



CONSTRUCTION AND INDUSTRY

SPECIAL STEEL WIRE ROPES



TOGETHER IN MOTION



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WARNING

Using these products may prove hazardous. Therefore, never use our products for purposes other than those they were designed for. Customers must ensure that all persons using these products are familiar with their correct use and the related necessary safety precautions. Please bear in mind that any of these products may inflict harm when used incorrectly or subjected to excessive loads.

TEUFELBERGER SEIL GES.M.B.H.

TOGETHER IN MOTION

Success through perfection. The name TEUFELBERGER stands for a dynamic group of companies with three strategic business divisions and more than 200 years of experience. 750 dedicated employees work for customers in more than 100 countries.

Together in motion. Whether for transport, fixing or securing of people and goods – our ropes, strapping materials and twines provide for movement while keeping things together. But we are also constantly moving in another sense of the word: the quick response to the requirements of our customers as well as the continual improvement, innovation and diversification of our products are inherent to our corporate culture and reflect the dynamics that distinguishes us.

Close cooperation with our customers and suppliers, the creation of synergies offered by the

three technologies as well as the closeness of the family-owned enterprise to its employees are further examples of what makes us unique.

We understand ourselves as a provider of solutions for the optimized use of high-grade products that ensure our international customers that their processes come off smoothly and their objectives are achieved. Superior know-how, new technologies and comprehensive service ensure top quality and reliability. In our three technologies wire rope, fiber rope and extrusion we set standards in more than 100 countries.



WIRE ROPE

- Crane ropes for cranes in the building industry, in harbours, on boats and offshore platforms
- Ropeway ropes for passenger and material ropeways as well as winch ropes for slope groomers
- Rope and safety: equipment for lifting, conveying and securing



FIBER ROPE

- Yachting ropes for motorboats and sailing boats
- Technical fiber ropes for industrial applications, technical winches and forestry applications
- Fall protection: harnesses and ropes for industrial applications, tree care
- Composite Braiding: composite fiber architecture for automotive, aeronautics and general industry



FIBERS & PLASTICS

- Strapping products for automatic packaging machines, for strapping of cans, papers, building materials, wood, fiber bales
- Baler twines for the rational mechanical harvesting of straw and hay

TEUFELBERGER SEIL GES.M.B.H.

SUCCESS THROUGH PERFECTION

TEUFELBERGER Seil Ges.m.b.H. fully concentrates on special high-quality steel wire ropes in all aspects of production, research & development, marketing & sales activities: top quality products are the basis of our success.

We care more for our customers – is the mission of the TEUFELBERGER Seil Ges.m.b.H. Joint development work with OEM's, close cooperation with our suppliers and highly qualified staff ensure that our products fulfill your requirements at 100%.

Two production sites with modern machinery, an own research and development department along with close cooperation with our subsidiaries ensure that our know-how is transferred optimally into your success. From petroleum industry to harbours, building sites and forestry, to ropeways for passengers and goods – TEUFELBERGER's special

steel wire ropes and systems for personal safety are perfectly tailored to fit your field of application.

The power of innovation and quality awareness for the benefit of our customers.

Long-term cooperation with universities and research institutions, and numerous key-users in the aftermarket, stand for our focus on customer requirements. We give research & development top priority which is in a decentralized company structure to exploit synergies. Our quality awareness is evident by fulfilling ISO 9001 as well as compliance to industry-specific standards.

TEUFELBERGER SEIL GES.M.B.H.

FULL POWER AROUND THE CLOCK

The power of innovation and quality awareness for the benefit of our customers. Long-term experience, research & development and exceptional quality have made us one of the leading rope producers in the world.

Expertise

Our special steel wire ropes are designed for fulfilling the requirements of your application in an optimal way. Worldwide reference projects serve to award our work. We issue certification reports for ABS, DNV, API, BV, RINA, GL, LR, RS, NKK, and CGS according to your requirements.

Highest quality

Only high-strength material and state-of-the-art production processes are used for our products.

Service around the clock

Our 24-hour hotline and top service teams ensure that our experts are available within the shortest time possible wherever required.

24-hour hotline: +43 (0) 7242-615-388

Expert consultancy

TEUFELBERGER's network of consultants ensures that expert support is close to you. Our staff is especially trained for your application which translates into cooperative development of the most useful answer to any problems which may occur.

Delivery reliability

TEUFELBERGER's management of orders ensures optimal processing in production and logistics.

Research and development

Increasing customer requirements are challenging us. Our R & D department provides permanent product improvement in terms of safety, reliability and service life.

TEUFELBERGER SEIL GES.M.B.H.

TECHNOLOGIES FOR YOUR BENEFIT

Our know-how provides essential advantages in use and effective cost savings. Our special steel wire ropes achieve outstanding service life, provide best possible safety for persons and devices and reduce maintenance, replacement and organization costs.

PLASTFILL™ INSERT

The lubricated steel core is enclosed in a tight synthetic coat.

- Advantages:**
- long service life through permanent lubrication
 - resistance against pressing and lateral pressure
 - higher breaking forces through reduced friction in the rope

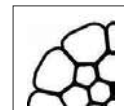
The strands are embedded in the synthetic coat during the stranding process.

- Advantages:**
- exact strand position with consistent interstices for reduced internal abrasion
 - equal load shares at all components due to optimized construction

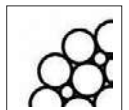
SUPERFILL® COMPACTION TECHNOLOGY

Our compaction method has been developed in close cooperation with universities and independent research institutions. Each rope strand is compacted in a specific procedure with the aim of significantly improving the rope's properties:

- up to 30% more breaking forces than non-compacted ropes
- prolonged service life due to reduced nominal stress
- use of smaller rope diameters of the same breaking load (important for new crane constructions)
- smooth rope surface result in reduced abrasion on rope, sheaves and drums
- a continuous constant wire rope diameter tolerance for long lengths



With
SUPERFILL®



Without
SUPERFILL®

GALVANIZED STEEL WIRES

Our steel wires are galvanized before they are drawn in order to achieve high wire precision. This ensures optimal stability and service life. Galvanization in combination with our PLASTFILL™ technology provides for extreme resistance against corrosion.



TEUFELBERGER SEIL GES.M.B.H.

HIGH-PERFORMANCE STEEL WIRE ROPES

High-performance steel wire ropes made by TEUFELBERGER belong to the very best worldwide. To make it easier for our customers to choose the right steel rope for their specific purpose, we have now divided our existing product portfolio into three separate product classes: EVOLUTION, PERFECTION, and EXECUTION.

These product classes differ in their technical features, achieve different performance levels, and are therefore marketed in different price segments. TEUFELBERGER's new product classification makes it easier for you to find the right steel wire rope for your specific purpose. Yet, no matter which rope you choose, you will always get a high-quality high-performance TEUFELBERGER product which, as usual, offers you great value for money.

Products of the various product classes are characterized by the following features:

EVOLUTION

The ropes of our premium class are global market leaders in their respective product categories. Constituting an ideal combination of highest breaking forces, exceptionally long service lives in the roughest conditions, and top-level performance for the respective types of use, they achieve a substantial improvement of the total cost of ownership (TCO) – in spite of the required higher initial investment. Intensive in-house and external testing, both on our testing facility for crane ropes and also in cooperation with our partners (leading crane manufacturers), form the basis for continued de-

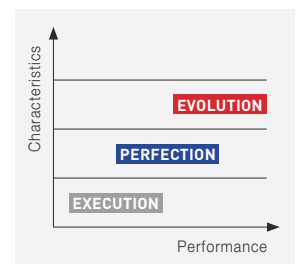
velopment and improvement in this product class. EVOLUTION ropes made by TEUFELBERGER are your product of choice if highest performance is what you are looking for.

PERFECTION

High-performance steel wire ropes of this product class also feature extremely high breaking forces that are usually higher than those of comparable competitor products. In addition, service life and performance were improved considerably. In view of the somewhat lower cost of investment as compared to our EVOLUTION class ropes, what you get is excellent value for money and high operational reliability in rough environments.

EXECUTION

Products of this category are special steel wire ropes as well, offering a significantly better performance and higher breaking forces than conventional standard ropes. Generally, these ropes are compacted, have an optimized structure, and constitute an excellent choice if what you are looking for is a marked improvement in performance as compared to standard ropes. The lower cost of investment provides an ideal springboard for your entry into the world of „special steel wire ropes“.



ROPES FOR TOWER CRANES



Safety and reliability are vital characteristics for ropes used in building construction. The trend toward utilizing equipment at the limits of its capacity leads to unexpected downtimes caused by rope problems and, as a consequence, generates extra costs. 24 hours a day, 365 days a year, TEUFELBERGER ropes stand the test around the globe on tower cranes of industry-leading manufacturers.

YOUR BENEFITS

■ Utmost safety

Even with enormous lifting heights, there is virtually no rotation of the hook block on our non-rotating hoisting ropes. The high breaking forces are achieved thanks to CAD-optimized rope design, parallel lay of the inner rope, and SUPERFILL® compaction.

■ Long service life

The computer-optimized rope geometry and the ideal distribution of the load between the inner and the outer rope layers ensure the outstanding durability of our ropes. Grease inside the rope provides for optimum lubrication. Many of these ropes come with a PLASTFILL™ insert.

■ Good value for money

Their high minimum breaking force allows crane designers to use thinner ropes and smaller rope sheaves and drums.

■ Excellent winding performance

on rope drums thanks to the ropes' high form stability against lateral pressure.

■ Handling

Our ropes are flexible. This makes them easy to handle.

PRODUCT PORTFOLIO

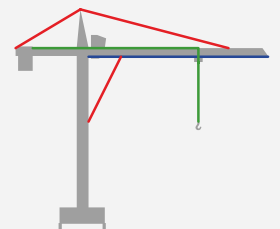
TOWER CRANES

■ **EVOLUTION TK 17*** – rotation-resistant lang's lay rope featuring SUPERFILL® compaction technology, suited for hoisting to extreme heights and high loads

■ **PERFECTION TK 15*** – rotation-resistant regular lay or lang's lay design, specifically suited for hoisting to great heights

■ **612 W** – 6-strand regular lay rope; suited for use as trolley rope and mounting rope

■ **QS 816 V** – 8-strand regular lay rope, suited as guyline, stay rope, and as mounting rope



* Lang's lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical, non-destructive checks.

ROPES FOR TRUCK-MOUNTED AND CRAWLER CRANES



The capacity of mobile cranes continues to increase. In this context, the focus clearly is on greater flexibility, the handling of even heavier loads, and on boosting performance. TEUFELBERGER makes high-performance hoisting ropes featuring highest breaking forces and perfectly suited for multi-layer winding.

YOUR BENEFITS

- **Utmost safety**
Extremely high breaking forces, especially due to SUPERFILL® compaction technology, guarantee utmost safety for your application.
- **Optimum winding performance**
thanks to excellent form stability against lateral pressure.
- **No rotation**
Our non-rotating TK ropes ensure safety at work even for great lifting heights.
- **Longer service life**
Grease inside the rope ensures permanent lubrication and extend the lifetime.
- **Expertise**
Our long-standing experience in the crane industry allows us to tailor our products to your specific needs.

PRODUCT PORTFOLIO

TRUCK-MOUNTED AND CRAWLER CRANES

Non-rotating lang's lay ropes used as hoisting ropes:

■ **EVOLUTION TK 17*** featuring SUPERFILL® compaction technology, suited for extreme lifting heights and high loads

■ **PERFECTION TK 15*** with inner rope in SUPERFILL® compaction technology



* Lang's lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical, non-destructive checks.

ROPES FOR CIVIL ENGINEERING



For a top-level performance, various applications of relevance to civil engineering such as drilling, trench-cutting, grabbing, or pile-driving require rope types tailored to the specific purpose. Especially in the field of civil engineering, TEUFELBERGER brings long-standing experience obtained by cooperating with leading equipment manufacturers and prestigious end customers.

YOUR BENEFITS

■ Utmost safety

TK ropes are non-rotating. Even with extreme lifting heights, there is virtually no rotation of the hook block. The high breaking forces are achieved thanks to the use of cutting-edge software solutions in rope design, parallel lay of the inner rope, and SUPERFILL® compaction.

■ Long service life

The computer-optimized rope geometry and the ideal distribution of the load between the inner and the outer rope layers ensure the outstanding durability of our ropes. Grease inside the rope provides for optimum lubrication. Many of these ropes come with a PLASTFILL™ insert.

■ Good value for money

Their high minimum breaking force allows crane designers to use thinner ropes and smaller rope sheaves and drums.

■ Excellent winding performance

on rope drums thanks to the ropes' high form stability against lateral pressure.

■ Handling

Our ropes are flexible. This makes them easy to handle.

PRODUCT PORTFOLIO

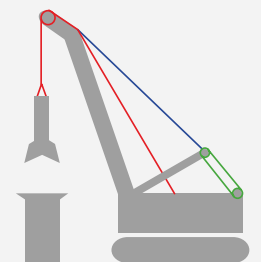
BORED PILE GRAB

■ **EVOLUTION TK 16** – rotation-resistant regular lay rope, suited for use as hoisting rope and closing rope

■ **QS 816 V** – 8-strand regular lay rope, suited for use as stay rope and boom stay rope (neck rope)

■ **QS 816 V(G)*** – 8-strand regular lay or langs lay rope suited for use as luffing rope

■ **EVOLUTION Q8*** – 8-strand regular lay or langs lay rope suited for use as luffing rope

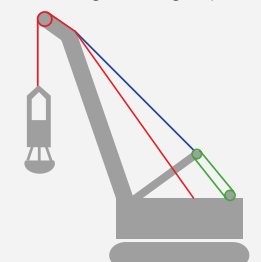


DIAPHRAGM WALL GRAB

■ **QS 816 V** – 8-strand regular lay rope, suited for use as luffing rope, hoisting rope, and hoisting/closing rope

■ **QS 816 V(G)*** – 8-strand regular lay or langs lay rope, suited for use as luffing rope

■ **EVOLUTION Q8*** – 8-strand regular lay or langs lay rope, suited for use as luffing rope



* Langs lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical, non-destructive checks



PRODUCT RANGE

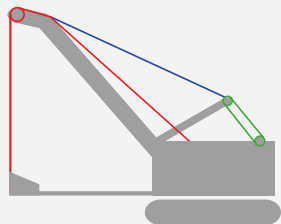
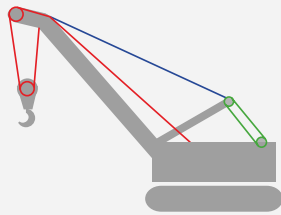
CABLE DREDGER

■ **EVOLUTION TK 16*** – rotation-resistant regular lay or langs lay rope, suited for use as hoisting rope

■ **QS 816 V** – 8-strand regular lay rope, suited for use as stay rope and boom stay rope (neck rope)

■ **QS 816 V(G)*** – 8-strand regular lay or langs lay rope, suited for use as luffing rope

■ **EVOLUTION Q8*** – 8-strand langs lay rope, suited for use as luffing rope



SLURRY TRENCH CUTTER

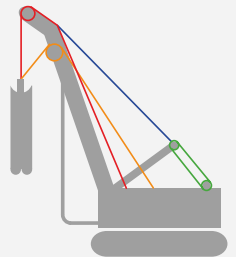
■ **EVOLUTION TK 16*** – rotation-resistant regular lay or langs lay rope, suited for use as hoisting rope

■ **PERFECTION TK 15*** – rotation-resistant regular lay and langs lay rope, suited for use as hoisting rope

■ **QS 816 V** – 8-strand regular lay rope, suited for use as stay rope and luffing rope (neck rope)

■ **QS 816 V(G)*** – 8-strand regular lay or langs lay rope suited for use as luffing rope

■ **EVOLUTION Q8*** – 8-strand langs lay rope suited for use as luffing rope

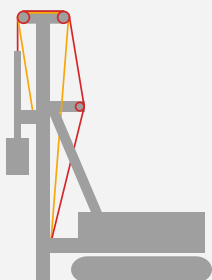


ROTARY DRILLING RIG

■ **EVOLUTION TK 16*** – rotation-resistant regular lay or langs lay rope, suited for use as hoisting rope

■ **PERFECTION TK 15** – rotation-resistant regular lay rope, specifically suited for use as hoisting rope and auxiliary hoisting rope

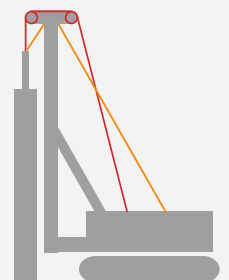
■ **QS 816 V** – 8-strand regular lay rope suited for use as stay rope and boom stay rope (neck rope)



PILE DRIVER

■ **EVOLUTION TK 16** – rotation-resistant regular lay rope suited for use as hoisting rope

■ **PERFECTION TK 15*** – rotation-resistant regular lay and langs lay rope suited for use as hoisting rope and auxiliary hoisting rope



* Langs lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical, non-destructive checks.

ROPES FOR SCRAPER INSTALLATIONS AND PONTOON CRANES



The rough operating conditions cable dredgers need to cope with in gravel mining put the ropes to the test, especially in terms of flexibility and resistance to shock-like loads.

YOUR BENEFITS

- **Utmost operational safety**
Certain ropes for cable dredgers come with a fiber insert. This insert helps ensure a greater resistance to shock-like loads frequently encountered in gravel mining.
- **Optimized value for money**
An ideal cost/benefit ratio can only be achieved with top quality steel wire ropes. TEUFELBERGER's quality products will definitely help you optimize your total costs and boost performance at the same time.
- **Utmost safety**
Our ropes provide extremely high breaking forces, as necessary. They ensure the best possible safety for your application.
- **Expertise**
Cooperating closely with leading manufacturers and users, we are familiar with the special requirements for cable dredgers. Therefore, we are in a position to attune our products perfectly to your needs.

PRODUCT RANGE

PS 610 F* 6-strand lang's lay rope in SUPERFILL® design with plastified fiber insert

QS 816 V 8-strand regular lay rope in SUPERFILL® design with PLASTIFILL™ technology

EVOLUTION Q8 8-strand regular lay rope, suited as hoisting rope

* Lang's lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical, non-destructive checks.

ROPES FOR INDOOR CRANES AND GANTRY CRANES



Safety and reliability are vital characteristics for steel wire ropes used in industrial installations such as indoor or gantry cranes. 24 hours a day, 365 days a year. Unexpected failures of an installation may shut down entire production lines and end up being quite costly. Additional standby facilities are rarely, if ever, available. Ropes need to have large service life reserves lasting beyond the next scheduled inspection. We are experts when it comes to meeting these criteria.

YOUR BENEFITS

■ Reliability

Being a manufacturer with centuries of experience, we have specific expertise regarding our customers' needs. Therefore, we are able to develop ropes guaranteeing the best possible service life.

■ Utmost operational safety

Extremely high breaking forces, achieved in particular through SUPERFILL® compaction technology, ensure utmost safety for your application.

■ Bending cycle

Our steel wire ropes specifically developed for your needs offer excellent bending-cycle characteristics.

■ Shock resistance

Thanks to its radial-elastic rope structure, our 8-strand EVOLUTION Q8 in particular effectively absorbs dynamic forces and, as a result, achieves top-level operational performance.

■ Total cost of ownership

The combination of these factors significantly increases the life span of your rope, shortens periods of standstill, and reduces maintenance costs. At the bottom line, what you get is a clear reduction of total costs.








PRODUCT RANGE

EVOLUTION Q8 8-strand regular lay rope, suited for use as hoisting rope




QS 816 V 8-strand regular lay rope, suited for use as hoisting rope in multi-layer and single-layer winding applications for indoor and gantry cranes, and for warehouse winches and inclined hoists

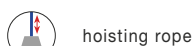
RECOMMENDED STEEL WIRE ROPES



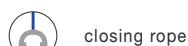
	Rope Designation	RCN	Diameter	Description	Superfill®		Plastfill™	
					inside	outside		
	EVOLUTION EVOLUTION TK 16*	23-1 23-2	12-30 mm 31-42 mm	One of the best hoisting ropes with great breaking forces and high flexibility!	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	EVOLUTION EVOLUTION TK 17*	23-1 23-2	12-30 mm 31-42 mm	Top hoisting rope without PLASTFILL™ insert for maximum flexibility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	PERFECTION PERFECTION TK 15*	23-2	8-22 mm	High minimum breaking forces, increased service life, and optimal rotating behavior – especially with large lifting heights	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	EVOLUTION QS 816 V (G)*	09	10-48 mm	Best bending-cycle performance and high form stability to lateral pressure: therefore, optimum performance in multi-layer winding applications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	EVOLUTION EVOLUTION Q8*	06	12-48 mm	Particularly long service life, increased minimum breaking force and perfect functioning in multi-layer winding applications	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	EXECUTION PS 610 F*	04	22-40 mm	The perfect hauling rope with fiber insert for gravel mining and scraper installations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	EXECUTION 612 W	04	4-12 mm	Very low-twist and low-tension rope; the ideal mounting rope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

RECOMMENDED STEEL WIRE ROPES FOR CIVIL ENGINEERING

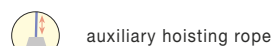
	Rope Designation	RCN	Diameter	Description	Superfill®		Plastfill™	
					inside	outside		
	EVOLUTION EVOLUTION TK 16*	23-1 23-2	12-30 mm 31-42 mm	One of the best hoisting ropes with the greatest breaking forces and high flexibility!	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	EVOLUTION EVOLUTION TK 17*	23-1 23-2	12-30 mm 31-42 mm	Top-notch hoisting rope without PLASTFILL™ insert for maximum flexibility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	EVOLUTION QS 816 V (G)*	09	10-48 mm	Best bending-cycle performance and high form stability to lateral pressure: therefore, best performance in multi-layer winding applications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	



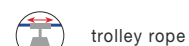
hoisting rope



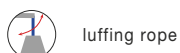
closing rope



auxiliary hoisting rope



trolley rope



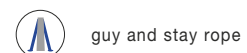
luffing rope



hauling rope



pull-on/mounting rope



guy and stay rope



Truck-mounted and crawler cranes

Tower cranes

Gantry cranes, bridge cranes, and industrial installations

Scraper installations

Cable dredgers

Diaphragm wall grabs

Rotary drilling rigs

Bored pile grabs

Slurry trench cutters

Pile drivers

preferred choice

alternative choice

NOTE!

Our rope recommendations are non-binding empirical values. Please be sure to take the special characteristics of your installation into account. Do not hesitate to contact us. We will help you find the best possible rope solution for your needs.

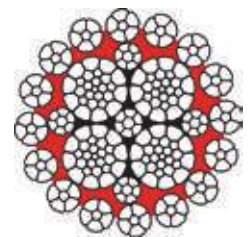
* Langs lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical non-destructive checks.



EVOLUTION TK 16



Revolutionary design, high-quality materials and perfectly coordinated production processes – EVOLUTION TK 16 combines all the characteristics your application requires: highest breaking forces and best flexibility.



YOUR BENEFIT

- **Highest breaking forces worldwide**
This new type of rope structure and the SUPERFILL® compaction technology provide best breaking forces worldwide for strand-compacted ropes. This results in increased safety when in operation.
- **Lowest twist at high torsion stability**
The excellent torsion behavior of this rope facilitates the easy transportation of loads.
- **Increased flexibility**
The flexibility of this rope facilitates optimal spooling conditions for multi-layer winding enabling extremely challenging lifting operations to be performed. The rope also absorbs high dynamic strain.
- **Longer service life, increased profitability**
The structure of this rope is intended for long-term use. And, by further improving the process of production the high quality of our hoist rope production has been increased. The PLASTIFILL™ insert between the inner rope and outer strands provides additional protection against corrosion and ensures outstanding resistance against extreme environmental conditions. Your decision to choose EVOLUTION TK 16 affirms increased productivity, long-term cost reduction and added competitiveness.

FIELD OF APPLICATION

Hoist rope for all crane installations such as:

- Offshore cranes
- Shipboard cranes
- Cable-dredgers
- Special civil engineering facilities
- and more

SPECIFICATIONS MULTI-LAYER WINDING

Ordinary lay (also available in lang's lay), right or left lay
 12 – 30 mm: 16 x K6 – EPIWRC (K), RCN 23-1
 32 – 42 mm: 16 x K7 – EPIWRC (K), RCN 23-2
 Rope grades: 1770 / 1960 / 2160
 Number of wires in the outer strands: 96 (12 – 30 mm),
 112 (32 – 42 mm)



SUPERFILL®

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Nominal Ø	Weight		Minimum breaking force at rope grade					
			1770		1960		2160	
mm (inch)	kg/m	lbs	kN	lbs	kN	lbs	kN	lbs
8,00 (= 5/16")	0,34	0,75	54,0	12.140	59,0	13.264	64,0	14.388
10,00	0,50	1,10	82,0	18.434	91,0	20.458	98,0	22.031
12,00	0,74	1,63	120,0	26.977	133,0	29.900	144,0	32.372
13,00	0,86	1,90	141,0	31.698	156,0	35.070	170,0	38.218
14,00 (= 9/16")	1,01	2,23	163,0	36.644	181,0	40.690	197,0	44.287
15,00	1,16	2,56	194,0	43.613	215,0	48.334	231,0	51.931
16,00 (= 5/8")	1,32	2,91	221,0	49.683	244,0	54.853	263,0	59.125
17,00	1,50	3,31	241,0	54.179	267,0	60.024	290,0	65.195
18,00	1,68	3,70	279,0	62.722	309,0	69.466	333,0	74.861
19,00 (= 3/4")	1,85	4,08	312,0	70.140	345,0	77.559	371,0	83.404
20,00	2,08	4,59	338,0	75.985	374,0	84.079	401,0	90.148
21,00	2,25	4,96	373,0	83.854	413,0	92.846	444,0	99.815
22,00 (= 7/8")	2,51	5,53	408,0	91.722	452,0	101.614	487,0	109.482
22,23 (= 7/8")	2,54	5,60	426,0	95.769	472,0	106.110	506,0	113.753
23,00	2,75	6,06	445,0	100.040	493,0	110.831	533,0	119.823
24,00	2,96	6,53	483,0	108.583	535,0	120.273	580,0	130.389
25,00	3,15	6,94	537,0	120.722	595,0	133.761	639,0	143.653
25,40 (= 1")	3,31	7,30	541,0	121.622	599,0	134.661	644,0	144.777
26,00	3,48	7,67	567,0	127.467	627,0	140.955	675,0	151.746
27,00	3,74	8,25	609,0	136.909	674,0	151.521	725,0	162.986
28,00	4,05	8,93	655,0	147.250	725,0	162.986	780,0	175.351
28,57 (= 1 1/8")	4,14	9,13	668,0	150.172	740,0	166.359	796,0	178.948
29,00	4,27	9,41	701,0	157.591	777,0	174.677	835,0	187.715
30,00	4,62	10,19	749,0	168.382	830,0	186.591	on request	
32,00 (= 1 1/4")	5,24	11,55	853,0	191.762	944,0	212.220	1.016,0	228.405,8
34,00	5,90	13,01	958,0	215.367	1.061,0	238.522	on request	
36,00	6,65	14,66	1.072,0	240.995	1.187,0	266.848	on request	
38,00 (= 1 1/2")	7,35	16,20	1.237,0	278.089	1.369,0	307.763	on request	
40,00	8,13	17,92	1.317,0	296.073	1.458,0	327.771	on request	
42,00	8,97	19,78	1.452,0	326.423	1.608,0	361.493	on request	

EVOLUTION TK 16 Technical Data

⚠ NOTE!

Our rope recommendations are non-binding empirical values. Please be sure to take the special characteristics of your installation into account. Do not hesitate to contact us. We will help you find the best possible rope solution for your needs.

Langs lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical checks by an expert.

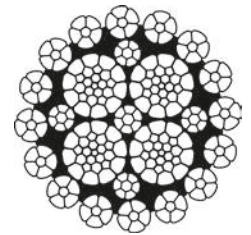
Other diameters are available on request.



EVOLUTION TK 17



Like **EVOLUTION TK 16**, **EVOLUTION TK 17** features – thanks to its structure – ideal all-round characteristics paired with highest breaking forces. **EVOLUTION TK 17** was specifically designed for heavy-duty use in multi-layer winding applications, especially also for small diameter drums.



YOUR BENEFITS

- **Highest breaking forces worldwide**
Its structure and SUPERFILL® compaction technology give this rope the world’s highest breaking forces for compacted-strand ropes. This greatly enhances operational safety.
- **Minimal rotation and high torsional stability**
The rope’s superior rotational characteristics ensure the smooth transportation of loads.
- **Highest flexibility**
The rope’s special structure and the fact that it does not include a plastic insert make it more flexible and provide it with improved winding characteristics, even when wound into a large number of layers. At the same time, it boasts excellent form stability against lateral pressure. What is more, the rope is capable of absorbing high dynamic loads.
- **Longer service life, higher profitability**
EVOLUTION TK 17 is designed for long-term use. In this rope, upgraded and refined production processes have taken the well-known high product quality of TEUFELBERGER hoisting ropes to a new level. By opting for EVOLUTION TK 17, you will choose the path toward increased productivity, long-term cost savings, and enhanced competitiveness.

FIELD OF APPLICATION

Specifically developed for multi-layer winding applications, this hoisting rope is used on truck-mounted cranes, crawler cranes, and

- tower cranes with extremely great lifting heights
- in civil engineering

SPECIFICATIONS

regular lay (also available as Langs lay version)
 12-30 mm: 16 x K6 – PIWRC(K)
 32-42 mm: 16 x K7 – PIWRC(K)
 rope grade: 1770 / 1960 / 2160
 number of wires in outer strands: 96



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Nominal Ø	Weight		Minimum breaking force at rope grade					
			1770		1960		2160	
mm (inch)	kg/m	lbs	kN	lbs	kN	lbs	kN	lbs
10	0,48	1,05	82,0	18.435	91,0	20.459	98,0	22.032
12,00	0,72	1,59	120,0	26.978	133,0	29.901	144,0	32.374
13,00	0,83	1,83	141,0	31.699	156,0	35.072	170,0	38.219
14,00 (=9/16")	0,97	2,14	163,0	36.645	181,0	40.692	197,0	44.289
15,00	1,11	2,45	188,0	42.266	208,0	46.763	226,0	50.809
16,00 (=5/8")	1,27	2,8	214,0	48.112	236,0	53.058	257,0	57.779
17,00	1,42	3,13	241,0	54.182	267,0	60.027	290,0	65.198
18,00	1,61	3,54	271,0	60.926	300,0	67.446	325,0	73.067
19 (=3/4")	1,78	3,92	302,0	67.896	334,0	75.090	362,0	81.385
20,00	2,02	4,45	338,0	75.989	374,0	84.083	401,0	90.153
21,00	2,23	4,92	373,0	83.858	413,0	92.851	444,0	99.820
22,00 (7/8")	2,39	5,27	408,0	91.727	452,0	101.619	487,0	109.487
23,00	2,61	5,75	445,0	100.045	493,0	110.836	533,0	119.829
24,00	2,83	6,24	483,0	108.588	535,0	120.279	580,0	130.396
25,00	3,11	6,86	524,0	117.806	580,0	130.395	624,0	140.288
25,40 (=1")	3,16	6,96	527,0	118.480	584,0	131.295	628,0	141.187
26,00	3,34	7,36	567,0	127.473	627,0	140.962	675,0	151.754
27,00	3,61	7,96	609,0	136.915	674,0	151.529	725,0	162.995
28,00	3,89	8,57	655,0	147.257	725,0	162.995	780,0	175.360
28,57 (= 1 1/8")	3,91	8,62	659,0	148.156	730,0	164.119	785,0	176.484
29,00	4,14	9,13	701,0	157.599	777,0	174.685	835,0	187.725
30,00	4,49	9,9	749,0	168.390	830,0	186.601	893,0	200.764
32,00 (=1 1/4")	5,04	11,11	853,0	191.771	944,0	212.230	1.016,0	228.417
34,00	5,62	12,39	958,0	215.377	1.061,0	238.534	1.141,0	256.520

EVOLUTION TK 17 Technical Data

⚠ NOTE!

Our rope recommendations are non-binding empirical values. Please be sure to take the special characteristics of your installation into account. Do not hesitate to contact us. We will help you find the best possible rope solution for your needs.

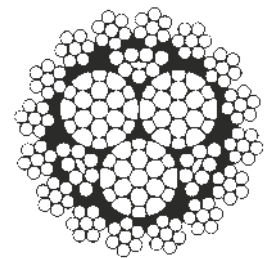
Langs lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical checks by an expert.

Other diameters are available on request.



PERFECTION TK 15

Rotation is a thing of the past – the future is called PERFECTION TK 15. Check out this perfect combination of exceptional torsional stability and high breaking strength, excellent durability and optimum spooling. The new generation of high-performance hoisting ropes for construction cranes has arrived. **PERFECTION TK 15. Non-rotating. Cost-efficient. Safe.**



YOUR BENEFIT

- **Higher minimum breaking force (approx. + 10%)**
An entirely new rope construction, combined with higher compaction, substantially enhanced breaking strength vis-à-vis TK 12 and comparable competitor products.
- **Longest service life (approx. + 15%)**
In the crane rope testing facility, the new PERFECTION TK 15 reaches – compared to its predecessor product – a 15% longer service life until reaching the discard criteria. Also in practical use, a significant improvement of the life time compared to competitor products was observed.
- **Excellent torsional behavior and best performance**
PERFECTION TK 15 achieves a markedly improved torsional behavior, especially at large hoisting heights (e.g. on tower cranes) and heavy loads. This allows the user to move goods with high precision. Above all, even in difficult conditions the rope winds up perfectly on the drum and ensures long-term and faultless continuous use.
- **Increased flexibility in handling**

FIELD OF APPLICATION

- Hoisting rope for**
- Tower cranes
 - Mobile cranes
 - Cable-operated excavators
 - Pile drivers

SPECIFICATIONS

MULTI-LAYER WINDING

Ordinary and lang's lay, right or left lay
16 x 7-IWRC (K)
8 – 22 mm: RCN 23-2
Rope grades: 1770 / 1960 / 2160
Number of wires in the outer strands: 112



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Nominal Ø	Weight		Minimum breaking force at rope grade					
			1770		1960		2160	
mm (inch)	kg/m	lbs	kN	lbs	kN	lbs	kN	lbs
7,00	0,23	0,51	36,5	8.206	40,4	9.082	42,9	9.644
8,00 (= 5/16")	0,31	0,68	47,6	10.701	52,80	11.870	56,00	12.589
9,00	0,37	0,82	60,3	13.556	66,8	15.017	70,8	15.916
9,20	0,39	0,86	62,9	14.140	69,7	15.669	76,8	17.265
10,00	0,45	0,99	74,4	16.726	82,4	18.524	87,4	19.648
11,00 (= 7/16")	0,54	1,19	90,0	20.233	100,0	22.481	106,0	23.830
12,00	0,64	1,41	108,0	24.279	119,0	26.752	126,0	28.326
13,00	0,81	1,79	126,0	28.326	140,0	31.473	148,0	33.272
14,00 (= 9/16")	0,91	2,01	146,0	32.822	162,0	36.419	172,0	38.667
15,00	1,07	2,36	167,0	37.543	186,0	41.814	197,0	44.287
16,00 (= 5/8")	1,16	2,56	191,0	42.938	211,0	47.435	224,0	50.357
17,00	1,32	2,91	215,0	48.334	239,0	53.729	253,0	56.877
18,00	1,46	3,22	241,0	54.179	267,0	60.024	284,0	63.846
19,00 (= 3/4")	1,64	3,62	269,0	60.474	298,0	66.993	316,0	71.040
20,00	1,88	4,14	298,0	66.993	330,0	74.187	350,0	78.683
21,00	2,01	4,43	328,0	73.737	364,0	81.830	386,0	86.776
22,00 (= 7/8")	2,20	4,85	360,0	80.931	399,0	89.699	423,0	95.094
23,00	2,40	5,29	394,0	88.575	436,0	98.017	463,0	104.087
24,00	2,69	5,93	428,0	96.218	475,0	106.784	504,0	113.304

PERFECTION TK 15 Technical Data

⚠ NOTE!

Our rope recommendations are non-binding empirical values. Please be sure to take the special characteristics of your installation into account. Do not hesitate to contact us. We will help you find the best possible rope solution for your needs.

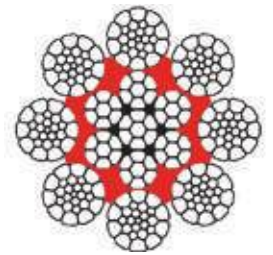
Langs lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical checks by an expert.

Other diameters are available on request.



QS 816 V (G)

Extreme resistance to negative external influences distinguish this rope from others. TEUFELBERGER's SUPERFILL® compaction technology ensures high breaking forces, translating to optimum operational safety. The design of the inner rope and the PLASTFILL™ result into best stability against lateral pressure.



YOUR BENEFIT

- **Reliability and safety** during operation – due to extremely high breaking forces
- **Cost reduction** – due to reduced rope abrasion, longer service life and reduced maintenance intervals
- **Trouble-free operation** – resulting from excellent absorption of knocks and vibrations
- **Long service life** – due to smoother rope surfaces
- **Optimal winding characteristics** – resulting from high form stability against lateral pressure
- **Improved permanent lubrication** – due to PLASTFILL™ insert

FIELD OF APPLICATION

- **Hoist rope** for mobile harbour cranes or container cranes
- **Boom hoist rope** for offshore cranes, shipboard cranes or cable-dredgers
- **Hoist, grab and pendant rope** for diggers and devices for civil engineering
- **Guy rope** for tower yarders
- **Carrying rope** for wood liners
- **Hoist rope** for cable crane installations

SPECIFICATIONS

MULTI-LAYER WINDING

QS 816 V in ordinary lay, QS 816 V G in lang's lay
 10 – 48 mm: 8 x K26WS EPIWRC (K), left and right lay
 10 – 48 mm: RCN 9
 Rope grades: 1770 / 1960 / 2160
 Number of wires in the outer strands: 208



SUPERFILL®

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Nominal Ø	Weight		Minimum breaking force at rope grade					
			1770		1960		2160	
	mm (inch)	kg/m	lbs	kN	lbs	kN	lbs	kN
10,00	0,46	1,01	81,0	18.209,5	89,0	20.008	98,0	22.031
11,00 (= 7/16")	0,55	1,21	97,0	21.806	107,0	24.055	118,0	26.527
12,00	0,69	1,52	117,0	26.303	129,0	29.000	143,0	32.148
13,00	0,81	1,79	141,0	31.698	156,0	35.070	172,0	38.667
14,00 (= 9/16")	0,93	2,05	162,0	36.419	179,0	40.241	198,0	44.512
15,00	1,06	2,34	185,0	41.590	205,0	46.086	226,0	50.807
16,00 (= 5/8")	1,20	2,65	210,0	47.210	232,0	52.156	256,0	57.551
17,00	1,35	2,98	235,0	52.830	261,0	58.675	287,0	64.520
18,00	1,55	3,42	263,0	59.125	291,0	65.419	321,0	72.164
19,00 (= 3/4")	1,71	3,77	302,0	67.892	335,0	75.311	369,0	82.954
20,00	1,89	4,17	330,0	74.187	365,0	82.055	on request	
21,00	2,15	4,74	374,0	84.079	414,0	93.071	457,0	102.738
22,00 (= 7/8")	2,34	5,16	408,0	91.722	451,0	101.389	on request	
23,00	2,54	5,60	445,0	100.040	492,0	110.606	543,0	122.071
24,00	2,75	6,06	467,0	104.986	517,0	116.226	570,0	128.141
25,00	2,97	6,55	518,0	116.451	574,0	129.040	633,0	142.304
25,40 (= 1")	3,02	6,66	528,0	118.699	584,0	131.288	644,0	144.777
26,00	3,19	7,03	555,0	124.769	615,0	138.257	on request	
27,00	3,51	7,74	595,0	133.761	659,0	148.149	727,0	163.436
28,00	3,72	8,20	656,0	147.475	726,0	163.211	on request	
28,57 (= 1 1/8")	3,98	8,77	672,0	151.072	745,0	167.483	820,0	184.343
29,00	3,98	8,77	694,0	156.017	768,0	172.653	847,0	190.413
30,00	4,37	9,63	764,0	171.754	846,0	190.188	on request	
31,00	4,62	10,19	778,0	174.901	862,0	193.785	on request	
32,00 (= 1 1/4")	4,90	10,80	864,0	194.235	957,0	215.142	on request	
33,00	5,15	11,35	893,0	200.754	989,0	222.336	on request	
34,00	5,59	12,32	945,0	212.444	1.046,0	235.150	on request	
36,00	6,36	14,02	1.071,0	240.770	1.186,0	266.623	on request	
38,00 (= 1 1/2")	7,03	15,50	1.222,0	274.716	1.354,0	304.391	on request	
40,00	7,81	17,22	1.342,0	301.694	1.486,0	334.066	on request	
41,00	8,12	17,90	1.382,0	310.686	1.531,0	344.182	on request	
42,00	8,60	18,96	1.482,0	333.167	1.641,0	368.911	on request	
44,00	9,24	20,37	1.596,0	358.795	1.768,0	397.462	on request	
46,00	10,21	22,51	1.760,0	395.664	1.949,0	438.153	on request	
48,00	10,78	23,77	1.848,0	415.447	2.046,0	459.959	on request	
50,00	12,36	27,25	1.987,0	446.695	2.200,0	494.580	on request	

QS 816 V (G)

Technical Data

⚠ NOTE!

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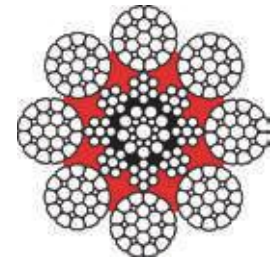
Langs lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical checks by an expert.

Other diameters are available on request.



EVOLUTION Q8

Endurance is everything. EVOLUTION Q8 – the high-performance hoisting rope for harbour cranes and industrial applications – impresses with its exceptionally long service life and high breaking strength. Due to its innovative outer compaction. EVOLUTION Q8. Lasts much longer!



YOUR BENEFIT

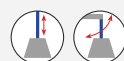
- **Highest service life (up to + 40%)**
 Compared to conventional and similar products, our new EVOLUTION Q8 exhibits, in the test lab as well as in practical use, a service life until reaching the discard criteria, which is up to 40% longer, especially with single-layer winding.
- **Higher minimum breaking force (approx. + 5%)**
 Due to an innovative rope design in combination with compacted outer strands, the breaking strength was increased considerably compared to conventional 8x25 steel ropes (approx. + 20%) and vis-à-vis competitor products (approx. + 5%).
- **Best performance with multi-layer winding**
 As a result of the compacted outer strands, EVOLUTION Q8 is ideal for multi-layer winding – even under difficult conditions. This permits its long and faultless use in permanent operation and helps reducing downtime to a minimum.

FIELD OF APPLICATION

- Van carrier
- Harbour mobile cranes
- RTG cranes
- RMG cranes
- Ship-to-shore cranes
- Loading bridges
- Pontoon cranes
- Grab excavators
- Indoor cranes with low lifting height

SPECIFICATIONS MULTI-LAYER WINDING

regular lay or lang's lay
 8 x K25F-EPIWRC (K)
 RCN 6
 Rope grades: 1770 / 1960
 Number of wires in outer strands: 200



SUPERFILL®

PLASTIFILL™



Nominal Ø	Weight		Minimum breaking force at rope grade			
			1770		1960	
			mm (inch)	kg/m	lbs	kN
12,00	0,67	1,47	110,2	24.768	122,0	27.427
14,00 (= 9/16")	0,91	2,00	149,9	33.701	166,0	37.318
16,00 (= 5/8")	1,19	2,61	196,0	44.055	217,0	48.784
18,00	1,50	3,31	247,4	55.626	274,0	61.598
20,00	1,85	4,08	306,1	68.822	339,0	76.210
22,00 (= 7/8")	2,29	5,05	370,3	83.237	410,0	92.172
24,00	2,49	5,49	440,7	99.072	488,0	109.707
25,00	2,71	5,96	477,9	107.429	529,0	118.924
26,00	2,92	6,44	516,6	116.125	572,0	128.591
28,00	3,55	7,83	599,6	134.803	664,0	149.273
30,00	4,14	9,13	688,1	154.698	762,0	171.304
32,00 (= 1 1/4")	4,62	10,19	783,0	176.015	867,0	194.909
34,00	5,35	11,80	884,1	198.753	979,0	220.088
36,00	5,97	13,15	990,7	222.709	1.097,0	246.615
38,00 (= 1 1/2")	6,69	14,74	1.104,4	248.289	1.223,0	274.941
40,00	7,41	16,33	1.223,6	275.087	1.355,0	304.616
42,00	8,17	18,01	1.349,2	303.306	1.494,0	335.864
44,00 (= 1 3/4")	8,95	19,73	1.480,1	332.744	1.639,0	368.462
46,00	9,80	21,60	1.618,3	363.805	1.792,0	402.858
48,00	10,65	23,48	1.761,9	396.085	1.951,0	438.602

EVOLUTION Q8

Technical Data

⚠ NOTE!

Our rope recommendations are non-binding empirical values. Please be sure to take the special characteristics of your installation into account. Do not hesitate to contact us. We will help you find the best possible rope solution for your needs.

Langs lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical checks by an expert.

Other diameters are available on request.



PS 610 F

PS 610 F stands for a 6-strand round strand rope in SUPERFILL® design featuring a PLASTFILL™ insert. Its particularly robust structure, which includes a plastified fiber insert, makes this compacted steel wire rope the ideal hauling rope for gravel mining installations, scraper installations, and logging winches.



YOUR BENEFITS

- **Exceptional wear and shock resistance** thanks to the rope's special structure including a flexible fiber insert, thick outer wires, and a high degree of compaction.
- **The plastification of the fiber insert** ensures excellent form stability to lateral pressure.

FIELD OF APPLICATION

- Hauling rope for gravel mining and scraper installations
- Winch rope for logging winches

SPECIFICATIONS

MULTI-LAYER WINDING

lang's lay rope
 6 x K21F-SFC
 12-52 mm: RCN 4
 number of wires in outer strands: 126



SUPERFILL®

PLASTFILL™



Nominal Ø	Weight		Minimum breaking force at rope grade 1770		
	mm (inch)	kg/m	lbs	kN	lbs
22,00	2,16	4,76	375	84.308	
26,00	2,97	6,55	517	116.232	
29,00	3,77	8,31	643	144.559	
36,00	5,90	13,00	955	214.703	
40,00	7,90	17,42	1.232	276.978	

PS 610 F Technical Data

⚠ NOTE!

Our rope recommendations are non-binding empirical values. Please be sure to take the special characteristics of your installation into account. Do not hesitate to contact us. We will help you find the best possible rope solution for your needs.

Langs lay ropes may be used with multi-layer winding (on the drum) only, or they must be subjected to periodical checks by an expert.

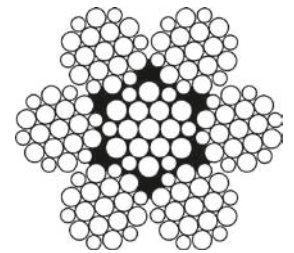
Other diameters are available on request.



612 W



Its special computer-optimized design gives the special 612 W rope its low-twist and low-tension character.



YOUR BENEFITS

- **Greater safety** thanks to high breaking forces
- **Easy to handle** due to low-twist and low-tension stranding
- **Above-average life span** thanks to flexible structure and lubricated steel insert

FIELD OF APPLICATION

- Trolley rope, and mounting rope for tower cranes
- Hoisting rope for container cranes, loading bridges, and indoor cranes
- Winch rope for logging winches

SPECIFICATIONS

MEHRLAGENWICKLUNG

regular lay rope
 4-6 mm: 6x19W-WSC; 7-12 mm: 6x19W-IWRC
 RCN 4
 strength class: 1960
 number of wires in outer strands: 126



SUPERFILL®

PLASTFILL™



Nominal Ø	Weight		Minimum breaking force at rope grade 1960		
	mm (inch)	kg/m	lbs	kN	lbs
6,00	0,16	0,35	29,0	6.520	
7,00	0,20	0,44	36,0	8.094	
8,00	0,27	0,59	48,0	10.791	
9,00	0,33	0,73	59,0	13.264	
10,00	0,42	0,93	75,0	16.862	

612 W Technical Data

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PLEASE NOTE ALSO OUR OTHER
PRODUCT CATALOGUES



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TOGETHER IN MOTION

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