QUALITY ASSURANCE

Our multiple certifications by recognized regulatory bodies testify to our drive to bring the best quality and value product to our clients. We uphold our high standards of quality by employing the following processes.

Material supplier qualification

We run one of the most stringent supplier qualification programs in the industry. Our business is built on the consistency and quality of raw materials.

Employee training and education

We constantly improve competencies of our employees through supporting ongoing education and training programs and ensure that they have the correct tools to excel in their jobs.

Equipment calibration and maintenance

Calibrated and well-maintained equipment leads to greater product consistency and on-time delivery.

Coordinated and planned inspections

Planned inspections assure product consistency and conformity to specification.

Consistency through procedures

Documented and maintained procedures ensure all employees use the same work methods.

Audit and corrective actions

Internal audits and corrective actions ensure systems are effective and that continuous improvement is realized.

Document verification

Formalized and monitored documentation allows for the complete tracking of product, processes, and materials.

Quality monitoring through inspection and testing

We monitor the quality of incoming materials, semi-manufactured products during manufacturing, and final products to ensure the quality standards are met before shipment.

Breaking load verification

Computerized destructive testing confirms the actual breaking load of individual rope and strand.

Field simulation through cycle testing

Fatigue cycle testing, simulating field conditions, verifies actual rope fatigue life.

Statistical Process Control (SPC)

We perform process capability studies to maintain and improve the quality of our manufacturing operations. Continuous measuring devices and procedures allow us to monitor if the process consistently meets specifications. They are also used to define control limits, which are used to flag inconsistencies and trigger immediate corrective actions. Ongoing SPC training for supervisory and operator personnel ensures adherence to procedures and that equipment is operated to peak efficiency.



Consulting and Training Services

Wire Rope Industries' ability to combine operational analysis with higher performing products allows us to provide improvement recommendations including high performance rope solutions, maintenance and inspection procedures, and potential equipment operating strategies.

Rope analysis and inventory assessment permits our clients to consider the types of ropes in use on their equipment and rationalize inventory based on the best performance solutions

On-site inspection and analysis of customer ropes, equipment, and operations allows for the verification of rope condition and the identification of potential operational problems.

Underground mining consulting for new mine shafts including the selection of ropes and attachments, installation recommendations, and performance cost assessments permits our mining clients and their consultants to consider various types of rope hoisting systems and the associated cost/maintenance implications.

Specialized mine maintenance and engineering seminars, conducted by Wire Rope Industries personnel with over 25 years of mining experience, allows our clients to deal with the highly technical and critical demands of their individual operations.

On-site rope and assembly seminars, focusing on product selection, proper use, handling and inspection provide operators and riggers with the information necessary to use our products safely and securely while optimizing performance.

Lab testing and analysis

Detailed lab analysis, testing, and reporting allow for the specific verification of rope failure modes and identify possible rope and operational improvements.

Pre-stretching and Proof-loading

We are equipped with facilities capable of applying up to 800,000 lbs tensile force. Prestretching facilities include hydraulic grips at each end allowing unlimited lengths of finished assemblies. Standard length accuracy of assemblies is $\pm 1/8"$ per 100 feet for rope or strand up to $\pm 1/2"$ per 1000 feet..

Socketing, Proof-loading, and Certification

For maximum worker security and product quality, Wire Rope Industries is capable of conducting a full range of socketing, pre-stretch (proof-loading), and certification services. We can socket products up to 6" (153mm) in diameter and use epoxy resin, zinc, or custom socketing compounds upon request.

Custom Rope Engineering

Our experienced team of engineers has been developing customized rope designs for specialized application for decades. We can help you assess your operational requirements and develop the best product for your machinery, working conditions, and performance targets.



RESEARCH & DEVELOPMENT

Drawing from years of engineering expertise, WRI has developed one of the most sophisticated design and testing systems in the marketplace today. Our technologies and precision testing allows us to examine and resolve complex problems quickly and efficiently, ensuring optimum performance for each design.

Our Test Lab and Field Facilities provide us with the following capabilities:

- » Our in-line EM testing equipment for underground mining ropes is capable of detecting broken wires, rope distortion, and establishing the baseline for loss of metallic area verification during rope life.
- » Tensile testing of ropes up to 180 metric tons and all types of wire
- » Evaluation rotation and modulus of wire ropes
- » Actual bending fatigue cycle testing under load, to simulate field conditions and optimize designs using two proprietary fatigue testing machines
- » Metallurgical analysis, including full chemical and structural analysis of all steel components, allows for optimum wire selection for each design.
- » Specialized material testing on key components such as lubricants, plastics and synthetics allows for the selection of the most appropriate materials for our designs
- » Field sample analysis allows us to verify design parameters and development new ideas for improvement by comparing laboratory test results with actual customer samples.

Your feedback is important

A majority of our technical innovations come from customer feedback. Aftersales relationships are as important to Wire Rope industries as they are to our customers. We rely on field data to improve our products and bring more value to your operations.

Joint Product Development

We developed some of our most successful products through relationships with our long-term clients. We strive to understand the challenges that our clients face in their operations in order to be able to develop performance solutions for them. This process is especially fruitful when both sides understand the benefits and are open to employ their engineering resources towards the same goal. Contact us and learn how we can work together to develop custom solutions tailored to your needs.

Cooperation with Bekaert Technology Centers (BTC)

WRI's parent company Bekaert is a world leader in wire technology and employs hundreds of experts in their technology centers in Belgium and China. We are continuously working with BTC partners to provide clients with the most advanced wire materials and performance coatings available.



SURFACE MINING

OIL SANDS MINING

Alberta Oil Sands, Canada

WRI supplies 80% of the surface mining market of the Oil Sands in Northwest Canada. When the Oil Sands emerged as one of the largest mining areas in the world, WRI was there to support their growth with the industry-leading Cushion-Pac Ultra ropes for P&H and Bucyrus (CAT) shovels. In order to further assist our clients in rapid growth in this region, WRI developed the custom-made Oil Sands Rope™ designed specifically for extremely difficult digging conditions with P&H 4100C BOSS and Bucyrus 495HF shovels.

COAL MINING

Powder River Basin, USA

WRI is a major supplier of dragline and shovel ropes to companies operating in the Powder River Basin, one of the largest coal mining areas in the world. Our complete product range allows us to provide our clients with everything from basic 6-strand ropes to revolutionary Cushion Ultras, which have recently set new production records.



FEATURE CLIENTS

UNDERGROUND MINING

IRON ORE MINING

North Sweden


Our flagship client operates the largest and most technologically advanced underground iron ore mine in the world. The mine currently operates hoisting system which is currently being upgraded to capacity of 37 million tonnes per year. WRI has been the primary supplier of all shaft ropes for this client since 1997, providing the most advanced solutions available on the market. This close relationship has fueled innovation on both sides, resulting in next generation of hoist ropes with leading anti-corrosion properties as well as practical solutions which significantly reduced rope change-out intervals.

POTASH, NICKEL, AND GOLD MINING

Canadian Mining Industry

Wire Rope Industries has played a leading role in the development of the underground mining industry in Canada. We have decades-long relationships with all major miners of potash, gold, iron ore, and nickel, in some of the deepest shafts in the world (over 1000m). Our clients have tested and installed generations of innovative products, with our new Cushion-Pac 35™ hoist ropes being a major success in the latest round of mine expansions.





SURFACE MINING

For decades, the Wire Rope Industries brand has been synonymous with surface mining and performance. We constantly push our manufacturing capabilities and engineering to the next level, as we pursue innovation to meet and exceed our clients' expectations.

WRI is continuously investing in its capabilities. We have recently installed one of the largest machines in the world and are in the process of upgrading other machinery to boost our versatility and responsiveness to the market. And in true WRI fashion, we are already working on the next generation of shovel and dragline ropes in cooperation with our flagship clients.

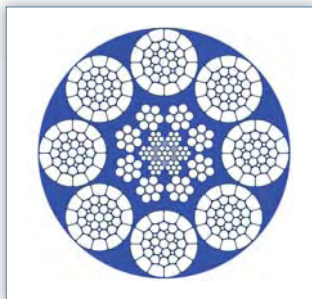
SHOVELS

At Wire Rope Industries, we take special pride in our expertise and world-class products for shovel applications. Since electro-mechanical shovels emerged as productivity drivers in mines around the world, WRI has continuously been investing in innovation and pushing the boundaries of performance for these machines.

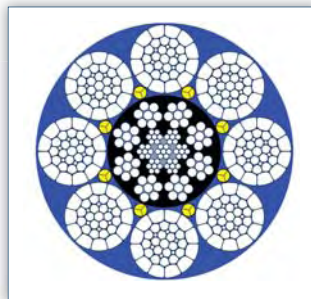
We were among the pioneers of thermo-plastic technology in the early 1980s, and our Cushion Ropes have been used by mining leaders throughout the Americas. The latest generation of patented Cushion-Pac Ultra™ ropes has raised the performance bar even further. Our ropes are now used by most major operators of large shovels in every type of commodity market.

The race for productivity does not stop with Cushion-Pac Ultra™. For our clients, we can go a step further and design unique high-end ropes specifically for their machinery and operating conditions. The custom design program sometimes results in new technological breakthroughs, like the Oil Sands Rope™, which edges out even the Cushion-Pac Ultra™ in terms of performance.

PRODUCT LINE



Cushion Rope
Industry Standard



Cushion-Pac Ultra™
Premium

**Ultimate performance ropes engineered
for your specific application**

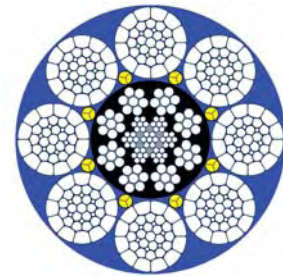
“Oil Sands Rope™”

Custom Ropes







CUSHION-PAC ULTRA™

The patented Cushion-Pac Ultra is our flagship premium rope for modern excavators. Developed through years of field analysis and product design, and perfected in cooperation with our clients, the Cushion-Pac Ultra™ has established itself as the industry benchmark for performance in all types of environments. This rope has outperformed the competition in oil sand, coal, iron ore, and copper mining across North and South America. If you want to maximize the productivity of your shovels, look no further.



Design and Features

SPECIAL FEATURES	FEATURES	BENEFITS
<p>Advanced Plastic Technology</p> 	<ul style="list-style-type: none"> » Protection against strand-to-core contacts » Lubricant retention » Superior outer strand support 	<ul style="list-style-type: none"> » Less wire notching » Extended fatigue life » Improved dimensional stability
 <p>Optimal Strand Positioning</p>	<ul style="list-style-type: none"> » Exclusive wormings ensure evenly spaced strands » Minimized metal to metal contacts 	<ul style="list-style-type: none"> » Even distribution of the working load » Extended fatigue life
<p>DY-PAC Strands</p> 	<ul style="list-style-type: none"> » Higher metallic area » Smooth outer surface 	<ul style="list-style-type: none"> » Increased strength and crush resistance » Improved fatigue life and reduced wear on rope and drum
 <p>Interlocking Outer Plastic Jacket</p>	<ul style="list-style-type: none"> » Lubricant retention » Controlled outer plastic jacket 	<ul style="list-style-type: none"> » Extended fatigue life » Minimized abrasion on the rope crowns, the drums and the sheaves

SHOVELS

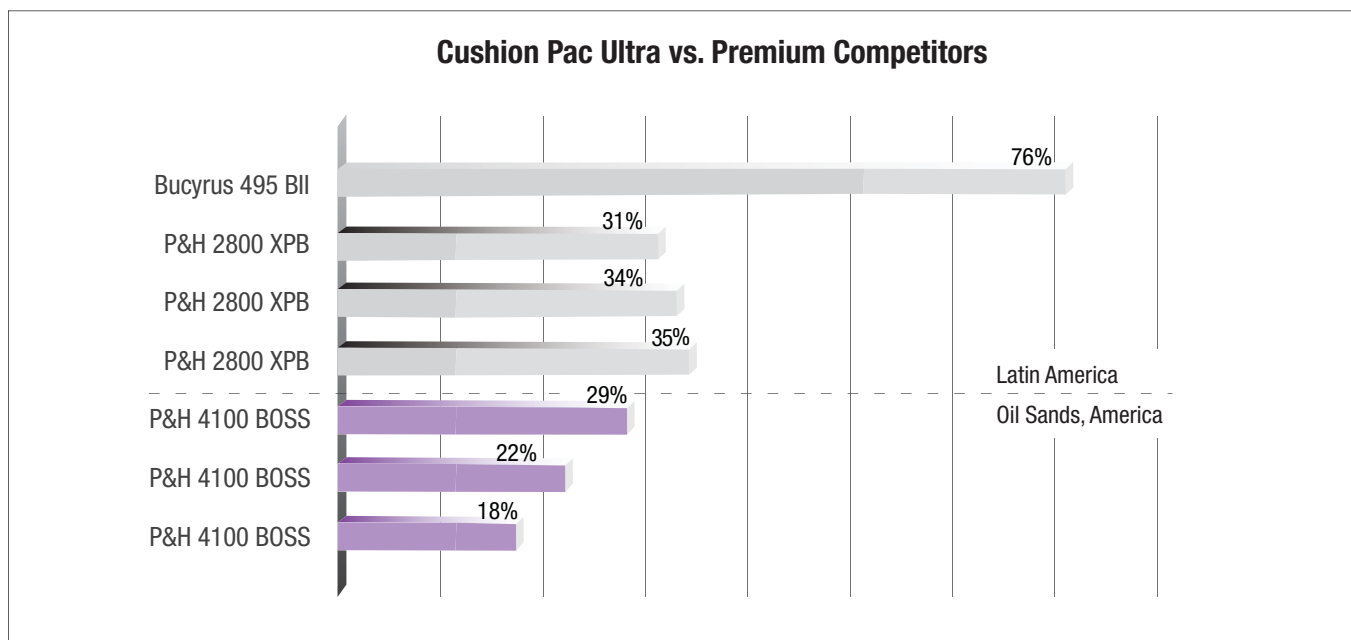
Environment and Machinery

Cushion-Pac Ultra™ ropes have proven themselves in the environments as harsh as Oil Sands in Northwest Canada, where shovels operate around the clock in temperatures from -40° to +40°. Our clients dig material of various degrees of fragmentation, from well fragmented coal to frozen chunks of bitumen weighing tens of tons.

We supply the full range of P&H and Bucyrus shovels, including fleets of popular P&H 2300, 2800, and 4100, as well as Bucyrus 295, 395, and 495 machines. Cushion-Pac Ultra™ is currently used on the largest available shovels with bucket capacities over 70m³.



Performance - Improvement in Rope Life



Disclaimer: Our clients typically measure Hours of Operation, or Tons Excavated. Each row shows relative improvement in rope life on one of the customer shovels after switching to WRI product, relative to previous average life of competitor's product. Results may vary depending on the machine and digging conditions.

CUSTOM ROPES

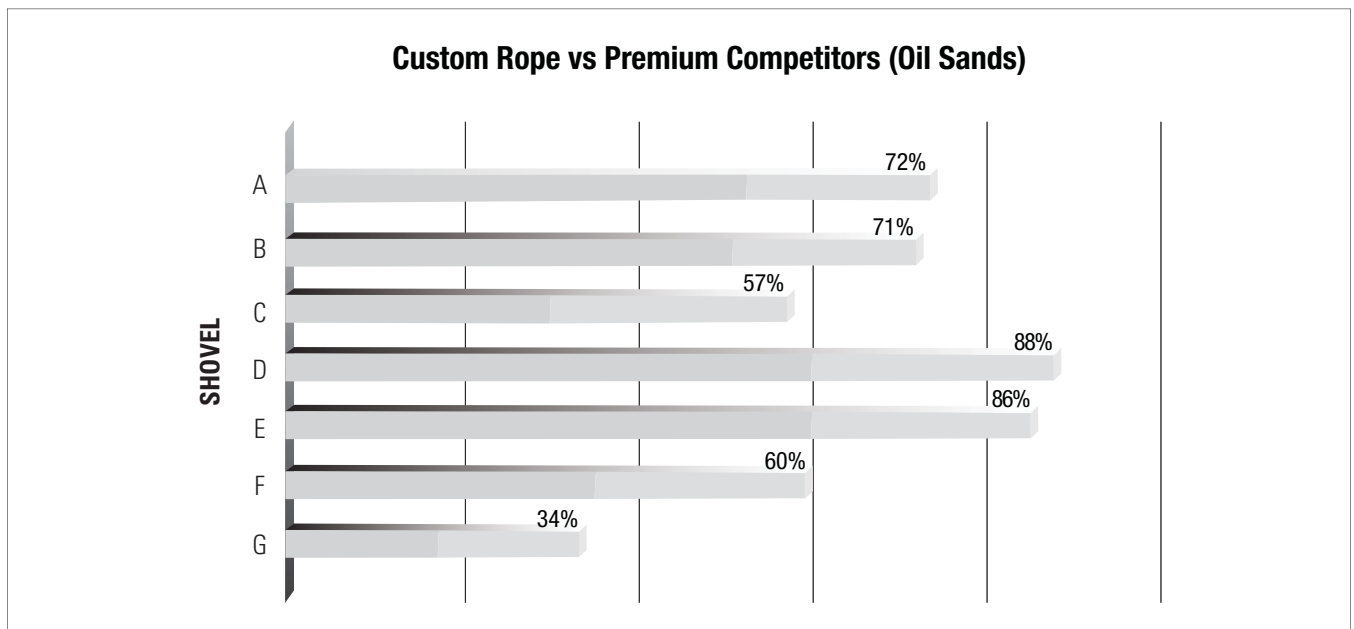
Wire Rope Industries has a successful track record of designing custom ropes for your unique combination of machinery, digging conditions, and operational demands. We maintain an extensive database of past R&D projects during which we tested hundreds of combinations of constructions and materials. This body of knowledge, coupled with expertise of our engineers, allows us to craft special purpose ropes with significantly better lifetime compared to off-the-shelf items. Some of the areas of customization are:

- » Advanced plastics and nylons
- » Advanced lubricants
- » Core and strand design
- » Specialized high-tensile wire and wire coatings
- » Outer reinforcements

The results below show the performance of one of our recent custom ropes, based on Cushion-Pac Ultra platform, against one of the premium offerings of our major competitor. Contact WRI to discuss your operational requirements and let us make better custom rope designed specifically to your needs.



Performance - Custom Shovel Rope



Disclaimer: Our clients typically measure Hours of Operation, or Tons Excavated. Each row shows relative improvement in rope life on one of the customer shovels after switching to WRI product, relative to previous average life of competitor's product. Results may vary depending on the machine and digging conditions.

SHOVELS

OIL SANDS ROPE™



Developed specifically for the extreme operating conditions in the Oil Sands of Northwest Canada, the Oil Sands Rope™ (OSR) was recently launched after a successful testing phase. This rope is a result of more than two decades of experience in serving the Oil Sands clients, and sets the next standard for rope performance.

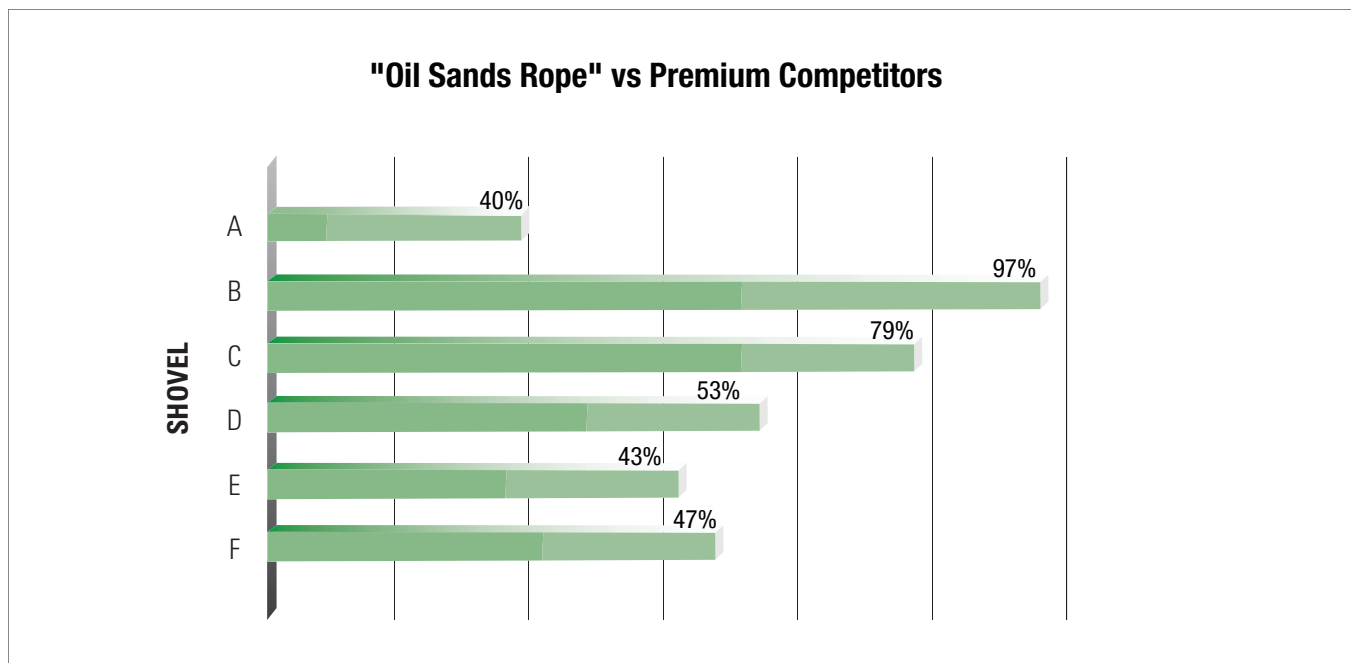
Environment and Machinery

Oil Sands Rope™ is designed to operate in typical Oil Sands environment with temperature varying from -40° to +40° and difficult digging conditions with minimal fragmentation. The rope have been developed for and tested on P&H 4100C-BOSS and Bucyrus BI-495HF shovels.



Performance

Shown below are some of the excellent results of OSR against the premium offerings of our competitors. Percentage improvements in rope life are based on the OSR performance measured by the clients relative to the average achieved by the incumbent ropes on the same machine.

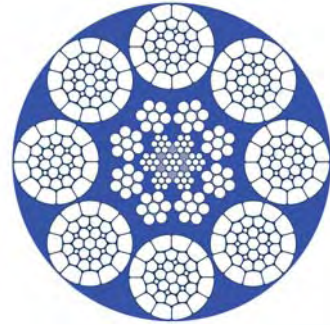


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CUSHION ROPE™

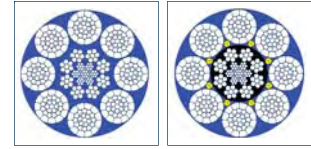
Our Cushion Rope™ for shovel excavators is considered a proven design with two decades of service behind it. Cushion Rope™ is a solution for mines looking for reliable performance and good value.

- » The Cushion Rope™ features rock solid 8-strand DyPac™ construction with exceptional strength, resistance to crushing, and resulting good fatigue life.
- » WRI's industry-leading thermal injection process ensures deep penetration of plastic into the rope, which provides core protection, strong strand support, keeps abrasives and moisture out, and maximizes the surface contact area.
- » Calibrated cut-lengths, high-efficiency ferrule brackets and available hairpin winding ensure correct installation and reduced downtime.



PRODUCT SPECIFICATIONS

BREAKING LOAD TABLES - SHOVELS



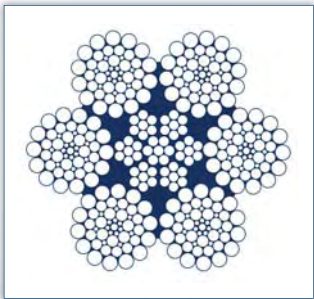
Cushion Rope, Cushion Pac Ultra

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
1 1/2	38	8 x 31 Dy-Pac 8 CR/CC & CPU	4.5	6.7	110	981
1 5/8	41	8 x 31 Dy-Pac 8 CR/CC & CPU	5.3	7.9	128	1,141
1 3/4	44	8 x 31 Dy-Pac 8 CR/CC & CPU	6.2	9.2	150	1,336
1 7/8	48	8 x 31 Dy-Pac 8 CR/CC & CPU	7.1	10.5	171	1,522
2	51	8 x 31 Dy-Pac 8 CR/CC & CPU	7.9	11.7	192	1,708
2 1/8	54	8 x 31 Dy-Pac 8 CR/CC & CPU	9.1	13.5	220	1,962
2 1/4	57	8 x 31 Dy-Pac 8 CR/CC & CPU	10.1	15.1	245	2,181
2 3/8	60	8 x 31 Dy-Pac 8 CR/CC & CPU	11.2	16.7	271	2,410
2 1/2	64	8 x 31 Dy-Pac 8 CR/CC & CPU	12.6	18.7	304	2,706
2 5/8	67	8 x 31 Dy-Pac 8 CR/CC & CPU	14.0	20.8	339	3,018
2 3/4	70	8 x 36 Dy-Pac 8 CR/CC & CPU	15.2	22.6	351	3,120
2 7/8	73	8 x 36 Dy-Pac 8 CR/CC & CPU	16.6	24.7	400	3,562
3	76	8 x 36 Dy-Pac 8 CR/CC & CPU	18.1	26.9	436	3,881

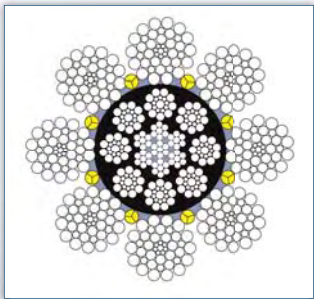
DRAGLINES

DRAGLINES

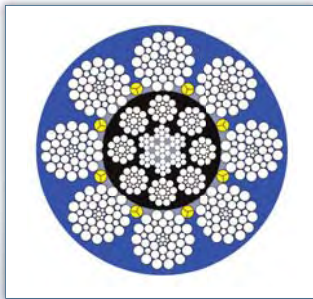
Built on our extensive experience and innovation in surface mining, Wire Rope Industries' product range for dragline excavators is unparalleled in the industry. We are the only manufacturer who offers a full line of products, from the industry-standard 6-strand basic ropes to the revolutionary Cushion Ultra™, which set the bar for performance. Our experts are available to assess your operations and help you find the rope that maximizes productivity and reduces maintenance costs.



6S Basic
Industry Standard



Ultra
Advanced



Cushion Ultra™
Premium

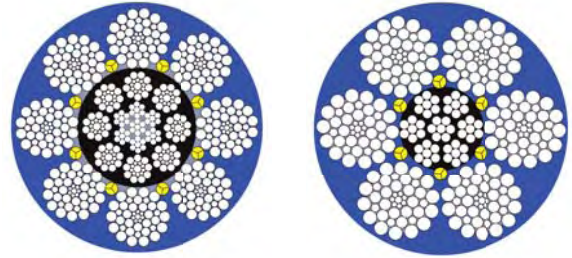


DRAGLINES

CUSHION ULTRA™



To address the growing productivity requirements of dragline mining industry, WRI developed a next generation of premium dragline ropes, which outperforms the basic 6-strand design by a large margin. Tested and proven on some of the biggest draglines in the world, these new ropes have become a benchmark for performance.



Design and Features

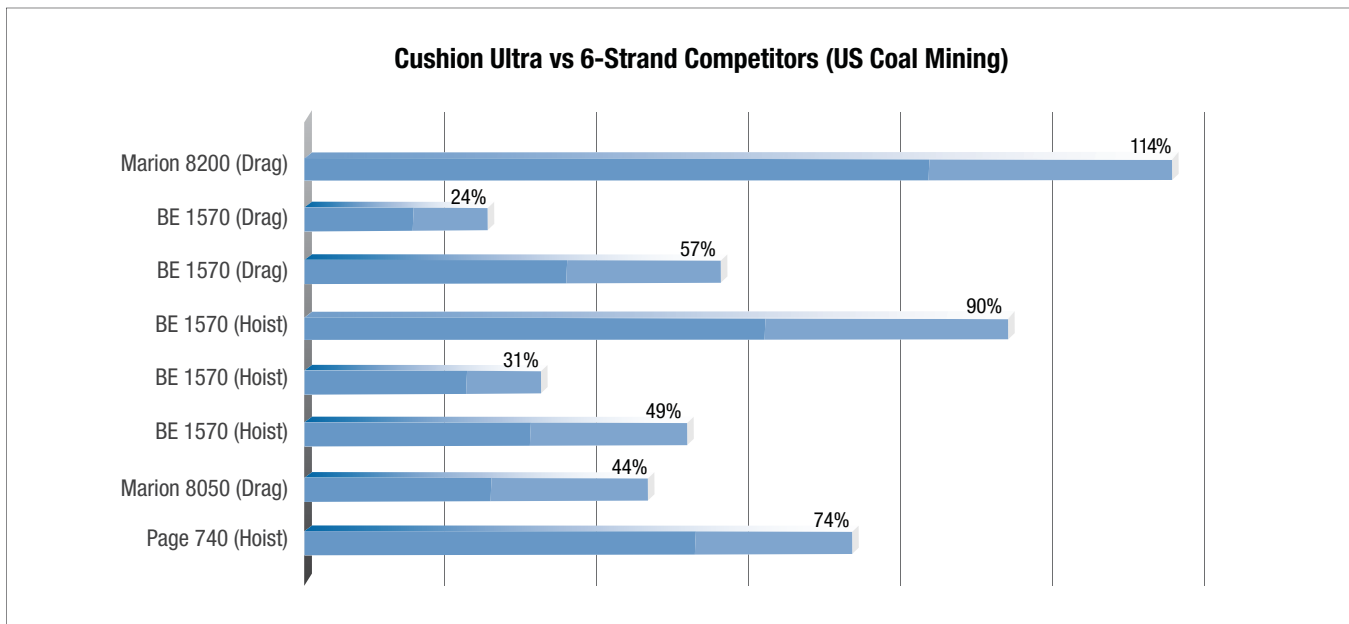
- » Cushion Ultra™ features a patented design with inter-strand spacers to minimize metal-to-metal contact and ensure ideal load distribution.
- » Heavy-duty core, built using proprietary high pressure plastic extrusion process
- » Best-in-industry outer plastic jacket retains internal lubrication and minimizes wear on sheaves and drums
- » 6-strand construction provides larger diameter strand for improved resistance to abrasion and is typically used for drag rope position.
- » 8-strand construction features increased flexibility and is typically used for hoist rope position.

Benefits

The patented Cushion Ultra™ has been a great success in the North American market thanks to the clear value it creates for the clients relative to 6-strand standard ropes.

- » Longest lifetime of any dragline rope on the market
- » Significant reduction in downtime and number of rope change-outs
- » Minimized sheave and drum wear
- » Overall improvement in rope and machine cleanliness

Performance



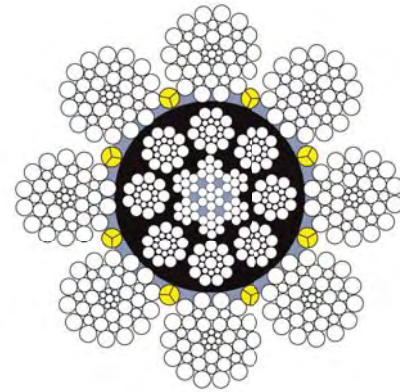
Disclaimer: Our clients typically measure Hours of Operation, or Tons Excavated. Each row shows relative improvement in rope life on one of the customer draglines after switching to WRI product, relative to previous average life of competitor's product. Results may vary depending on the machine and digging conditions.

ULTRA

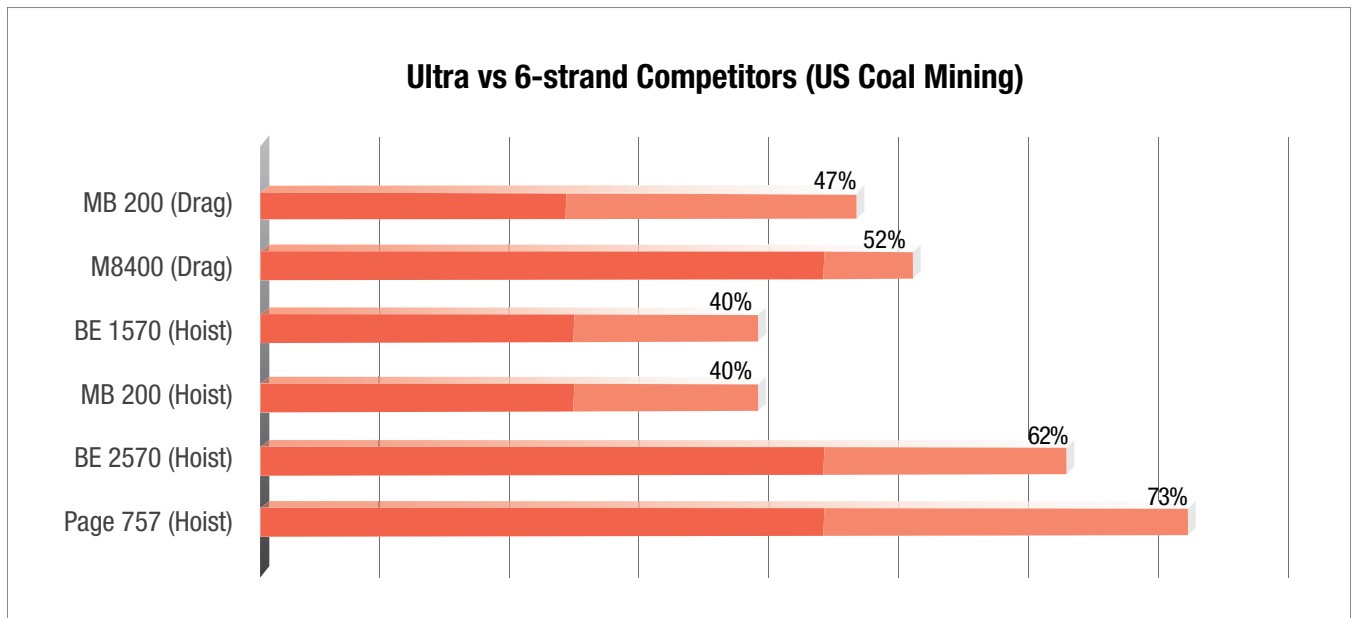
For clients who want the breakthrough construction of Cushion Ultra™, but require visibility of the outer strands for inspection purposes, WRI offers Ultra.

Ultra ropes feature the same construction as Cushion Ultra™, but without the outer plastic jacket. Although slightly behind Cushion Ultra™ in terms of performance, Ultra provides major improvement in rope life over standard 6-strand ropes, and is very popular upgrade choice among our clients.

Ultra is available in 6-strand design for drag position and 8-strand configuration for hoist position.



Performance



Disclaimer: Our clients typically measure Hours of Operation, or Tons Excavated. Each row shows relative improvement in rope life on one of the customer draglines after switching to WRI product, relative to previous average life of competitor's product. Results may vary depending on the machine and digging conditions.

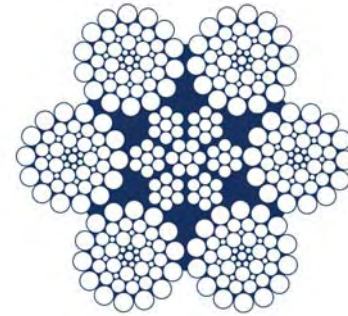
DRAGLINES

6S BASIC

For the clients who prefer the proven 6-strand rope without jacketing, WRI offers the rock-solid 6S Basic.

- » Rugged 6 strand construction for excellent wear resistance
- » Specially selected wire tensiles and a heavy-duty IWRC core
- » Advanced lubricants extend rope life and reduce fly-off

Many of our clients who tested Cushion Ultra and Ultra have converted from 6S Basic. Contact our application experts to learn how switching to our premium ropes can create value for your operation.



BRIDGE STRANDS AND SOCKETS FOR SURFACE MINING

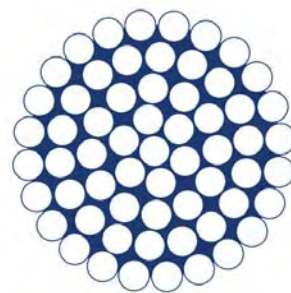
PS 1000™ BOOM PENDANTS

For the boom support applications, we offer our PS 1000 line of products, specially designed and tested for superior performance.

- » Wide range of sizes up to 4 1/2" (114 mm) diameter
- » Pre-stretch and socketing capabilities include one of the largest facilities in the world with a 960 ft (295 m) long, 800 000 lbs (365 000 kg) capacity pre-stretch bed and 40 ft. (12.2 m) socketing tower.
- » Accurate high quality pendants are supplied consistently by incorporating quality control processes including socket inspection and testing, under tension length markings and precision cuts, and specially designed socketing equipment.
- » Pendants can be correctly positioned and efficiently installed with special length markings and custom manufactured transport reels.
- » Equipment operation and safety is enhanced with the low stretch, equally balanced support of strand pendants.
- » Greater metallic area and higher strength-to-diameter ratios reduce stretch and increase service life when compared to rope pendants

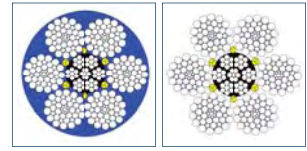
PS 1000 pendants are cost effective

- » Reduced long term capital purchase costs resulting from increased service life.
- » Reduced equipment maintenance costs resulting from more stable boom structures.



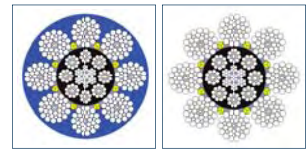
PRODUCT SPECIFICATIONS

BREAKING LOAD TABLES- DRAGLINES



6 Strand Cushion Ultra & 6 Strand Ultra

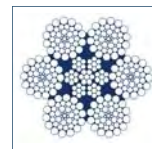
DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
2 3/4	(70)	6 Strand Ultra / Cushion Ultra	12.7	18.9	311	2,765
2 7/8	(73)	6 Strand Ultra / Cushion Ultra	13.9	20.7	341	3,035
3	(76)	6 Strand Ultra / Cushion Ultra	15.2	22.6	371	3,297
3 1/8	(79)	6 Strand Ultra / Cushion Ultra	16.5	24.6	402	3,576
3 1/4	(83)	6 Strand Ultra / Cushion Ultra	18.0	26.8	440	3,915
3 3/8	(86)	6 Strand Ultra / Cushion Ultra	19.4	28.9	468	4,168
3 1/2	(89)	6 Strand Ultra / Cushion Ultra	20.8	31.0	543	4,836
3 5/8	(92)	6 Strand Ultra / Cushion Ultra	22.5	33.5	583	5,191
3 3/4	(95)	6 Strand Ultra / Cushion Ultra	24.0	35.7	625	5,563
3 7/8	(98)	6 Strand Ultra / Cushion Ultra	25.7	38.2	646	5,749
4	(102)	6 Strand Ultra / Cushion Ultra	27.5	40.9	689	6,130
4 1/8	(105)	6 Strand Ultra / Cushion Ultra	29.3	43.6	732	6,519
4 1/4	(108)	6 Strand Ultra / Cushion Ultra	31.2	46.4	777	6,916
4 3/8	(111)	6 Strand Ultra / Cushion Ultra	33.4	49.7	824	7,330
4 1/2	(114)	6 Strand Ultra / Cushion Ultra	35.2	52.4	871	7,753
4 5/8	(117)	6 Strand Ultra / Cushion Ultra	37.2	55.4	921	8,193
4 3/4	(121)	6 Strand Ultra / Cushion Ultra	39.3	58.5	971	8,641
4 7/8	(124)	6 Strand Ultra / Cushion Ultra	41.4	61.6	1,023	9,106
5	(127)	6 Strand Ultra / Cushion Ultra	43.5	64.7	1,076	9,579



8 Strand Cushion Ultra & 8 Strand Ultra

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
2 3/4	70	8 Strand Ultra / Cushion Ultra	12.9	19.2	313	2,782
2 7/8	73	8 Strand Ultra / Cushion Ultra	14.1	21.0	342	3,044
3	76	8 Strand Ultra / Cushion Ultra	15.4	22.9	371	3,306
3 1/8	79	8 Strand Ultra / Cushion Ultra	16.7	24.9	403	3,585
3 1/4	83	8 Strand Ultra / Cushion Ultra	18.3	27.2	439	3,906
3 3/8	86	8 Strand Ultra / Cushion Ultra	19.6	29.2	470	4,185
3 1/2	89	8 Strand Ultra / Cushion Ultra	21.1	31.4	505	4,498
3 5/8	92	8 Strand Ultra / Cushion Ultra	22.3	33.2	542	4,828
3 3/4	95	8 Strand Ultra / Cushion Ultra	24.2	36.0	580	5,166
3 7/8	98	8 Strand Ultra / Cushion Ultra	26.0	38.7	628	5,589
4	102	8 Strand Ultra / Cushion Ultra	27.8	41.4	669	5,952
4 1/8	105	8 Strand Ultra / Cushion Ultra	29.8	44.3	719	6,400
4 1/4	108	8 Strand Ultra / Cushion Ultra	31.8	47.3	764	6,798
4 3/8	111	8 Strand Ultra / Cushion Ultra	33.9	50.4	816	7,263
4 1/2	114	8 Strand Ultra / Cushion Ultra	36.0	53.6	856	7,618
4 5/8	117	8 Strand Ultra / Cushion Ultra	38.3	57.0	904	8,049
4 3/4	121	8 Strand Ultra / Cushion Ultra	40.4	60.1	954	8,488
4 7/8	124	8 Strand Ultra / Cushion Ultra	42.5	63.2	1,005	8,945
5	127	8 Strand Ultra / Cushion Ultra	44.8	66.7	1,057	9,410

6S Basic



DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
1 1/2	38	6x41 RLL IWRC	4.2	6.2	108	964
1 5/8	41	6x41 RLL IWRC	5.0	7.4	126	1,125
1 3/4	44	6x41 RLL IWRC	5.7	8.4	145	1,294
1 7/8	48	6x41 RLL IWRC	6.5	9.7	165	1,471
2	51	6x41 RLL IWRC	7.6	11.4	188	1,674
2 1/8	54	6x41 RLL IWRC	8.4	12.4	210	1,869
2 1/4	57	6x41 RLL IWRC	9.4	13.9	235	2,088
2 3/8	60	6x41 RLL IWRC	10.2	15.2	243	2,164
2 1/2	64	6x41 RLL IWRC	11.3	16.9	277	2,469
2 5/8	67	6x41 RLL IWRC	12.5	18.6	311	2,765
2 3/4	70	6x41 RLL IWRC	13.8	20.5	344	3,061
2 7/8	73	6x43 RLL IWRC	14.9	22.2	378	3,365
3	76	6x43 RLL IWRC	16.3	24.2	411	3,661
3 1/8	79	6x43 RLL IWRC	17.6	26.3	445	3,957
3 1/4	83	6x43 RLL IWRC	19.5	29.1	479	4,261
3 3/8	86	6x43 RLL IWRC	20.5	30.5	512	4,557
3 1/2	89	6x49 RLL IWRC	21.8	32.5	545	4,853
3 5/8	92	6x49 RLL IWRC	23.8	35.5	580	5,157
3 3/4	95	6x49 RLL IWRC	25.3	37.7	613	5,453
3 7/8	98	6x49 RLL IWRC	27.3	40.6	683	6,079
4	102	6x49 RLL IWRC	29.1	43.4	731	6,502
4 1/8	105	6x49 RLL IWRC	31.5	46.9	777	6,916
4 1/4	108	6x49 RLL IWRC	33.4	49.8	825	7,339
4 3/8	111	6x49 RLL IWRC	35.4	52.7	872	7,761
4 1/2	114	6x49 RLL IWRC	37.3	55.4	943	8,395
4 5/8	117	6x49 RLL IWRC	39.1	58.3	984	8,757
4 3/4	121	6x49 RLL IWRC	41.7	62.1	1,057	9,410
4 7/8	124	6x49 RLL IWRC	43.9	65.3	1,115	9,926
5	127	6x49 RLL IWRC	46.3	68.8	1,171	10,425

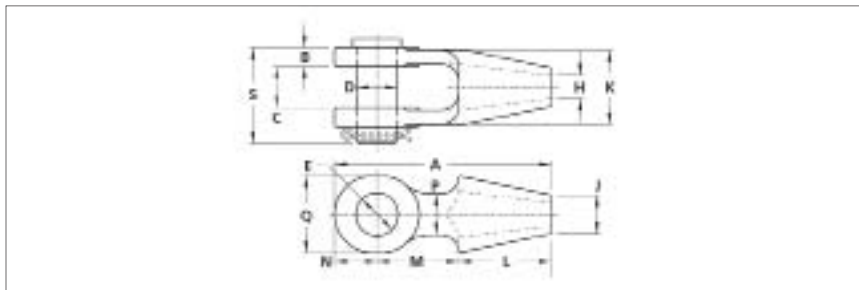
PRODUCT SPECIFICATIONS

BREAKING LOAD TABLES- DRAGLINES

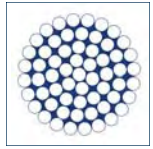
OPEN SPELTER SOCKETS

STRAND DIAMETER	ROPE DIAMETER	A	B	C	ØD	ØE	ØH	ØJ	K	L	M	N	P	Q	S	WT LBS.
1/2	9/16-5/8	6.75	0.56	1.25	1.19	1.25	0.69	1.13	2.38	3	2.56	1.25	1.25	2.25	3.06	4
9/16-5/8	3/4	7.94	0.69	1.5	1.38	1.44	0.81	1.38	2.74	3.5	3	1.44	1.5	2.63	3.44	7
11/16-3/4	7/8	9.25	0.81	1.75	1.63	1.69	1	1.63	3.25	4	3.5	1.75	1.75	3.25	3.94	10
13/16-7/8	1	10.56	0.94	2	2	2.06	1.13	1.75	3.75	4.5	4	2.06	2	3.75	4.63	15
15/16-1	1-1/8	11.88	1	2.25	2.25	2.31	1.25	1.94	4.25	5.06	4.5	2.31	2.38	4.13	5.13	23
1-1/16-1-1/8	1-1/4-1-3/8	13.06	1.13	2.5	2.5	2.56	1.5	2.19	4.69	5.38	5	2.69	2.88	4.63	5.81	33
1-3/16-1-1/4	1-1/2	15.13	1.19	3	2.75	2.81	1.63	2.75	5.38	6	6	3.13	3	5.38	6.25	43
1-5/16-1-3/8	1-5/8	16.25	1.31	3	3	3.06	1.75	2.88	5.63	6.5	6.5	3.25	3.25	5.75	6.5	52
1-7/16-1-5/8	1-3/4-1-7/8	18.38	1.63	3.5	3.5	3.56	2	3.13	6.25	7.5	7	3.88	3.88	6.5	7.63	83
1-11/16-1-3/4	2-2-1/8	21.75	1.81	4	3.75	3.81	2.25	3.75	7.5	8.5	9	4.25	4.25	7.25	8.88	127
1-13/16-1-7/8	—	21.75	1.81	4	4	4.06	2.25	3.75	7.5	8.5	9	4.25	4.25	7.25	9	130
1-15/16-2	2-1/4-2-3/8	23.75	2.13	4.5	4.25	4.31	2.5	4	8.38	9	10	4.75	4.38	8	10	178
2-1/16-2-1/8	—	23.75	2.13	4.5	4.5	4.56	2.5	4	8.38	9	10	4.75	4.38	8	10	184
2-3/16-2-1/4	2-1/2-2-5/8	26	2.38	5	4.75	4.81	2.88	4.5	9.25	9.75	11	5.25	4.75	8.5	11.25	236
2-5/16-2-3/8	2-3/4-2-7/8	28.25	2.88	5.25	5	5.06	3.13	5.31	10.13	11.5	11.5	5.25	5.25	9	12.5	315
2-7/16-2-9/16	3-3-1/8	29.75	3	5.75	5.25	5.31	3.38	7.5	10.75	12.5	11.5	5.75	5.5	9.5	13.25	424
2-5/8-2-3/4	3-1/4	30.5	3	6	5.75	5.81	3.5	7.38	11.5	12.5	12	6	5.5	9.75	13.5	484
2-7/8-3	3-3/8	31.75	3.13	6.25	6	6.06	3.63	7.63	11.5	12.5	12	7.25	6	12	14.25	558
3-1/8-3-1/4	3-1/2	32.5	3.25	6.75	6.5	6.56	3.88	8.25	12.25	13.25	12.5	6.75	7	11.25	15	627
3-3/8-3-1/2	3-5/8	34.75	3.38	7.25	6.75	6.81	4	8.63	13.25	14	13	7.75	7.25	11.75	15.63	734
3-5/8-3-3/4	3-3/4-4	36.25	3.5	7.5	7	7.06	4.25	9.25	14.25	15	13.5	7.75	7.5	13	16.25	844
3-7/8-4	4-1/8	38.75	3.63	8	7.25	7.31	4.5	9.75	14.5	15.5	14.25	9	8	14.5	17	999
4-1/8-4-3/8	4-1/4-4-1/2	44.38	3.88	8.25	7.25	7.31	5.25	9.5	16	18.5	16.5	9.38	8.5	15	17.25	1217
4-1/2-4-3/4	4-3/4-5	46.25	4	8.5	7.5	7.56	5.5	10.5	16.5	19	17.25	10	8.5	16	18.13	1405
4-7/8-5-1/8	5-1/4-5-1/2	49.25	4.5	8.75	8	8.06	6	11	17.15	21	18	10.25	9	16.5	19	1645
5-1/4-5-1/2	5-3/4-6	52.63	4.88	9	8.75	8.81	6.38	12	18.75	22.5	19	11.13	10	18	20	2090

All dimensions are in inches.



**PS 1000 - Boom Pendants - Bridge Strand High Quality
Structural Strand (ASTM-A-586)**



DIAMETER INCHES (MM)	APPROX. WEIGHT LBS/FT (KG/M)	MINIMUM BREAKING LOAD-TONS (KN)
7/8 (22)	1.61 (2.40)	46 (409)
15/16 (24)	1.85 (2.75)	54 (480)
1 (25)	2.10 (3.13)	61 (543)
1-1/16 (27)	2.37 (3.53)	69 (614)
1-1/8 (29)	2.66 (3.96)	78 (694)
1-3/16 (30)	2.96 (4.40)	86 (765)
1-1/4 (32)	3.28 (4.88)	96 (854)
1-5/16 (33)	3.62 (5.39)	106 (943)
1-3/8 (35)	3.97 (5.91)	116 (1 032)
1-7/16 (37)	4.34 (6.46)	126 (1 121)
1-1/2 (38)	4.73 (7.04)	138 (1 228)
1-9/16 (40)	5.13 (7.63)	150 (1 335)
1-5/8 (41)	5.55 (8.26)	162 (1 441)
1-11/16 (43)	5.98 (8.90)	176 (1 566)
1-3/4 (44)	6.43 (9.57)	188 (1 673)
1-13/16 (46)	6.90 (10.27)	202 (1 797)
1-7/8 (48)	7.39 (11.00)	216 (1 922)
1-15/16 (49)	7.89 (11.74)	230 (2 046)
2 (51)	8.40 (12.50)	245 (2 180)
2-1/16 (52)	8.94 (13.30)	261 (2 322)
2-1/8 (54)	9.49 (14.12)	277 (2 464)
2-3/16 (56)	10.05 (14.95)	293 (2 607)
2-1/4 (57)	10.64 (15.83)	310 (2 758)
2-5/16 (59)	11.24 (16.73)	327 (2 909)
2-3/8 (60)	11.85 (17.63)	344 (3 060)
2-7/16 (62)	12.48 (18.57)	360 (3 203)
2-1/2 (64)	13.13 (19.54)	376 (3 345)
2-9/16 (65)	13.80 (20.53)	392 (3 488)
2-5/8 (67)	14.47 (21.53)	417 (3 710)
2-11/16 (68)	15.16 (22.56)	432 (3 843)
2-3/4 (70)	15.88 (23.63)	452 (4 021)
2-7/8 (73)	17.36 (25.83)	494 (4 395)
3 (76)	18.90 (28.12)	538 (4 786)
3-1/8 (79)	20.51 (30.52)	584 (5 196)
3-1/4 (83)	22.18 (33.00)	625 (5 561)
3-3/8 (86)	23.92 (35.59)	673 (5 988)
3-1/2 (89)	25.73 (38.29)	724 (6 441)
3-5/8 (92)	27.60 (41.07)	768 (6 833)
3-3/4 (95)	29.50 (43.90)	822 (7 313)
3-7/8 (98)	31.50 (46.87)	878 (7 811)
4 (101)	33.60 (50.00)	925 (8 230)
4-1/8 (105)	35.70 (53.12)	990 (8 810)
4-1/4 (108)	37.90 (56.40)	1 050 (9 350)
4-3/8 (111)	40.20 (59.82)	1 110 (9 880)
4-1/2 (114)	41.30 (61.45)	1 175 (10 460)

GREEN REEL PROGRAM™

For many years, reels have been considered no more than the packaging for wire rope. However, with many clients concerned with environmental impact and real estate, used reels have come to present a serious inconvenience.

Based on discussions with our mining clients, WRI has developed a Green Reel Program™. We strongly believe that this program results in win-win situation and creates significant value for our clients. The program not only focuses on clients who receive products on wood reels, but also on clients who use steel reels but without a coordinated reel return program in place.

Please contact us if you are interested in enjoying the benefits of the Green Reel Program™.

Benefits:

- » Virtual elimination of waste caused by the used wood reels
- » Less real estate needed for on-site storage of reels
- » Reduced environmental impact
- » Lower costs by switching from wood to steel reels over the length of contract
- » If a customer already uses steel reels, savings from higher reuse of the existing reels

Example: A major shovel rope client

- » Reduction from 850 wood reels to just 100 steel reels over the course of the contract
- » Elimination of stock of more than 200 discarded wood reels on site
- » Savings of 10% on the cost of reels
- » Reduction of environmental impact



A blue-tinted photograph of an underground mining environment. In the foreground, two workers in hard hats and safety gear stand on a metal platform or walkway. The background shows a dark, cavernous space with a bright light source creating a strong glow and lens flare effect. The overall atmosphere is industrial and dimly lit.

UNDERGROUND MINING






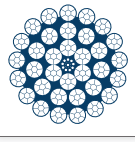

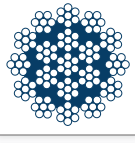

As a recognized leader in custom engineered underground ropes, WRI has decades of experience in supplying some of the world's deepest mines with the harshest operating conditions. Our product range is unmatched in the industry, as is our capability to design the best rope for any application.

Through innovation, Wire Rope Industries goes beyond offering rope constructions traditionally supplied by our competitors. We strive to develop new designs which combine the benefits of existing types without the inherent downsides. We listened to our clients and created Cushion-Pac 35™, a revolutionary new hoist rope that has become an instant success in the underground mining market.

Talk to our experts and let us show you how our expertise and industry-leading products can help you reach new levels of productivity and profitability.

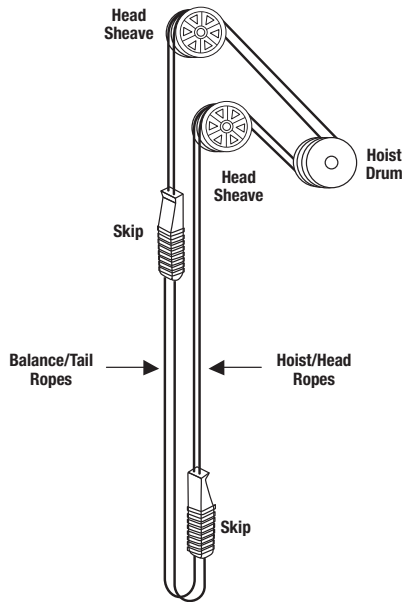
PRODUCT SELECTOR

APPLICATION SELECTOR

PRODUCTS		FRICTION HOIST	DRUM HOIST	BALANCE	GUIDE	SHAFT SINKING
Premium Ropes	 Cushion-Pac 35	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	 Tri-Pac & Tri-Max	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	 Power-Loc FLC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	 Power-Loc HLC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	 Cushion 34	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	 DyPac 34	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Standard Ropes	 PS 3410	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	 PS 1810	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	 PS 620	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

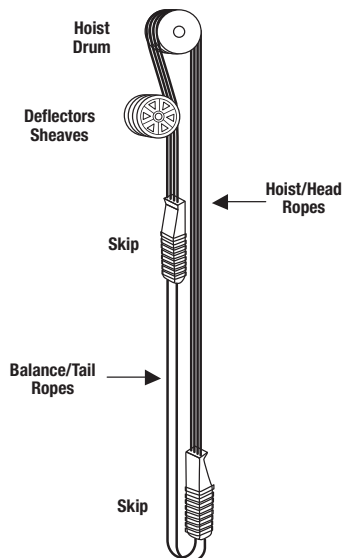
Ground Mounted Friction Hoist

2 Hoist Ropes ¥ 2 Balance Ropes

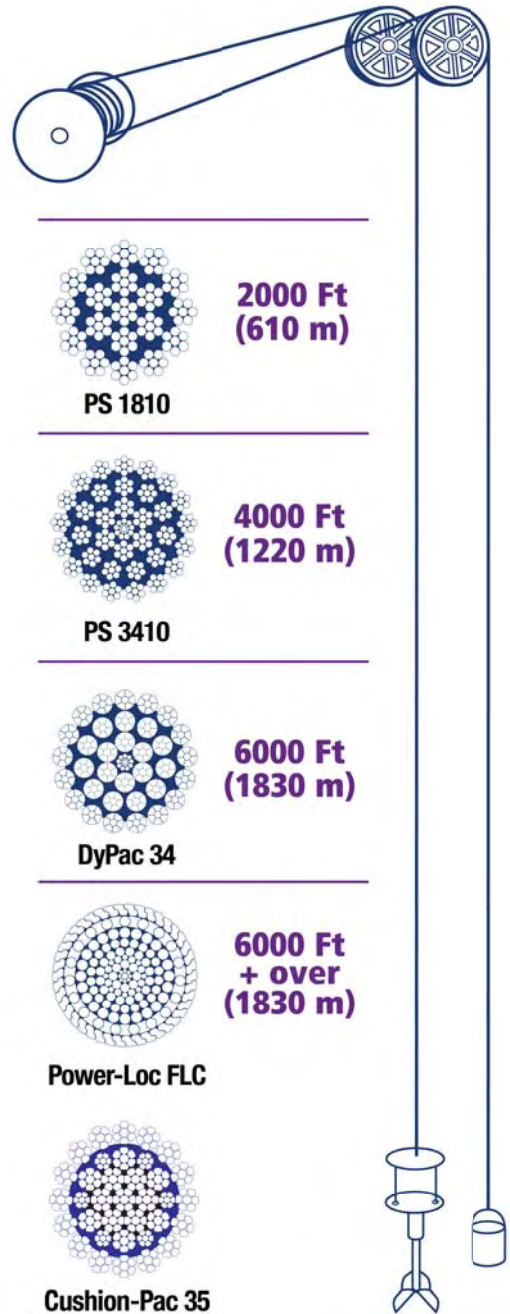


Tower Mounted Friction Hoist with Deflectors

4 Hoist Ropes ¥ 2 Balance Ropes



SHAFT SINKING



CUSHION-PAC 35™



New Rotation-Resistant Friction (Koepe) Hoist Rope

WRI's latest product combines the flexibility of triangular flattened strand ropes with non-rotational resistance required for installation in deep shafts which was until now only available with full-lock coil construction. The result has redefined our clients' expectations with the most versatile hoisting rope on the market.

Rotation Resistant

- » Rotation resistance allows the Cushion-Pac 35 to be used in modern deep shaft mines
- » Low torque means easier handling during installation and maintenance

Flexibility

- » More flexible than full-lock coil ropes
- » Less susceptible to structural upset

Minimal Elongation

- » The parallel lay construction of the core coupled with the compacting of the outer strands give the Cushion-Pac 35 a very high metallic area, which keeps the elongation to a minimum

Compacted Outer Strands

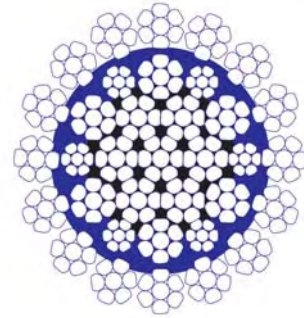
- » Increased breaking load and fatigue life
- » Smooth outer surface provides larger contact area with drum & sheaves for increased wear resistance and superior traction
- » Is compatible with existing polyurethane liners

Plastic Jacketed Core

- » A physical separation between the outer strands and the core that effectively seals in the core lubricant and ensures the proper positioning of the outer strands

Superior Lubrication

- » Outer strand lubricant is specifically formulated for Koepe friction winder applications
- » Core lubricant offers optimal protection against steel-to-steel abrasion for superior fatigue life



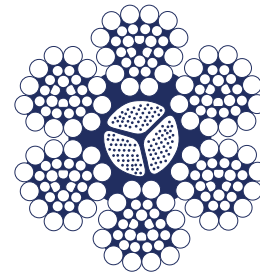
TRI-MAX FS™ & TRI-PAC FS™

Triangular Flattened Strand Hoist Ropes

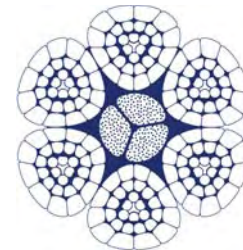
- » A well-proven 6x27 lang-lay flattened triangular strand construction provides 2.5 times the contact area of a round strand rope.
- » Designed for increased rope strength, wear resistance and fatigue life, and exceptional resistance to drum crushing.
- » The (3/3) triangular strand center construction provides the best strength/performance combination for drums with a recommended D/d ratio of 80/1.
- » An optional (6/1) brangle strand center construction provides improved flexibility and fatigue life on drums with smaller D/d ratios.
- » Custom design capabilities and a full wire tensile range from 1770MPa (115 Long Tons/In²) to 2160 MPa (140 Long Tons/In²) ensure that rope can be designed to meet individual customer requirements.
- » A specially manufactured core increases rope life by significantly reducing stretch, providing a more consistent density and diameter to support the strands, resisting strand abrasion, and eliminating core rot caused by corrosive environments.
- » Specially formulated lubrication increases rope performance, reduces corrosion and other effects of shaft environments, and minimizes environmental impact due to fly-off.

How Tri-Max™ ropes reduce downtime and create value:

- » Greater rope contact area provides for smoother operation and reduced sheave and drum wear. The optional thermal plastic enhancement of the rope drum end significantly enhances protection of the dead wraps, improves support of the upper layers of rope.
- » Reduces stretch, and limits the number of drum end cuts required. Available high-quality conveyance attachments simplify installation and removal for rope test cuts, ensure maximum rope breaking-load efficiency, and reduce maintenance downtime.
- » Reduction of overall operating costs as a result of improved rope performance and maximized payloads
- » Reduction of equipment downtime due to quicker maintenance turnaround and fewer drum end cuts.



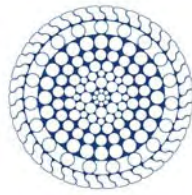
Tri-Max FS™



Tri-Pac FS™

PRODUCT OVERVIEWS

POWER-LOC FLC™



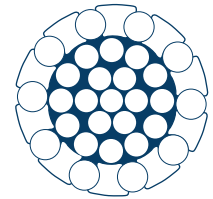
Full-lock coil ropes for friction (Koepe) hoisting applications:

- » A specialized full locked coil design, developed by WRI, provides one of the highest strength to weight ratios of any rope
- » Significantly increased cycle life, and reduced stretch compared to round or flattened triangular strand ropes. Power-Loc FLC™ is most effective when installed with a D/d ratio greater than 100-1.
- » Exclusive manufacturing techniques provide superior rotation resistance and virtually eliminate the natural torque and rotation common to round or flattened triangular strand ropes.
- » Custom design capabilities and the highest wire tensile range currently available ensure that production capacity can be maximized for each individual hoisting system.
- » Specially formulated lubrication maintains friction while increasing rope performance, thus reducing corrosion and other effects of shaft environments. The locked coil design has the added advantage of maintaining lubrication inside the rope.
- » Greater rope contact area and minimal rotation during hoisting provides smoother conveyance operation and reduces drum wear
- » Good correlation between loss in strength and loss in metallic area during EM testing makes it easier to determine the duration of rope life and to better plan change-outs
- » Available high-quality conveyance attachments simplify installation and removal for rope test cuts, ensure maximum rope breaking-load efficiency, and reduce maintenance downtime.

How Power-Loc FLC™ creates value:

- » Reduced overall operating costs as a result of significantly enhanced rope performance and maximized payloads.
- » Reduced equipment downtime due to fewer scheduled change-outs.
- » Reduced equipment maintenance costs resulting from less drum liner wear and smoother conveyance operation.

POWER-LOC HLC™



Half-lock coil ropes for Guide and Rubbing applications

WRI's Power-Loc HLC™ guide and rubbing ropes have two decades of proven track record.

- » A specially designed half locked coil construction provides excellent rotation resistance, superior wear properties and minimal movement in the shaft when compared to other rope constructions.
- » Locked coil rope guides provide a cost-effective alternative to rigid wood or metal guides by allowing for reduced shaft sizes and structures, improved air displacement on moving conveyances and minimized damage and wear caused by vibration.
- » WRI's recommended 9 pair outer wire rope design has less torque and rotation, and is easier to install when compared to 7 pair rope designs.
- » The smooth outer profile of the rope minimizes vibration, reduces conveyance slipper wear, and provides superior rope performance.
- » Specially formulated lubrication and recommended maintenance programs extend service life and reduce the corrosive effects of shaft environments.
- » Optional galvanizing further enhances corrosion resistance and service life. Galvanizing is recommended for the most severe shaft conditions.
- » High-quality positioning and suspension attachments, long established installation procedures, and qualified WRI technical personnel ensure efficient handling and minimized downtime.

How Power-Loc HLC™ creates value:

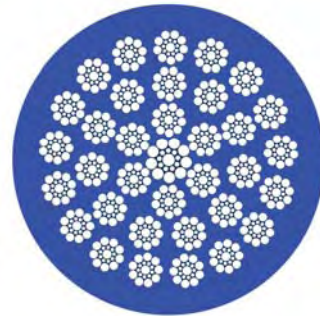
- » Reduced long-term operating costs as the result of increased service life and trouble-free operation
- » Reduced equipment wear and smoother conveyance operation resulting in lower maintenance costs

CUSHION 34™



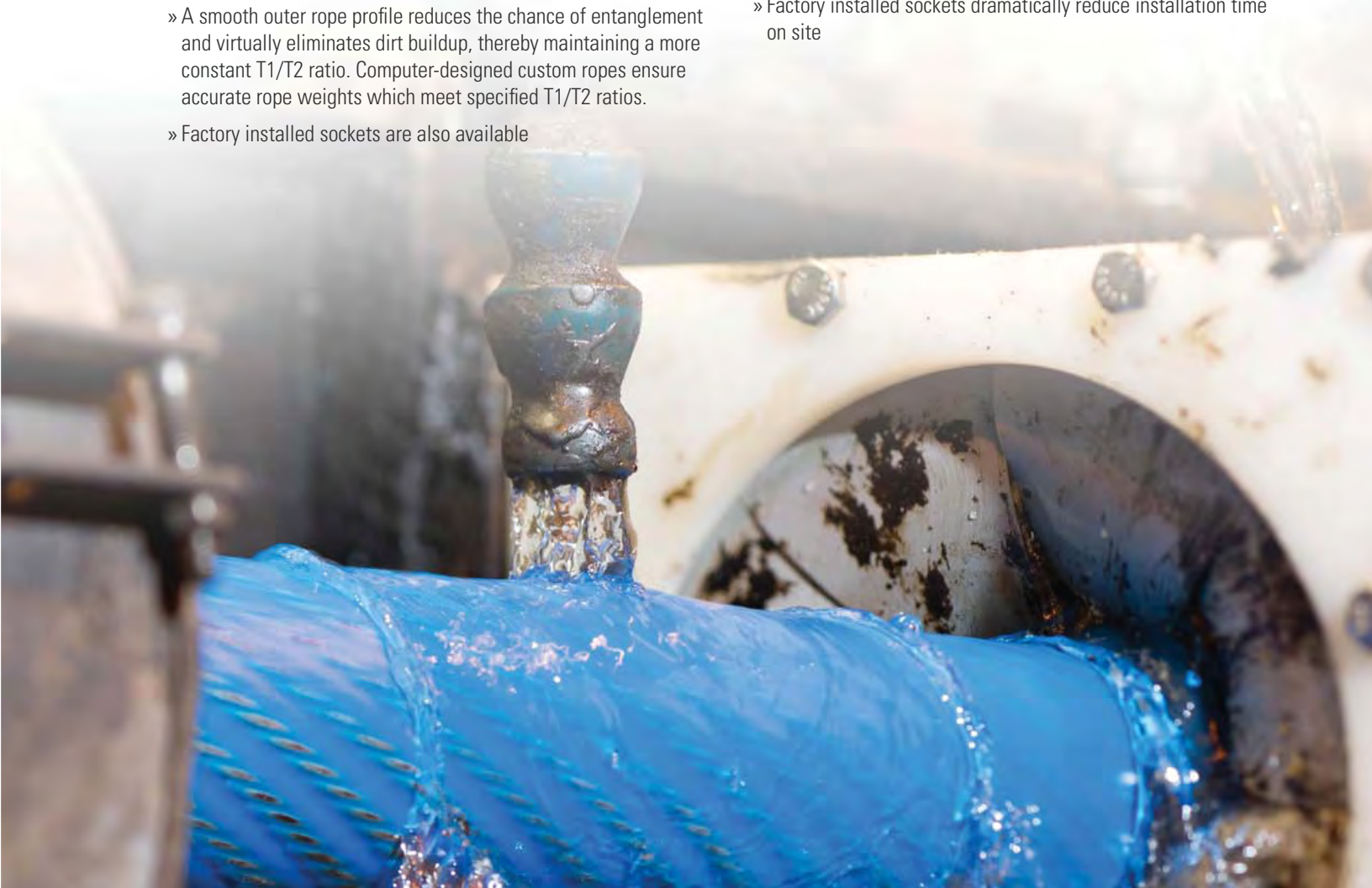
Plasticized multi-strand ropes for balance applications

- » A 34x19 construction provides improved flexibility and an approximate natural loop to rope ratio of 50-1.
- » Multi-strand spin resistance and plastic enhancement allow for smooth in-service operation, significantly reduced rope torque and stretch, and less movement in the shaft when the rope is at full speed.
- » Full plastic impregnation improves spin-resistance and eliminates internal cross cutting of the strands which is common to other multi-strand products, thereby extending service life and improving security.
- » Galvanized wire and WRI's patented one-step impregnation and jacketing process, which provides a thick protective outer layer of plastic, prevents contaminants from corroding the rope and eliminates the need for costly in-field lubrication.
- » A smooth outer rope profile reduces the chance of entanglement and virtually eliminates dirt buildup, thereby maintaining a more constant T1/T2 ratio. Computer-designed custom ropes ensure accurate rope weights which meet specified T1/T2 ratios.
- » Factory installed sockets are also available



How Cushion 34™ creates value:

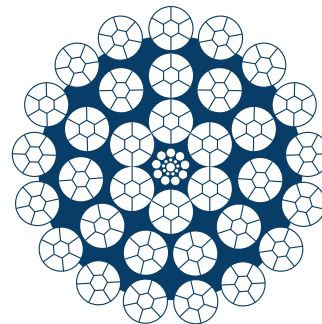
- » Reduced overall operating costs as the result of enhanced performance and the elimination of in-field lubrication.
- » Reduced equipment downtime resulting from fewer maintenance requirements.
- » Factory installed sockets dramatically reduce installation time on site



DYPAC 34

Premium version of PS3410 design

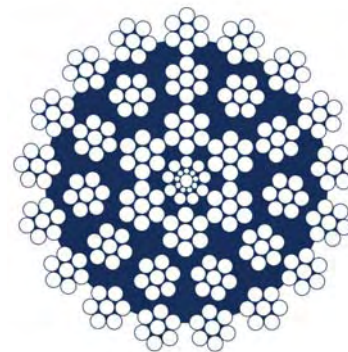
Dy-Pac® strand enhancement of a 34x7 (LCD) construction provides additional performance, an increase in strength of approximately 15%, reduced sheave and drum wear, and significantly enhanced drum spooling. As a result, operating depths can be extended up to approximately 6000 ft (1830 m).



PS 3410

Standard rope for shaft sinking, hoisting, and balance applications

- » A well-proven 34x7 construction provides good flexibility
- » Multi-strand spin resistance allows for smoother in-service operation, reduced rope torque, and less movement in the shaft.
- » A specialized Line Contact Design (LCD) improves performance and reduces internal cross cutting damage, common to other multi-strand products. By combining outer lang's-lay strands with inner regular lay strands, the underside of the outer strand wires run in the same direction as the wires of the supporting layer.
- » A specially manufactured core improves rope performance by reducing stretch, providing a more consistent density and diameter to support the strands, resisting strand abrasion, and eliminating core rot caused by corrosive environments.
- » Specially formulated lubrication extends service life by reducing corrosion and other effects of shaft environments.



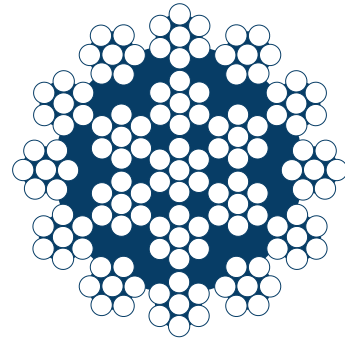
How PS 3410 creates value:

- » Reduced overall operating costs as the result of a high performance, cost effective rope design.
- » Reduced equipment downtime as the result of consistent trouble-free operation.

PS 1810

Standard rope for hoisting, balance, or shaft sinking applications

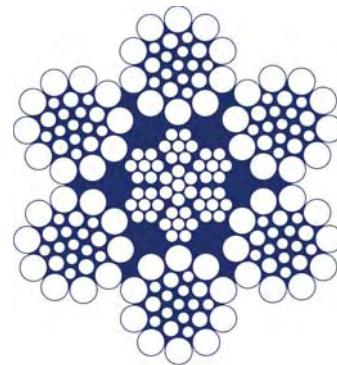
- » A resilient 18x7 IWRC construction and wire tensiles ranging from In2 1770 MPa (115 Long Tons/) to 2000 MPa (130 Long Tons/ In²) provide the necessary strength and reliability to operate up to depths of approximately 2000 ft (610 m).
- » A specialized Line Contact Design (LCD) improves performance and reduces internal cross cutting damage, common to other multi-strand products. By combining outer lang's lay strands with inner regular lay strands, the underside of the outer strand wires run in the same direction as the wires of the supporting layer.
- » Specially formulated lubrication increases rope performance and reduces the corrosive effects of shaft environments.



PS 620

Standard rope for low-depth hoisting applications

- » Specially selected wire tensile grades and 6 strand construction enhance wear resistance.
- » Specially formulated lubrication enhances wear properties, increases rope performance, and reduces environmental impact due to fly-off and the calibrated cut lengths and custom pad eyes simplify installation and reduce down-time.
- » Excellent value for less demanding applications



BEZINAL[®] 3000

BEZINAL[®] 3000 COATINGS

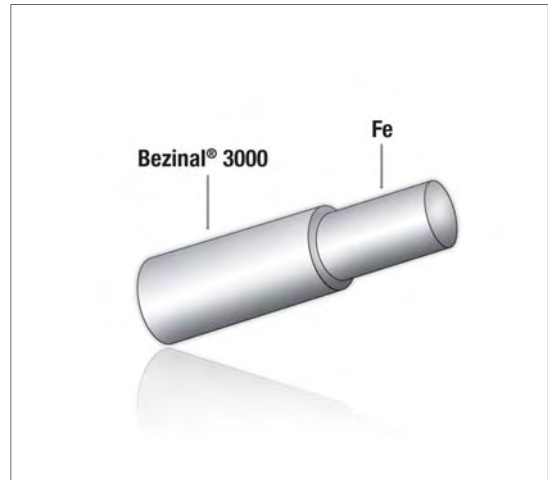


Developed by our parent company Bekaert, world leader in wire technology, Bezinal[®] is the next generation of Zinc-Aluminum coating for high-carbon wires.

We offer Bezinal for all our underground mining ropes. Bezinal coated ropes have been used by several of our flagship clients with exceptional results.

Benefits

- » Superior corrosion resistance for longer lifetime
- » Exposure up to 350°C leaves the coating intact
- » Cathodic protection
- » Active protection of cut ends
- » Sustained corrosion protection at welded points
- » Good formability
- » Withstands heavy deformations
- » Suitable for cycled fatigue loads

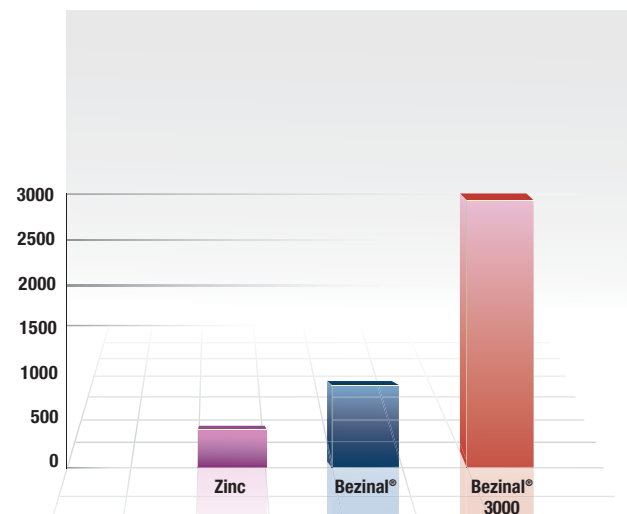


Bezinal[®] outperforms standard galvanized products by a least 3 to 1 (for the same coating weight) in many applications.

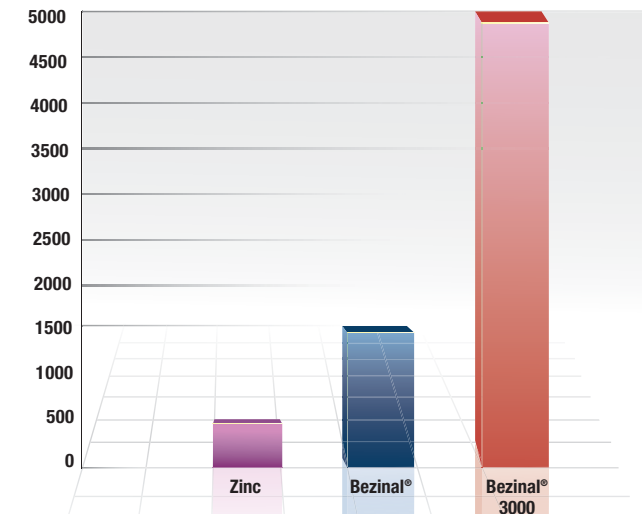
Salt Spray Performance

(hours exposure before appearance of 5% Dark Brown Rust (DBR);

Redrawn wires Bezinal[®] 3000
Class B according to EN-10244-2



Final coated wires Bezinal[®] 3000
Class A according to EN-10244-2



PRODUCT SPECIFICATIONS

BREAKING LOAD TABLES - UNDERGROUND MINING



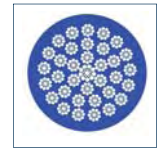
Tri-MAX FS™

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD									
inches	mm		lb/ft	kg/m	Gr 115		Gr 120		Gr 125		Gr 133		Gr 140	
					Tons	kN	Tons	kN	Tons	kN	Tons	kN	Tons	kN
7/8	22	6x27 (3/3) LL Polyester Core	1.33	1.98	35.6	317	37.1	330	39.0	347	41.2	367	43.2	385
1	25	6x27 (3/3) LL Polyester Core	1.74	2.59	47.0	419	48.9	435	51.3	457	54.4	484	57.5	512
1 1/8	29	6x27 (3/3) LL Polyester Core	2.22	3.30	59.9	533	62.7	558	65.1	579	69.2	616	73.2	651
1 1/4	32	6x27 (3/3) LL Polyester Core	2.74	4.08	74.1	660	77.4	689	80.3	714	85.7	763	90.3	803
1 3/8	35	6x27 (3/3) LL Polyester Core	3.32	4.94	89.8	799	93.6	833	97.4	867	104	924	108	960
1 1/2	38	6x27 (3/3) LL Polyester Core	3.95	5.88	107	951	112	993	116	1,036	124	1,100		-
1 5/8	41	6x27 (3/3) LL Polyester Core	4.66	6.93	126	1,120	131	1,167	137	1,218	146	1,296		-
1 3/4	44	6x27 (3/3) LL Polyester Core	5.37	7.99	145	1,294	152	1,349	158	1,404	168	1,496		-
1 7/8	48	6x27 (3/3) LL Polyester Core	6.09	9.06	165	1,471	172	1,535	180	1,602	191	1,701		-
2	51	6x27 (3/3) LL Polyester Core	6.90	10.27	187	1,666	195	1,737	203	1,809	216	1,926		-
2 1/8	54	6x27 (3/3) LL Polyester Core	7.80	11.61	211	1,877	220	1,957	229	2,042	244	2,171		-
2 1/4	57	6x27 (3/3) LL Polyester Core	8.55	12.72	237	2,105	247	2,198	252	2,241	274	2,435		-

Note: For 6x25 (6/1) brangle and 6x30 style "G" flattened (triangular) strand ropes, reduce the minimum breaking load by 5%.

PRODUCT SPECIFICATIONS

BREAKING LOAD TABLES - UNDERGROUND MINING



Cushion 34 Balance Ropes

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD					
inches	mm		lb/ft	kg/m	Gr 90		Gr 100		Gr 110	
					Tons	kN	Tons	kN	Tons	kN
3/4	19.1	34x19 RRL Gal IWRC Cushion Rope	1.5	2.2	25.5	227	28.3	252	31.2	278
7/8	22.2	34x19 RRL Gal IWRC Cushion Rope	1.8	2.6	30.8	274	34.2	304	37.6	335
1	25.4	34x19 RRL Gal IWRC Cushion Rope	2.1	3.1	36.9	329	41.0	365	45.1	402
1 1/8	28.6	34x19 RRL Gal IWRC Cushion Rope	2.6	3.8	44.8	399	49.8	443	54.8	488
1 1/4	31.8	34x19 RRL Gal IWRC Cushion Rope	3.1	4.7	56.2	501	62.5	556	68.7	612
1 3/8	34.9	34x19 RRL Gal IWRC Cushion Rope	3.8	5.7	66.8	594	74.2	660	81.6	726
1 1/2	38.1	34x19 RRL Gal IWRC Cushion Rope	4.5	6.7	79.6	709	88.5	787	97.3	866
1 5/8	41.3	34x19 RRL Gal IWRC Cushion Rope	5.4	8.0	94.4	840	104.9	933	115.4	1,027
1 3/4	44.5	34x19 RRL Gal IWRC Cushion Rope	6.3	9.3	110	981	122.4	1,090	134.7	1,199
1 7/8	47.6	34x19 RRL Gal IWRC Cushion Rope	7.2	10.8	127	1,131	141.2	1,256	155.3	1,382
2	50.8	34x19 RRL Gal IWRC Cushion Rope	8.2	12.1	143	1,275	159.2	1,417	175.1	1,558
2 1/8	54.0	34x19 RRL Gal IWRC Cushion Rope	9.2	13.7	162	1,439	179.7	1,599	197.6	1,759
2 1/4	57.2	34x19 RRL Gal IWRC Cushion Rope	10.3	15.3	181	1,606	200.6	1,785	220.6	1,963
2 3/8	60.3	34x19 RRL Gal IWRC Cushion Rope	11.3	16.8	199	1,767	220.7	1,964	242.7	2,160
2 1/2	63.5	34x19 RRL Gal IWRC Cushion Rope	12.4	18.4	217	1,935	241.6	2,150	265.7	2,365
2 5/8	66.7	34x19 RRL Gal IWRC Cushion Rope	13.4	20.0	236	2,099	262.0	2,332	288.2	2,565
2 3/4	69.9	34x19 RRL Gal IWRC Cushion Rope	14.3	21.2	250	2,229	278.3	2,477	306.1	2,724

This table is for illustration purposes only. Balance ropes are normally custom designed to achieve a desired weight and breaking load which meet individual shaft parameters. Rope construction may also vary to suit loop requirements.



Power-LOC HLC

DIAMETER		ROPE CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD			
inches	mm		lb/ft	kg/m	Gr 65		Gr 70	
					Tons	kN	Tons	kN
1 1/2	38.1	Power-Loc HLC	5.5	8.1	93	827	102	911
1 5/8	41.3	Power-Loc HLC	6.4	9.6	109	971	120	1,069
1 3/4	44.5	Power-Loc HLC	7.5	11.1	126	1,126	139	1,240
1 7/8	47.6	Power-Loc HLC	8.6	12.7	145	1,292	160	1,424
2	50.8	Power-Loc HLC	9.7	14.5	165	1,470	182	1,620

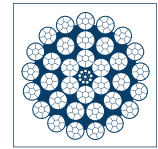
Power-LOC FLC



DIAMETER		ROPE CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD			
inches	mm		lb/ft	kg/m	HS		EHS	
					Tons	kN	Tons	kN
5/8	15.9	Power-Loc FLC Hoist & Sinking Ropes	0.88	1.31	21.9	195	24.6	219
11/16	17.5	Power-Loc FLC Hoist & Sinking Ropes	1.10	1.64	27.6	246	30.4	271
3/4	19.1	Power-Loc FLC Hoist & Sinking Ropes	1.31	1.95	33.0	294	36.3	323
13/16	20.6	Power-Loc FLC Hoist & Sinking Ropes	1.58	2.35	38.3	341	42.1	375
7/8	22.2	Power-Loc FLC Hoist & Sinking Ropes	1.85	2.75	44.7	398	49.1	437
15/16	23.8	Power-Loc FLC Hoist & Sinking Ropes	2.12	3.15	51.1	455	56.2	500
1	25.4	Power-Loc FLC Hoist & Sinking Ropes	2.45	3.65	58.6	522	64.4	573
1 1/16	27.0	Power-Loc FLC Hoist & Sinking Ropes	2.77	4.12	65.6	584	72.2	643
1 1/18	26.8	Power-Loc FLC Hoist & Sinking Ropes	3.08	4.58	74.1	660	81.9	729
1 3/16	30.2	Power-Loc FLC Hoist & Sinking Ropes	3.41	5.07	82.7	736	91.3	813
1 1/4	31.8	Power-Loc FLC Hoist & Sinking Ropes	3.75	5.58	91.2	812	100.6	896
1 5/16	33.3	Power-Loc FLC Hoist & Sinking Ropes	4.13	6.15	100.7	896	111.2	990
1 3/8	34.9	Power-Loc FLC Hoist & Sinking Ropes	4.53	6.74	110.2	981	121.7	1,084
1 7/16	36.5	Power-Loc FLC Hoist & Sinking Ropes	4.95	7.37	120.7	1,074	133.4	1,188
1 1/2	38.1	Power-Loc FLC Hoist & Sinking Ropes	5.40	8.04	131.1	1,167	145.2	1,292
1 9/16	39.7	Power-Loc FLC Hoist & Sinking Ropes	5.74	8.54	142.5	1,268	156.9	1,396
1 5/8	41.3	Power-Loc FLC Hoist & Sinking Ropes	6.24	9.29	153.9	1,370	169.7	1,510
1 11/16	42.9	Power-Loc FLC Hoist & Sinking Ropes	6.75	10.05	166.3	1,480	183.7	1,635
1 3/4	44.5	Power-Loc FLC Hoist & Sinking Ropes	7.29	10.85	178.6	1,590	196.7	1,750
1 13/16	46.0	Power-Loc FLC Hoist & Sinking Ropes	7.84	11.67	191.9	1,708	211.8	1,885
1 7/8	47.6	Power-Loc FLC Hoist & Sinking Ropes	8.46	12.59	205.2	1,826	225.9	2,011
1 15/16	49.2	Power-Loc FLC Hoist & Sinking Ropes	9.06	13.48	219.5	1,954	241.4	2,148
2	50.8	Power-Loc FLC Hoist & Sinking Ropes	9.67	14.39	233.7	2,080	257.5	2,292
2 1/16	52.4	Power-Loc FLC Hoist & Sinking Ropes	10.28	15.30	248.9	2,215	273.9	2,438
2 1/8	54.0	Power-Loc FLC Hoist & Sinking Ropes	10.86	16.16	263.9	2,349	290.3	2,584

PRODUCT SPECIFICATIONS

BREAKING LOAD TABLES - UNDERGROUND MINING

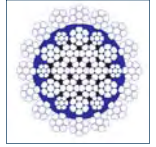


Dy-Pac 34

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD					
inches	mm		lb/ft	kg/m	Gr 120		Gr 125		Gr 133	
					Tons	kN	Tons	kN	Tons	kN
3/4	19	34x7 RLL LCD Dy-Pac WSC	1.10	1.64	29.7	265	31.0	276	33.0	293
7/8	22	34x7 RLL LCD Dy-Pac WSC	1.50	2.23	40.5	360	42.1	375	44.9	399
1	25	34x7 RLL LCD Dy-Pac WSC	1.96	2.92	52.7	469	54.9	489	58.4	520
1 1/8	29	34x7 RLL LCD Dy-Pac WSC	2.48	3.69	68.1	606	70.3	626	75.5	672
1 1/4	32	34x7 RLL LCD Dy-Pac WSC	3.06	4.55	83.4	742	86.8	773	92.4	823
1 3/8	35	34x7 RLL LCD Dy-Pac WSC	3.70	5.51	101	898	105	936	112	995
1 1/2	38	34x7 RLL LCD Dy-Pac WSC	4.40	6.55	116	1,035	121	1,078	129	1,147
1 5/8	41	34x7 RLL LCD Dy-Pac WSC	5.19	7.72	136	1,214	142	1,265	151	1,346
1 3/4	44	34x7 RLL LCD Dy-Pac WSC	6.00	8.93	159	1,411	165	1,469	176	1,564
1 7/8	48	34x7 RLL LCD Dy-Pac WSC	7.22	10.74	182	1,619	190	1,687	202	1,795
2	51	34x7 RLL LCD Dy-Pac WSC	7.83	11.65	197	1,756	205	1,829	219	1,946

PS 620

DIAMETER		ROPE CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD			
inches	mm		lb/ft	kg/m	Gr 115		Gr 125	
					Tons	kN	Tons	kN
5/8	16	6x19 RLL Polyester Core	0.65	0.97	16.0	142	17.4	155
3/4	19	6x19 RLL Polyester Core	0.92	1.37	22.5	200	24.5	218
7/8	22	6x19 RLL Polyester Core	1.24	1.85	30.2	269	32.9	293
1	25	6x19 RLL Polyester Core	1.60	2.38	39.0	348	42.5	378
1 1/8	29	6x19 RLL Polyester Core	2.15	3.20	52.5	468	57.1	508
1 1/4	32	6x19 RLL Polyester Core	2.62	3.90	64.0	570	69.6	620
1 3/8	35	6x19 RLL Polyester Core	3.14	4.67	76.6	681	83.2	741
1 1/2	38	6x19 RLL Polyester Core	3.70	5.51	90.3	803	98.1	873
1 5/8	41	6x19 RLL Polyester Core	4.30	6.40	105.1	935	114.2	1,016
1 3/4	44	6x19 RLL Polyester Core	4.96	7.38	121.0	1,077	131.6	1,171



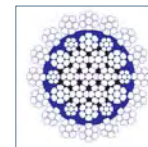
Cushion-Pac 35 High Breaking Load

DIAMETER	CONSTRUCTION	APPROX. WEIGHT	MINIMUM BREAKING LOAD		
			1770 MPa	1960 MPa	2160 MPa
mm		kg/m	kN	kN	kN
26	Cushion-Pac 35 HBL	3.3	510	560	620
28	Cushion-Pac 35 HBL	3.8	600	650	720
30	Cushion-Pac 35 HBL	4.4	680	740	830
32	Cushion-Pac 35 HBL	4.9	780	850	940
34	Cushion-Pac 35 HBL	5.6	880	950	1060
36	Cushion-Pac 35 HBL	6.3	980	1070	1190
38	Cushion-Pac 35 HBL	7.0	1100	1190	1320
40	Cushion-Pac 35 HBL	7.7	1220	1320	1470
42	Cushion-Pac 35 HBL	8.5	1340	1460	1620
44	Cushion-Pac 35 HBL	9.4	1470	1600	1780
46	Cushion-Pac 35 HBL	10.2	1610	1750	1940
48	Cushion-Pac 35 HBL	11.1	1750	1900	2110
50	Cushion-Pac 35 HBL	12.1	1900	2060	2290
52	Cushion-Pac 35 HBL	13.1	2050	2230	2480
54	Cushion-Pac 35 HBL	14.1	2210	2410	2680
56	Cushion-Pac 35 HBL	15.2	2380	2590	2880

DIAMETER	CONSTRUCTION	APPROX. WEIGHT	MINIMUM BREAKING LOAD		
			Gr 115	Gr 125	Gr 140
inches		lb/ft	Tons	Tons	Tons
1	Cushion-Pac 35 HBL	2.1	56.0	60.8	67.6
1 1/8	Cushion-Pac 35 HBL	2.7	70.8	77.0	85.6
1 1/4	Cushion-Pac 35 HBL	3.3	87.4	95.0	106
1 3/8	Cushion-Pac 35 HBL	4.0	106	115	128
1 1/2	Cushion-Pac 35 HBL	4.8	126	137	152
1 5/8	Cushion-Pac 35 HBL	5.6	148	161	178
1 3/4	Cushion-Pac 35 HBL	6.5	171	186	207
1 7/8	Cushion-Pac 35 HBL	7.5	197	214	238
2	Cushion-Pac 35 HBL	8.5	224	243	270
2 1/8	Cushion-Pac 35 HBL	9.6	253	275	305
2 1/4	Cushion-Pac 35 HBL	10.8	283	308	342
2 3/8	Cushion-Pac 35 HBL	12.0	316	343	381
2 1/2	Cushion-Pac 35 HBL	13.3	350	380	422

PRODUCT SPECIFICATIONS

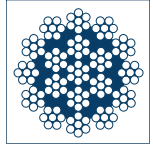
BREAKING LOAD TABLES - UNDERGROUND MINING



Cushion-Pac 35 Low Weight

DIAMETER	CONSTRUCTION	APPROX. WEIGHT	MINIMUM BREAKING LOAD		
			1770 MPa	1960 MPa	2160 MPa
mm		kg/m	kN	kN	kN
26	Cushion-Pac 35 Low Weight	2.9	440	480	540
28	Cushion-Pac 35 Low Weight	3.4	520	560	620
30	Cushion-Pac 35 Low Weight	3.9	590	640	720
32	Cushion-Pac 35 Low Weight	4.5	670	730	810
34	Cushion-Pac 35 Low Weight	5.0	760	830	920
36	Cushion-Pac 35 Low Weight	5.7	850	930	1030
38	Cushion-Pac 35 Low Weight	6.3	950	1030	1150
40	Cushion-Pac 35 Low Weight	7.0	1050	1150	1270
42	Cushion-Pac 35 Low Weight	7.7	1160	1260	1400
44	Cushion-Pac 35 Low Weight	8.4	1270	1390	1540
46	Cushion-Pac 35 Low Weight	9.2	1390	1510	1680
48	Cushion-Pac 35 Low Weight	10.0	1520	1650	1830
50	Cushion-Pac 35 Low Weight	10.9	1650	1790	1990
52	Cushion-Pac 35 Low Weight	11.8	1780	1940	2150
54	Cushion-Pac 35 Low Weight	12.7	1920	2090	2320
56	Cushion-Pac 35 Low Weight	13.7	2060	2240	2490

DIAMETER	CONSTRUCTION	APPROX. WEIGHT	MINIMUM BREAKING LOAD		
			Gr 115	Gr 125	Gr 140
inches		lb/ft	Tons	Tons	Tons
1	Cushion-Pac 35 Low Weight	1.9	48.5	52.7	58.6
1 1/8	Cushion-Pac 35 Low Weight	2.4	61.4	66.7	74.1
1 1/4	Cushion-Pac 35 Low Weight	3.0	75.8	82.4	91.5
1 3/8	Cushion-Pac 35 Low Weight	3.6	91.7	100	111
1 1/2	Cushion-Pac 35 Low Weight	4.3	109	119	132
1 5/8	Cushion-Pac 35 Low Weight	5.1	128	139	155
1 3/4	Cushion-Pac 35 Low Weight	5.9	149	162	179
1 7/8	Cushion-Pac 35 Low Weight	6.8	171	185	206
2	Cushion-Pac 35 Low Weight	7.7	194	211	234
2 1/8	Cushion-Pac 35 Low Weight	8.7	219	238	264
2 1/4	Cushion-Pac 35 Low Weight	9.7	246	267	296
2 3/8	Cushion-Pac 35 Low Weight	10.8	274	297	330
2 1/2	Cushion-Pac 35 Low Weight	12.0	303	330	366



PS 1810 (Shaft Sinking)

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD							
inches	mm		lb/ft	kg/m	Gr 115		Gr 120		Gr 125		Gr 133	
					Tons	kN	Tons	kN	Tons	kN	Tons	kN
3/4	19	18x7 RLL LCD IWRC	0.99	1.47	25.1	224	26.2	234	27.3	243	29.1	259
7/8	22	18x7 RLL LCD IWRC	1.35	2.01	33.7	300	35.2	313	36.6	326	39.0	347
1	25	18x7 RLL LCD IWRC	1.76	2.62	43.6	388	45.5	405	47.4	422	50.5	449
1 1/8	29	18x7 RLL LCD IWRC	2.23	3.32	55.2	491	57.6	512	60.0	534	63.8	568
1 1/4	32	18x7 RLL LCD IWRC	2.8	4.17	67.7	602	70.6	628	73.6	655	78.3	697
1 3/8	35	18x7 RLL LCD IWRC	3.38	5.03	81.7	727	85.2	759	88.8	790	94.5	841
1 1/2	38	18x7 RLL LCD IWRC	4.02	5.98	96.7	861	101	898	105	936	112	996
1 5/8	41	18x7 RLL LCD IWRC	4.69	6.98	113	1,009	118	1,053	123	1,096	131	1,167
1 3/4	44	18x7 RLL LCD IWRC	5.4	8.04	136	1,209	142	1,262	148	1,314	157	1,398
1 7/8	48	18x7 RLL LCD IWRC	6.18	9.20	151	1,342	157	1,400	162	1,437	174	1,552
2	51	18x7 RLL LCD IWRC	7.08	10.54	171	1,522	179	1,589	186	1,655	198	1,761
2 1/8	54	18x7 RLL LCD IWRC	8.19	12.19	198	1,762	207	1,838	215	1,915	229	2,037
2 1/4	57	18x7 RLL LCD IWRC	9.15	13.62	221	1,967	231	2,053	240	2,138	256	2,275
2 3/8	60	18x7 RLL LCD IWRC	10.16	15.12	246	2,185	256	2,280	267	2,375	284	2,527
2 1/2	64	18x7 RLL LCD IWRC	11.22	16.70	271	2,414	283	2,519	295	2,624	314	2,792

PS 1810 (Balance Ropes)

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD					
inches	mm		lb/ft	kg/m	Gr 115		Gr 120		Gr 125	
					Tons	kN	Tons	kN	Tons	kN
3/4	19	18x7 RLL LCD Polyester Core	0.93	1.38	17.6	156	19.5	173	21.5	191
7/8	22	18x7 RLL LCD Polyester Core	1.26	1.88	24.2	216	27.1	241	29.6	264
1	25	18x7 RLL LCD Polyester Core	1.64	2.44	31.8	283	35.2	313	38.9	346
1 1/8	29	18x7 RLL LCD Polyester Core	2.07	3.08	40.4	359	44.7	397	49.3	439
1 1/4	32	18x7 RLL LCD Polyester Core	2.56	3.81	49.4	440	55.1	490	60.4	537
1 3/8	35	18x7 RLL LCD Polyester Core	3.10	4.61	59.9	533	66.5	592	73.2	651
1 1/2	38	18x7 RLL LCD Polyester Core	3.69	5.49	71.3	634	79.3	706	87.1	775
1 5/8	41	18x7 RLL LCD Polyester Core	4.33	6.44	83.6	744	93.1	829	102	909
1 3/4	44	18x7 RLL LCD Polyester Core	5.02	7.47	97.4	867	108	960	119	1,059
1 7/8	48	18x7 RLL LCD Polyester Core	5.76	8.57	112	993	124	1,103	136	1,214
2	51	18x7 RLL LCD Polyester Core	6.56	9.76	127	1,129	141	1,256	155	1,380
2 1/8	54	18x7 RLL LCD Polyester Core	7.40	11.01	143	1,277	159	1,416	175	1,560
2 1/4	57	18x7 RLL LCD Polyester Core	8.30	12.35	161	1,429	178	1,585	196	1,746
2 3/8	60	18x7 RLL LCD Polyester Core	9.25	13.77	179	1,594	199	1,767	219	1,948
2 1/2	64	18x7 RLL LCD Polyester Core	10.25	15.25	198	1,763	220	1,957	242	2,155

PRODUCT SPECIFICATIONS

BREAKING LOAD TABLES - UNDERGROUND MINING



PS 3410 (Shaft Sinking)

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD							
					Gr 115		Gr 120		Gr 125		Gr 133	
inches	mm		lb/ft	kg/m	Tons	kN	Tons	kN	Tons	kN	Tons	kN
3/4	19	34x7 RLL LCD WSC	1.01	1.50	24.9	222	26.0	231	27.1	241	28.8	256
7/8	22	34x7 RLL LCD WSC	1.38	2.05	33.9	301	35.3	315	36.8	328	39.2	349
1	25	34x7 RLL LCD WSC	1.8	2.68	44.2	394	46.1	411	48.1	428	51.1	455
1 1/8	29	34x7 RLL LCD WSC	2.28	3.39	56.0	498	58.4	520	60.9	542	64.8	576
1 1/4	32	34x7 RLL LCD WSC	2.81	4.18	69.1	615	72.1	642	75.1	669	79.9	711
1 3/8	35	34x7 RLL LCD WSC	3.41	5.07	83.6	744	87.3	777	90.9	809	96.7	861
1 1/2	38	34x7 RLL LCD WSC	4.05	6.03	99.5	886	104	924	108	963	115	1,024
1 5/8	41	34x7 RLL LCD WSC	4.76	7.08	117	1,040	122	1,085	127	1,130	135	1,202
1 3/4	44	34x7 RLL LCD WSC	5.52	8.21	135	1,206	141	1,258	147	1,311	157	1,394
1 7/8	48	34x7 RLL LCD WSC	6.33	9.42	156	1,384	162	1,444	169	1,505	180	1,601
2	51	34x7 RLL LCD WSC	7.21	10.73	177	1,575	185	1,643	192	1,712	205	1,821
2 1/8	54	34x7 RLL LCD WSC	8.13	12.10	200	1,778	208	1,855	217	1,932	231	2,056
2 1/4	57	34x7 RLL LCD WSC	9.12	13.57	224	1,993	234	2,080	243	2,167	259	2,305
2 3/8	60	34x7 RLL LCD WSC	10.16	15.12	250	2,221	260	2,317	271	2,414	289	2,568
2 1/2	64	34x7 RLL LCD WSC	11.26	16.76	276	2,461	289	2,568	301	2,675	320	2,846

PS 3410 (Balance Ropes)

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD					
					Gr 115		Gr 120		Gr 125	
inches	mm		lb/ft	kg/m	Tons	kN	Tons	kN	Tons	kN
3/4	19	34x7 RLL LCD Polyester Core	0.94	1.40	18.1	161	20.0	178	22.1	196
7/8	22	34x7 RLL LCD Polyester Core	1.28	1.90	24.7	220	27.6	245	30.2	269
1	25	34x7 RLL LCD Polyester Core	1.68	2.50	32.3	288	35.6	317	39.5	351
1 1/8	29	34x7 RLL LCD Polyester Core	2.12	3.15	40.4	359	45.1	402	49.3	439
1 1/4	32	34x7 RLL LCD Polyester Core	2.62	3.90	50.4	448	56.1	499	61.5	548
1 3/8	35	34x7 RLL LCD Polyester Core	3.17	4.72	60.8	541	67.5	600	74.3	661
1 1/2	38	34x7 RLL LCD Polyester Core	3.77	5.61	72.2	643	80.3	714	88.2	785
1 5/8	41	34x7 RLL LCD Polyester Core	4.42	6.58	84.6	753	94.5	841	103	920
1 3/4	44	34x7 RLL LCD Polyester Core	5.13	7.63	98.3	875	109	972	120	1,070
1 7/8	48	34x7 RLL LCD Polyester Core	5.89	8.77	113	1,002	125	1,116	138	1,225
2	51	34x7 RLL LCD Polyester Core	6.70	9.97	128	1,141	143	1,272	157	1,395
2 1/8	54	34x7 RLL LCD Polyester Core	7.57	11.27	145	1,289	162	1,437	177	1,576
2 1/4	57	34x7 RLL LCD Polyester Core	8.48	12.62	162	1,446	181	1,611	199	1,767
2 3/8	60	34x7 RLL LCD Polyester Core	9.45	14.06	181	1,611	201	1,792	221	1,969
2 1/2	64	34x7 RLL LCD Polyester Core	10.47	15.58	200	1,784	223	1,987	245	2,180

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