

# INDUSTRIAL 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**

# BEKAERT NORTH AMERICA

Our parent company is a global leader in wire technologies and a major industrial employer in North America. Bekaert employs more Americans in its 9 high-tech facilities than any of our market competitors.

BEKAERT USA	BEKAERT CANADA
<ul style="list-style-type: none"> <li>» Over 1800 employees at 6 manufacturing sites</li> <li>» Active in the US since 1952</li> <li>» All facilities purchase US made and melted steel wire rod</li> <li>» Sales of over \$850 million (Global sales exceed \$6B)</li> <li>» Approved US government supplier including DoT, DoI, and BLM</li> <li>» All US manufacturing sites are ISO: 9002 and 14001 certified</li> </ul>	<ul style="list-style-type: none"> <li>» Over 200 employees at 2 manufacturing sites</li> <li>» Centralized wire rope production in Montreal</li> <li>» All sites are ISO 9000 certified</li> </ul>



**Bekaert Wire in the USA**

1. Bekaert Orville
2. Bekaert Shelbyville
3. Bekaert Van Buren
4. Marietta Office - Georgia
5. Akron Office - Ohio

**Bekaert Steel Cord**

6. Bekaert Rogers
7. Bekaert Rome

**Bekaert Advanced Material**

8. Simpsonville
9. Marietta - Georgia

**Bekaert Wire in Canada**

10. Wire Rope Industries
11. Bekaert Surrey



# MANUFACTURING

Our production is centralized at a specially designed 365,000ft<sup>2</sup> (34,000m<sup>2</sup>) 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
- ✓ 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](http://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 its 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 customers 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.

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 standard epoxy resin, pure zinc media, 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.





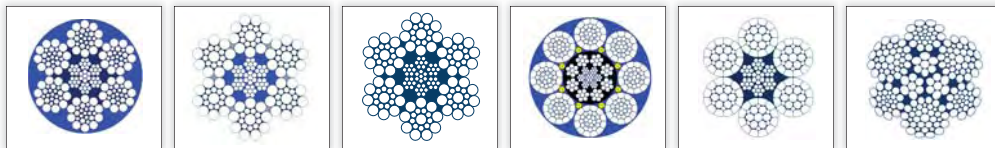


# OIL & GAS

With decades of experience in drilling and well-servicing applications, WRI offers a complete range of solutions for Oil & Gas contractors. Our products are designed and manufactured with one goal – to increase the productivity of your rigs while maintaining the highest standards of safety. Our Cushion 6 drilling line is considered to be the best product by industry's leading innovators and the recommended line for the latest generation of modular rigs.

We understand the importance of service to your enterprise. Our experts are at your disposal to help you resolve operational issues and improve the efficiency of your crews through specialized training courses.

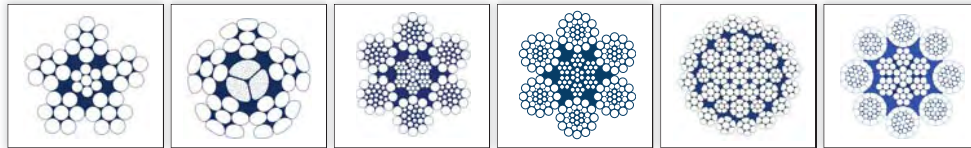
# PRODUCT LINE



**Cushion 6      Cushion Core      PS 619      Cushion-Pac Ultra      Dypac 6      Power-Pac 9**

		Cushion 6	Cushion Core	PS 619	Cushion-Pac Ultra	Dypac 6	Power-Pac 9
<b>LAND DRILLING</b>	Drilling Line	●	●	●			
<b>WELL SERVICING</b>	Tubing Line					●	●
	Sand line						
	Winch line						
	Drilling Line	●	●	●			
<b>OFFSHORE DRILLING</b>	Riser Tensioner				●		
	Crane Hoist Line						
	Crane Boom Line						●





**PS 510      Pro-swaged 5      PS 620      PS 630      Surelift 35      Cushion-Pac 8**

Drill line						
Tubing line			●			
Sand line	●	●				
Winch line				●		
Drill line						
Riser Tensionner						
Crane Hoist Line					●	
Crane Boom Line						●



# SPECIALIZED SERVICES

## SEMINARS FOR RIG CREWS

WRI's most popular training engagements are specialized courses for drilling crews. A session typically includes one whole rig crew: rig managers, drillers, floormen, derrickmen, roustabouts, and related representatives of the contracting company. Our trainers work as a part of your personnel development team and develop programs that fit in your training structure. We offer training both at customers' training sites and in the field.

WRI experts train more than a 1000 rig workers every year, ranging from new personnel to rig managers with years of experience. The courses have the following objectives:

- » To make every person on the rig competent on all aspects of drilling lines, including theory on how rope functions, critical areas of wear and failure, and how to inspect and maintain the rope
- » Understand process of measuring work done by a rope (ton-mile or mega-joule program) and how to manage rope usage in a safe and effective manner
- » How to maximize Total Drilling Time (TDT) through proper management of ton-mile program and visual inspections
- » How to evaluate preventative maintenance on the equipment that drill line is working on

## SEMINARS FOR RIG MANAGERS

Wire Rope Industries also offers specialized courses for rig managers of varying degree of experience. Our trainers have extensive experience in the industry and run two class levels:

- » Introductory course (3hr) for inexperienced rig managers, including full in-depth training on wire rope properties, using ton-mile programs and maximizing total drilling time.
- » Advanced 1.5hr session for experienced professionals including techniques for improving rig efficiency through selection and management of drill lines, and resulting decrease in downtime.

Please enquire about our services and how we can help you improve your TDT and increase profitability.

## CONSULTING & CUSTOM ROPE DESIGN

Our experts have decades of experience in Oil & Gas industry. We can analyze your rig operation and recommend actions to help you maximize performance through lower downtime and more effective uptime. With more than 125 years of engineering experience behind us, we can craft a unique product for your application using hybrid designs and high end materials.



## CUSHION 6

### Premium Drilling Line

Our flagship product is considered to be the best drilling line in the industry. The technology used for manufacturing Cushion 6 is based on more than 20 years of development of some of the largest extruded ropes in the world.

The toughest drilling line on the planet, with a plastic jacket that stays on.

- » 20-30% longer life than standard 6x19 drilling line
- » More ton-miles between slip-and-cuts
- » Higher Total Drilling Time (TDT)
- » Most durable plastic in the industry
- » Rope is designed specifically for plastic extrusion
- » No spooling or slipping issues at the deadline anchor
- » Available high-end materials for custom breaking loads
- » API Certified



### How Cushion 6 Creates Value:

CONFIDENTIAL CLIENT – LAND DRILLING DRILLING PROJECT OF 137,000 TON-MILES			
Performance	Standard 6x19 Bright Rope	WRI Cushion 6	
Ton-Miles/ft between Cuts	18	23	+28%
Average feet/cut	94	74	-22%
Cuts available	65	83	+27%
Total rope length required for the job (ft)	7625	6100	-20%
Savings on Rope Used + Savings on Downtime (\$)		\$14,900 Total Savings	

*Disclaimer: Savings calculations shown take into consideration higher average price of Cushion 6 compared to Bright 6x19 rope, and are based on an actual client operation. Cushion 6 performance may vary depending on the rope size and rig type. Savings on downtime relate to increased total drilling time due to lower total number of cuts required, and may vary depending on the rig rental rate.*

# ROTARY LAND DRILLING

## CUSHION CORE

### Premium Drilling Line

Wire Rope Industries' offers a hybrid solution for the customers who want improvement in life over standard 6x19 products but prefer non-jacketed rope. We channeled the decades of experience in building high-strength cores and our unique plastic extrusion process to offer this drilling line with superior crushing resistance.

- » Improved life over standard 6x19 construction
- » High strength core offers better structural strand support
- » Less internal strand wear contributes to durability
- » Better distribution of weight loading on the rope
- » Superior crushing resistance on the drum
- » API Certified

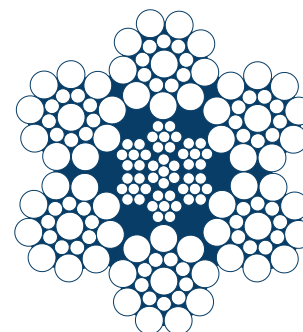


## PS 619

### Standard Drilling Line

For customers loyal to the proven 6x19 design without plastic enhancement, WRI offers PS 619. Our lines are engineered for strength and compatibility with the LEBUS parallel-winding drum standard. The unique construction ensures that breaking strength requirements are met without over-sizing the rope.

- » Proven design compatible with LEBUS drum standard
- » Excellent spooling properties
- » Good value and wide range of diameters
- » API Certified



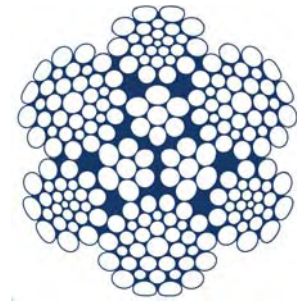
## TUBING LINES

### POWER-PAC 9



#### Premium Tubing Line

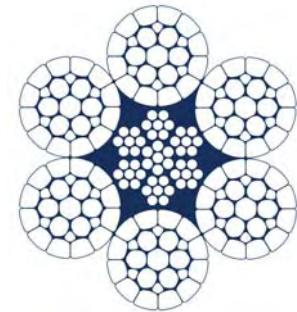
- » Made with roller compaction process instead of hammering
- » Superior crushing resistance and drum spooling properties
- » Extremely high breaking load and a stable cross section
- » Smooth outer surface for minimal rope wear
- » Excellent choice for double-fastline systems due to faster tripping than swaged 6x26 and 6x31



### DYPAC 6

#### Premium high-cycle rope for tubing line applications

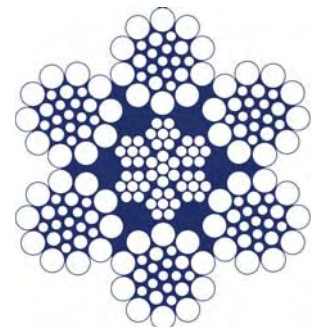
- » The DyPac compaction for superior strength & durability
- » 6x31 IWRC construction with specially selected wire tensiles
- » High crush resistance and excellent drum spooling
- » Smooth outer strands for reduced sheave and drum wear
- » Good flexibility under load



### PS 620

#### Standard Tubing Line

- » Proven 6x26 rope design with EIPS tensile wire
- » Specially formulated lubrication increases rope performance, reduces corrosion, and minimizes environmental impact due to fly-off.
- » Manufactured using ISO-9001-94 and API 9A&Q1 quality standards





## SAND LINES & WINCH LINES

### PRO-SWAGED 5

#### **Premium Sand line**

- » New fully compacted (swaged) 5x 7 design
- » Very high strength-to-weight ratio
- » Improved stripping capabilities, cleaner operation and good drum spooling
- » Exceptional rope performance and durability
- » Low susceptibility to torque and improved corrosion resistance
- » A smooth outer profile for reduced sheave and drum wear



### PS 510

#### **Standard Sand Line**

- » High quality EIPS grade tensile wire
- » Special lubrication for performance and decreased corrosion
- » Manufactured using ISO-9001-94 and API 9A&Q1 quality standards



## DRILLING LINES

### CUSHION 6

#### Premium Drilling Line

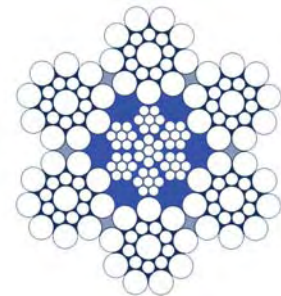
- » 20-30% longer life than standard 6x19 drilling line
- » Higher Total Drilling Time (TDT)
- » Most durable plastic in the industry
- » Rope is designed specifically for plastic extrusion
- » Available high-end materials for custom breaking loads



### CUSHION CORE

#### Premium Drilling Line

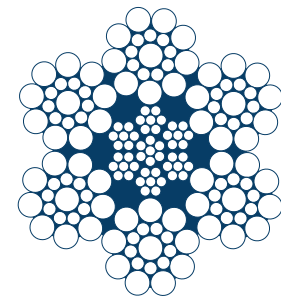
- » Improved life over standard 6x19 construction
- » High strength core offers better structural strand support
- » Less internal strand wear contributes to durability
- » Better distribution of weight loading on the rope
- » Superior crushing resistance on the drum



### PS 619

#### Standard Drilling Line

- » Proven 6x19 design compatible with LEBUS drum standard
- » Excellent spooling properties
- » Good value and wide range of diameters



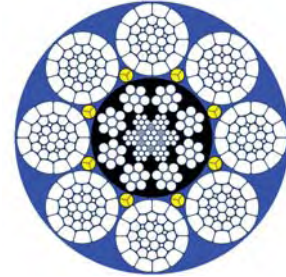
## RISER TENSIONERS

### CUSHION-PAC ULTRA™



#### Premium Riser Tensioner Line

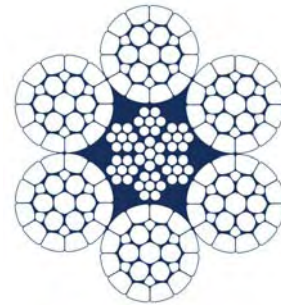
- » Patented CPU is the most advanced heavy-duty rope in the world
- » Proprietary construction for excellent fatigue life and resistance to crushing
- » Industry-leading plastic enhancement for unparalleled durability
- » Smooth contact area increases rope life and reduces sheave wear
- » Specially formulated materials and lubrication
- » Available galvanized without the outer plastic jacket



### DYPAC 6

#### Advanced Riser Tensioner Line

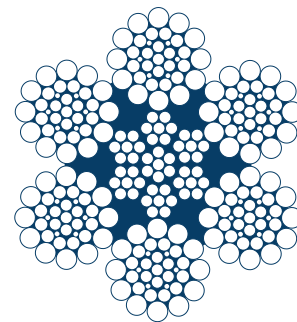
- » Proven 6-strand construction with specially selected high tensile wires
- » Very high breaking loads and smooth outer surface
- » Excellent crush resistance and enhanced drum spooling
- » Available with galvanized wires



### PS 630

#### Standard Riser Tensioner Line

- » Well-proven 6x36 design with high breaking load
- » Good value with excellent fatigue life
- » Consistent quality with our ISO 9001 and API certified processes
- » Available custom solutions with special wire tensiles and lubrication.

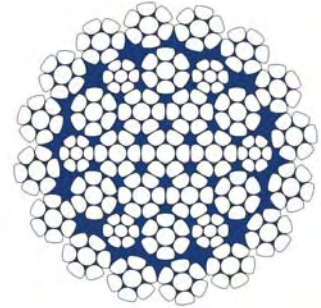


## CRANE ROPES

### SURELIFT 35

#### Hoist Line

- » Highly rotation resistant
- » Specially designed for high performance cranes with long drops
- » High strength-to-weight ratio ensures high breaking loads
- » Long life, high flexibility, and excellent spooling properties
- » Smooth surface area for decreased wear on sheaves and drums
- » Can be used with a swivel

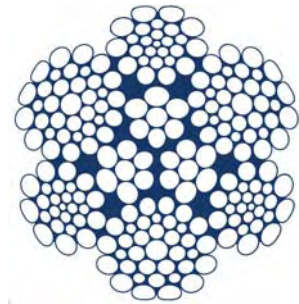


### POWER-PAC 9



#### Boom Line

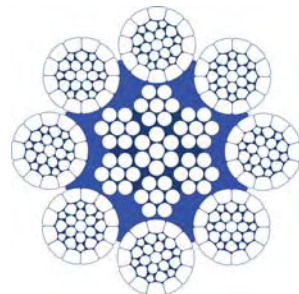
- » Roller-compacted for maximum breaking load and consistency
- » Very high damage resistance and long service life
- » Unparalleled resistance to crushing on multi-layered drums
- » Smooth surface area for decreased wear on sheaves and drums



### CUSHION-PAC 8

#### Boom Line

- » Excellent choice for production-oriented cranes
- » Exceptionally long service life for minimized downtime
- » High lifting capacity and resistance to crushing
- » Reduced drum and sheave wear and good spooling properties
- » Advanced cushioned core for superior rope life
- » Reverse-lay core version is available





# PRODUCT SPECIFICATIONS

## BREAKING LOAD TABLES - OIL & GAS



### Cushion 6

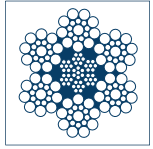
DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
7/8	22	6 x 26WS RRL EIPS IWRC Cushion Rope	1.4	2.1	39.8	354
1	25	6 x 26WS RRL EIPS IWRC Cushion Rope	1.9	2.8	51.7	460
1 1/8	29	6 x 19S RRL EIPS IWRC Cushion Rope	2.4	3.6	66.6	593
1 1/4	32	6 x 19S RRL EIPS IWRC Cushion Rope	3.0	4.5	82.9	738
1 3/8	35	6 x 19S RRL EIPS IWRC Cushion Rope	3.7	5.4	100.9	898
1 1/2	38	6 x 19S RRL EIPS IWRC Cushion Rope	4.2	6.2	114	1,015
1 5/8	41	6 x 19S RRL EIPS IWRC Cushion Rope	5.1	7.5	132	1,175
1 3/4	44	6 x 19S RRL EIPS IWRC Cushion Rope	5.9	8.8	153	1,362



### Cushion Core

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
1	25	6 x 19S RRL EIPS Cushion Core	1.8	2.7	52.9	471
1 1/8	29	6 x 19S RRL EIPS Cushion Core	2.3	3.4	65.0	579
1 1/4	32	6 x 19S RRL EIPS Cushion Core	2.8	4.2	83.8	746
1 3/8	35	6 x 19S RRL EIPS Cushion Core	3.4	5.1	101.0	899
1 5/8	41	6 x 19S RRL EIPS Cushion Core	4.8	7.1	132	1,175
1 3/4	44	6 x 19S RRL EIPS Cushion Core	5.3	7.9	153	1,362
2	51	6 x 19S RRL EIPS Cushion Core	7	10.4	198	1,762

## PS619



DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
7/8	22	6 x 26 RRL EIPS IWRC	1.4	2.1	39.8	354
1	25	6 x 19 (9.9.1) RRL EIPS IWRC	1.9	2.8	51.7	460
1 1/8	29	6 x 19 (9.9.1) RRL EIPS IWRC	2.3	3.5	65.0	579
1 1/4	32	6 x 19 (9.9.1) RRL EIPS IWRC	2.9	4.3	79.9	711
1 3/8	35	6 x 19 (9.9.1) RRL EIPS IWRC	3.5	5.2	96.0	854
1 1/2	38	6 x 19 (9.9.1) RRL EIPS IWRC	4.2	6.2	114	1,015
1 5/8	41	6 x 19 (9.9.1) RRL EIPS IWRC	4.9	7.3	132	1,175
1 3/4	44	6 x 19 (9.9.1) RRL EIPS IWRC	5.7	8.4	153	1,362

Note: MBL values meet API 9A

## 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

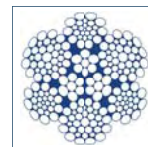
# PRODUCT SPECIFICATIONS

## BREAKING LOAD TABLES - OIL & GAS



### DyPac 6

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
3/8	10	6x19 RRL Dy-Pac	0.30	0.4	8.8	78
7/16	11	6x19 RRL Dy-Pac	0.39	0.6	11.9	106
1/2	13	6x19 RRL Dy-Pac	0.51	0.8	15.3	136
9/16	14	6x19 RRL Dy-Pac	0.64	1.0	19.3	172
5/8	16	6x19 RRL Dy-Pac	0.79	1.2	22.7	202
3/4	19	6x19 RRL Dy-Pac	1.1	1.7	32.4	288
7/8	22	6x19 RRL Dy-Pac	1.5	2.3	43.8	390
1	25	6x19 RRL Dy-Pac	2.0	3.0	57.5	512
1 1/8	29	6x19 RRL Dy-Pac	2.5	3.8	71.5	636
1 1/4	32	6x19 RRL Dy-Pac	3.1	4.6	87.9	782
1 3/8	35	6x19 RRL Dy-Pac	3.7	5.5	106	943
1 1/2	38	6x19 RRL Dy-Pac	4.6	6.8	125	1,112



### Power-Pac 9

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
Inches	mm		lb/ft	kg/m	Tons	kN
5/8	16	Power Pac 9	0.9	1.3	25.5	227
3/4	19	Power Pac 9	1.1	1.6	36.5	325
7/8	22	Power Pac 9	1.5	2.2	48.5	432
1	25	Power Pac 9	2.0	3.0	62.5	556
1 1/8	29	Power Pac 9	2.6	3.9	79.5	708



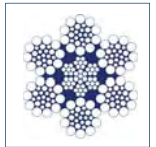
### PS510

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
1/2	13	5x7 "firm lay" polyp. core	0.37	0.55	10.4	92.8
9/16	14	5x7 "firm lay" polyp. core	0.48	0.71	13.5	119.7
5/8	16	5x7 "firm lay" polyp. core	0.59	0.88	17.4	154.5



## Pro-Swaged 5

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
3/8	10	Swaged 5x7 WSC	0.33	0.49	9.5	84.5
7/16	11	Swaged 5x7 WSC	0.46	0.68	13.2	117.8
1/2	13	Swaged 5x7 WSC	0.57	0.85	16.7	148.2
9/16	14	Swaged 5x7 WSC	0.71	1.06	21.0	186.9

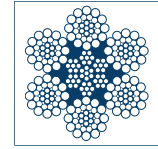


## PS 620

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
1/4	6	6x26 RRL EIPS IWRC	0.12	0.18	3.4	30
5/16	8	6x26 RRL EIPS IWRC	0.18	0.27	5.3	47
3/8	10	6x26 RRL EIPS IWRC	0.26	0.39	7.6	68
7/16	11	6x26 RRL EIPS IWRC	0.35	0.52	10.2	91
1/2	13	6x26 RRL EIPS IWRC	0.46	0.68	13.3	118
9/16	14	6x26 RRL EIPS IWRC	0.59	0.88	16.8	150
5/8	16	6x26 RRL EIPS IWRC	0.72	1.07	20.6	183
3/4	19	6x26 RRL EIPS IWRC	1.04	1.55	29.4	262
7/8	22	6x26 RRL EIPS IWRC	1.42	2.11	39.8	354
1	25	6x26 RRL EIPS IWRC	1.85	2.75	51.7	460
1 1/8	29	6x26 RRL EIPS IWRC	2.34	3.48	65.0	579
1 1/4	32	6x26 RRL EIPS IWRC	2.89	4.30	79.9	711
1 3/8	35	6x26 RRL EIPS IWRC	3.50	5.21	96.0	854
1 1/2	38	6x26 RRL EIPS IWRC	4.16	6.19	114	1,015
1 5/8	41	6x26 RRL EIPS IWRC	4.88	7.26	132	1,175
1 3/4	44	6x26 RRL EIPS IWRC	5.67	8.44	153	1,362
1 7/8	48	6x26 RRL EIPS IWRC	6.50	9.67	174	1,549
2	51	6x26 RRL EIPS IWRC	7.39	11.00	198	1,762
2 1/8	54	6x26 RRL EIPS IWRC	8.35	12.43	221	1,967
2 1/4	57	6x26 RRL EIPS IWRC	9.36	13.93	247	2,198

# PRODUCT SPECIFICATIONS

## BREAKING LOAD TABLES - OIL & GAS



### PS 630

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
Inches	mm		lb/ft	kg/m	Tons	kN
1/4	6	6x36 RRL EIPS IWRC	0.12	0.18	3.4	30
5/16	8	6x36 RRL EIPS IWRC	0.18	0.27	5.27	47
3/8	10	6x36 RRL EIPS IWRC	0.26	0.39	7.55	67
7/16	11	6x36 RRL EIPS IWRC	0.35	0.52	10.2	91
1/2	13	6x36 RRL EIPS IWRC	0.46	0.68	13.3	118
9/16	14	6x36 RRL EIPS IWRC	0.59	0.88	16.8	150
5/8	16	6x36 RRL EIPS IWRC	0.72	1.07	20.6	183
3/4	19	6x36 RRL EIPS IWRC	1.04	1.55	29.4	262
7/8	22	6x36 RRL EIPS IWRC	1.42	2.11	39.8	354
1	25	6x36 RRL EIPS IWRC	1.85	2.75	51.7	460
1 1/8	29	6x36 RRL EIPS IWRC	2.34	3.48	65.0	579
1 1/4	32	6x36 RRL EIPS IWRC	2.89	4.30	79.9	711
1 3/8	35	6x36 RRL EIPS IWRC	3.50	5.21	96.0	854
1 1/2	38	6x36 RRL EIPS IWRC	4.16	6.19	114	1,015
1 5/8	41	6x36 RRL EIPS IWRC	4.88	7.26	132	1,175
1 3/4	44	6x36 RRL EIPS IWRC	5.67	8.44	153	1,362
1 7/8	48	6x36 RRL EIPS IWRC	6.50	9.67	174	1,549
2	51	6x36 RRL EIPS IWRC	7.39	11.00	198	1,762
2 1/8	54	6x36 RRL EIPS IWRC	8.35	12.43	221	1,967
2 1/4	57	6x36 RRL EIPS IWRC	9.36	13.93	247	2,198
2 3/8	60	6x36 RRL EIPS IWRC	10.60	15.77	274	2,439
2 1/2	64	6x36 RRL EIPS IWRC	11.60	17.26	302	2,688
2 3/4	70	6x36 RRL EIPS IWRC	14.00	20.83	361	3,213
3	76	6x36 RRL EIPS IWRC	16.60	24.70	425	3,782
3 1/4	83	6x36 RRL EIPS IWRC	19.50	29.02	492	4,379
3 1/2	89	6x36 RRL EIPS IWRC	22.70	33.78	564	5,019



## Surelift 35



DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
			lb/ft	kg/m	Tons	kN
10	mm	Surelift 35	0.33	0.50	11.0	98
11	mm	Surelift 35	0.40	0.60	13.3	118
13	mm	Surelift 35	0.56	0.84	18.2	162
14	mm	Surelift 35	0.65	0.97	21.1	188
15	mm	Surelift 35	0.77	1.14	24.4	217
16	mm	Surelift 35	0.85	1.27	28.2	251
18	mm	Surelift 35	1.08	1.61	34.6	308
19	mm	Surelift 35	1.21	1.79	38.7	344
20	mm	Surelift 35	1.34	1.99	42.9	382
21	mm	Surelift 35	1.48	2.20	47.7	424
22	mm	Surelift 35	1.62	2.41	52.4	466
23	mm	Surelift 35	1.77	2.63	57.3	510
24	mm	Surelift 35	1.92	2.86	62.4	555
25	mm	Surelift 35	2.04	3.03	66.1	588
1	inch	Surelift 35	2.15	3.21	70.0	622
28	mm	Surelift 35	2.62	3.90	85.2	758
1 1/8	inch	Surelift 35	2.73	4.06	86.9	773
32	mm	Surelift 35	3.42	5.09	110	980
34	mm	Surelift 35	3.95	5.87	126	1,117
38	mm	Surelift 35	4.85	7.22	147	1,307
40	mm	Surelift 35	5.34	7.95	171	1,521
42	mm	Surelift 35	6.02	8.96	174	1,546
44	mm	Surelift 35	6.61	9.83	191	1,697

Ref. ASTM 1023/A, 1023M-07 Table 34

# PRODUCT SPECIFICATIONS

## BREAKING LOAD TABLES - OIL & GAS



### Cushion-Pac 8

DIAMETER		CONSTRUCTION	APPROXIMATE WEIGHT		MINIMUM BREAKING LOAD		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	EIP		EEIP	
					Tons	kN	Tons	kN
1/2	13	8x26WS Dy-Pac CC (APT - Reverse Lay)	0.50	0.74	14.6	130	16.1	143
9/16	14	8x26WS Dy-Pac CC (APT - Reverse Lay)	0.63	0.94	18.5	165	20.4	182
5/8	16	8x26WS Dy-Pac CC (APT - Reverse Lay)	0.78	1.2	22.7	202	25.0	223
3/4	19	8x26WS Dy-Pac CC (APT - Reverse Lay)	1.1	1.6	32.4	288	35.6	317
7/8	22	8x31WS Dy-Pac CC (APT - Reverse Lay)	1.5	2.2	43.8	390	48.2	429
1	25	8x31WS Dy-Pac CC (APT - Reverse Lay)	1.9	2.9	56.9	506	62.6	557
1 1/8	29	8x31WS Dy-Pac CC (APT - Reverse Lay)	2.4	3.6	71.5	636	78.7	700
1 1/4	32	8x31WS Dy-Pac CC (APT - Reverse Lay)	3.1	4.5	87.9	782	96.7	861
1 3/8	35	8x36WS Dy-Pac CC (APT - Reverse Lay)	3.7	5.5	106	943	117	1,041
1 1/2	38	8x36WS Dy-Pac CC (APT - Reverse Lay)	4.4	6.5	125	1,112	138	1,228

A large tower crane is shown against a cloudy sky. The crane's lattice structure is prominent, extending from the bottom left towards the top right. The sky is filled with soft, grey clouds, and the overall tone is somewhat muted and industrial.

# CRANE & LIFTING SOLUTIONS

With over a century of experience in lifting solutions, WRI offers an extensive range of crane ropes for any application. We leverage our materials expertise and versatile machinery to produce high quality ropes that allow our customers to increase efficiency of their operations and cut costs. Our specialists are at your disposal to advise you on the right selection of rope for your application and demonstrate how our ropes can create value for you.

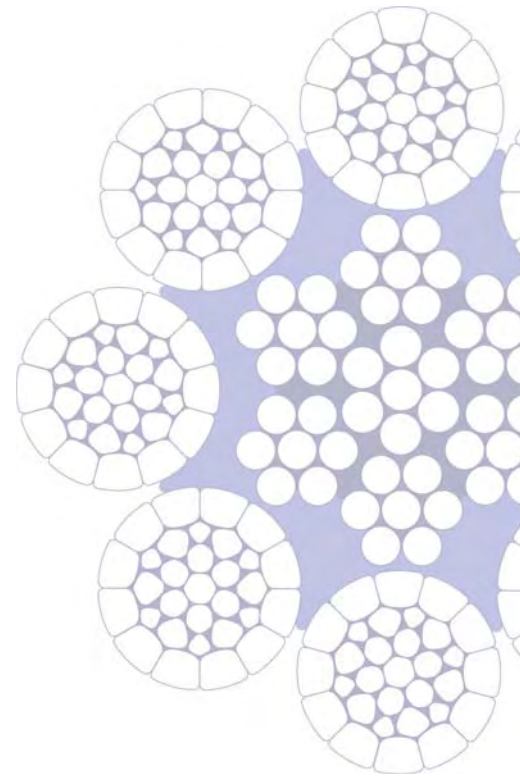
# CRANE AND LIFTING SOLUTIONS

## PRODUCT LINE

	PRODUCTS	CONTAINER CRANES	CLAMSHELL CRANES	OFFSHORE PEDESTAL
	<b>Surelift 35</b>			» Main Hoist » Auxiliary Hoist
	<b>Surelift 7</b>			
	<b>Power-Pac 9</b>	» Boom Hoist	» Main Hoist » Closing Rope » Boom Hoist	» Boom Hoist
	<b>Cushion-Pac 8</b>	» Main Hoist » Boom Hoist	» Main Hoist » Closing Rope » Boom Hoist » Trolley Rope	
	<b>DyPac 6</b>	» Main Hoist » Boom Hoist	» Main Hoist » Closing Rope » Boom Hoist » Trolley Rope	» Boom Hoist
	<b>Cushion-Pac 18</b>			» Main Hoist » Auxiliary Hoist
	<b>PS 630</b>	» Main Hoist » Trolley Rope	» Main Hoist » Closing Rope » Boom Hoist » Trolley Rope	
	<b>PS 620</b>	» Main Hoist » Trolley Rope	» Main Hoist » Closing Rope » Boom Hoist	» Boom Hoist

*Any rope that is not rotation resistant is not recommended for use on a single-part line. Rotation resistant ropes are Surelift 35, Cushion-Pac 18, and Cushion-Pac 8 (reverse-lay version only)*

TOWER CRANES	MOBILE CRANES	OVERHEAD CRANES
» Main Hoist	» Main Hoist » Aux. Hoist	
		» Main Hoist
	» Boom Hoist	
» Derricking Rope » Trolley Rope	» Main Hoist	» Main Hoist
» Derricking Rope » Trolley Rope	» Main Hoist » Boom Hoist	» Main Hoist
	» Main Hoist » Aux. Hoist	» Main Hoist
» Derricking Rope » Trolley Rope	» Main Hoist » Boom Hoist	» Main Hoist
» Derricking Rope » Trolley Rope	» Main Hoist » Boom Hoist	» Main Hoist



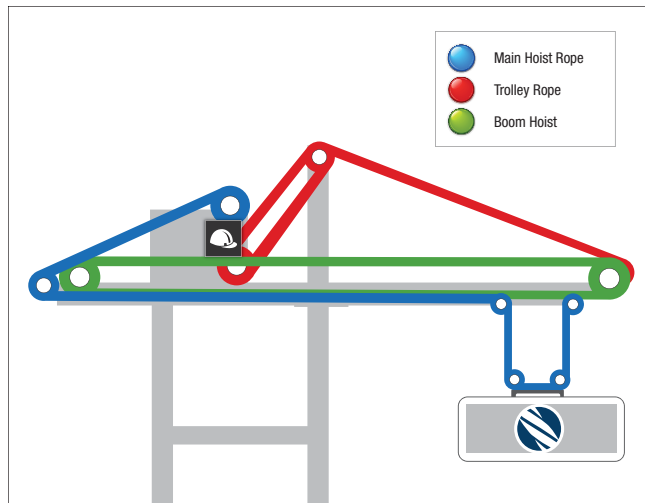


# CONTAINER CRANES

## CUSHION-PAC 8

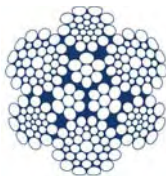


- » Excellent choice for production-oriented cranes
- » Exceptionally long service life for minimized downtime
- » High lifting capacity and resistance to crushing
- » Reduced drum and sheave wear and good spooling properties
- » Advanced cushioned core for superior rope life
- » Reverse-lay core version is available



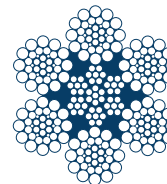
## POWER-PAC 9

NEW



- » Roller-compacted for maximum breaking load and consistency
- » Very high damage resistance and long service life
- » Unparalleled resistance to crushing on multi-layered drums
- » Smooth surface area for decreased wear on sheaves and drums

## PS 630



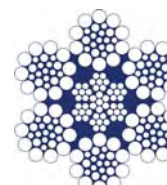
- » Proven durable rope design for a variety of applications
- » Improved flexibility relative to basic 6x26 constructions

## DYPAC 6



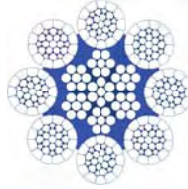
- » Proven 6-strand construction with special high tensile wires
- » Exceptional durability ensures high productivity
- » DyPac design for high breaking loads and smooth outer surface
- » High crush resistance and enhanced drum spooling

## PS 620

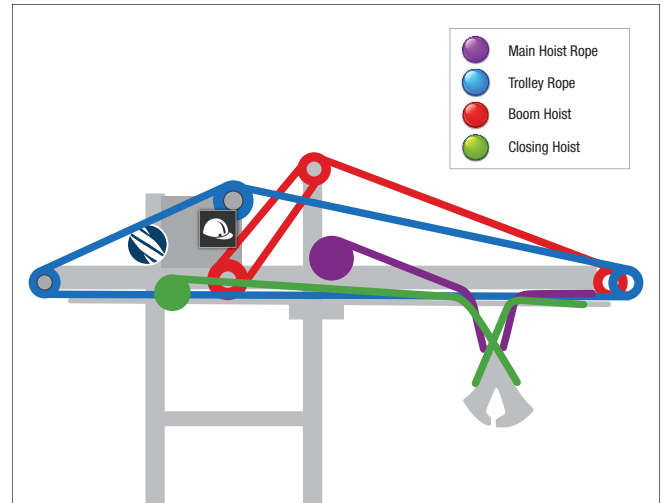


- » Good balance between wear resistance and flexibility
- » Specially formulated lubrication for extended service life

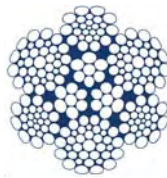
## CUSHION-PAC 8



- » Excellent choice for production-oriented cranes
- » Exceptionally long service life for minimized downtime
- » High lifting capacity and resistance to crushing
- » Reduced drum and sheave wear and good spooling properties
- » Advanced cushioned core for superior rope life
- » Reverse-lay core version is available

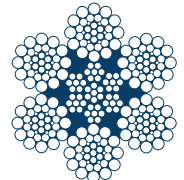


## POWER-PAC 9



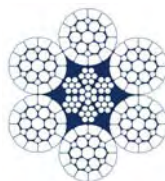
- » Roller-compacted for maximum breaking load and consistency
- » Very high damage resistance and long service life
- » Unparalleled resistance to crushing on multi-layered drums
- » Smooth surface area for decreased wear on sheaves and drums

## PS 630



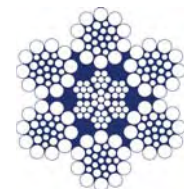
- » Proven durable rope design for a variety of applications
- » Improved flexibility relative to basic 6x26 constructions

## DYPAC 6



- » Proven 6-strand construction with special high tensile wires
- » Exceptional durability ensures high productivity
- » DyPac design for high breaking loads and smooth outer surface
- » High crush resistance and enhanced drum spooling

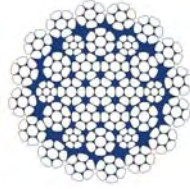
## PS 620



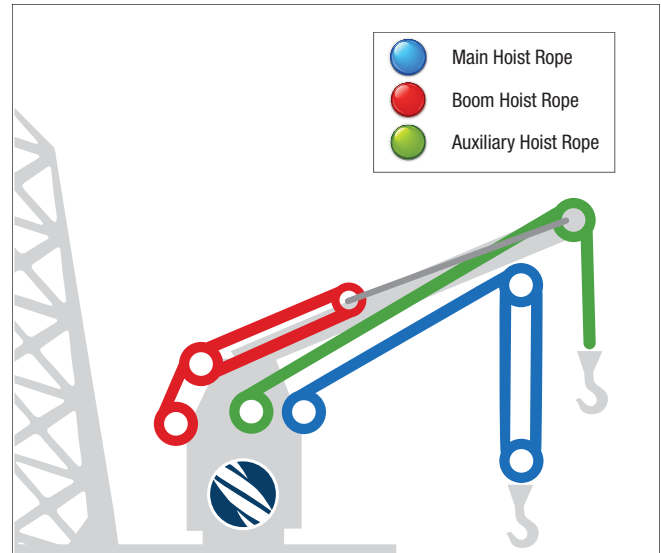
- » Good balance between wear resistance and flexibility
- » Specially formulated lubrication for extended service life

# OFFSHORE PEDESTAL CRANES

## SURELIFT 35



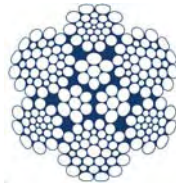
- » Highly rotation resistant
- » Specially designed for high performance cranes with long drops
- » High strength-to-weight ratio ensures high breaking loads
- » Long life, high flexibility, and excellent spooling properties
- » Smooth surface area for decreased wear on sheaves and drums
- » Can be used with a swivel



## POWER-PAC 9



NEW



- » Roller-compacted for maximum breaking load and consistency
- » Very high damage resistance and long service life
- » Unparalleled resistance to crushing on multi-layered drums
- » Smooth surface area for decreased wear on sheaves and drums

## DYPAC 6



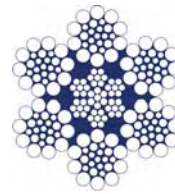
- » Proven 6-strand construction with special high tensile wires
- » Exceptional durability ensures high productivity
- » DyPac design for high breaking loads and smooth outer surface
- » High crush resistance and enhanced drum spooling

## CUSHION-PAC 18



- » Rotation resistant rope for hoisting applications
- » Suitable for both single-fall and multi-reeve applications
- » Multi-strand construction with specially selected wire tensiles
- » DyPac design for increased lifting capacity and crushing resistance
- » Smooth outer strand for efficiency on high speed hoisting lines
- » Advanced cushion core for superior service life
- » Excellent spooling properties

## PS 620

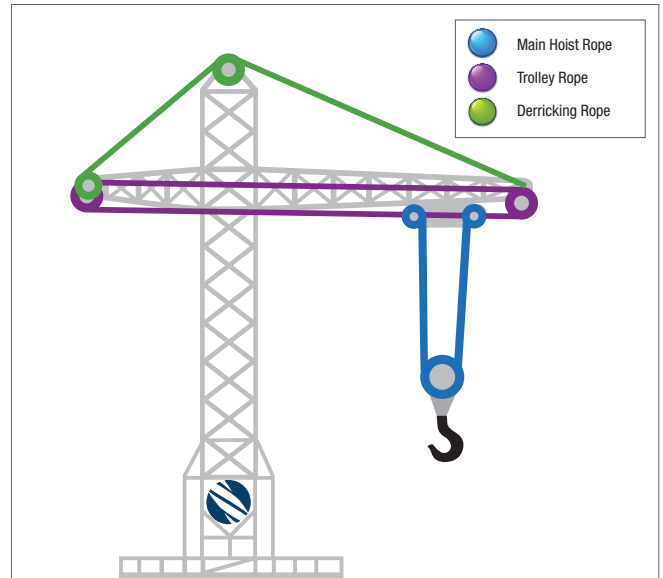


- » Good balance between wear resistance and flexibility
- » Specially formulated lubrication for extended service life

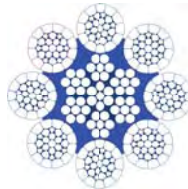
## SURELIFT 35



- » Highly rotation resistant
- » Specially designed for high performance cranes with long drops
- » High strength-to-weight ratio ensures high breaking loads
- » Long life, high flexibility, and excellent spooling properties
- » Smooth surface area for decreased wear on sheaves and drums
- » Can be used with a swivel



## CUSHION PAC 8



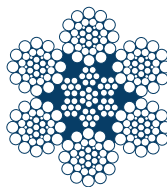
- » Excellent choice for production-oriented cranes
- » Exceptionally long service life for minimized downtime
- » High lifting capacity and resistance to crushing
- » Reduced drum and sheave wear and good spooling properties
- » Advanced cushioned core for superior rope life
- » Reverse-lay core version is available

## DYPAC 6



- » Proven 6-strand construction with special high tensile wires
- » Exceptional durability ensures high productivity
- » DyPac design for high breaking loads and smooth outer surface
- » High crush resistance and enhanced drum spooling

## PS 630



- » Proven durable rope design for a variety of applications
- » Improved flexibility relative to basic 6x26 constructions

## PS 620



- » Good balance between wear resistance and flexibility
- » Specially formulated lubrication for extended service life



# MOBILE CRANES

## SURELIFT 35



- » Highly rotation resistant
- » Specially designed for high performance cranes with long drops
- » High strength-to-weight ratio ensures high breaking loads
- » Long life, high flexibility, and excellent spooling properties
- » Smooth surface area for decreased wear on sheaves and drums
- » Can be used with a swivel

## CUSHION-PAC 8



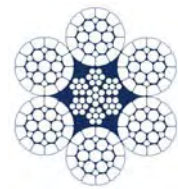
- » Excellent choice for production-oriented cranes
- » Exceptionally long service life for minimized downtime
- » High lifting capacity and resistance to crushing
- » Reduced drum and sheave wear and good spooling properties
- » Advanced cushioned core for superior rope life
- » Reverse-lay core version is available

## CUSHION-PAC 18



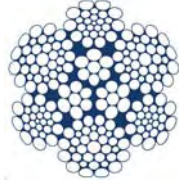
- » Rotation resistant rope for hoisting applications
- » Suitable for both single-fall and multi-reeve applications
- » Multi-strand construction with specially selected wire tensiles
- » DyPac design for increased lifting capacity and crushing resistance
- » Smooth outer strand for efficiency on high speed hoisting lines
- » Advanced cushion core for superior service life
- » Excellent spooling properties

## DYPAC 6



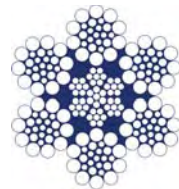
- » Proven 6-strand construction with special high tensile wires
- » Exceptional durability ensures high productivity
- » DyPac design for high breaking loads and smooth outer surface
- » High crush resistance and enhanced drum spooling

## POWER-PAC 9



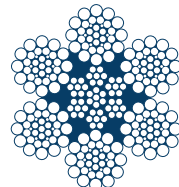
- » Roller-compacted for maximum breaking load and consistency
- » Very high damage resistance and long service life
- » Unparalleled resistance to crushing on multi-layered drums
- » Smooth surface area for decreased wear on sheaves and drums

## PS 620

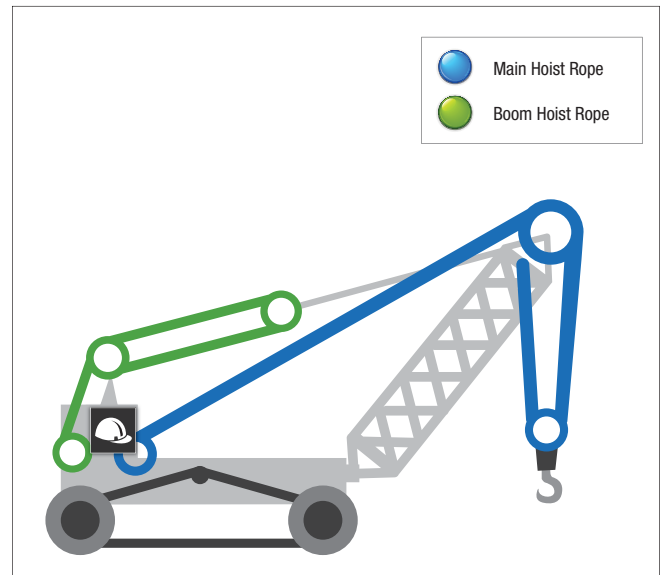
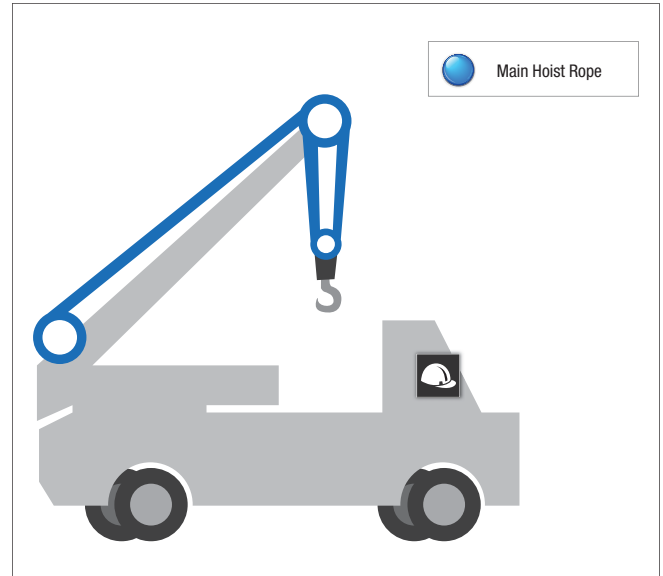


- » Proven durable rope design for a variety of applications
- » Improved flexibility relative to basic 6x26 constructions

## PS 630

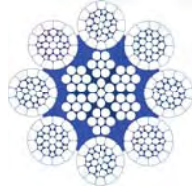


- » Good balance between wear resistance and flexibility
- » Specially formulated lubrication for extended service life

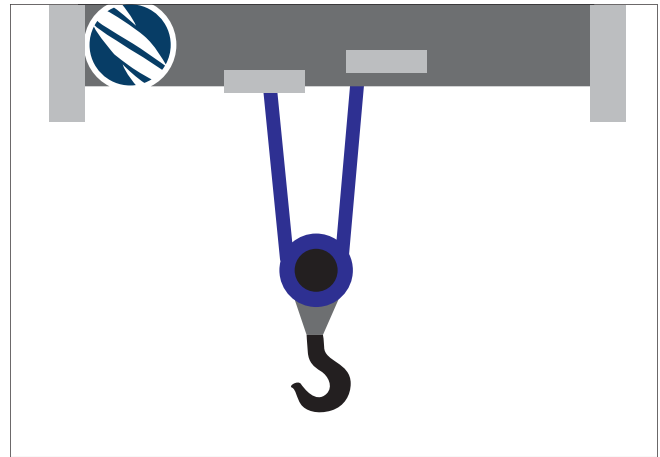


# OVERHEAD CRANES

## CUSHION-PAC 8



- » Excellent choice for production-oriented cranes
- » Exceptionally long service life for minimized downtime
- » High lifting capacity and resistance to crushing
- » Reduced drum and sheave wear and good spooling properties
- » Advanced cushioned core for superior rope life
- » Reverse-lay core version is available

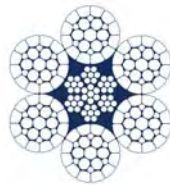


## CUSHION-PAC 18



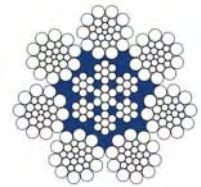
- » Rotation resistant rope for hoisting applications
- » Suitable for both single-fall and multi-reeve applications
- » Multi-strand construction with specially selected wire tensiles
- » DyPac design for increased lifting capacity and crushing resistance
- » Smooth outer strand for efficiency on high speed hoisting lines
- » Advanced cushion core for superior service life
- » Excellent spooling properties

## DYPAC 6



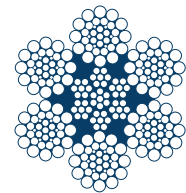
- » Proven 6-strand construction with special high tensile wires
- » Exceptional durability ensures high productivity
- » DyPac design for high breaking loads and smooth outer surface
- » High crush resistance and enhanced drum spooling

## SURELIFT 7



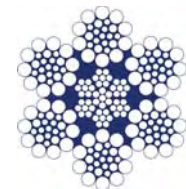
- » Well suited for high cycle applications like overhead cranes
- » High breaking load and resistance to bending fatigue
- » Good spooling in single layer or multi-layer winding applications
- » 7x26 construction up to 3/4" and 7x31 for larger diameters

## PS 630



- » Proven durable rope design for a variety of applications
- » Improved flexibility relative to basic 6x26 constructions

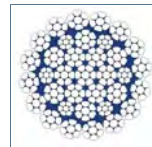
## PS 620



- » Good balance between wear resistance and flexibility
- » Specially formulated lubrication for extended service life

# PRODUCT SPECIFICATIONS

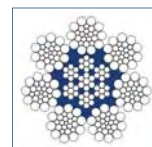
## BREAKING LOAD TABLES - CRANES



### Surelift 35

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
			lb/ft	kg/m	Tons	kN
10	mm	Surelift 35	0.33	0.50	11.0	98
11	mm	Surelift 35	0.40	0.60	13.3	118
13	mm	Surelift 35	0.56	0.84	18.2	162
14	mm	Surelift 35	0.65	0.97	21.1	188
15	mm	Surelift 35	0.77	1.14	24.4	217
16	mm	Surelift 35	0.85	1.27	28.2	251
18	mm	Surelift 35	1.08	1.61	34.6	308
19	mm	Surelift 35	1.21	1.79	38.7	344
20	mm	Surelift 35	1.34	1.99	42.9	382
21	mm	Surelift 35	1.48	2.20	47.7	424
22	mm	Surelift 35	1.62	2.41	52.4	466
23	mm	Surelift 35	1.77	2.63	57.3	510
24	mm	Surelift 35	1.92	2.86	62.4	555
25	mm	Surelift 35	2.04	3.03	66.1	588
1	inch	Surelift 35	2.15	3.21	70.0	622
28	mm	Surelift 35	2.62	3.90	85.2	758
1 1/8	inch	Surelift 35	2.73	4.06	86.9	773
32	mm	Surelift 35	3.42	5.09	110	980
34	mm	Surelift 35	3.95	5.87	126	1,117
38	mm	Surelift 35	4.85	7.22	147	1,307
40	mm	Surelift 35	5.34	7.95	171	1,521
42	mm	Surelift 35	6.02	8.96	174	1,546
44	mm	Surelift 35	6.61	9.83	191	1,697

Ref. ASTM 1023/A, 1023M-07 Table 34



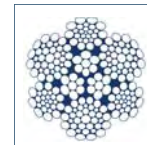
### Surelift 7

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
5/8	16	7 x 26 IWRC	0.72	1.1	20.6	183
3/4	19	7 x 26 IWRC	1.0	1.5	29.4	262
7/8	22	7 x 26 IWRC	1.4	2.1	39.8	354
1	25	7 x 26 IWRC	1.9	2.8	51.7	460
1 1/8	29	7 x 26 IWRC	2.3	3.5	65.0	579
1 1/4	32	7 x 26 IWRC	2.9	4.3	79.9	711



# PRODUCT SPECIFICATIONS

## BREAKING LOAD TABLES - CRANES



### Power-Pac 9

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
Inches	mm		lb/ft	kg/m	Tons	kN
5/8	16	Power Pac 9	0.9	1.3	25.5	227
3/4	19	Power Pac 9	1.1	1.6	36.5	325
7/8	22	Power Pac 9	1.5	2.2	48.5	432
1	25	Power Pac 9	2.0	3.0	62.5	556
1 1/8	29	Power Pac 9	2.6	3.9	79.5	708



### Cushion-Pac 8 RL

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD		MINIMUM BREAKING LOAD	
inches	(mm)		lb/ft	(kg/m)	EIP		EEIP	
				Tons	kN	Tons	kN	
1/2	13	8x26WS Dy-Pac CC (APT - Reverse Lay)	0.50	0.74	14.6	130	16.1	143
9/16	14	8x26WS Dy-Pac CC (APT - Reverse Lay)	0.63	0.94	18.5	165	20.4	182
5/8	16	8x26WS Dy-Pac CC (APT - Reverse Lay)	0.78	1.2	22.7	202	25.0	223
3/4	19	8x26WS Dy-Pac CC (APT - Reverse Lay)	1.1	1.6	32.4	288	35.6	317
7/8	22	8x31WS Dy-Pac CC (APT - Reverse Lay)	1.5	2.2	43.8	390	48.2	429
1	25	8x31WS Dy-Pac CC (APT - Reverse Lay)	1.9	2.9	56.9	506	62.6	557
1 1/8	29	8x31WS Dy-Pac CC (APT - Reverse Lay)	2.4	3.6	71.5	636	78.7	700
1 1/4	32	8x31WS Dy-Pac CC (APT - Reverse Lay)	3.1	4.5	87.9	782	96.7	861
1 3/8	35	8x36WS Dy-Pac CC (APT - Reverse Lay)	3.7	5.5	106	943	117	1,041
1 1/2	38	8x36WS Dy-Pac CC (APT - Reverse Lay)	4.4	6.5	125	1,112	138	1,228

## DyPac 6



DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
3/8	10	6x19 RRL Dy-Pac	0.30	0.4	8.8	78
7/16	11	6x19 RRL Dy-Pac	0.39	0.6	11.9	106
1/2	13	6x19 RRL Dy-Pac	0.51	0.8	15.3	136
9/16	14	6x19 RRL Dy-Pac	0.64	1.0	19.3	172
5/8	16	6x19 RRL Dy-Pac	0.79	1.2	22.7	202
3/4	19	6x19 RRL Dy-Pac	1.1	1.7	32.4	288
7/8	22	6x19 RRL Dy-Pac	1.5	2.3	43.8	390
1	25	6x19 RRL Dy-Pac	2.0	3.0	57.5	512
1 1/8	29	6x19 RRL Dy-Pac	2.5	3.8	71.5	636
1 1/4	32	6x19 RRL Dy-Pac	3.1	4.6	87.9	782
1 3/8	35	6x19 RRL Dy-Pac	3.7	5.5	106	943
1 1/2	38	6x19 RRL Dy-Pac	4.6	6.8	125	1,112

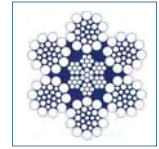
## Cushion-Pac 18



DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
inches	mm		lb/ft	kg/m	Tons	kN
3/8	10	18x7 RRL Dy-Pac CC	0.29	0.43	8.3	74
7/16	11	18x7 RRL Dy-Pac CC	0.40	0.60	11.2	100
1/2	13	18x7 RRL Dy-Pac CC	0.52	0.77	14.6	130
9/16	14	18x19 RRL Dy-Pac CC	0.66	1.0	19.2	171
5/8	16	18x19 RRL Dy-Pac CC	0.80	1.2	22.7	202
3/4	19	18x19 RRL Dy-Pac CC	1.2	1.8	32.4	288
7/8	22	18x19 RRL Dy-Pac CC	1.6	2.4	44.3	394
1	25	18x19 RRL Dy-Pac CC	2.1	3.1	57.5	512
1 1/8	29	18x19 RRL Dy-Pac CC	2.6	3.9	72.8	648
1 1/4	32	18x19 RRL Dy-Pac CC	3.3	4.9	90.6	806
1 3/8	35	18x19 RRL Dy-Pac CC	4.0	5.9	111	990
1 1/2	38	18x19 RRL Dy-Pac CC	4.7	7.0	133	1,180

# PRODUCT SPECIFICATIONS

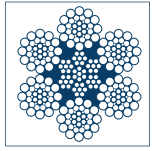
## BREAKING LOAD TABLES - CRANES



### PS 620

DIAMETER		CONSTRUCTION	APPROX. WEIGHT		NOMINAL BREAKING LOAD	
Inches	mm		lb/ft	kg/m	Tons	kN
1/4	6	6x26 RRL EIPS IWRC	0.12	0.18	3.4	30
5/16	8	6x26 RRL EIPS IWRC	0.18	0.27	5.3	47
3/8	10	6x26 RRL EIPS IWRC	0.26	0.39	7.6	68
7/16	11	6x26 RRL EIPS IWRC	0.35	0.52	10.2	91
1/2	13	6x26 RRL EIPS IWRC	0.46	0.68	13.3	118
9/16	14	6x26 RRL EIPS IWRC	0.59	0.88	16.8	150
5/8	16	6x26 RRL EIPS IWRC	0.72	1.07	20.6	183
3/4	19	6x26 RRL EIPS IWRC	1.04	1.55	29.4	262
7/8	22	6x26 RRL EIPS IWRC	1.42	2.11	39.8	354
1	25	6x26 RRL EIPS IWRC	1.85	2.75	51.7	460
1 1/8	29	6x26 RRL EIPS IWRC	2.34	3.48	65.0	579
1 1/4	32	6x26 RRL EIPS IWRC	2.89	4.30	79.9	711
1 3/8	35	6x26 RRL EIPS IWRC	3.50	5.21	96.0	854
1 1/2	38	6x26 RRL EIPS IWRC	4.16	6.19	114	1,015
1 5/8	41	6x26 RRL EIPS IWRC	4.88	7.26	132	1,175
1 3/4	44	6x26 RRL EIPS IWRC	5.67	8.44	153	1,362
1 7/8	48	6x26 RRL EIPS IWRC	6.50	9.67	174	1,549
2	51	6x26 RRL EIPS IWRC	7.39	11.00	198	1,762
2 1/8	54	6x26 RRL EIPS IWRC	8.35	12.43	221	1,967
2 1/4	57	6x26 RRL EIPS IWRC	9.36	13.93	247	2,198

**PS 630**



DIAMETER		CONSTRUCTION	APPROX. WEIGHT		MINIMUM BREAKING LOAD	
Inches	mm		lb/ft	kg/m	Tons	kN
1/4	6	6x36 RRL EIPS IWRC	0.12	0.18	3.4	30
5/16	8	6x36 RRL EIPS IWRC	0.18	0.27	5.27	47
3/8	10	6x36 RRL EIPS IWRC	0.26	0.39	7.55	67
7/16	11	6x36 RRL EIPS IWRC	0.35	0.52	10.2	91
1/2	13	6x36 RRL EIPS IWRC	0.46	0.68	13.3	118
9/16	14	6x36 RRL EIPS IWRC	0.59	0.88	16.8	150
5/8	16	6x36 RRL EIPS IWRC	0.72	1.07	20.6	183
3/4	19	6x36 RRL EIPS IWRC	1.04	1.55	29.4	262
7/8	22	6x36 RRL EIPS IWRC	1.42	2.11	39.8	354
1	25	6x36 RRL EIPS IWRC	1.85	2.75	51.7	460
1 1/8	29	6x36 RRL EIPS IWRC	2.34	3.48	65.0	579
1 1/4	32	6x36 RRL EIPS IWRC	2.89	4.30	79.9	711
1 3/8	35	6x36 RRL EIPS IWRC	3.50	5.21	96.0	854
1 1/2	38	6x36 RRL EIPS IWRC	4.16	6.19	114	1,015
1 5/8	41	6x36 RRL EIPS IWRC	4.88	7.26	132	1,175
1 3/4	44	6x36 RRL EIPS IWRC	5.67	8.44	153	1,362
1 7/8	48	6x36 RRL EIPS IWRC	6.50	9.67	174	1,549
2	51	6x36 RRL EIPS IWRC	7.39	11.00	198	1,762
2 1/8	54	6x36 RRL EIPS IWRC	8.35	12.43	221	1,967
2 1/4	57	6x36 RRL EIPS IWRC	9.36	13.93	247	2,198
2 3/8	60	6x36 RRL EIPS IWRC	10.60	15.77	274	2,439
2 1/2	64	6x36 RRL EIPS IWRC	11.60	17.26	302	2,688
2 3/4	70	6x36 RRL EIPS IWRC	14.00	20.83	361	3,213
3	76	6x36 RRL EIPS IWRC	16.60	24.70	425	3,782
3 1/4	83	6x36 RRL EIPS IWRC	19.50	29.02	492	4,379
3 1/2	89	6x36 RRL EIPS IWRC	22.70	33.78	564	5,019







An aerial, high-angle photograph of a large suspension bridge spanning a wide body of water. The bridge's steel truss structure and numerous suspension cables are clearly visible. The water below is dark and textured. The overall color palette is muted, with greys, browns, and blues.

# STRUCTURES & UTILITIES

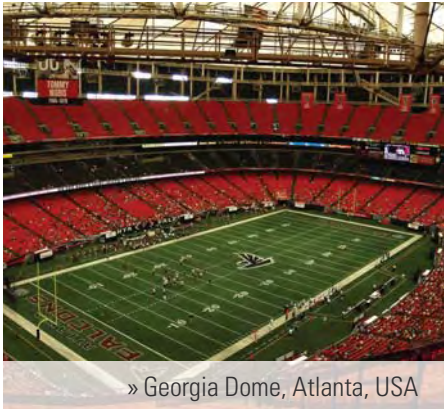
Backed by over a century of strand-making experience, Wire Rope Industries offers premium solutions to meet the diverse requirements of engineered structural support systems. Custom designed and tested to meet all industry standards, our systems are innovative and cost effective.

WRI is continuing to supply major structural projects globally, with focus on applications where our expertise and advanced wire coating technologies create value for our customers. We are also the main supplier of specialized strands to one of the largest power utilities in the world.



# PAST PROJECTS

ROOF PROJECTS SUPPLIED BY WRI



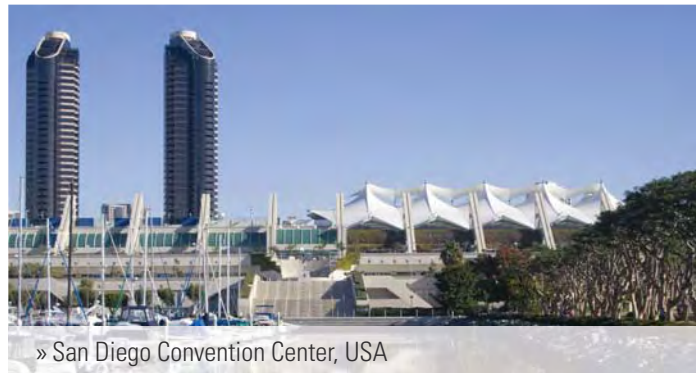
» Georgia Dome, Atlanta, USA



» Montreal Olympic Stadium, Canada



» Nautica Amphitheatre, Cleveland, USA



» San Diego Convention Center, USA



» Aspen Music Center, Aspen, USA

# BRIDGE PROJECTS SUPPLIED BY WRI



» Lion's Gate Bridge, Vancouver, Canada



» Barito Bridge, Indonesia



» Second Tacoma Narrows Bridge, Washington



» Triborough Bridge, New York, USA



» Billinghurst Bridge, Peru



# BRIDGES AND ROOF SUPPORT

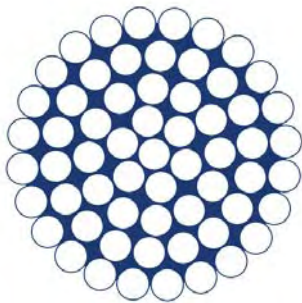
Our full line of class A, B or C Galvanized or Bezinal® coated structural strand and rope products is available in either PS 1000 (ASTM A-586 grade 1) or PS 1000UHS (ASTM A-586 grade 2) for your bridge and roof support requirements.

## For Bridges:

- » Main Cable, Suspender, and Wind Stay products for suspension bridges
- » Stay Cables for smaller Cable-Stayed bridges
- » Cables can be supplied with WRI Strandcote® corrosion protectant for additional corrosion resistance.

## For Roof Support Cables:

- » Full range of poured, socketed, or pressed end fittings are available to meet your project needs.
- » Cables that are in contact with roof fabric can be provided with a color-coordinated plastic jacket to reduce abrasion of the fabric.



## Broadcasting and Power Transmission Towers

Our full line of class A, B or C Galvanized or Bezinal® coated structural strand and rope products is available in either PS 1000 (ASTM A-586 grade 1) or PS 1000UHS (ASTM A-586 grade 2) for guy systems and towers.

- » We have supplied high quality guying systems for some of the tallest towers in North America
- » We regularly supply replacement strands for major military communication towers
- » WRI is the primary supplier of tower support cables for Canada's largest utility company
- » For towers installed in hostile environments, Strandcote is available for additional corrosion protection.
- » We offer all sizes of 19 and 37-wire constructions for ACSR power transmission cables.

## Other Applications

Galvanized structural strand is the ideal product for applications where high strength and low stretch is required. Pendant assemblies with standard or customized sockets are available for your large excavation equipment, ship loaders, stacker-reclaimers or other. We can also supply large guying systems for flare stacks.

# ANTI-CORROSION SOLUTIONS

## 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.

Bezinal coated ropes have been used by several of our flagship clients with exceptional results.

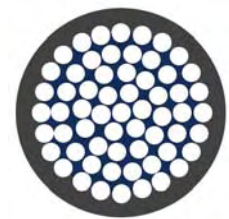
### Benefits

- » 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.**

## STRANDCOTE

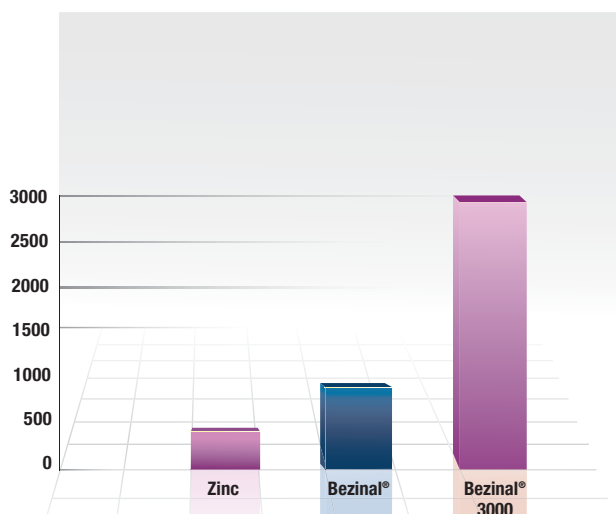
A revolutionary protective blocking compound, custom formulated for extending the anti-corrosion life of wire rope and strand and is available on request on any of our structural products. Strandcote is available for factory or field application and can be overcoated with pigmented top coats for color coordination.



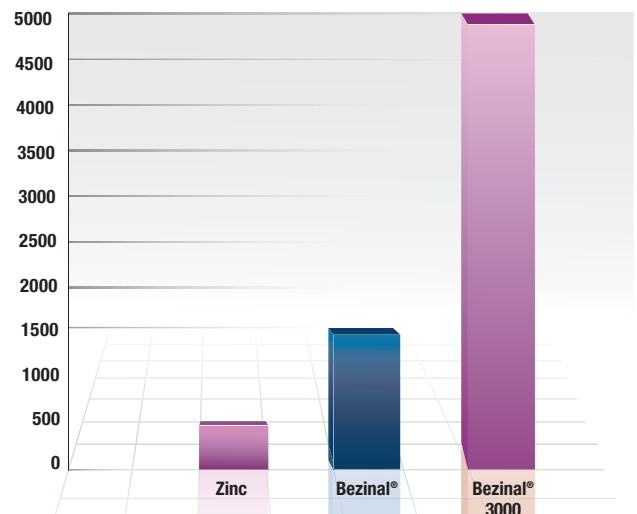
### Salt Spray Performance

(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



# SERVICES

## PRESTRETCHING AND PROOFLOADING

- » WRI is equipped with prestretching and proofloading facilities capable of handling 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 of rope or strand up to  $\pm 1/2$ " per 1000 feet.

## SOCKETING

- » WRI has facilities for socketing of product up to 6" diameter.
- » Our 40 foot high socketing stations ensure correct socket-to-strand alignment and uniform loading of all wires in even the largest diameter strands.
- » Standard socketing media is pure zinc or epoxy resin. Alternate media can be used to meet your project requirements.
- » Plastic jacketing of structural strand and rope up to 3-1/2" diameter is available.
- » Pigmentation is available to meet your project requirements. Check with us for your specific needs.

## ELEGANT SERIES SOCKETS

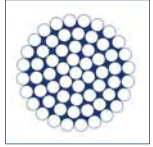
### When functionality and appearance are important

- » A recessed pin allowing for cable assembly connections in limited space applications.
- » Smooth hot dipped galvanized finish for long term corrosion protection. 100% termination efficiency when attached to all grades of Performance Series Structural strands and wire ropes.
- » Smooth streamlined surface for an aesthetically more pleasing look, and better complementing the designer's vision.



# PRODUCT SPECIFICATIONS

## BREAKING LOAD TABLES - STRUCTURES & UTILITIES



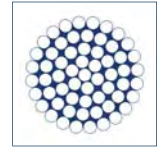
### PS 1000 for Structures

Diameter Inches (mm)	GALVANIZED STRAND PS 1000 ASTM A-586 GRADE 1		GALVANIZED STRAND PS 1000UHS ASTM A-586 GRADE 2		GALVANIZED ROPE ASTM A-603	
	Min. Breaking Load-tons (kN)	Approx. Weight lbs/ft (kg/m)	Min. Breaking Load-tons (kN)	Approx. Weight lbs/ft (kg/m)	Min. Breaking Load-tons (kN)	Approx. Weight lbs/ft (kg/m)
<b>1/2 (12.7)</b>	15.0 (133)	0.52 (0.77)	17.3 (154)	0.52 (0.77)	11.5 (102)	0.42 (0.62)
<b>9/16 (14.3)</b>	19.0 (169)	0.66 (0.98)	21.9 (195)	0.66 (0.98)	14.5 (129)	0.53 (0.79)
<b>5/8 (15.9)</b>	24.0 (213)	0.82 (1.22)	27.6 (245)	0.82 (1.22)	18.0 (160)	0.65 (0.97)
<b>11/16 (17.5)</b>	29.0 (258)	0.99 (1.47)	33.4 (297)	0.99 (1.47)	21.5 (191)	0.79 (1.18)
<b>3/4 (19.1)</b>	34.0 (302)	1.2 (1.79)	39.1 (348)	1.2 (1.79)	26.0 (231)	0.95 (1.41)
<b>13/16 (20.6)</b>	40.0 (356)	1.4 (2.08)	46.0 (409)	1.4 (2.08)	30.0 (267)	1.10 (1.64)
<b>7/8 (22.2)</b>	46.0 (409)	1.6 (2.38)	52.9 (471)	1.6 (2.38)	35.0 (311)	1.28 (1.90)
<b>15/16 (23.8)</b>	54.0 (480)	1.9 (2.83)	62.1 (552)	1.9 (2.83)	40.0 (356)	1.47 (2.19)
<b>1 (25.4)</b>	61.0 (543)	2.1 (3.13)	70.2 (625)	2.1 (3.13)	45.7 (407)	1.67 (2.49)
<b>1-1/16 (27.0)</b>	69.0 (614)	2.4 (3.57)	79.4 (706)	2.4 (3.57)		
<b>1-1/8 (28.6)</b>	78.0 (694)	2.7 (4.02)	89.7 (798)	2.7 (4.02)	57.8 (514)	2.11 (3.14)
<b>1-3/16 (30.2)</b>	86.0 (765)	3.0 (4.47)	98.9 (880)	3.0 (4.47)		
<b>1-1/4 (31.8)</b>	96.0 (854)	3.3 (4.91)	110 (979)	3.3 (4.91)	72.2 (642)	2.64 (3.93)
<b>1-5/16 (33.3)</b>	106 (943)	3.6 (5.36)	122 (1085)	3.6 (5.36)		
<b>1-3/8 (34.9)</b>	116 (1032)	4.0 (5.95)	133 (1183)	4.0 (5.95)	87.8 (781)	3.21 (4.48)
<b>1-7/16 (36.5)</b>	126 (1121)	4.3 (6.40)	145 (1290)	4.3 (6.40)		
<b>1-1/2 (38.1)</b>	138 (1228)	4.7 (7.00)	159 (1415)	4.7 (7.00)	104 (925)	3.82 (5.69)
<b>1-9/16 (39.7)</b>	150 (1335)	5.1 (7.59)	173 (1539)	5.1 (7.59)		
<b>1-5/8 (41.3)</b>	162 (1441)	5.6 (8.34)	186 (1655)	5.6 (8.34)	123 (1094)	4.51 (6.71)
<b>1-11/16 (42.9)</b>	176 (1566)	6.0 (8.93)	202 (1797)	6.0 (8.93)		
<b>1-3/4 (44.4)</b>	188 (1673)	6.4 (9.53)	216 (1922)	6.4 (9.53)	143 (1272)	5.24 (7.80)
<b>1-13/16 (46.0)</b>	202 (1797)	6.9 (10.3)	232 (2064)	6.9 (10.3)		
<b>1-7/8 (47.6)</b>	216 (1922)	7.4 (11.0)	248 (2206)	7.4 (11.0)	164 (1459)	6.03 (8.98)
<b>1-15/16 (49.2)</b>	230 (2046)	7.9 (11.8)	265 (2358)	7.9 (11.8)		

All dimensions are in inches. "U" Bolt & Spool type also available.

# PRODUCT SPECIFICATIONS

## BREAKING LOAD TABLES - STRUCTURES & UTILITIES



### PS 1000 for Structures (continued)

Diameter Inches (mm)	GALVANIZED STRAND PS 1000 ASTM A-586 GRADE 1		GALVANIZED STRAND PS 1000UHS ASTM A-586 GRADE 2		GALVANIZED ROPE ASTM A-603	
	Min. Breaking Load-tons (kN)	Approx. Weight lbs/ft (kg/m)	Min. Breaking Load-tons (kN)	Approx. Weight lbs/ft (kg/m)	Min. Breaking Load-tons (kN)	Approx. Weight lbs/ft (kg/m)
<b>2 (50.8)</b>	245 (2180)	8.4 (12.5)	282 (2509)	8.4 (12.5)	186 (1655)	6.85 (10.2)
<b>2-1/16 (52.4)</b>	261 (2322)	8.9 (13.2)	300 (2669)	8.9 (13.2)		
<b>2-1/8 (54.0)</b>	277 (2464)	9.5 (14.1)	319 (2838)	9.5 (14.1)	210 (1868)	7.73 (11.5)
<b>2-3/16 (55.6)</b>	293 (2607)	10 (14.9)	337 (2998)	10 (14.9)		
<b>2-1/4 (57.1)</b>	310 (2758)	11 (16.4)	357 (3176)	11 (16.4)	235 (2091)	8.66 (12.9)
<b>2-5/16 (58.7)</b>	327 (2909)	11 (16.4)	376 (3345)	11 (16.4)		
<b>2-3/8 (60.3)</b>	344 (3060)	12 (17.9)	396 (3523)	12 (17.9)	261 (2322)	9.61 (14.3)
<b>2-7/16 (61.9)</b>	360 (3203)	12 (17.9)	414 (3683)	12 (17.9)		
<b>2-1/2 (63.5)</b>	376 (3345)	13 (19.4)	432 (3843)	13 (19.4)	288 (2562)	10.6 (15.8)
<b>2-9/16 (65.1)</b>	392 (3488)	14 (20.8)	451 (4012)	14 (20.8)		
<b>2-5/8 (66.7)</b>	417 (3710)	14 (20.8)	480 (4270)	14 (20.8)	317 (2820)	11.6 (17.3)
<b>2-11/16 (68.3)</b>	432 (3843)	15 (22.3)	497 (4422)	15 (22.3)		
<b>2-3/4 (69.8)</b>	452 (4021)	16 (23.8)	520 (4626)	16 (23.8)	347 (3087)	12.7 (19.0)
<b>2-7/8 (73.0)</b>	494 (4395)	17 (25.3)	568 (5053)	17 (25.3)	379 (3372)	13.9 (20.7)
<b>3 (76.2)</b>	538 (4786)	19 (28.3)	619 (5507)	19 (28.3)	412 (3665)	15.1 (22.5)
<b>3-1/8 (79.4)</b>	584 (5196)	21 (31.3)	672 (5979)	21 (31.3)		
<b>3-1/4 (82.6)</b>	625 (5560)	22 (32.7)	719 (6397)	22 (32.7)	475 (4226)	18.8 (28.0)
<b>3-3/8 (85.7)</b>	673 (5988)	24 (35.7)	774 (6886)	24 (35.7)		
<b>3-1/2 (88.9)</b>	724 (6441)	26 (38.7)	833 (7411)	26 (38.7)	555 (4938)	21.0 (31.3)
<b>3-5/8 (92.1)</b>	768 (6833)	28 (41.7)	883 (7856)	28 (41.7)		
<b>3-3/4 (95.2)</b>	822 (7313)	30 (44.6)	945 (8407)	30 (44.6)	640 (5694)	24.0 (35.7)
<b>3-7/8 (98.4)</b>	878 (7811)	32 (47.6)	1010 (8986)	32 (47.6)		
<b>4 (101.6)</b>	925 (8230)	34 (50.6)	1060 (9431)	34 (50.6)	730 (6495)	27.0 (40.2)
<b>4-1/8 (104.8)</b>	1035 (9208)	35 (52.2)	1186 (10550)	35 (52.2)		
<b>4-1/4 (108.0)</b>	1090 (9698)	37 (55.1)	1249 (11112)	37 (55.1)		
<b>4-3/8 (111.1)</b>	1125 (10009)	39 (58.0)	1289 (11468)	39 (58.0)		
<b>4-1/2 (114.3)</b>	1200 (10676)	42 (62.3)	1375 (12233)	42 (62.3)		

All dimensions are in inches. "U" Bolt & Spool type also available.

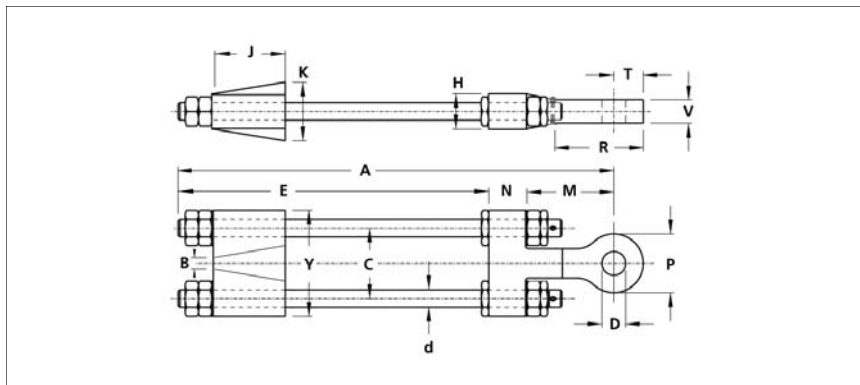


## CLOSED TAKE-UP ASSEMBLIES

72" Adjustment  
(also available with 24", 36", 48" & 96" take-ups)

STRAND DIAMETER	A	B	C	d	D	E	H	J	K	P	R	T	V	Y	WT LBS.
1/2	84.31	0.68	3.38	0.63	1.25	79.06	1.38	3.12	2.12	2.5	4	1.25	1	4.62	22
9/16-5/8	85.49	0.81	4.38	0.75	1.44	79.36	1.56	3.81	2.5	3.25	4.5	1.63	1.13	5.88	34
11/16-3/4	89.82	1	4.68	1	1.69	82.76	2.25	4.44	3.3	3.63	5	1.81	1.44	6.56	61
13/16-7/8	92.39	1.13	5.18	1.12	2.06	84.14	2.69	5.06	3.75	4.38	6	2.19	1.56	7.31	84
15/16-1	93.5	1.25	5.75	1.25	2.31	83.56	2.5	5.81	4.12	5.25	6.62	2.63	1.69	8.18	115
1-1/16-1-1/8	95.87	1.5	6	1.38	2.56	84.43	2.56	6	4.5	5.75	7.5	2.88	1.81	8.62	139
1-3/16-1-1/4	98.65	1.63	6.75	1.5	2.81	85.27	3	6.38	4.88	6.38	9	3.19	2.06	9.75	193
1-5/16-1-3/8	101.65	1.75	7.19	1.75	3.06	86.71	3.25	6.94	5.38	7	10	3.5	2.38	10.38	255
1-7/16-1-1/2	103.83	1.88	8.13	2	3.56	87.89	3.5	7.31	6.5	8	11	4	2.56	11.88	342
1-9/16-1-3/4	105.6	2.13	9	2.25	3.81	89.22	4.38	8.13	7.25	9	11.5	4.5	2.81	13.13	474
1-13/16-2	110.72	2.5	10.25	2.5	4.56	91.97	4.5	9.31	8	10.38	12.5	5.5	3.06	14.63	663
2-1/16-2-1/4	111.97	3	11.5	2.75	4.81	93.22	5.13	10.88	9	12.25	13.25	6.13	3.31	16.44	856
2-5/16-2-3/8	116.17	3.13	12.69	3	5.06	95.54	6.31	11.81	9.75	12.5	14.96	6.25	3.69	18	1040
2-7/16-2-5/8	118.8	3.38	13.38	3.25	5.81	96.8	6.88	12.81	10.5	13.5	17.31	7.75	4	19.25	1319
2-11/16-2-3/4	124.31	3.5	14.06	3.5	5.81	100.68	6.69	13.38	11.38	14.5	19.25	8	4.19	21.13	1568
2-7/8-3	131.68	3.63	15.25	3.75	6.81	101.68	7	15.5	12.25	16	20.25	9.25	4.5	22	2056
3-1/8-3-1/4	137.43	3.88	17.25	4	7.06	105.99	8.25	17.13	13	18	24	11	4.75	24.5	2518
3-3/8-3-1/2	142.18	3.94	18.31	4.25	7.31	109.18	8.38	19.31	13.88	18	25	11	5	26.06	3052
3-5/8-3-3/4	143.93	4.25	19.38	4.5	7.56	110.43	9.38	21.13	14.75	18	25.25	11.63	5.25	27.13	3495
3-7/8-4	148.8	4.5	20.44	4.75	7.81	112.8	9.75	22.94	15.75	20	26	12.25	5.5	29.44	4170

All dimensions are in inches. "U" Bolt & Spool type also available.



# PRODUCT SPECIFICATIONS

## BREAKING LOAD TABLES - STRUCTURES & UTILITIES

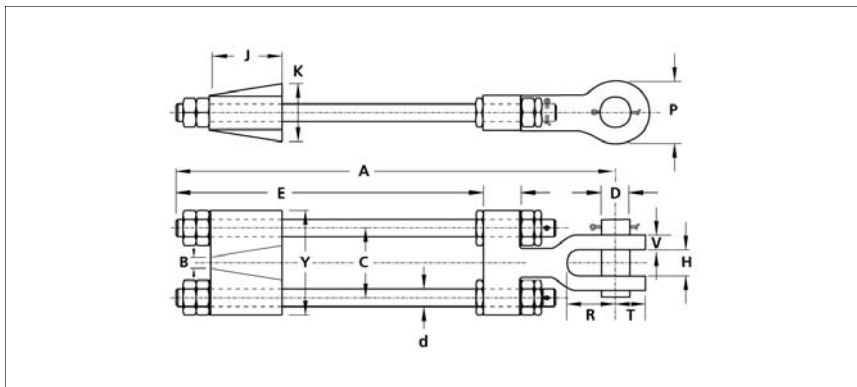
### OPEN TAKE-UP ASSEMBLIES

72" Adjustment

R T (also available with 24", 36", 48" & 96" take-ups)

STRAND DIAMETER	A	B	C	d	D	E	H	J	K	P	R	T	V	Y	WT LBS.
1/2	84.44	0.68	3.38	0.63	1.19	79.06	1.25	3.12	2.12	2.5	2.5	1.38	0.63	4.62	24
9/16-5/8	85.99	0.81	4.38	0.75	1.38	79.36	1.5	3.81	2.5	2.75	3	1.63	0.75	5.88	38
11/16-3/4	90.98	1	4.68	1	1.63	82.98	1.75	4.44	3.3	3.25	3.51	1.88	1	6.56	59
13/16-7/8	92.7	1.13	5.18	1.12	2	84.57	2	5.06	3.75	4	4	2.25	1.13	7.31	82
15/16-1	93.93	1.25	5.75	1.25	2.25	83.93	2.25	5.81	4.12	4.5	4.5	2.63	1.25	8.18	114
1-1/16-1-1/8	96.06	1.5	6	1.38	2.5	84.68	2.5	6	4.5	5	5	2.88	1.38	8.62	142
1-3/16-1-1/4	99.46	1.63	6.75	1.5	2.75	86.08	3	6.38	4.88	5.5	6	3.13	1.63	9.75	191
1-5/16-1-3/8	101.9	1.75	7.19	1.75	3	87.65	3	6.94	5.38	6	6.5	3.38	1.75	10.38	243
1-7/16-1-1/2	104.76	1.88	8.13	2	3.5	88.88	3.5	7.31	6.5	7	7	4	2	11.88	339
1-9/16-1-3/4	106.47	2.13	9	2.25	3.75	90.1	4	8.13	7.25	7.5	7	4.5	2.25	13.13	462
1-13/16-2	112.91	2.5	10.25	2.5	4.25	93.16	4.5	9.31	8	8.5	9.5	5	2.5	14.63	642
2-1/16-2-1/4	116.04	3	11.5	2.75	4.75	94.16	5	10.88	9	9.5	10	5.5	2.75	16.44	905
2-5/16-2-3/8	120.54	3.13	12.69	3	5	96.17	5.38	11.81	9.75	10	11.25	5.75	3	18	1121
2-7/16-2-5/8	123.11	3.38	13.38	3.25	5.75	97.36	6	12.81	10.5	11.5	11.5	6.63	3.25	19.25	1425
2-11/16-2-3/4	127.36	3.5	14.06	3.5	5.75	100.74	6.25	13.38	11.38	11.5	11.5	6.63	3.5	21.13	1689
2-7/8-3	131.05	3.63	15.25	3.75	6.75	102.05	7.50	15.50	12.25	13.50	12.00	7.63	3.75	22.00	2144
3-3/8-3-1/2	141.18	3.94	18.31	4.25	7.25	109.05	8	19.31	13.88	15	13	8.5	4.25	26.06	3242
3-5/8-3-3/4	143.93	4.25	19.38	4.5	7.5	110.43	8.25	21.13	14.75	16	13.5	9	4.5	27.13	3872
3-7/8-4	148.06	4.5	20.44	4.75	7.88	112.8	8.5	22.94	15.75	17	14.25	9.63	4.75	29.44	4531

All dimensions are in inches. "U" Bolt & Spool type also available.

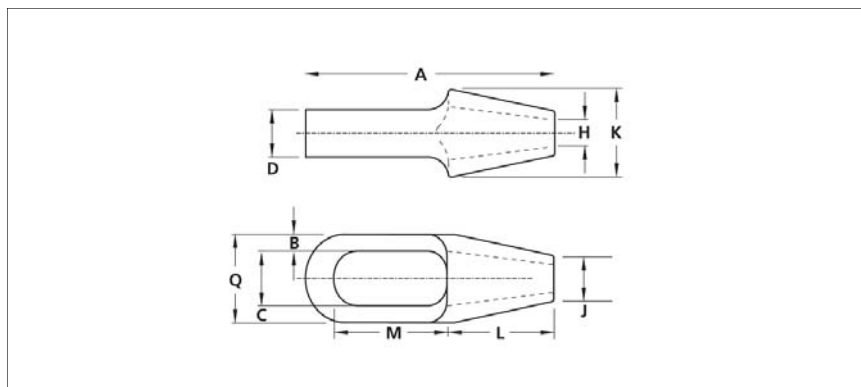


## CLOSED SPELTER SOCKETS

for structure

STRAND DIAMETER	ROPE DIAMETER	A	B	C	D	H	J	K	L	M	Q	WT LBS.
1/2	9/16-5/8	6.38	0.63	1.38	1	0.69	1.19	2.38	3	2.5	2.63	3
9/16-5/8	3/4	7.63	0.69	1.63	1.25	0.81	1.31	2.75	3.5	3.06	3	5
1-1/16-3/4	7/8	8.88	0.88	1.88	1.5	1	1.5	3.13	4	3.56	3.63	9
1-3/16-7/8	1	10	0.94	2.25	1.75	1.13	1.75	3.75	4.5	4.06	4.13	12
15/16-1	1-1/8	11.13	1	2.5	2	1.25	2	4.13	5	4.56	4.5	17
1-1/16-1-1/8	1-1/4-1-3/8	12.31	1.13	2.75	2.19	1.5	2.25	4.75	5.5	4.94	5	22
1-3/16-1-1/4	1-1/2	14	1.13	3.13	2.5	1.63	2.75	5.25	6	6	5.38	30
1-5/16-1-3/8	1-5/8	15.13	1.25	3.25	2.75	1.81	3	5.5	6.5	6.5	5.75	35
1-7/16-1-5/8	1-3/4-1-7/8	17.38	1.5	3.69	3	2.13	3.13	6.38	7.38	7.88	6.69	52
1-11/16-1-3/4	2-2-1/8	19.75	1.91	3.81	3.25	2.25	3.75	7.28	8.5	8.81	7.63	86
1-13/16-1-7/8	2-1/4-2-3/8	21.63	2.06	4.38	3.69	2.56	4.5	8.25	9	9.75	8.5	116
1-15/16-2	2-1/2-2-5/8	24.75	2.13	5.5	4	2.88	5.25	9.25	10.5	10.69	9.75	170
2-3/16-2-7/16	2-3/4-2-7/8	26.25	2.25	6.25	4.88	3.25	6	10	11.5	11	10.75	228
2-1/2-2-5/8	3-3-1/8	28	2.5	6.75	5.25	3.63	6.63	10.75	12.5	11.38	11.75	297
2-3/4-2-7/8	3-1/4-3-3/8	28.5	2.5	7.25	5.75	3.88	6.88	11.5	12.5	11.63	12.25	326
3-3-1/8	3-1/2-3-5/8	30.75	2.63	7.75	6.25	4	7.5	12.5	13.5	12.63	13	410
3-1/4-3-5/8	3-3/4-4	32.25	2.88	8.5	7	4.5	8	12.75	15	12.94	14.25	535
3-3/4-4	4-1/4-4-1/2	35.5	3.25	9	7.75	4.88	8.25	14.25	16.5	14.5	15.5	615
4-1/4-4-1/2	4-3/4-5	42.38	3.5	10.5	8.25	5.38	9.25	16	21	16	17.5	940
4-3/4-5	5-1/4-5-1/2	47.25	3.75	11.5	8.75	5.88	9.75	17.25	23	18.5	19	1180
5-1/4-5-1/2	5-3/4-6	52	4.25	13	9	6.38	11	19	25	20	21.5	1600

All dimensions are in inches.



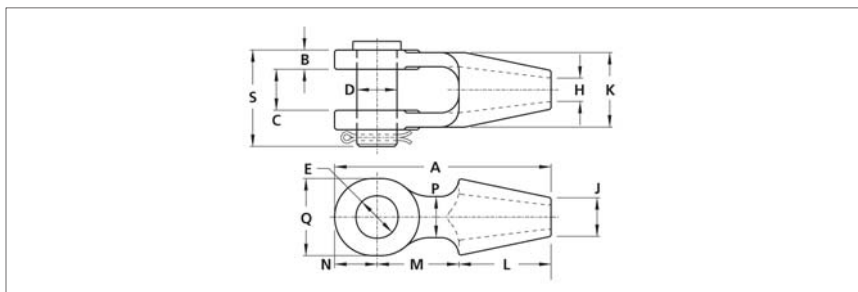
# PRODUCT SPECIFICATIONS

## BREAKING LOAD TABLES - STRUCTURES & UTILITIES

### 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.



# MILITARY APPLICATIONS

Wire Rope Industries is one of the largest suppliers of military-grade wire ropes in the world. Our products are custom designed and manufactured to meet the extremely rigid specifications and testing requirements of the United States Department of Defense.





# PRODUCT & SERVICES

## ARRESTOR, LAUNCH & ELEVATOR SYSTEMS FOR AIRCRAFT CARRIERS

WRI is the largest manufacturer in the world for specialized aircraft arresting systems. We are also the only approved supplier for the manufacture of aircraft launching bridles and pendant assemblies made to MIL-322036 standard. These strict approval processes, utilized by the U.S. Forces, ensure that maximum product quality and consistency are maintained and verified.

Rope constructions and designs vary depending on the specifications. Please contact us for more information.

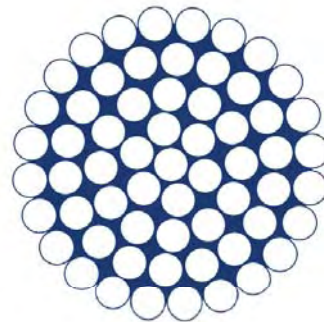
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- » Proofloading and certification
- » Certified socketing & attachments
- » Seaworthy packaging
- » Custom design and engineering assistance
- » In-house quality control

## SPECIALIZED STRUCTURAL STRAND

We offer custom structural strands for installations like tall communication towers and suspended structures. Our machinery is capable of producing high quality strands up to 6" (150+mm) which, combined with the cutting edge expertise in wire coating technology, allows us to design and manufacture strands to almost any specification. WRI is currently supplying highly corrosion-resistant tower strands to one of the largest communication bases in the world.

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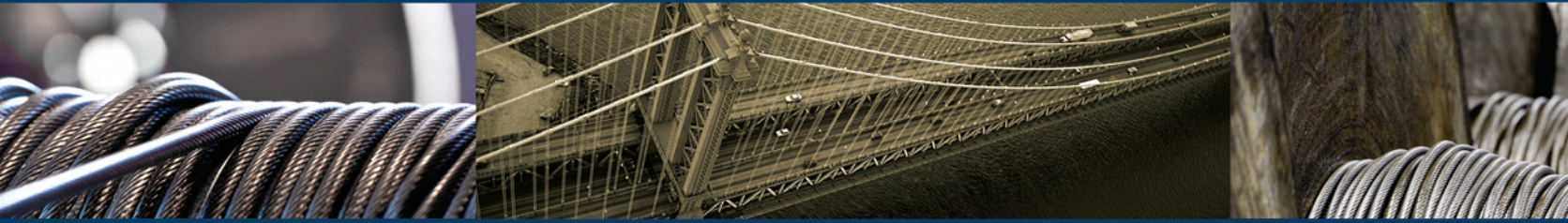
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# WIRE ROPE INDUSTRIES



**WIRE ROPE**  
INDUSTRIES

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