

# Forestry applications

Ropes and accessories





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## Warning!

Using these products may involve hazards. Therefore, never use our products for any purposes other than those they are designed for. In particular, do not use them for lifting purposes as defined by the EU Directive 2006/42/EC. Customers must ensure that all users are familiar with the correct use of our products and the necessary safety precautions. Please bear in mind that any of the products may cause damage or harm if incorrectly used, stored, cleaned, or overloaded. Check national safety regulations, industry recommendations, and standards for locally applicable requirements. Teufelberger®, 拖飞宝®, Teufelberger-Redaelli®, Stratos®, Superfill® and Plastfill® are internationally registered trademarks of the Teufelberger Group. Dyneema® is a registered trademark of DSM. We have been a supplier of ropes for many years. The resulting wealth of experience forms the basis of our non-binding rope recommendations. Be sure to take the special characteristics of your system into account. Go ahead and contact us to help you find the perfect rope for your needs. Subject to technical modifications as well as typesetting and printing errors.

# One Company

What started back in 1790 as a simple shop making hemp ropes has since evolved into a globally successful group of enterprises specializing in the development and production of custom-tailored solutions for fiber ropes, steel wire ropes, and strapping.

## Innovative products of superior quality

Our expertise in a wide range of technologies has generated numerous synergies between our various divisions, much to the benefit of our customers. By assigning five percent of our workforce to research and development, we ensure that our customers always have access to cutting-edge technologies. In addition to upholding social and environmental standards, we also pay close attention to delivering consistently high quality and make sure that all our products comply with the most stringent quality standards

Teufelberger headquarters, Wels, Austria



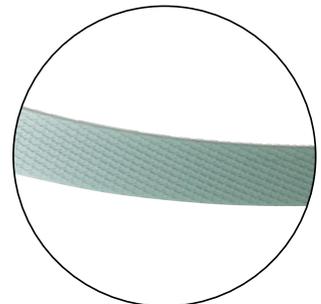
### Fiber Rope

- Industrial Fiber Ropes
- Life Safety Ropes
- Paper Carrier Ropes
- Treecare & Forestry
- Yachting Ropes



### Wire Rope

- Ropeway Ropes
- Crane & Industrial Ropes
- Mining Ropes
- Offshore Ropes
- Ropeway Ropes
- Rope & Safety / Teci
- Tensostructures



### Strapping Solutions

- PET Strapping
- PP Strapping

# Infinite Possibilities

Service & support

before and after

steel wire rope selection

Whatever your requirements are, we are your partner of choice!

We cooperate with our customers in the spirit of mutual respect and equality in order to develop custom-tailored solutions for fiber ropes, steel wire ropes, and strapping. The continuity and stability of our family-owned group make us a reliable partner that will support you in tackling your day-to-day challenges.

## The essence of Teufelberger-Redaelli

We at Teufelberger-Redaelli develop and produce high performance steel wire ropes that create added value by enhancing the efficiency and safety of your applications.

**Expect more:** of our innovative steel wire ropes, our service offerings, and our experienced experts in development, application engineering, and sales, all around the globe. Being a family enterprise, we attach particular importance to building successful, long-standing business relationships. Our effort is not limited to the supply of premium quality steel wire ropes. Rather, we support you throughout your entire work process.

## Unleashing potentials

Optimum customization as well as professional installation are key. Therefore, we also provide support in terms of project planning, commissioning and subsequent careful handling in order to maximize rope lifetime. After all, the initial purchasing costs are just the tip of the iceberg.

## Your performance expert

We at Teufelberger-Redaelli will not leave you to your own devices when it comes to choosing the right kind of high performance steel wire rope. Our specialists know what matters in regard to your specific application and are therefore able to recommend the product that best suits your needs. Every single application requires a specific custom-tailored solution.

## We take it to the next level

When selecting a high performance steel wire rope, obtaining reliable specifications such as breaking force, discard criteria, but

also rotating characteristics, service life, and spooling behavior in multilayer configurations is key. Each parameter has a direct impact on the total cost of ownership. Each step in Teufelberger-Redaelli's development effort is based on the actual on-site conditions, directly at our customers' premises. The use of one-of-a-kind state-of-the-art systems for testing and analyzing enables us to subject ropes to detailed examinations to ensure that they perform at their best.

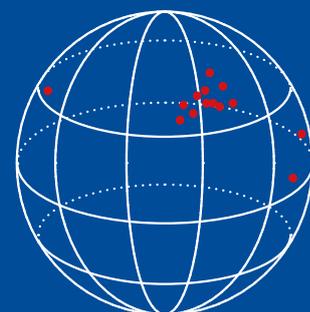
## Quality is not a matter of chance

Teufelberger-Redaelli has an extraordinarily large number of measuring and testing capabilities at its disposal. A rope is subjected to several quality control procedures, from development and incoming inspection to production and product testing and through to on-site analyses at our customers' premises. We have a wide range of in-house options for analyzing torsional behavior. Tests can be conducted quickly and efficiently using a force of up to 3,000 kN and torques of up to 14,000 Nm.

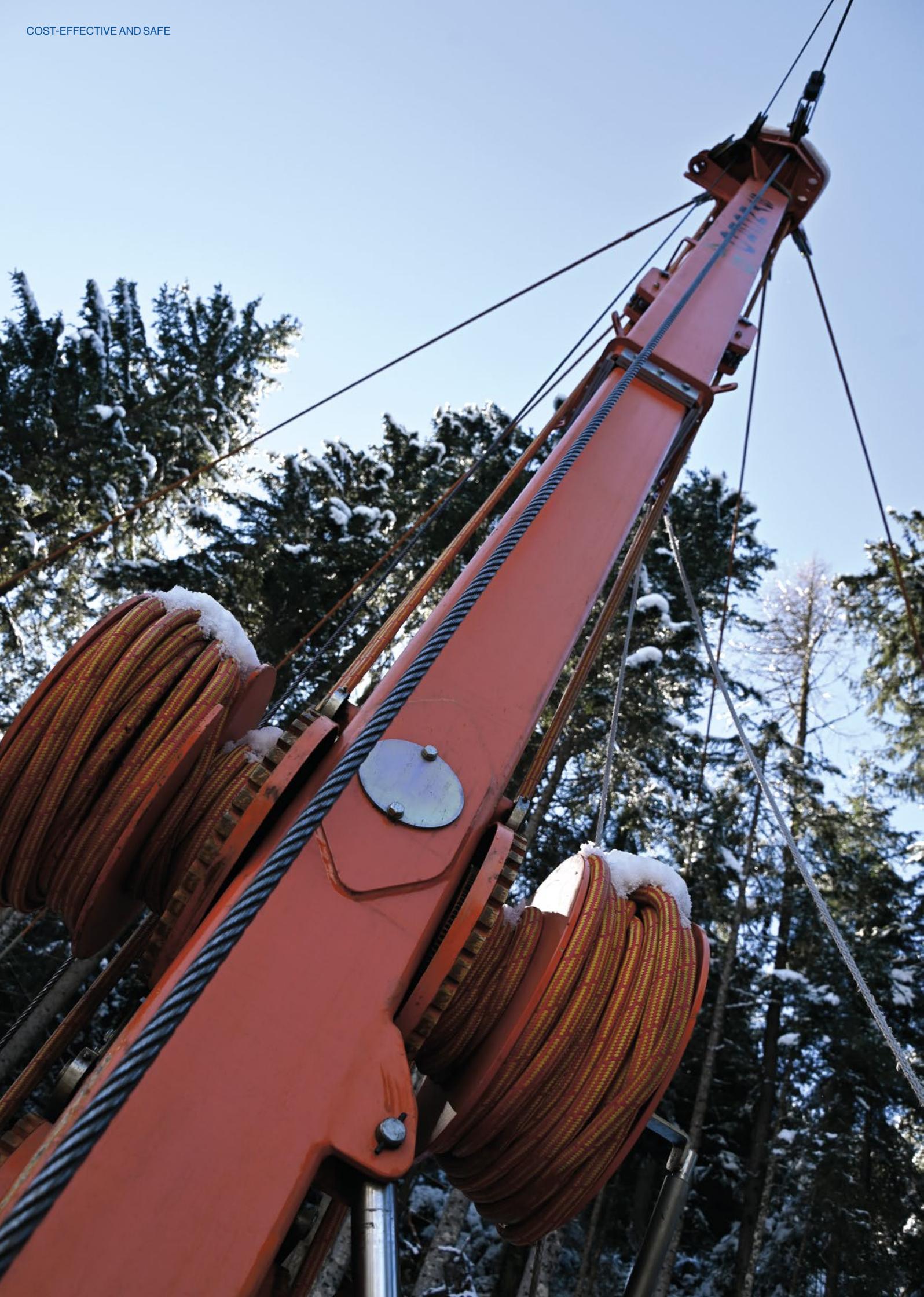


## Global network and market proximity

**14 locations** around the world, incl. production sites in Austria, Italy, Poland, Thailand, the Czech Republic, and the U.S.



## Trusted partner for international OEMs

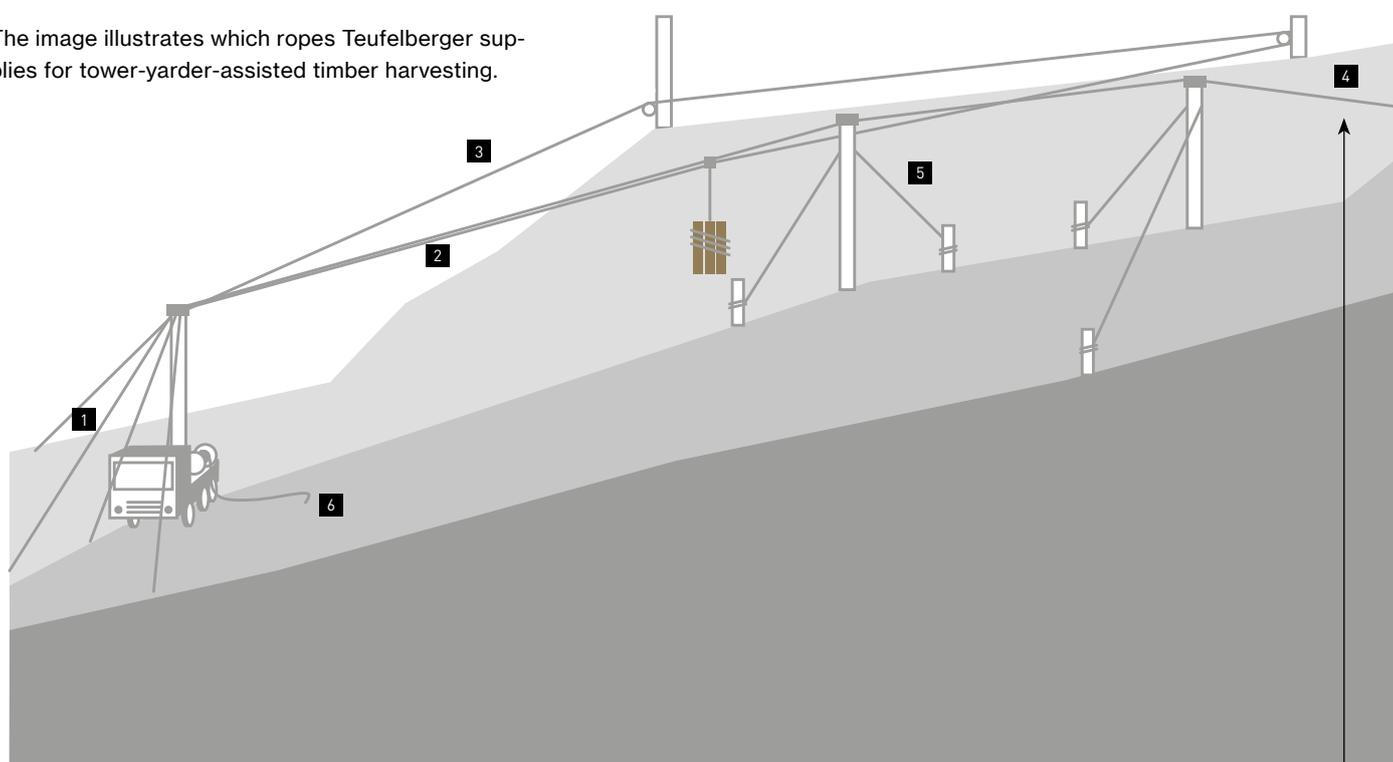


# Cost-effective and safe

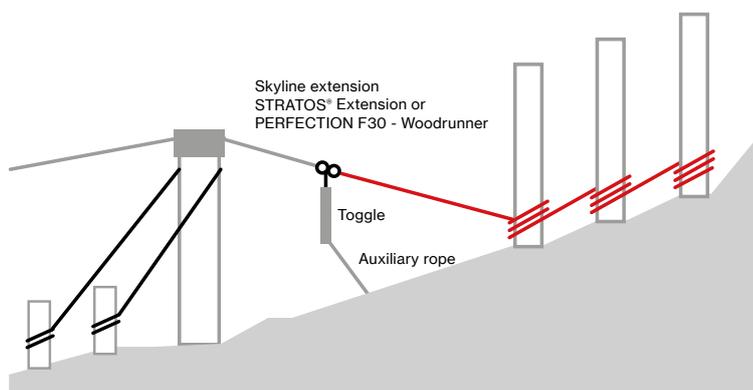
Teufelberger offers a range of fiber and wire ropes for optimized timber harvesting. Whether in use on tower yarders or long distance ropeways, ropes from Teufelberger impress users with long lifetimes, high minimum breaking force values, and excellent user friendliness.

## Ropes for tower yarder use

The image illustrates which ropes Teufelberger supplies for tower-yarder-assisted timber harvesting.



- 1** **Guylines:**  
STRATOS® Anchor or EVOLUTION QS 816V
- 2** **Skyline:**  
PERFECTION F30 – Woodrunner
- 3** **Hauling and haulback rope:**  
QS 610 V or FSS 625
- 4** **Skyline extension:**  
STRATOS® Extension or PERFECTION F30 - Woodrunner
- 5** **Guylines for intermediate supports:**  
STRATOS® Support
- 6** **Mounting or auxiliary rope:**  
Mounting Light or FSS 619



Schematic illustration: STRATOS® Extension



# Wire ropes



# PERFECTION F30 – Woodrunner

The design of our **Perfection F30 - Woodrunner** was specifically engineered for forestry use. The high breaking force ratings of the respective diameter versions translate into greater safety without requiring an increase in diameter. Rope-friendly SUPERFILL® strand compaction (no damage to the rope core) gives the rope high abrasion resistance and a smooth surface.

## Fields of application

- Skyline for tower yarders and long distance ropeways
- Skidding rope for forestry winches and skidders
- Suited for traction winches

## Benefits

- ✓ High dimensional stability under lateral pressure
- ✓ Lower elongation
- ✓ Up to 20% higher breaking force as compared to conventional ropes of the same diameter
- ✓ Up to 15% greater ropelength as compared to conventional ropes because the same minimum breaking force is achieved with a smaller diameter

## Technical data

Nominal Ø	Weight	Minimum breaking force at rope grade 1960 N/mm <sup>2</sup>	STC*	Surface
mm	kg/m	kN		
13	0.83	182	R	
14	0.94	211	S	
15	1.10	242	R	
16	1.26	276	R	
17	1.41	311	S	
18.5	1.68	369	S	blanc
20.5	2.05	453	S	
22	2.35	501	S	
22.5	2.48	546	R	
24	2.82	621	R	
26	3.30	728	R	

\*STC = standard codes · R = upon request · S = in stock

**The Pro:** More Meters,

More Breaking Strength, More Wood



## Specifications:

- EN 12385-4
- 13 – 26 mm: 6 x K19-PWRC, RCN 04
- Rope grade: 1960
- ✓ Multilayer spooling
- ✓ SUPERFILL®

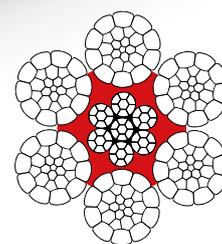
# QS 610 V

Key benefits of this rope produced in line with the SUPERFILL® process include high breaking force, robustness in spooling, and flexibility.

**The Flexible One**

## Fields of application

- Hauling and haulback rope for tower yarders and long distance ropeways
- Various high performance winches



## Benefits

- ✓ High dimensional stability under lateral pressure
- ✓ Lower elongation
- ✓ Up to 20% higher breaking force as compared to conventional ropes of the same diameter

## Specifications:

- EN 12385-4
- 8.5 - 16 mm: 6 x K26WS-EPIWRC (K), RCN 6
- Rope grade: 1960
- Number of wires in outer strands: 156
- ✓ Multilayer spooling
- ✓ SUPERFILL®
- ✓ PLASTFILL®

## Technical data

Nominal Ø	Weight	Minimum breaking force at rope grade 1960 N/mm <sup>2</sup>	STC*	Surface
mm	kg/m	kN		
8.5	0.34	67	S	blanc
11	0.58	112	R	

\*STC = standard codes · R = upon request · S = in stock

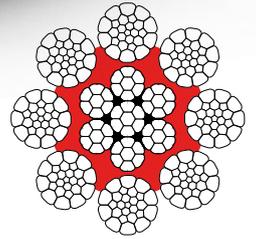
# Evolution QS 816 V – Woodliner

The **Evolution QS 816 V** serves as the skyline for Woodliner carriages. Its many advantages include high reliability and safety in use due to exceptionally high breaking strength, cost reduction due to less rope wear, longer service life and fewer maintenance intervals, and trouble-free operation thanks to excellent shock and vibration absorption. Long lifetime due to smoother rope surfaces; ideal for multilayer spooling.

## Fields of application

- Skyline for Woodliner carriages

**The Original:** Designed Specifically for  
Use with Woodliner Carriages



## Benefits

- ✓ Developed and certified specifically for use with Woodliner carriages
- ✓ Highly flexible, and thus good spooling behavior
- ✓ High dimensional stability under lateral pressure
- ✓ Low elongation

## Specifications:

- EN 12385-4
- 20 - 22 mm: 8 x K26WS-EPIWRC, RCN 9
- Rope grade: 1960
- Number of wires in outer strands: 208
- ✓ Multilayer spooling
- ✓ SUPERFILL®
- ✓ PLASTFILL®

## Technical data

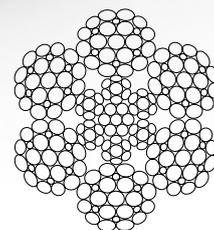
Nominal Ø	Weight	Minimum breaking force at rope grade 1960 N/mm <sup>2</sup>	STC*	Surface
mm	kg/m	kN		
20	1.89	365	S	galvanized
22	2.34	451	S	

\*STC = standard codes · R = upon request · S = in stock

# F20 - 625

A forestry rope that ticks all the boxes: low-twist, flexible, robust under large deflection angles, high breaking force ratings, and optimized lubrication.

**The Jack-Of-All-Trades**



## Fields of application

- Hauling and haulback rope for tower yarders and long distance ropeways
- Skyline for tower yarders and long distance ropeways
- Skidding winches

## Benefits

- ✓ Optimal spooling behavior thanks to excellent flexibility
- ✓ Enhanced safety thanks to high breaking strength
- ✓ Easy-to-handle thanks to low-twist and low-tension stranding
- ✓ Above-average lifetime thanks to flexible construction and greased steel core

## Specifications:

- EN 12385-4
- 6 x K25F-IWRC
- Rope grade: 1960
- Number of wires in outer strands: 150
- ✓ Multilayer spooling
- ✓ Compacted

## Technical data

Nominal Ø	Weight	Minimum breaking force at rope grade 1960 N/mm <sup>2</sup>	STC*	Surface
mm	kg/m	kN		
10	0.53	97	S	blanc
11	0.63	133	S	
12	0.73	153	S	
13	0.84	180	S	
16	1.23	239	S	
18	1.64	294	S	
20	1.98	356	S	
22	2.37	424	R	

\*STC = standard codes · R = upon request · S = in stock

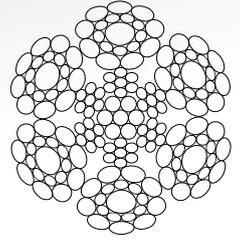
# F10 - 619

Low-twist, flexible, robust under large deflection angles, and high breaking strength: our **F10 - 619** has it all.

**The Robust One**

## Fields of application

- Hauling and haulback rope for tower yarders and long distance ropeways
- Skidding winches



## Benefits

- ✓ Abrasion resistant
- ✓ Easy-to-handle thanks to low-twist and low-tension stranding
- ✓ Above-average lifetime thanks to flexible construction and greased steel core

## Specifications:

- EN 12385-4
- 6 x K19S-IWRC
- Rope grade: 1960
- Number of wires in outer strands: 114
- ✓ Multilayer spooling
- ✓ Compacted

## Technical data

Nominal Ø	Weight	Minimum breaking force at rope grade 1960 N/mm <sup>2</sup>	STC*	Surface
mm	kg/m	kN		
7	0.26	47	S	blanc
8	0.37	66	S	
9	0.45	81	S	
10	0.54	97	S	
11	0.64	115	S	
12	0.75	133	S	
13	0.86	154	S	
14	0.98	176	R	

\*STC = standard codes · R = upon request · S = in stock





Fiber ropes



# STRATOS® Anchor

Our **STRATOS® Anchor** is the textile, lightweight guyline for tower yarders. Its unique rope construction features a tightly braided, abrasion-resistant and UV-stable polyethylene-monofil cover. Made of UHMWPE fibers, its highly stretched core achieves breaking force ratings that match those of a steel wire rope, and this at 80% less weight.

## Fields of application

- Guyline for tower yarders and long distance ropeways

## Technical data

Rope Ø	Core Ø	Weight	Minimum breaking force
mm	mm	g/m	kN
20	16	240	300
22	18	289	355
26	22	383	500

\*Other diameters available upon request. Lengths: standard lengths 55, 60, 65, 70, 75, 80, 85 m. Special lengths can be produced upon request.



## Benefits

- ✓ Very lightweight
- ✓ Extremely stable
- ✓ Easy to handle
- ✓ No risk of injury due to protruding wires
- ✓ Minimal stretch
- ✓ Excellent abrasion resistance

# STRATOS® Mounting Light NG

The **STRATOS® Mounting Light NG** auxiliary and mounting rope is a super-lightweight fiber rope. The high-density UHMWPE fiber makes this rope highly resistant to abrasion and durable. Its benefits include extremely high breaking loads and low weight, great ease of splicing, and low investment costs.

## Fields of application

- An extremely lightweight and high-strength pull-in rope for steel wire ropes along tower yarders and long distance ropeways

## Technical data

Rope Ø	Weight	Minimum breaking force
mm	g/m	kN
5	20	40
6	25	48
7	36	70
8	47	90



## Benefits

- ✓ Extremely lightweight
- ✓ Easy to handle
- ✓ No risk of injury due to protruding wires
- ✓ Great ease of splicing
- ✓ Low investment costs

# STRATOS® Winch Pro

The **STRATOS® Winch Pro** kernmantle rope made of UHMWPE is Teufelberger's winch rope for professional users. The tightly braided UHMWPE cover protects the load-bearing UHMWPE fibers from abrasion, the ingress of dirt, and chafing, and, as a result, increases the rope's lifetime by severalfold. When dimensioned and used correctly, this long-established and proven winch rope will last significantly longer than a steel wire rope of the same size.

## Fields of application

- Extremely long-lived, high-density high-performance fiber rope with protective cover for use on tractor winches or skidders
- The professional rope for commercial use (forestry companies, full-time foresters)

## Technical data

Rope Ø	Core Ø	Weight	Minimum breaking force
mm	mm	g/m	kN
8	6	44	48
10.5	8	73	90
12	10	94	120
13	11	124	145
15	12	150	180
17	14	203	235
20	16	270	300
23	18	332	355

\* other diameters available upon request. Lengths: Standard length is 75 m, special custom lengths can be produced upon request.

## Benefits

- ✓ Very lightweight
- ✓ Same breaking force as a steel wire rope, despite protective cover
- ✓ Easy to handle, especially for downhill yarding
- ✓ No risk of injury due to protruding wires
- ✓ Best spooling behavior on drum
- ✓ "Cut-ins", i.e., a scenario where, in multilayer winding, the rope forces its way in between lower winding layers on the drum, are largely no problem for the rope.
- ✓ No rope ejection system required due to easy pull-out (it does, however, work with the rope ejection systems of the most common winches)
- ✓ Excellent abrasion resistance





# STRATOS® Winch Light H / Light S

Our **STRATOS® Winch Light** is the alternative for your forestry winches, offering you unbeatable value for money. In addition to the highly abrasion resistant STRATOS® Winch Pro, Teufelberger also offers its customers a lower-priced rope variant without a cover. Consequently, this product is ideal for discerning part-time foresters and hobbyists with high expectations in terms of quality, performance, and durability.

Our **STRATOS® Winch Light** is a 12-strand braided UHMWPE rope. It is available in two versions: 'Standard Construction' (S) and 'Highly Compact' (H).

The highly compact winch rope **STRATOS® Winch Light H** delivers maximum rope length and breaking strength in combination with excellent resistance to abrasion.

**STRATOS® Winch Light S** is the uncompacted standard version boasting good abrasion resistance and breaking strength.

## Benefits

- ✓ Extremely lightweight
- ✓ Easy to handle, especially for downhill yarding
- ✓ No injury risk
- ✓ Optimum spooling behavior on the drum
- ✓ "Cut-ins", i.e., a scenario where, in multilayer winding, the rope forces its way in between lower winding layers on the drum, are largely no problem for the rope
- ✓ Easy to pull out; does not require a rope ejection system
- ✓ Best spliceability

# STRATOS® Winch Light H

## Fields of application

- Extremely long-lived, high-density fiber rope for use on tractor winches or skidders
- The top rope for discerning part-time farmers and foresters

## Technical data

Rope Ø mm	Weight g/m	Minimum breaking force kN
5	20	40
6	25	48
7	36	70
8	47	90
10	65	120
11	73	145
12	101	180
14	130	235
15	146	270
16	176	300
18	215	355
20	253	440
22	270	500
24	350	600

### Benefits of Light H

- ✓ Higher breaking force than a steel wire rope, thus allowing for greater rope lengths
- ✓ High abrasion resistance
- ✓ Long lifetime
- ✓ Low investment costs

# STRATOS® Winch Light S

## Fields of application

- Long-lived fiber rope for use on tractor winches or skidders
- The cost-effective high-performing rope for discerning hobbyists

## Technical data

Rope Ø mm	Weight g/m	Minimum breaking force kN
5	15	21
6	20	35
7	27	43
8	34	55
9	44	72
10	54	85
11	65	107
12	76	125
14	107	160
16	144	220

### Benefits of Light S

- ✓ Breaking force matches that of a steel wire rope
- ✓ Good abrasion resistance
- ✓ Good lifetime
- ✓ Best value for money



# Component combinations

# STRATOS® Component combinations

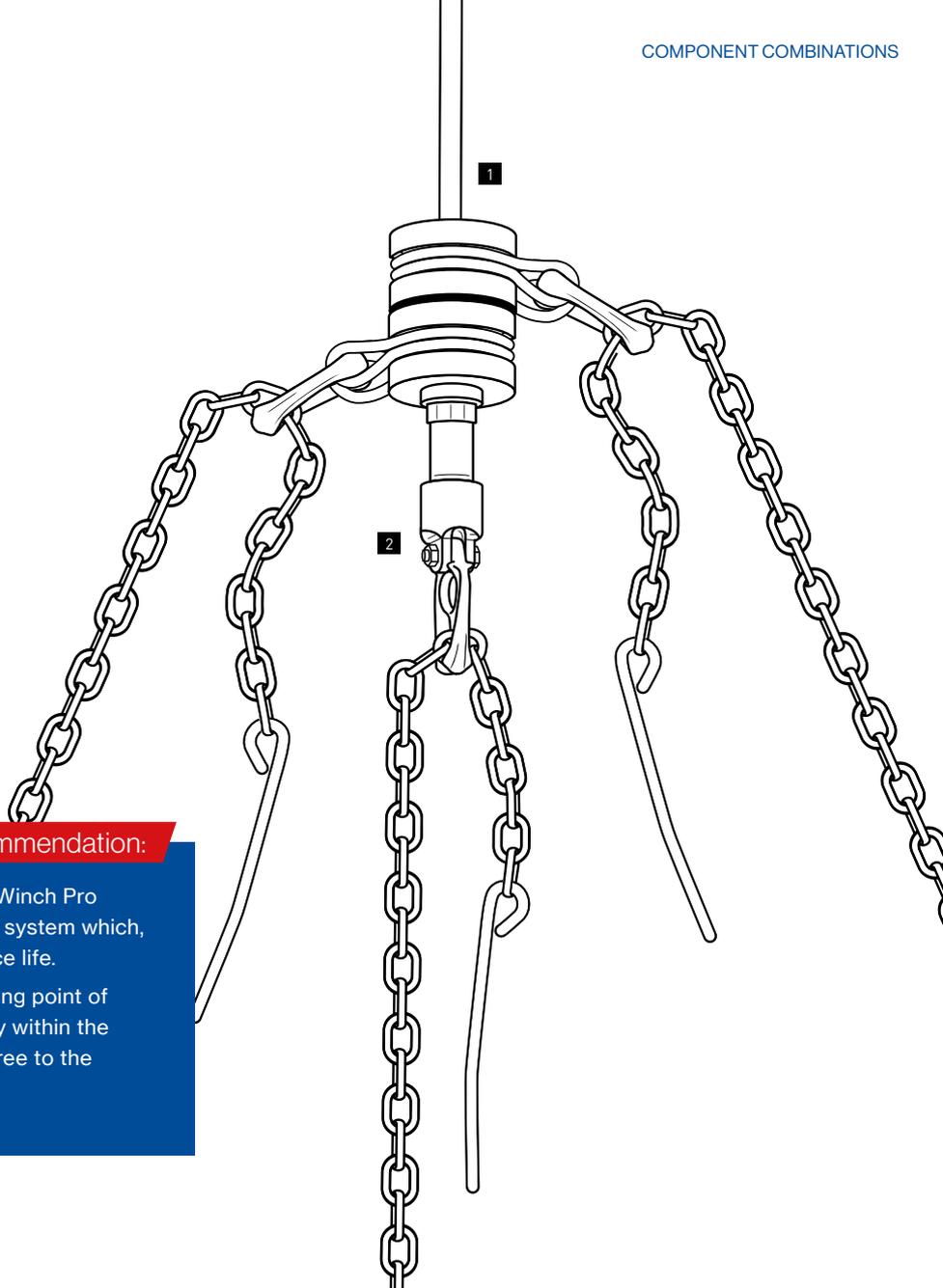
## STRATOS® Winch Pro with choker chains:

STRATOS® Winch Pro with VGE Winch Pro end bond, two STRATOS® Easyglide choker gliders and one GBG-V chain lug.

**1** Straight-line pull = lowest possible deflection of hauling rope in the area of the choker gliders.

**2** **Recommendation:**

- ✓ The use of the connector of the VGE Winch Pro ensures a relatively straight pull in the system which, in turn, significantly prolongs its service life.
- ✓ Fasten the heaviest tree to the mounting point of the VGE Winch Pro. To enhance safety within the system, connect (at least) one other tree to the STRATOS® Easyglide choker glider.



## STRATOS® Winch Pro with choker chains:

STRATOS® Winch Pro with one STRATOS® Easyglide choker glider and one STRATOS® VGE Winch Pro end bond.



## STRATOS® Winch Light with choker chains:

STRATOS® Winch Light with two STRATOS® Easyglide choker gliders and one STRATOS® rope puck.



## STRATOS® Winch Light with choker chains:

STRATOS® Winch Light with two Log Slide gliders and one STRATOS® rope puck.





# Accessories

# Wire-rope-based choker ropes

Our **choker ropes** are made to customer requirements. We use un-compacted standard ropes of construction type '216WS blanc'. The variants shown in the catalog are standard versions. Other versions are available upon request.

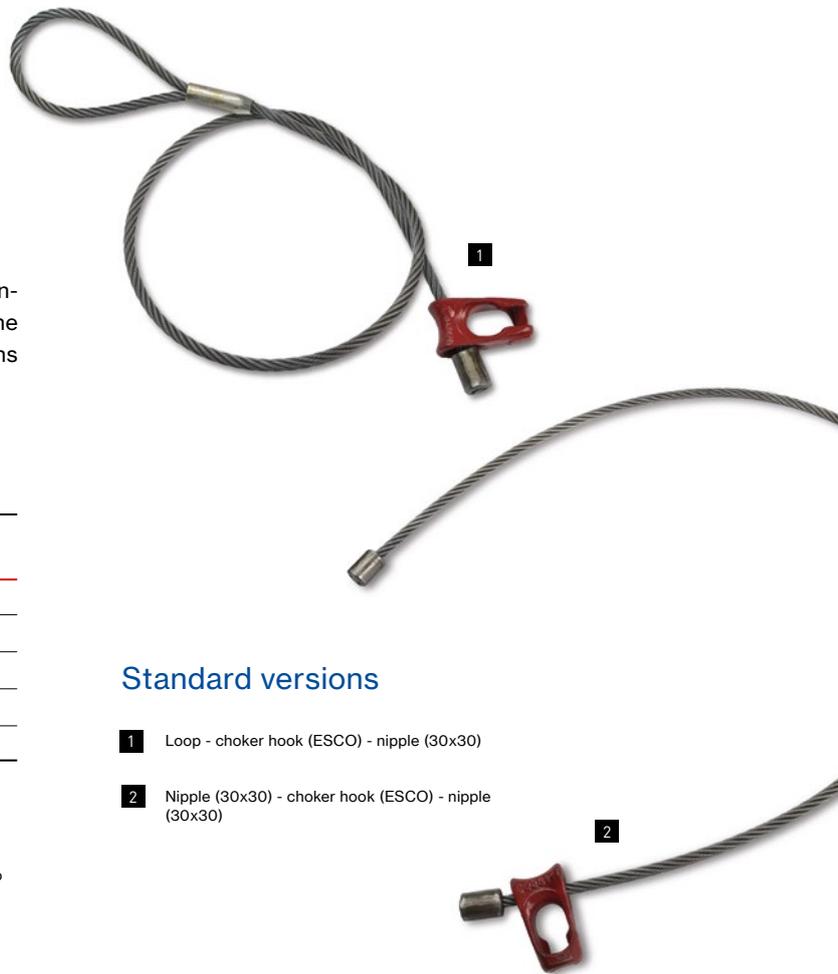
## Technical data

Rope Ø	Length	STC*
mm	m	
11.13	1.5	R
11.13	1.8	R
11.13	2.2	R
11.13	2.6	R
11.13	3.0	R

\*STC = standard codes · R = upon request · S = in stock

### ⚠ Warning!

Only for on-the-ground skidding operations: Not for use as a sling or lifting tackle according to EN 13414, Parts 1-4. This is NO sling according to EN 13414, Parts 1-3. The choker rope MUST NOT be used for lifting purposes!



## Standard versions

- 1 Loop - choker hook (ESCO) - nipple (30x30)
- 2 Nipple (30x30) - choker hook (ESCO) - nipple (30x30)

# STRATOS® Rope Puck

The **STRATOS® Rope Puck** is suited for use with STRATOS® Winch Pro, STRATOS® Winch Light up to 15 mm in diameter, or other commercially available synthetic fiber ropes.

The unique design of our new **STRATOS® Rope Puck** brings significant advantages for heavy-duty use in forests:

- ✓ Lightweight design
- ✓ Tool-free installation
- ✓ A deep rope groove to avoid rope squeeze caused by choker gliders



0.5 kg  
total weight

100 mm  
in diameter

80 mm  
in width

## STRATOS® Grouting Kit

The **STRATOS® Grouting Kit** was designed specifically for the STRATOS® product line. It is a two-component grouting kit consisting of a curing agent, an epoxy resin, a syringe, a measuring cup and user's instructions that is designed for about two socketing procedures. When used correctly, as described in the user's manual, the socketed part will be capable of bearing almost as much load as the rope itself.

## STRATOS® Splicing Kit

The **STRATOS® Splicing Kit** for STRATOS® Winch Light (suited for use with rope diameters ranging from 5 - 16 mm) consists of a set of splicing needles, splicing scissors, whipping twine, a needle, insulating tape, a permanent marker, and splicing instructions. It comes packaged in a stable and weatherproof bag.

# STRATOS® VGE WINCH PRO End Bond

Our patented **STRATOS® VGE Winch Pro End Bond** ensures that the rope's core is protected along the entire length, specifically also at the end of the **STRATOS® Winch Pro** rope, which is where the high loads caused by choker gliders occur.

The **STRATOS® VGE Winch Pro** features a connector for choker chains or choker ropes. Use this connector in your skidding & winching operations in order to ensure a long service life of your **STRATOS® Winch Pro**.

The "straight pull" on the winch rope resulting from this feature helps prevent any severe bending of your **STRATOS® Winch Pro** caused by the choker gliders. The **STRATOS® VGE Winch Pro** can be repaired by the user without great effort and is used only in combination with the **STRATOS® Winch Pro**. The socketing kit and the inner cone are available as separate items.



## Technical data

Possible combinations	Rope diameter of Stratos® Winch Pro mm					
	10	12	15	17	20	23
Chain lug 7 & 8 mm chains	✓	✓	✓			
Chain lug 10 mm chain				✓	✓	✓



# STRATOS® Easyglide

## Choker glider for fiber ropes

The cutting-edge choker glider from Teufelberger-Redaelli. The **STRATOS® Easyglide** impresses users with its low weight achieved by using high-strength plastic material and a rope sling made of Dyneema®. Compared to other commercially available choker gliders, our **STRATOS® Easyglide** provides a large entrance radius which prevents any squeeze of the winch rope by the choker glider. As a consequence, the main cause of ruptured synthetic ropes is now a thing of the past.

Type	Rope Ø	Traction force	Weight	STC*
	mm	kN	kg/m	
STRATOS® Easyglide for 8 mm chain	8-17	70	0.75	S
STRATOS® Easyglide for 10 mm chain	8-17	70	0.85	S



# GO 10

## Twitch hook for fiber and wire ropes

The **GO 10** (Pewag) twitch hook is suited for skidding & winching operations with choker ropes (made of synthetic material or steel). The GO 10 twitch hook is used for winch ropes having diameters of up to 17 mm. Weight: 0.73 kg, opening width for winch rope: up to 17 mm

Rope Ø	Traction force	Weight	STC*
mm	kN	kg/m	
8-20	70	0.73	R



# GBGV

## Chain Lug for wire ropes

Die **GBGV Chain Lug** (Pewag) is used in combination with Teufelberger-Redaelli's end bond. The combination of these two elements ensures that the line of pull on the winch rope will be as straight as possible in skidding & winching operations. This helps counteract any problems caused by the winch rope being bent significantly due to great deflection angles of the choker gliders.

Type	Rope Ø	Traction force	Weight	STC*
	mm	kN	kg/m	
GBGV Chain Lug 7/8	8-14	60	0.61	R
GBGV Chain Lug 10	10-16	85	1.38	S



# Midget choker hook

## for choker rope

Type	Rope Ø	Traction force	Weight	STC*
	mm	kN	kg/m	
GOS	14 max.	60	0.48	R



\*STC = standard codes · R = upon request · S = in stock

# STRATOS® end piece LT

The **STRATOS® end piece LT** can be used for STRATOS® winch ropes and is provided with a nipple mount. Minimum breaking force: 120 kN



# Sliding choker hook WLL (5-fold safety)

Rope Ø mm	Working load limit WLL t	STC*
9 - 13	1.3	R
14 - 16	2.0	R
17 - 19	3.0	R



# Wedge sockets with wedge, bolt, and wire rope grip

Rope Ø mm	Working load limit WLL t	STC*
9 - 10	1.44	R
11 - 13	2.79	R
14 - 16	4.40	R
18 - 19	6.58	R
20 - 22	9.75	R



# Wire rope grips EN 13411-5

Rope Ø mm	Quantity	Weight kg	STC*
8	4	0.08	S
10	4	0.09	S
13	4	0.27	S
16	4	0.43	S
19	4	0.49	S



**Important!** According to EN 13411-5 and EN 13411-6, wedge sockets and wire rope grips reduce the MBF of the rope system by approx. 20%.

# High-strength shackle in curved form, with screw pin

NG	Working load limit WLL t	Weight kg	STC*
½	2.00	0.3	S
¾	4.75	1.0	S
1	6.50	1.5	S
1 ¼	8.50	2.4	S
1 ½	12.00	4.3	S
1 ¾	17.00	7.8	S
2	35.00	18.5	R



WLL with 5-fold safety

\*STC = standard codes · R = upon request · S = in stock

# A 120 & A 180

## Aluminum deflection pulleys for forestry

**Deflection pulleys** of this type come in a very lightweight, but extremely strong design. They are suited for use with steel wire ropes, but also with polyamide ropes. This system allows for the simple and fast introduction of ropes. The lateral parts are made of a special aluminum alloy. Polyamide pulleys are mounted on roller bearings.

### Technical data

Type	Permitted max. force kN	Max. rope Ø mm	Weight kg/m	STC*
A 120	120	14	2.6	S
A 180	180	18	4.3	S

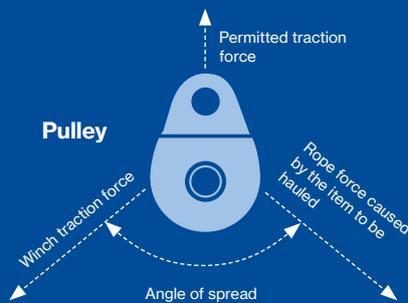


### ⚠ Please note!

Be sure to observe the following when using pulleys: The angle of spread of the deflected rope has a significant influence on how the deflection pulley is subjected to load.

#### Example:

Angle of spread: 90° = 0.7x100 kN (permitted max. force exerted on the deflection pulley)  
= 70 kN winch traction force



	Angle of spread	Winch traction force
	0°	0.5 x permitted traction force
^	90°	0.7 x permitted traction force
^	120°	1.0 x permitted traction force

# RS-TEM

## Single-cover round sling with polyester cover to EN 1492-2

- 100% polyester
- High-quality single cover
- Lloyds-approved
- Color coding to EN 1492-2
- Continuous marking of working load limit
- Stripe coding (1 stripe per t of WLL)



### Technical data

Type	Permitted max. force kN	Max. rope Ø mm	Weight kg/m	STC*
SRL-B10	30	14	1.95	S
SRL-IF14	50	15	4.30	S
SRL-IF16	100	16	7.30	S

\*STC = standard codes · R = upon request · S = in stock

# 50 mm web lashing with power ratchet

to EN 12195-2

## Technical data

Type	In two parts	Permitted lashing force LC in straight pull daN	Pretensioning force with $S_{HF}$ 50 daN	End fittings
50AER/2	✓	5,000	$S_{TF}$ 300	hook/hook



# Heavy-duty 75 mm web lashing with ratchet

to EN 12195-2

## Technical data

Type	In two parts	Permitted lashing force LC in straight pull daN	Pretensioning force with $S_{HF}$ 50 daN	End fittings
100A/2	✓	10,000	$S_{TF}$ 500	hook/hook



# Lifting straps

two-layered, made of polyester, with reinforced loops

## Technical data

Working load limit t	Strap width mm	Thick-ness mm	Loop length		Loop length
			1 m - useful length mm	2 m - useful length mm	3 m - useful length mm
WLL 1	30	7.0	250	400	
WLL 2	60	6.0	250	400	
WLL 3	90	7.5	250	400	
WLL 4	120	8.0		450	
WLL 5	150	7.0		550	
WLL 6	180	7.0		600	
WLL 8	240	8.0			750
WLL 10	300	7.0			1,000
WLL 12	300	8.0			1,000







# Treecare



# Harnesses

## treeMOTION® Essential & Pro

Since 2007, Teufelberger has been consistently improving its treeMOTION harnesses, building on many years of feedback from tree climbers, partners, and ambassadors, and always laser focused on the sole objective of making the ideal harness that suits all climbing styles and climber anatomies. We are, therefore, proud to manufacture the now fourth generation of our original treeMOTIONS in Europe. The treeMOTION® Pro is our top climbing harness for all arborists.

With their shape and adaptability, the new **treeMOTION® Pro** and **treeMOTION® Essential** harnesses are perfectly tailored to the needs of every climber. This gives the term "unisex" a whole new, better definition in the climbing harness industry. The 10-year lifespan and the ability to exchange up to 10 components make our treeMOTIONS the harnesses with the lowest TCO (Total Cost of Ownership) in the treecare industry.

Both harnesses are available in three different sizes:



### Standards

- EN813:2008
- EN358:2018
- ANSI Z133-2017 for arboricultural operations
- ASTM F887-20
- CSA Z259.1-05
- AS/NZS 1891.1:2020

Enhanceable and exchangeable elements:

#### ENHANCEABLE

- Shoulder strap
- Second bridge
- Openable ring

#### EXCHANGEABLE

- Bridges
- Lying openable ring
- Leg loops
- Hip/leg connection
- Elastic band of leg loops
- Elastic cords for gear loops
- Chainsaw ring (back side)
- Back padding
- Leg paddings

# treeMOTION® Essential

## Features

- ✓ 10-year lifetime (from the date of manufacture)
- ✓ 3 sizes (Small, Medium, Large)
- ✓ Better adapted to every physique
- ✓ Optional double bridges
- ✓ Openable side ring for easy replacement of hip/leg connections
- ✓ 4 attachment points for suspender/chest harness
- ✓ New hip and leg paddings
- ✓ Improved comfort
- ✓ Maximum customizability



Size	Hip circumference		Leg circumference		Weight		Max. user weight kg
	cm	inch	cm	inch	kg	lbs	
Small	69-86	27-33	38-57	15-22	2.03	4.47	150
Medium	80-105	31-41	42-72	17-28	2.25	4.96	150
Large	92-129	36-50	48-87	19-34	2.48	5.46	150

# treeMOTION® Pro

## Features

- ✓ 10-year lifetime (from the date of manufacture)
- ✓ 3 sizes (Small, Medium, Large)
- ✓ Double-adjustment waist buckle
- ✓ Better adapted to every physique
- ✓ Optional double bridges
- ✓ Openable side ring for easy replacement of hip/leg connections
- ✓ 4 attachment points for suspender/chest harness
- ✓ New hip and leg paddings
- ✓ Improved comfort
- ✓ Maximum customizability



Size	Hip circumference		Leg circumference		Weight		Max. user weight kg
	cm	inch	cm	inch	kg	lbs	
Small	69-86	27-33	38-57	15-22	2.30	5.08	150
Medium	80-105	31-41	42-72	17-28	2.56	5.64	150
Large	92-129	36-50	48-87	19-34	2.82	6.21	150

## The main differences between treeMOTION® Essential and Pro are:

### Buckles

The treeMOTION® Essential is equipped with readjustable sliding buckles for beginners, while the treeMOTION® Pro features Cobra quick release buckles for more experienced users.

### Back and leg paddings

The treeMOTION® Essential is equipped with standard padding, while the treeMOTION® Pro features comfort padding. Both paddings are exchangeable.

### Gear brackets

The treeMOTION® Essential is equipped with 2x3 gear brackets, while the treeMOTION® Pro features 2x3 gear brackets plus 2x1 gear brackets in the lower region of the harness.

### Red elastic band for fixation

The treeMOTION® Essential is delivered without the red elastic band, while the treeMOTION® Pro includes the red elastic band for waist and leg loops.

### Weight

The thinner material and the lighter readjustable buckles make the treeMOTION® Essential extremely lightweight.

# upMOTION® SRT

The **upMOTION® SRT** is a versatile chest harness for maximum freedom of movement in the tree. This chest harness is not only a tool for accessing trees, it is much more than that. With its ability to change between a fully spec'd out chest harness with all the bells and whistles you could ever ask for and a slimmed-down-to-the-minimum version, it offers you all the versatility you want. upMOTION® SRT comes in two sizes, with detachable paddings, climbing harness and Hydro Pack attachment options, and much more.

## Features

- ✓ Colored magnetic buckles for easy putting on and taking off
- ✓ Removable padding
- ✓ Comes in a reusable bag
- ✓ Lots of daisy chains on the front
- ✓ Lightweight design
- ✓ 2 harness attachment webbings on the back + a harness attachment option on the front (no load sharing)
- ✓ Optional Hydro Pack with magnetic drinking tube holder



### EXCHANGEABLE

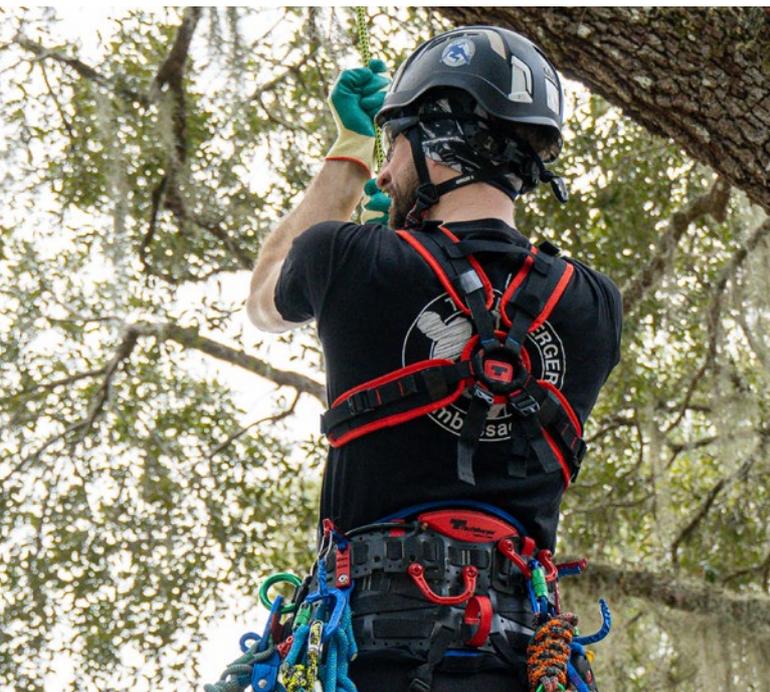
- Paddings
- Optional Hydro Pack



Size	Weight		Color
	g	lbs	
M/L	442	0.97	black/red
L/XL	455	1	black/red

### ⚠ Caution!

These products contain magnets! Magnets can impact the proper functioning of pacemakers and implanted defibrillators. A magnetic impulse could set pacemakers into a different mode. In certain circumstances, defibrillators may stop working. As a wearer of such devices, maintain a sufficient distance! Warn wearers of such devices as appropriate!





# Lanyards

## drenaLINE

A rope that epitomizes efficiency! Whether on single or double rope configurations, this rope always affords climbers ultimate freedom in choosing the right technique for the task at hand.

The **spLIFE-able drenaLINE** works perfectly and reliably in either of these configurations. Its extremely light construction and 32-strand cover guarantee super smooth precision during ascents and descents. With drenaLINE, you can always be confident that the hardware you bought will be suitable. This rope has been extensively tested in the field in combination with a vast range of hardware in both single and double rope climbing techniques by experienced tree climbers around the world.



### Specifications:

<b>Diameter:</b>	11.8 mm (15/32")	<b>Length:</b>	45 m, 60 m, 80 m and 500 m
<b>Cover:</b>	Polyester	<b>Version:</b>	With spLIFE
<b>Core:</b>	Nylon	<b>Standards:</b>	EN 1891A, ANSI Z133
<b>Braid:</b>	32		

11.8 mm  
drenaLINE



11.8 mm  
charityLINE



Ø		Elongation 50-150 kg %	Knotability	Min. breaking strength				Weight					
mm	inch			Free length		[slaiice]®		Spliced		Knotted		g/m	lbs/100
11.8	15/32	2.30	1.10	3,500	7,865	1,650	3,705	1,650	3,705	1,800	4,045	96.5	6.50

# hipSTAR Glide

## hipSTAR Flex becomes hipSTAR Glide

The brand-new **hipSTAR Glide** is a multifunctional and certified lanyard replacing our hipSTAR Flex. Having been developed for use in work positioning systems, it comes in two different diameter versions (11.5 mm and 12.9 mm) and a wide range of lengths. The hipSTAR Glide also includes an 8 mm Sirius polyester cord with a prusikLOOP thimble that provides an extra mounting point, further expanding its functionality. All parts are replaceable and made by Teufelberger.



### Specifications:

**Diameter:** 11.5 mm, 12.9 mm  
**Length:** 3 m, 4 m, 5 m, 7 m, 10 m  
**Max. user weight:** 150 kg (330 lbs) including tools and gear  
 other

**Standards:** EN 358:2018, EN 795B:2012, ANSI Z133-2017, AS/NZS 5532:2013, AS 1891.5:2020, CEN/TS 16415:2017 (2 persons)

#### EXCHANGEABLE

- karaT carabiner
- glideHITCH pulley
- Ocean Polyester e2e (new lengths available: 60, 65, and 70 cm!)
- hipSTAR Glide e2e rope
- prusikLOOP thimble

# multiSLING

Our **multiSLING** is regarded as the number one multi-purpose tool for professional arborists. It can be used as an anchor sling and a friction hitch cord, in single leg or choked configurations. In combination with a DMM Revolver carabiner, the multiSLING also serves as a cambium saver.

### Specifications:

**Length:** 1 m, 1.3 m  
**Standards:** EN 566, EN 795B, EN 354, ANSI Z133

Ø		Min. breaking strength	
mm	inch	daN	lbf
10	3/8	2,450	5,500



# fimblSAVER

The **fimblSAVER** is part of Teufelberger’s cambium saver portfolio. The two stainless steel thimbles [fimbl] of the fimblSAVER ensure that the climbing rope will move smoothly during work in the canopy. The friction values are only slightly higher than those encountered with the pulleySAVER. The 10 cm long tapered longitudinal seam makes retrieving this cambium saver simple. Since the fimblSAVER is easy to install from the ground, it closes the gap between the multiSAVER and the pulleySAVER.

## Specifications:

**Length:** 1.25 m, 2 m  
**Standards:** EN 795B, ANSI Z133, AS/NZS 5532

Ø		Min. breaking strength	
mm	inch	daN	lbf
15	19/32	4,000	8,990



### EXCHANGEABLE

- Ocean Polyester Loop T
- Retrieval Cone L

# fimblCLIMB

The **fimblCLIMB** consists of a polyester rope with a polyester cover. Weighing a mere 311 g (1.25 m) and 426 g (2.25 m), respectively, it is the lightweight of the fimbl family. And yet, it amazes with a breaking load of 30 kN. The compact 6 mm steel thimbles facilitate retrieval from the ground and help ensure the product’s usual long service life. Unlike the fimblSAVER, the fimblCLIMB features the 7 mm Ocean Dyneema® Loop T as a readjustable friction hitch. The fimblCLIMB is indispensable for all those who would like to climb safely and efficiently. Therefore, it should not be missing from any harness.

## Specifications:

**Length:** 1.25 m, 2.25 m  
**Standards:** EN 795B, ANSI Z133, AS/NZS 5532

Ø		Min. breaking strength	
mm	inch	daN	lbf
12	1/2	2,800	6,290



### EXCHANGEABLE

- Ocean Dyneema® Loop T
- Retrieval Cone S



# Accessories

## nineLINE

The **nineLINE** is a 1.7 mm UHMWP throwline with a special coating that makes it flexible, smooth, and running very well around every surface. It is the exact right degree of slipperiness to ensure a perfect and precise handling. Its braiding type, shape, coating, and perfect stiffness prevent nesting issues and make it easy to retrieve the line from the tree but also facilitate its storage in your throw bag. The nineLINE has a breaking strength of 315 daN/3.15 kN and is available in red and yellow.

### Specifications:

**Length:** 60 m, 150 m      **Cover:** UHMPE        
**Standard:** no standard      **Braid:** 12

Ø		Min. breaking strength				Weight	
mm	inch	daN	lbf	Knotted		g/m	lbs/100
				daN	lbf		
1.7	1/16	315	708	137	308	2.3	0.15



2.2 mm  
yellow



2.2 mm  
red



## FALCON throwbag

Low **throw weight** and compact design, ideal for manual throwing. For the installation of ropes from the ground. The throwbag features an upper metal ring and a lower sling loop. The metal ring is very small to avoid snagging on branches or other structures. The bag itself is made of tear-proof material.

Art. no.	Designation	Colors	Weight
7333801	FALCON throwbag	orange / black	350 g



# K1 Keeper

Useful. Neat. Effective.

The reimagined **K1 Keeper** allows you to move efficiently and cleanly through trees. Its innovative design neatly stows your lanyard in one easy pull and effectively reduces the amount of time spent organizing excess line. Don't let the plastic fool you! It's made of industrial-grade Nylon 6 (an alternative to aluminum alloy) and has aluminum components that make it one sturdy piece of gear. To make life easier for you on the ground and in the tree, the K1 Keeper has been redesigned to require no tools for installation. We are sure you will love this upgrade!

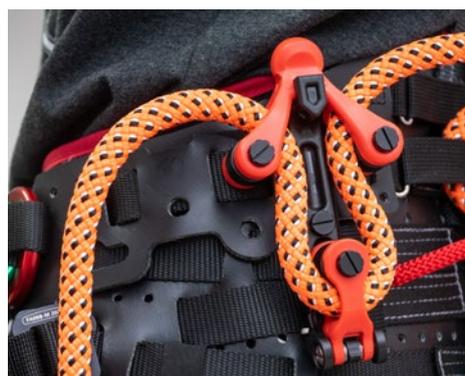
The K1 Keeper's ability to handle dynamic and semi-static lines make it a useful and accommodating tool that is meant to increase your work efficiency in the tree.

## Features

- ✓ Delivered with thread locker
- ✓ Works with ropes up to 13.5 mm in diameter
- ✗ Not for climbing (non-PPE)

## Specifications:

- Material:** nylon, aluminum & stainless steel
- Weight:** 120 g
- Size:** 150x80 mm
- Color:** black



Invented by Chris Corley

# miniME

Strong. Handy. Colorful.

Despite its small size, **miniME** is a powerful and effective fighter, outshining quite a few other accessory carabiners. Despite being a mini clone of bigger carabiners, mini-Me is shown to be stronger and tougher than some of its larger counterparts. Your miniMEs will be discreet and will carry out a multitude of missions without ever letting you down. The only challenge for you will be to choose the color.

## Features

- ✓ Breaking strength: 4 kN (407 kg / 897 lbs)
- ✗ Not for climbing (non-PPE)

## Specifications:

- Material:** anodized aluminum alloy
- Weight:** 8.7 g
- Size:** 58x33 mm
- Colors:** blue, red, black, pink, gold, purple





# Transport

## Mighty Mule

Rugged. Smart. Flexible.

Mules are strong, sturdy and tough. They are the perfect beast of burden. Exactly like our new bag: the **Mighty Mule** 80l. It will carry all you need for your daily work. Due to its flexible and smart construction, you can personalize it with any and all accessories of your liking. At work, for traveling, and at competitions. It's ready for anything that lies ahead. Everything, everywhere, the way you like it.

### Specifications:

- Material:** special waterproof 600D PVC + waterproof 600D/PU + 210D/420D polyester lining
- Color:** black
- Size:** H= 65 cm, P= 120 cm  
Excluding apron: H= 25 cm
- Volume:** 80 l



# Gear Mule

Clean. Fast. Convenient.

Our **Gear Mule** is the little helper you need for your everyday tasks. Store your most important tools in one place and quickly grab them when you need them. It seamlessly clips to our Lazy and Mighty Mule 80l and makes them even more flexible. Equipped with handy gear clips to cleanly store your tools.

## Specifications:

- Material:** waterproof 600D/PVC
- Color:** black
- Size:** L = 41cm, W = 27cm,  
H = 15cm
- Volume** : 15 l



# Bucket Mule

Tidy. Fitting. Handy.

**Bucket Mule 30l** has enough space to carry all the ropes you will need for your workday. It fits perfectly into our Lazy and Mighty Mule 80l and keeps them tidy. Strong, sturdy and tough, like a real mule, our Bucket Mule 30l is your perfect companion for your daily challenges.

## Specifications:

- Material:** special waterproof  
600D/PVC
- Color:** black
- Size:** H = 31cm, P = 100cm  
Excluding apron: H = 19cm
- Volume:** 30l



# Waist Belt

Removable. Ergo. Comfy.

The **Waist Belt** completes your Lazy or Mighty Mule 80l. Use it together with a pair of Shoulder Straps and comfortably carry your climbing gear. Using our Waist Belt also makes carrying your gear more ergonomical and easy on your back.

## Specifications:

**Material:** waterproof 600D/PU  
Lining: 420D/210D/PU

**Color:** black

**Max. length:** 160 cm

## Features

- ✓ Improves comfort
- ✓ Adds additional storage for personal belongings



# Shoulder Straps

Soft. Comfy. Ergo.

This pair of **Shoulder Straps** completes your Lazy or Mighty Mule 80l. Attach the straps to your bag and make carrying your gear more comfortable.

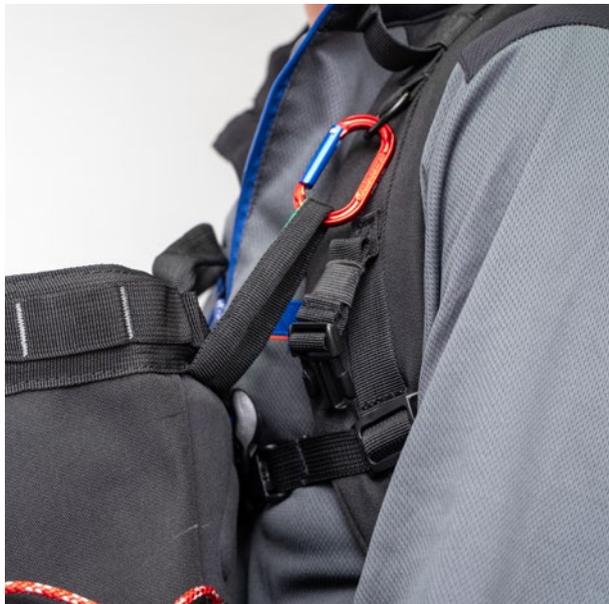
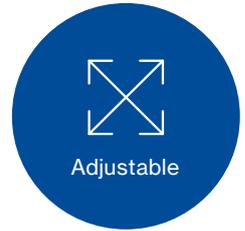
## Specifications:

**Material:** waterproof 600D/PU  
Lining: 420D/210D/PU

**Color:** black

## Features

- ✓ Comfortable
- ✓ Perfectly adjustable to your anatomy



# Relevant standards in agriculture and forestry

## ÖNORM L 5276

Skidding winches for agriculture and forestry (design specifications)

Here are a few terms and details from this standard:

- **Three-point hitch cable winch:** Winch for attachment to the three-point linkage of tractors according to ÖNORM ISO 730-1 and for front mounting
- **Winch head:** Winch that can be mounted to a suitable carrier vehicle (e.g., tractor, motorized carts)
- **Drum core:** must equal at least 14 times the rope diameter
- **Rope dimensioning:** the ratio of the rope's minimum breaking force to the winch's maximum traction force must not be less than 2
- **Overload protection:** An overload protection device must be provided to ensure that the permitted maximum traction force of the winch is not exceeded.
- Deflection pulleys and their attachment must be attuned to the respective traction force of the winch and the angle ratios.
- Attachment means must be used to attach the load. Using the hauling rope as a choker rope is prohibited.
- For attachment means, the following minimum requirements must be met in connection with the maximum traction force of the winch:
  - a) for ropes, twice the safety factor as compared to the minimum breaking force
  - b) for chains, twice the safety factor as compared to the breaking force
- Attachment means do not constitute lifting tackles and must not be used for the lifting of loads.

## ÖNORM EN 16517

Agricultural and forestry machinery – Mobile yarders for timber logging – Safety

Here are a few terms and details from this standard:

This standard is to be applied to the design and construction of mobile yarders used to transport timber products and to their mounting. Furthermore, it covers all operations of transporting timber with mobile yarders in sloped or flat terrain.

**Ropeway:** a freely suspended and tensioned rope that serves as a guide for a towed or driven carriage

**Yarder:** a mobile or partly mobile system consisting of winches and deflection pulleys that is used to drive ropes for a temporary ropeway

**Tower yarder:** a yarder mounted on a vehicle or trailer and including a tower that can be tilted and/or extended into a horizontal position, or retracted for transport reasons

**Rope system with securely anchored skyline:** system in which the skyline is fixed at both ends and forces result from the pretension, the payload, and the position of the carriage (maximum forces in the middle of the longest span)

**Rope system with movable skyline:** system in which the skyline can be retracted or extended during use and which is used to transport the logs attached to the carriage close to the ground

**Rope system with circulating skyline:** system in which the haulback rope is installed with the hauling rope in a circulating loop with one winch at each of the two ends and in which a high-lead winch, a carriage, or a simple butt rig is fixed between the two ropes

**Guying:** The stability and/or structural integrity of the yarders in use must be ensured through guying or the use of anti-tilt means. For the drive mechanism for the storage drums of the guy lines (installed on mobile yarders), powered winches are not an option. The traction force must be limited to the force needed to tension the guy lines (before tensioning the skyline) and to wind up the unloaded rope as rope reserve. The design of the drum is to be subdivided into two segments, one for the rope reserve, and another for pretensioning the guy line. Mechanical installations or hand-guided tools must be provided to transfer the rope between the two segments of the drum so that this procedure can be carried out by the operator in a risk-free manner.

**Rope drives:** Rope drives for moving ropes (e.g., hauling rope, haulback rope, and hoist rope) must be equipped with an automatic device used to slacken the rope or to reduce rope tension in order to prevent overloading. The load must not exceed 1.2 times the maximum working load. If the rope is tensioned in a separate segment of the drum with a smaller diameter, a mechanical device or handheld tool must be provided in order to move the rope without endangering the operator.

**Rope assembly:** The forces in guylines must be exerted in the direction of the rope's central axis. The forces from the skyline must be distributed to at least two guylines. Instructions for the arrangement of guylines must be set forth in the User's Guide

**Steel wire ropes:** The selection of steel wire ropes shall be carried out based on EN 12385-1:2002+A1:2008, EN 12385-2:2002+A1:2008, EN 12385-3:2020, and EN 12385-4:2002+A1:2008. The dimensioning of steel wire ropes shall be done according to ISO 16625:2013 (or EN 13001-3-2:2014). For steel wire ropes, the discard criteria according to ISO 4309:2017 shall apply.

**Synthetic ropes:** A synthetic rope with a protective cover (i.e., a braided cover) shall exhibit the same minimum breaking force as steel wire ropes used for the same purpose. In the case of unprotected synthetic ropes without any cover, the safety factor must be 40% higher than for steel wire ropes used for the same purpose (to factor in the abrasion of structural fiber components).

**Drums and deflection pulleys:** Drums and deflection pulleys on the carriage must be designed in such a way that the ropes are kept from jumping out sideways (by means of a device or the structural design); drive drums must be at least 20 times the maximum rope diameter.

For stationary ropes, the pulley diameter must be at least 14 times the maximum rope diameter. The drum diameter must be at least 12 times the maximum rope diameter. The measurement must be taken at the central axis of the rope.





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