

Bullivants



UNDERGROUND MINING HIGH PERFORMANCE WIRE ROPE

Exclusive Distributor of

verope[®]
MINING



**A LEADING SUPPLIER AND
RELIABLE PARTNER TO
THE MINING INDUSTRY.**

verope[®]
MINING

A partnership you can rely on.

Bullivants

With over 130 years' experience, Bullivants is recognised as Australia's oldest, largest, and most technical product and service provider (in the Lifting and Rigging Industry) in Australia. Since 1891, Bullivants has and continues to provide comprehensive solutions to support customers with safe and efficient operations in wire rope and installations. Founded on a reputation for quality and safety; safety remains our number one priority, designing and building Zero Harm into everything we do.

In 1928, Bullivants became the largest agency dealing in wire rope in Australia and remains a strong market leader in the industrial sector. Since 2006, Bullivants has operated within the Industrial Specialists Division backed by Wesfarmers. The support provided by the Wesfarmers group strengthens Bullivants' ability to provide industry leading service and solutions to our customers.

Customers can rely on Bullivants to provide product knowledge and complete solutions for the Lifting and Rigging industry. All testing and installation services are provided according to the relevant ISO and Australian Standard certifications, and accreditations providing reassurance that we are a leading supplier to the industrial sector.

Bullivants knows what it takes to stay ahead of the game. Combining a strong depth of experience, expert support and engineering capabilities, Bullivants provides you with verope high quality ropes nationwide.



Verope is a Joint Venture company between Pierre Verreet, CEO and founder of verope, and Kiswire Ltd from South Korea. With state-of-the-art production and an integrated production process, starting from their own wire drawing and finishing with the final rope under one roof, the quality can be controlled constantly.

This setup also provides high flexibility when it comes to “tailor-made” mining rope constructions. Our cost-efficient production in South Korea enables us to directly transfer savings to our customers: premium quality at a moderate price level.

With the superb know-how of Kiswire Ltd in wire drawing and the application and product know-how from Mr. Verreet and his team, verope creates reliable and cost-orientated mining wire ropes.

UNDERGROUND MINING

Mines operate in harsh and demanding conditions where rough and robust work takes place on a continuous basis. Safety, reliability and productivity of each shaft operation is vital with people and equipment being transported deep underground. With mining ropes playing a key role in the operations of the shaft, Bullivants ensures the strength and efficiency of verope mining ropes are designed first and foremost for safety.

As one of the largest distributors of wire rope in Australia, Bullivants understands our customers' unique requirements of wire rope and wire rope fittings. For the past 15 years, Bullivants have been the exclusive distributor of Verope® in Australia. verope are approved OEM suppliers, offering high performance wire ropes customised to specific customer requirements for complete product and service solutions for all underground mining ropes. Bullivants' knowledge of equipment specifications allows our team to support customers efficiently and effectively offering satisfying solutions for all conditions.

Ropes with higher breaking load offer an increased service life under a lower specific level of stress. With a proven track record and quality of product, verope wire rope offers long lasting life of the rope to meet these demanding conditions.

BULLIVANTS ACCREDITATION AND CAPABILITIES

Bullivants is dedicated to helping our customers achieve a safe work environment and ensure compliance to regulations, codes of practice and Australian Standards. All installation work is carried out by Bullivants' highly trained personnel. On-site repairs and testing services allow work to be carried out on location, minimising work disruptions, eliminating transport costs and keeping you operational.

Bullivants is an approved and accredited installer, maintainer, and inspector to the relevant Australian Standards for all products used. All around Australia and offshore, Bullivants has been providing NATA accredited lifting and rigging equipment testing services for over 60 years.



- NATA ISO17020 for Technical/ Visual Inspections
- NATA ISO17025 for Mechanical Testing
- ISO9001 Quality Management
- AS4801 OH&S Management Systems
- ISO14001 Environment Management

Additional services available:

- Wire rope inspection services from our qualified Technical Service team
- Rope inspection, re-swaging (where possible) and retesting
- Safe use training of wire ropes and pre-use inspection of the existing crane rope assemblies

TECHNICAL SERVICE CAPABILITIES	IN-HOUSE	ON-SITE FST VEHICLE
Asset Management	•	•
AmSteel Blue Splicing	•	•
Crane Rope Inspection	•	•
Container Management Services	•	•
Dye Penetrant Inspection	•	•
Equipment Repairs	•	•
Horizontal Test Bed	•	•
Height Safety Installation		•
Load Testing	•	•
Lifting Solutions	•	•
Mobile Test Trailer – Proof Load Testing		•
Proof Loading of Anchor Points		•
Product Sales	•	•
Reverse Engineering	•	•
Socketing	•	•
Test and Repair of Lifting and Rigging Equipment	•	•
Wire Rope Splicing, Lubrication and Repairs	•	•
NDT (Non Destructive Testing) inc. MPI, Eddy Current	•	•

All Bullivants Field Service Technicians are trained to have extensive knowledge, understanding and experience in customer operations, procedures and safety standards to ensure we supply the highest quality service at all times.



SAFETY IS OUR NUMBER ONE PRIORITY

Keeping safe is a continuous challenge and one we believe is worth taking on.

- All wire rope assemblies are individually proof tested in accordance with Australian Standards
- All wire rope is supplied with a Wire Rope Mill test certificate
- All wire rope assemblies can be supplied with NATA Test certificates following proof testing of assemblies or terminations
- Discard criteria are available in AS2759, when inspecting wire ropes in service
- Training – our National Training Team can provide training on safe use of wire ropes applications



NON-DESTRUCTIVE TESTING (NDT) SERVICES

Bullivants are fully equipped and qualified to complete Non-Destructive Testing (NDT) electromagnetic inspections on wire ropes. Our technicians use world leading equipment to inspect the external and internal integrity on wire ropes, enabling us to determine the loss of metallic area that can be caused by corrosion or operational damage.

Providing NDT for over 35 years across Australia, New Zealand and the Asia Pacific region in accordance with wire rope Non-Destructive Testing (NDT) AS 4812.

A number of statutory requirements call for this service as part of proactive maintenance programs covering the Mining Industry, Aerial Ropeways and many other key industries such as Cranes and Ship-loading/lifting where the cost of downtime can be enormous. This can be preventable with timely and accurate NDT/reporting.

Bullivants have over 130 years of wire rope experience to not just test, but also provide expert advice on the spot, to troubleshoot problems.

Magnetic Particle Inspection (MPI) Testing

Magnetic Particle Inspection (MPI) also sometimes called Magnetic Test (MT) is a non-destructive test method for the detection of surface and sub-surface cracks in ferrous materials. It is the economical and faster non-destructive test method used widely in mining, aerospace, locomotive, automotive, utilities and oil & gas markets.

The test method involves application of a magnetic field externally or applying electric current through the material, which in turn produces a magnetic flux in the material. Simultaneously, visible ferrous particles are sprinkled or sprayed on the test surface. The presence of a surface or near surface cracks in the material causes distortion in the magnetic flux which in turn causes leakage of the magnetic fields at the crack.

Magnetic Particle Inspection cannot be used for non-ferrous materials and non-magnetic ferrous materials such as austenitic stainless steels.

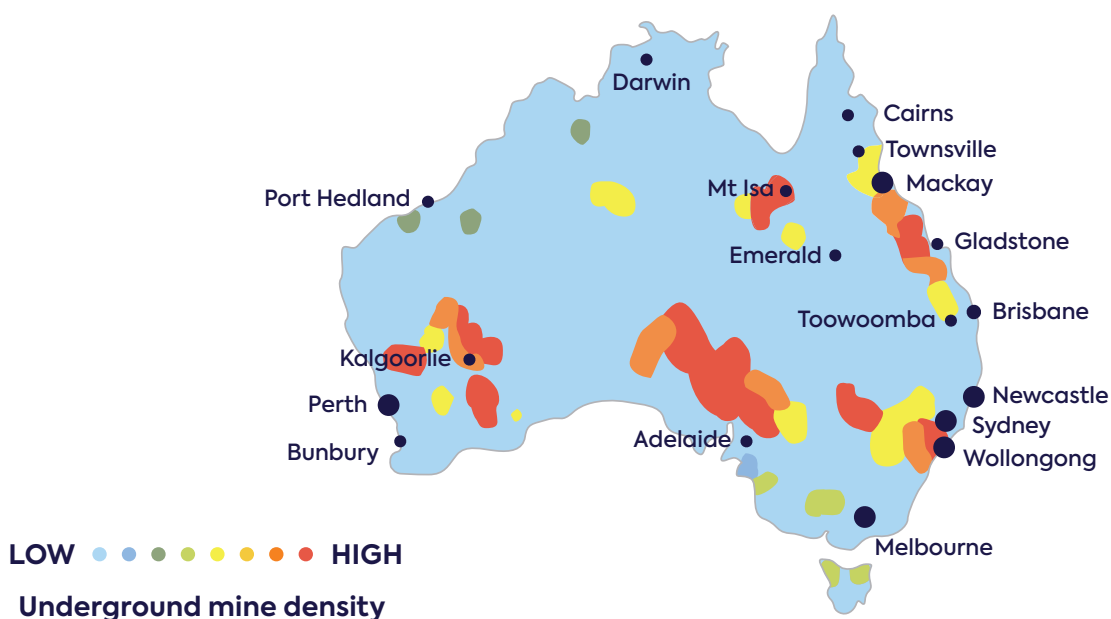
Eddy Current Testing

Eddy Current* testing is another Non-Destructive Test method for detection of cracks and flaws on steel and conductive material. A key advantage of Eddy Current testing is that this process can detect flaws and cracks through paint or other surface coatings, so it does not require these surface coatings to be removed prior to inspection.

*Eddy Current only available in certain locations, contact your nearest branch for more information on 1300 LIFTING.

OUR NATIONAL NETWORK

With 18 locations nationally, Bullivants can provide product and services to the mining sector effectively and efficiently. While all Bullivants locations provide mainstream services, the 5 hub locations are able to accommodate your specialised manufacturing requirements.



VEROPE MINING CAPABILITIES

- Tailor-made rope construction
 - > Construction
 - > Rope weight
 - > Breaking load
 - > Lubrication
- State-of-the-art production facilities up to 600t single gross-weight
- Own wire drawing
- Customised steel reels
- Detailed mining rope training
- Application consulting
- Detailed rope autopsies
- Fracture analyses
- Troubleshooting
- On-site visits by our technical team
- Research and development centre for new developments
- Theoretical rope lifetime calculation

verope AG as a manufacturer of special mining ropes, uses the highest quality lubricants from market-leading companies only.

The lubrication on underground mining ropes is a crucial part of enhancing the durability of the rope performance. In underground mining, the use of a certain type of lubricant is mandatory. The type of lubricant depends on the mining application and its intended purpose. Furthermore, the lubricant must protect the rope against corrosion in an aggressive, dirty or dusty environment.

All kinds of mining drum winders (single, double, or BMRs) have certain requirements for the wire rope lubricant. Ropes on drum winders are spooled in a multi-layer system. The number of layers is dependent on the spooling depth and the geometry of the drum-winder. Shaft sinking winders can have up to 15 rope layers per drum. There are two critical parts for the rope on a multi-layer system: the climbing and cross-over area in each layer and the radial pressure between the rope layers, which increases with the number of rope layers.

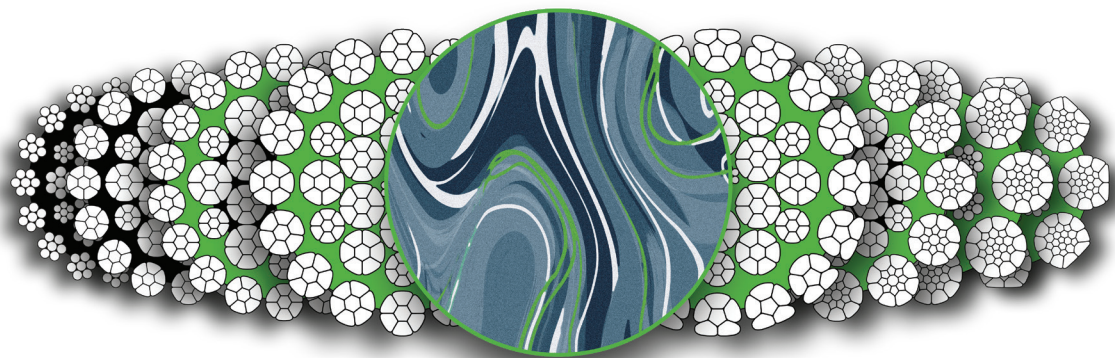
verope can provide lubricants that have a positive influence on both drum and BMR winders. These high quality lubricants have excellent values on the so called “four-ball test welding load” which indicates the performance under high radial pressure.

For mining friction winders, a certain type of lubricant is mandatory. The lubricant must support the power transmission by friction. The use of conventional lubricants will lead to slipping and a reduction in efficiency, potentially preventing friction drive. Considering the special requirements for friction winders, this lubricant must also offer sufficient protection against corrosion in tough surroundings. verope cooperates with German manufacturers providing state-of-the-art lubricants.

Flexibility in lubrication is one of verope AG's strengths: working with established lubricant manufacturers they are happy to recommend lubricants for any application and condition.



CONSTRUCTION RANGE OF WIRE ROPES

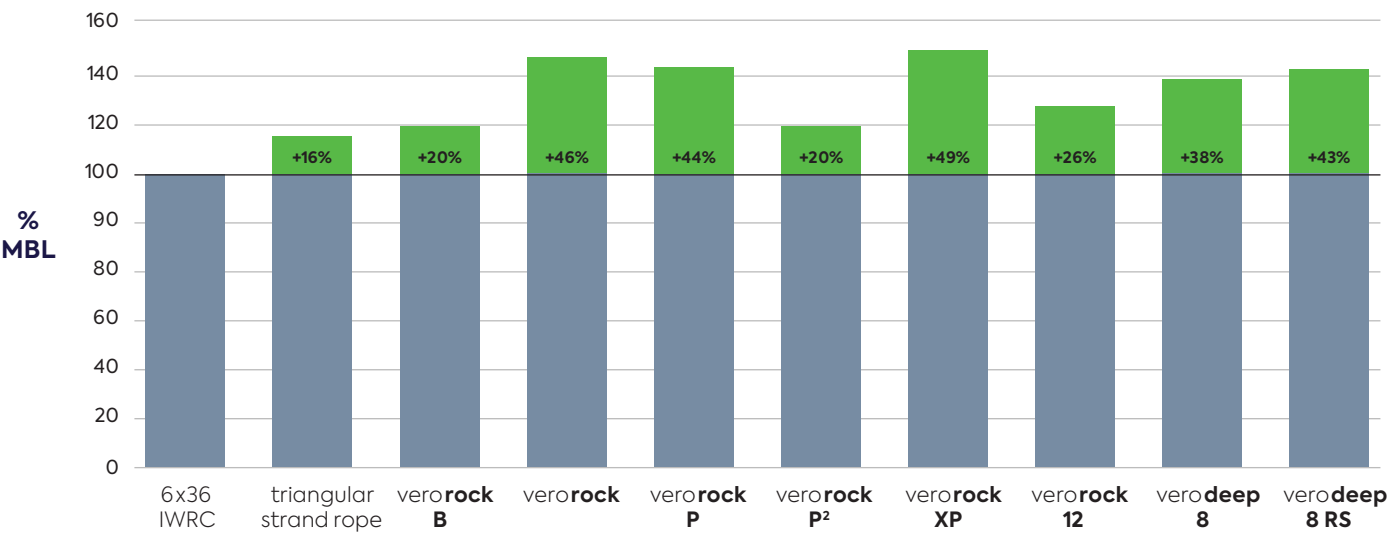


BREAKING LOAD

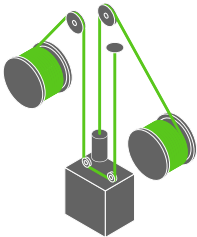
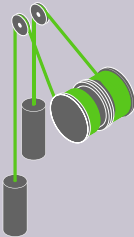
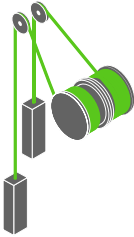
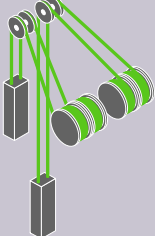
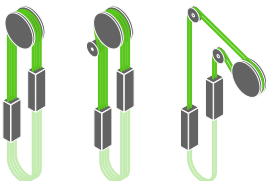
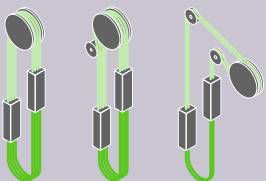
verope special mining ropes are designed to achieve high breaking loads and better strength-to-weight ratios. High ductility wires drawn to controlled tolerances are stranded and closed into a rope, constructed with optimised gap spacing between the individual rope elements.

verope products achieve an increased fill factor by using compacted strands as well as rotary swaging in their method of rope construction. Parallel lay elements in the rope composition increase the metallic cross-sectional area.

Comparative Breaking Load



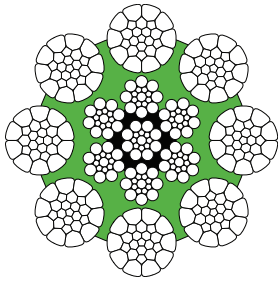
SPECIAL WIRE ROPES

			ROPE'S ROTATIONAL BEHAVIOUR		KIND OF LAY	
			Rotation resistant	Non-rotation resistant	Lang's lay	Ordinary lay
Shaft Sinking Stage Ropes		<ul style="list-style-type: none"> • No guide system • Slow driving speed • Low bending fatigue 	●	●	●	
Shaft Sinking Kibble Ropes		<ul style="list-style-type: none"> • No guide system (crosshead) • Hoist-cyclic application • Single fall hoisting 	●		●	
Drum Winder		<ul style="list-style-type: none"> • Multilayer spooling • Hoist-cyclic application • Working with rope pairs 	●	●	●	
Blair Multi Rope Winder (BMR)		<ul style="list-style-type: none"> • Multilayer spooling • Hoist-cyclic application • Fix or rope guides 	●	●	●	
Friction Winder Head Ropes		<ul style="list-style-type: none"> • Friction driven • Hoist-cyclic application • One layer spooling 	●	●	●	●
Frinction Winder Balance Ropes		<ul style="list-style-type: none"> • Zero rope tension • Free hanging rope length • Working with swivels 	●		●	●

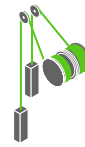
LUBRICATION	ADDITIONAL PLASTIC	ROPE'S SURFACE		TENSILE GRADE			
Fully lubricated	Recommended	Galvanised	Bright	1770 N/mm ²	1960 N/mm ²	2160 N/mm ²	On request
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
● Special lubrication for friction winder	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●

verodeep 8

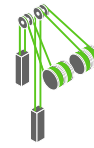
Offers superb bending fatigue results and decreases down and maintenance time. The allrounder in underground mining ropes.



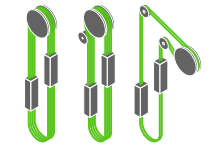
- Non-rotation-resistant rope construction
- Available in galvanised and bright wire surface
- Available in right hand and left hand
- Available in Lang's lay and Ordinary lay
- Special lubrication available on request
- The plastic layer offers certain construction advantages
- Available in 1770 N/mm², 1960 N/mm², 2160 N/mm², or upon customers request



double drum winder



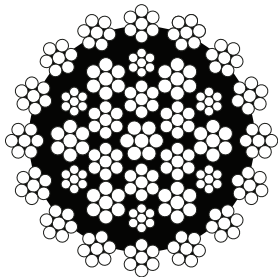
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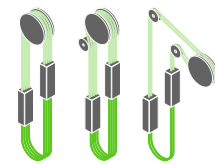
koepe friction winder

verorock B

Combines good rotation resistance and a remarkable flexibility for friction winder tail ropes with a small loop diameter.



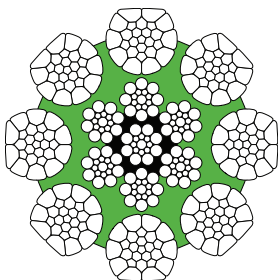
- Balance rope for friction drum winder
- Rotation-resistant rope construction
- Available in galvanised and bright wire surface
- Available in right hand and left hand
- Available in Lang's lay and Ordinary lay
- Special lubrication available on request
- Available in 1770 N/mm², 1960 N/mm², 2160 N/mm², or upon customers request



koepe friction winder

verodeep 8 RS

The strongest non-rotation resistant rope in the portfolio with tremendous performance on drum winders.



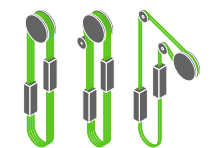
- Non-rotation-resistant rope construction
- Available in galvanised and bright wire surface
- Available in right hand and left hand
- Available in Lang's lay and Ordinary lay
- The plastic layer offers certain construction advantages
- Swaged surface offers Higher MBL and better contact behaviour with sheave grooves
- Available in 1770 N/mm², 1960 N/mm², 2160 N/mm², or upon customers request



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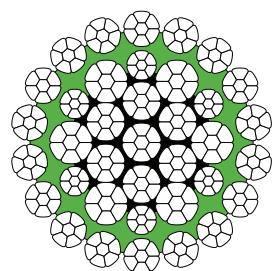
double drum winder



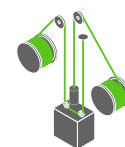
koepe friction winder

verorock P

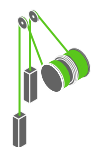
Ideal whenever moisture or highly corrosive shafts require a rope with plastic-infill and good rotational behavior.



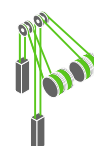
- Rotation-resistant rope construction
- Available in galvanised and bright wire surface
- Available in right hand and left hand
- Available in Lang's lay and Ordinary lay
- Special lubrication available on request
- Available in 1770 N/mm², 1960 N/mm², 2160 N/mm², or upon customers request



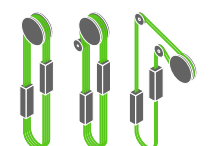
shaft sinking



double drum winder



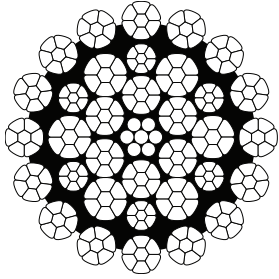
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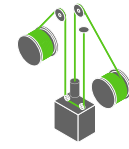
koepe friction winder

verorock

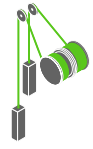
A rope with superb nonrotational properties, ideal for shaft sinking or deep mine drum winders, when bending fatigue performance is needed.



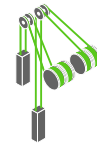
- Rotation-resistant rope construction
- Available in galvanised and bright wire surface
- Available in right hand and left hand
- Available in Lang's lay and Ordinary lay
- Special lubrication available on request
- Available in 1770 N/mm², 1960 N/mm², 2160 N/mm², or upon customers request



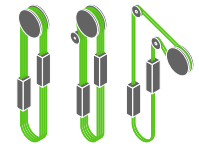
shaft sinking



double drum winder



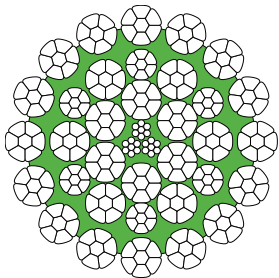
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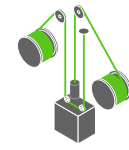
koepe friction winder

verorock P²

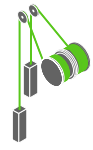
Fully plastic covered and its 16 outer strands provide resistance against abrasion on friction winders. Outstanding bending fatigue results.



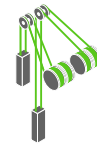
- Rotation-resistant rope construction
- Available in galvanised and bright wire surface
- Available in right hand and left hand
- Available in Lang's lay and Ordinary lay
- Special lubrication available on request
- The plastic layer offers certain construction advantages
- Available in 1770 N/mm², 1960 N/mm², 2160 N/mm²



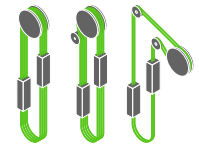
shaft sinking



double drum winder



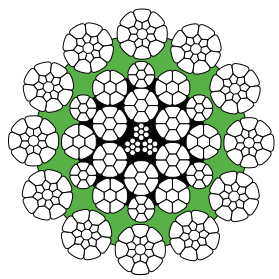
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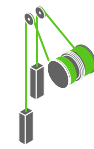
koepe friction winder

verorock 12

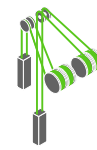
Provides good rotation resistance for mid-deep shafts with a strong abrasion resistance and high bending fatigue results.



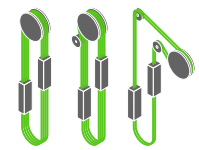
- Rotation-resistant rope construction
- Available in galvanised and bright wire surface
- Available in right hand and left hand
- Available in Lang's lay and Original lay
- Special lubrication available on request
- The plastic layer offers certain construction advantages
- Available in 1770 N/mm², 1960 N/mm², 2160 N/mm², or upon customers request



double drum winder



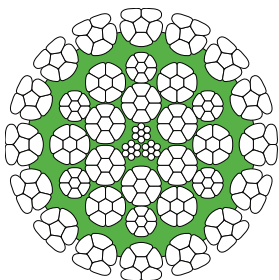
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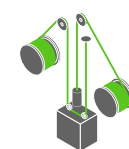
koepe friction winder

verorock XP

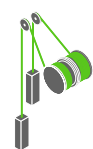
Has the highest breaking load for demanding mining applications with a low rope weight and excellent rope lifetime.



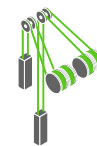
- Rotation-resistant rope construction wire surface
- Available in right hand and left hand
- Available in Lang's lay and Ordinary lay
- Special lubrication available on request
- The plastic layer offers certain construction advantages
- The swaged surface offers higher breaking forces and a better contact behavior
- Available in 1770 N/mm², 1960 N/mm², 2160 N/mm², or upon customers request



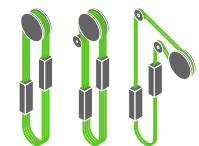
shaft sinking



double drum winder

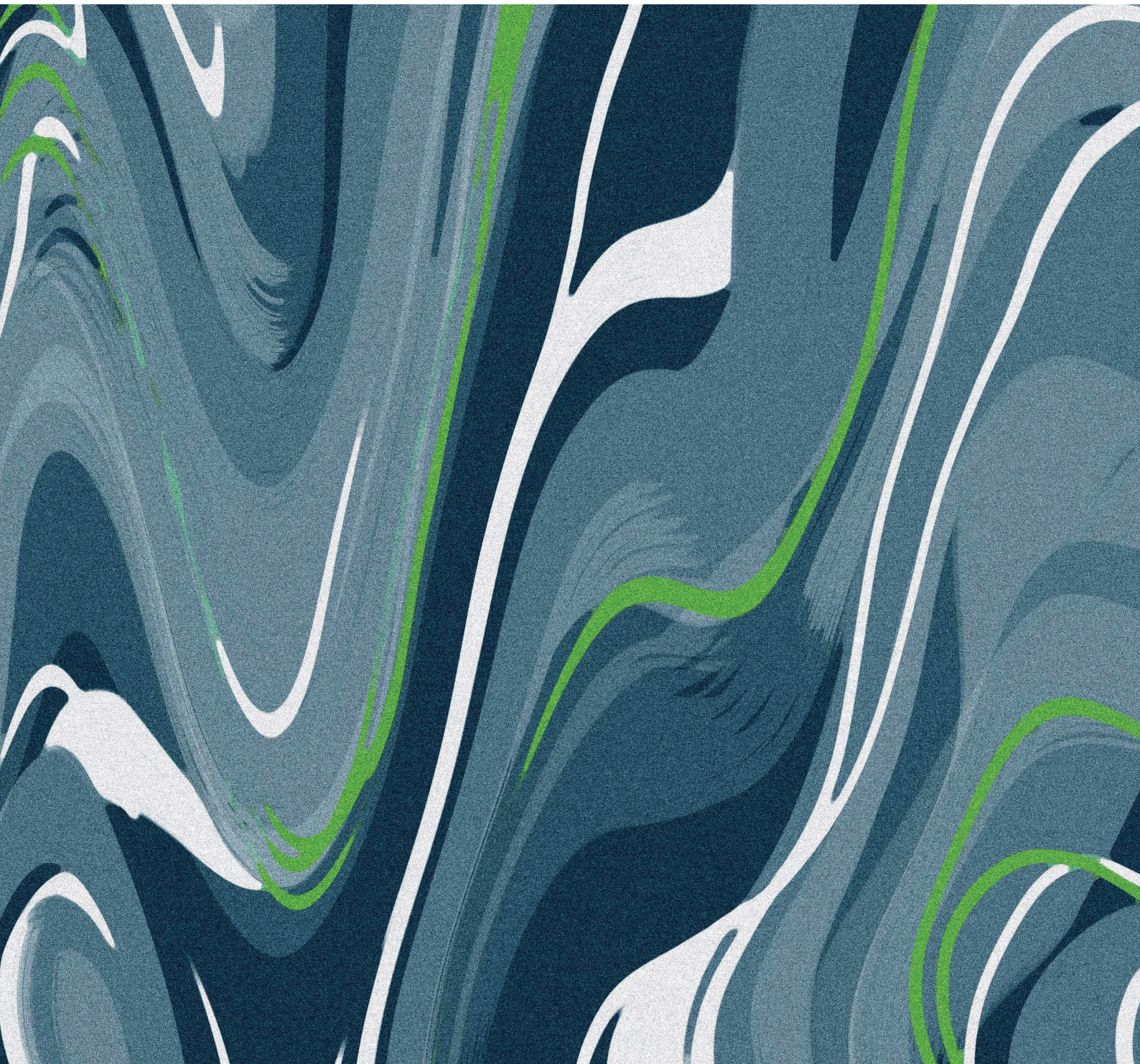


bmr



koepe friction winder

Bullivants



1300 LIFTING

info@bullivants.com
www.bullivants.com

Exclusive Distributor of

verope[®]
MINING