

CATALOGUE / ENG  
**2024**

not tied to be free

**LONDON**



# CLIMBERS, WORKERS AND ADRENALINE SPORTSMEN/SPORTSWOMEN,

Right now, you are holding a tendon catalogue in your hands which is founded on almost seventy years of experience in the field of development of ropes. We produce them utilizing the state-of-the-art procedures at lanex a.s. In the czech republic.

We continue working on ourselves, which makes us a technological leader in the market. Each year we bring you new innovations and technologies that make movement more effective, make work easier, and provide for your safety. In addition to our in-house development team we openly pursue cooperation with universities, research institutes, certified laboratories, and last, but not least, you our customers.














Thanks to quality and history, we have built a worldwide sales network that we are going to enlarge and improve incessantly. Tie up your future steps at work and in your leisure time with us.

tied to be free

**LANEX**



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1

### SINGLE ROPES

For ascent where only one rope is used. This is the most basic and widely used method of using rope for ascents.

1/2

### HALF ROPES

Separate ropes are anchored in alternating belaying points. This system reduces the risk of rope breakage by falling rocks and provides maximum protection in alpine conditions or on tough climbs.

2

### TWIN ROPES

The same ropes are always used in pairs, secured at common belaying points. Twin ropes guarantee a high level of safety, especially for classic alpine climbing.

1/2

### MIDPOINT OF ROPE

At half of the length, the rope is visibly marked by coloured band, which does not affect the core structure and its mechanical properties. Lengths 30 - 80 m only.

COMPACT

### COMPACT

Our own special technology has been used for the ends of the rope. In a length of 15 mm, the core strand and sheath are connected into one unit.

TEFIX®

### TEFIX®

The TeFIX® patented technology permanently bonds the sheath to the core. It prevents from any slippage between these two basic rope parts.

LOWE

### LOWE

Thanks to the unique combination of materials which work together jointly and meet the stringent requirements of the EN 892 standard, we were able to reduce the weight while retaining a diameter acceptable to all climbers.

SECURE

### SECURE

Rope with a zero sheath slippage is made with utilization of the unique patented technology named Secure. Thanks to the unique sandwich-type construction of braided layers and the use of specially finished fibres, the rope is safe even in case of a heavily damaged sheath.

SBS

### SBS — SIMPLE BRAID SYSTEM

SBS - is system where each strand is plaited separately into the sheath construction and not in pair (tandem). SBS braiding makes the sheath surface much more compact and smoother. Therefore ropes made by SBS generate much lower friction, are more resistant to abrasion and last longer while in contact with rocks.

STANDARD

### STANDARD

Improved basic finishing of dynamic ropes. The new technological process enables the application of impregnation agents early in the standard finishing of the ropes.

WATER REPELLANT  
UIAA

### COMPLETE SHIELD

Maximum level of rope protection against water and abrasion. It is reached by using the new progressive NANOTECHNOLOGY method. COMPLETE SHIELD is an impregnation which extends the general lifespan of TENDON ropes significantly.

ECO WATER REPELLANT  
UIAA

### ECO SHIELD

ECO variant of impregnation, which guarantees high water-repellent rope protection. The core and sheath are treated with a new method of PFC-free ECO impregnation, which forms a water-repellent layer. Rope with this protection does not absorb water and is environmentally friendly because it does not contain fluorinated hydrocarbons C8 or C6.



### BICOLOUR

A new, clearly identifiable change of rope pattern in the middle. Bicolour brings comfort in rope handling and is advantageous especially for descending.



### CE - SYMBOL OF CONFORMITY

This symbol confirms that the product meets safety requirements specified in the relevant European regulations. The number following symbol (e.g. CE1019) is number of notified body which performs checking of production: VVUÚ, a.s., Pikartská 1337/7, 71607 Ostrava-Radvanice, Czech Republic.



### UIAA

Products marked with this symbol meet UIAA requirements. The UIAA is the International Mountaineering and Climbing Federation.



### TENOTE

New, revolutionary conception of the overall administration and registration of ropes which, thanks to NFC technology, offers unthought-of possibilities and brings user comfort to a hitherto unrecognized level. Static ropes includes microchip. With a PC and a mobile phone you obtain a quick, effective and smart tool for examination and maintenance of your ropes.

### EN 1891

This European norm establishes safety requirements and testing procedures for static ropes at European Union accredited laboratories. Products labeled with the symbol of this European norm satisfy the given safety requirements.

### EN 892

This European norm establishes safety requirements and testing procedures for dynamic climbing ropes at European Union accredited laboratories. Products labelled with the symbol of this European norm satisfy the given safety requirements.

### NFPA

These ropes meet the life safety rope requirements of NFPA 2500 (1983), standard on fire service life safety rope and equipment for emergency services, 2022 edition.



**EXPERT** - If climbing is your lifestyle and you always go for the best equipment available. You need aggressive ropes that never fail and support your impressive performance.



**ADVANCED** - It seems that you are serious about climbing and that you care about the gear you use. The fact that you've already achieved quite difficult routes only confirms it. Go for the ropes labeled as Advanced.



**BEGINNER** - Ropes ideal for your first moves on rock or occasional climbing. Thicker diameters and long lifespan.





TECHNOLOGY

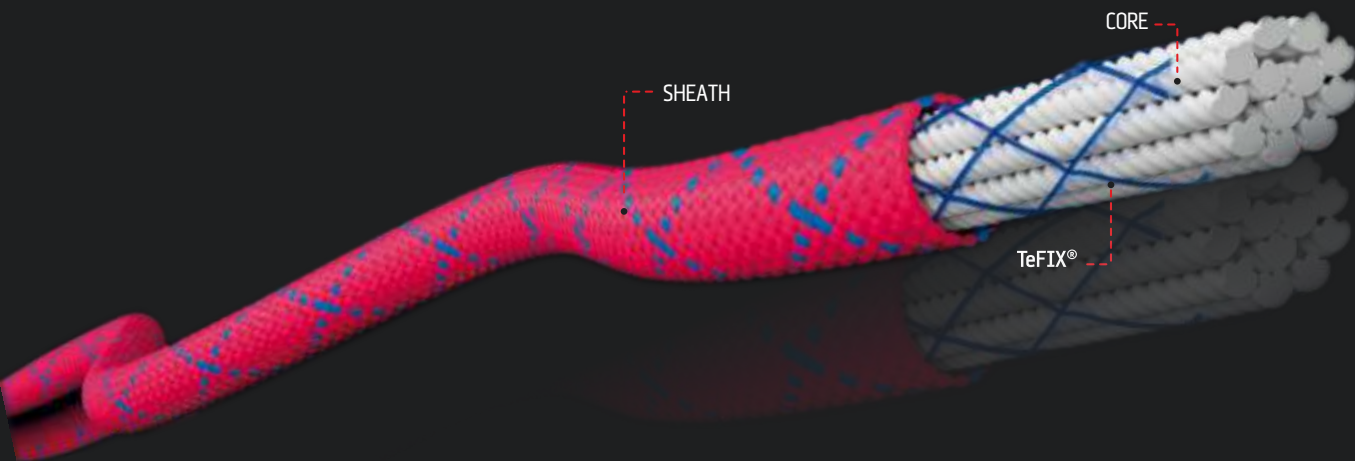
teFIX®

The TeFIX® patented technology permanently bonds the sheath to the core.

It prevents from any slippage between these two basic rope parts.

This particular feature was reached by adding a special material between the core and sheath. This extra material is added after the process so the bond is flexible and strong.

Rope has 0% sheath slippage, much longer lifespan, and better handling.



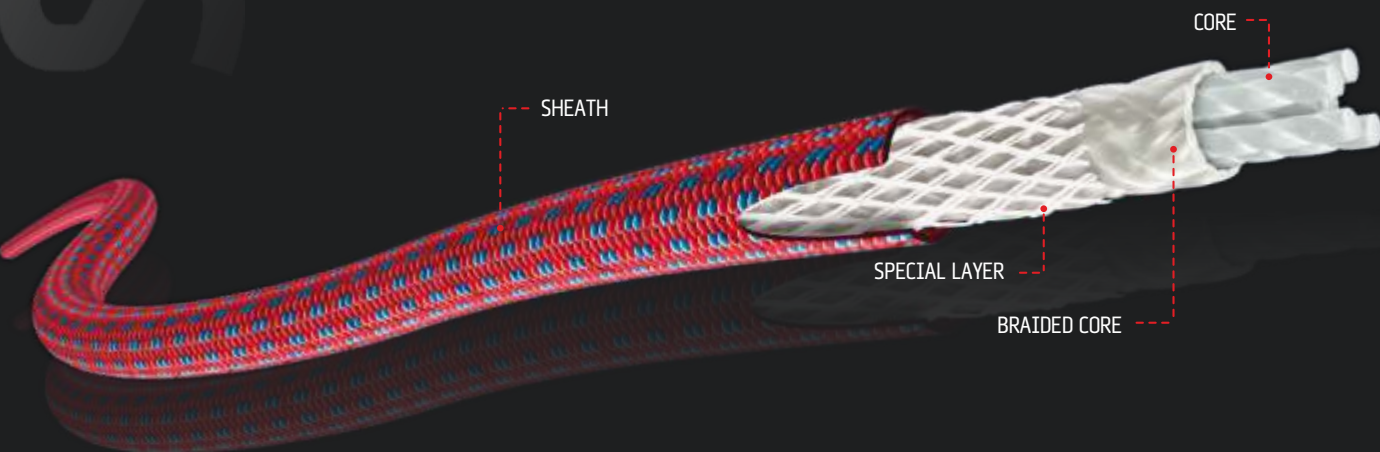
# SECURE



TECHNOLOGY

## SECURE

Thanks to the unique sandwich-type construction of braided layers and the use of specially developed staple fibres, the rope is able to hold the suspended person or load even in case of a considerably damaged sheath or core without a complete rupture of the rope and subsequent fall of the suspended person.



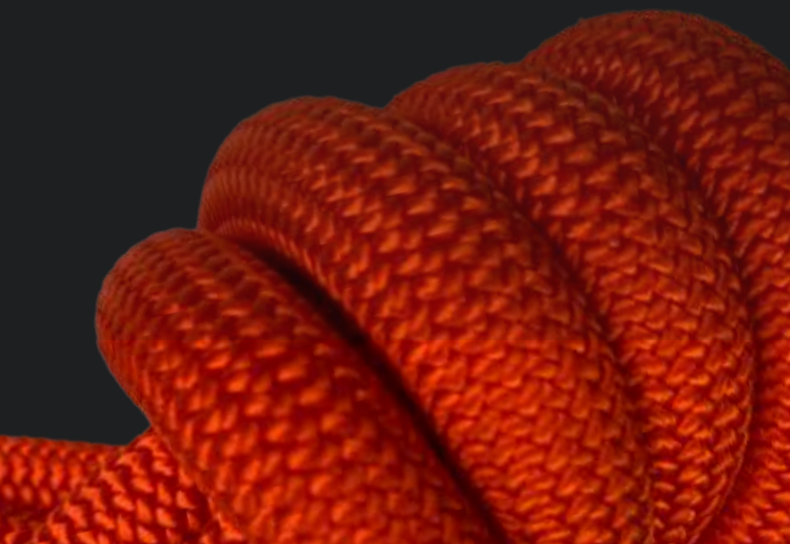




## TECHNOLOGY

# ECO SHIELD

The new ECO rope protection against impregnation, guarantees high water-repellent rope protection. The core and sheath are treated with a new method of PFC-free ECO impregnation, which forms a water-repellent layer. Rope with this protection does not absorb water and is environmentally friendly because it does not contain fluorinated hydrocarbons C8 or C6. Our PFC - free rope meets the UIAA water repellent standard.



## TECHNOLOGY

# COMPLETE SHIELD

Maximum level of rope protection against water and abrasion. It is reached by using the new progressive nanotechnology method. The rope fibres are then protected against dust and water which would otherwise cause a harm to the rope construction. Complete shield is an impregnation which extends the general lifespan of tendon ropes significantly. All ropes with the complete shield finish meet the uiaa 101 requirement for water repellent test.





TECHNOLOGY

# SBS

**SIMPLE BRAID SYSTEM** - is a system where each strand is plaited separately into the sheath construction and not in pairs (tandem). SBS braiding makes the sheath surface much more compact and smoother. Therefore ropes made by SBS generate much lower friction, are more resistant to abrasion and last longer while in contact with the rocks.



TANDEM

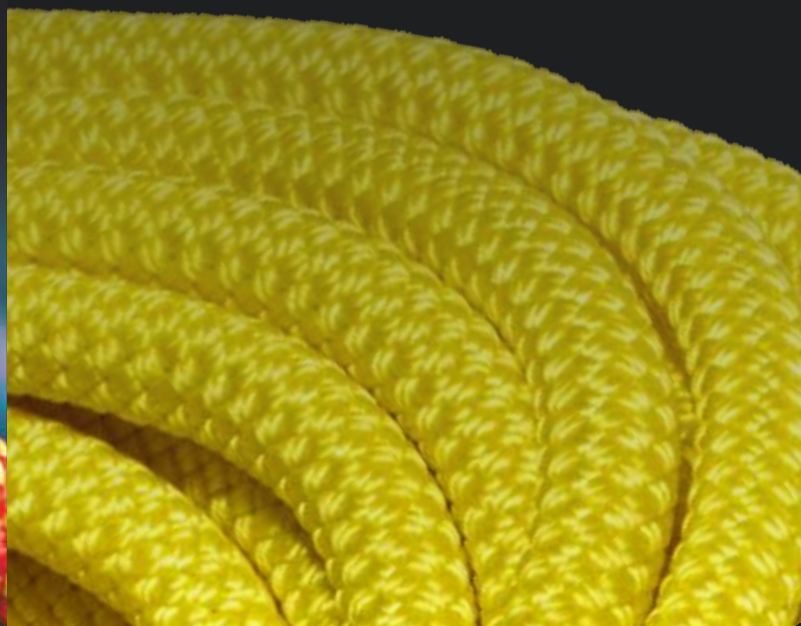
SBS



TECHNOLOGY

# LOWE

Thanks to the unique combination of materials which work together jointly and meet the stringent requirements of the EN 892 standard, we were able to reduce the weight while retaining a diameter acceptable to all climbers.

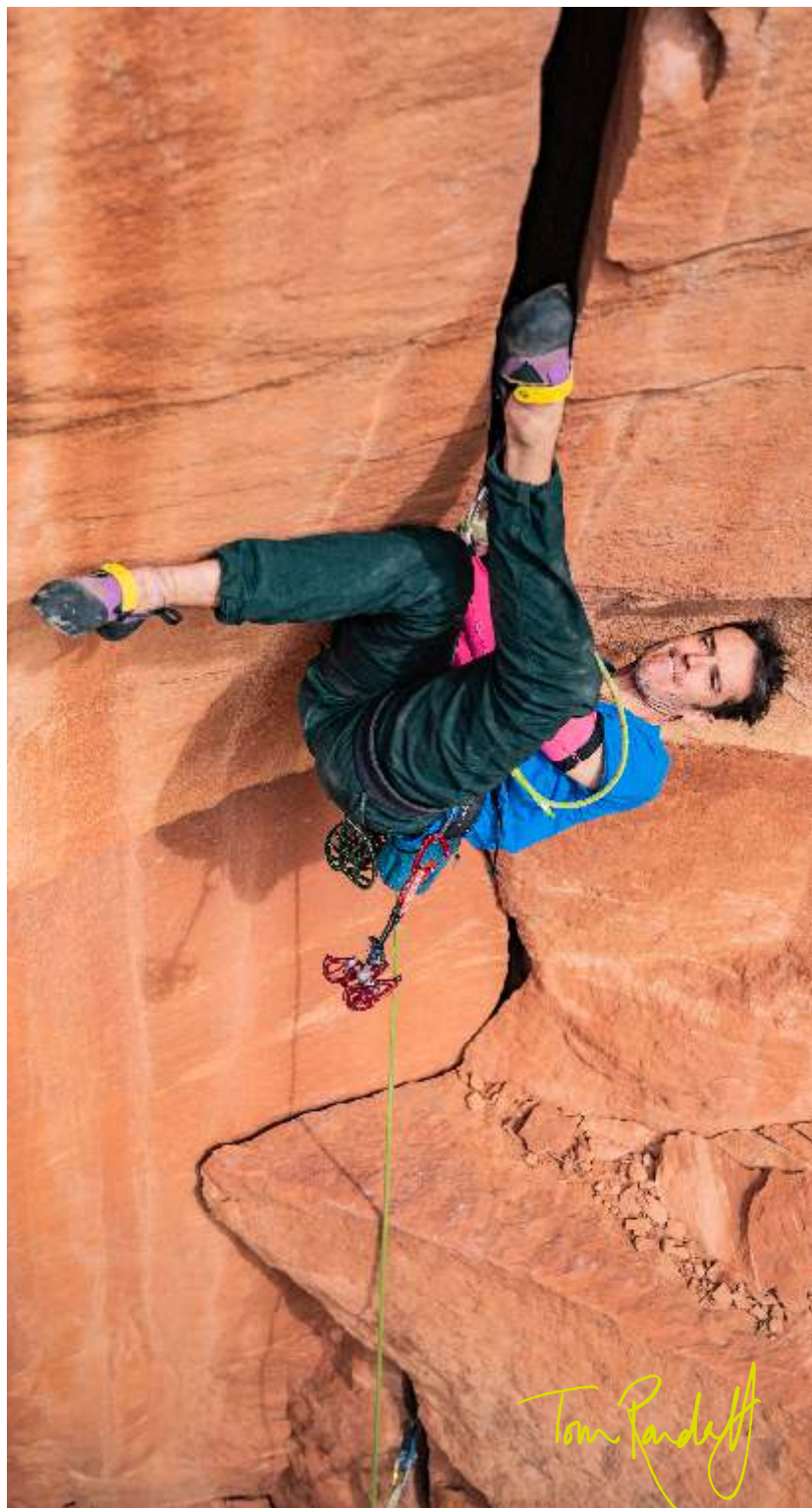




# SPORT CLIMBING







TOM

# RANDALL

## WHAT DOES CLIMBING MEAN TO ME?

Climbing for me, is a form of meditation and expression of creativity. On one side, I find that climbing is so involving for your brain that it actually makes everything else in like "switch off" so then I can feel really calm in my head and it seems like it's just me, the rock, the moves and nothing else in life. On the other side, it's an incredible outlet for creativity because it's still a sport without too many rules!



**EN 892 / CE 1019**

	①	①/2	∞	
ROPE DIAMETER	9.0	9.0	9.0	mm
WEIGHT	55	55	55	g/m
NUMBER OF UIAA FALLS	5	19	33	
MAX. IMPACT FORCE	8.9	6.5	10.8	kN
SHEATH SLIPPAGE	0	0	0	%
STATIC ELONGATION	9.6	9.6	9.6	%
DYNAMIC ELONGATION	31	29	25	%
KNOTABILITY	0.9	0.9	0.9	

**MASTER 9.0 TEFIX®** **EXPERT**

If you want to have a lightweight rope for sport climbing and if you would like to use it occasionally in the mountains also, MASTER 9.0 is a good choice. In addition, this rope makes use of the TeFIX® technology which increases resistance and prolongs the lifespan of the rope thanks to the connection of the core and the sheath.

	D090MF42C000C • TURQUOISE
	D090MF41C000C • PINK

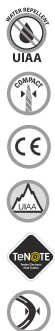
**EN 892 / CE 1019**

	①	
ROPE DIAMETER	9.2	mm
WEIGHT	58	g/m
NUMBER OF UIAA FALLS	9	
MAX. IMPACT FORCE	8.5	kN
SHEATH SLIPPAGE	0.1	%
STATIC ELONGATION	6.5	%
DYNAMIC ELONGATION	31	%
KNOTABILITY	0.9	

**MASTER PRO 9.2** **EXPERT**

This rope defeats the stigma that thin ropes are not durable. You don't need to carry one rope for practicing and another one for redpoint. Innovated, extremely fine SBS sheath significantly prolongs its lifespan. The rope is at the same time soft enough and easy to work with. If you're looking for a devoted friend for sport climbing, this is your choice.

	D092TP41C000C • RED
	D092TP43C000C • TURQUOISE

**EN 892 / CE 1019**

	①	①/2	∞	
ROPE DIAMETER	8.6	8.6	8.6	mm
WEIGHT	50	50	50	g/m
NUMBER OF UIAA FALLS	5	13	30	
MAX. IMPACT FORCE	9.9	7.2	11.5	kN
SHEATH SLIPPAGE	0.2	0.2	0.2	%
STATIC ELONGATION	5.7	5.8	3.9	%
DYNAMIC ELONGATION	30	22	23	%
KNOTABILITY	0.8	0.8	0.8	

**MASTER 8.6** **EXPERT**

The thinnest single rope we offer. The low weight, which is only 50 g, makes it an ideal weapon, which will help you to send your hardest projects.

	D086TM42C000C • PINK
	D086TM43C000C • TURQUOISE



EN 892 / CE 1019

	①	1/2	③	
ROPE DIAMETER	8.9	8.9	8.9	mm
WEIGHT	52	52	52	g/m
NUMBER OF UIAA FALLS	6	18	40	
MAX. IMPACT FORCE	9.1	6.7	10.7	kN
SHEATH SLIPPAGE	0.2	0.2	0.2	%
STATIC ELONGATION	6.9	6.9	5.6	%
DYNAMIC ELONGATION	31	26	24	%
KNOTABILITY	0.8	0.8	0.8	

MASTER PRO 8.9

EXPERT

Master PRO 8.9 is certificated as single, twin and half rope. Unique combination of simple braid system, modified sheath vs. core ratio in favour of sheath and complete shield impregnation guarantees good resistance and lifespan. The low weight, only 52 g/m, and low rope drag makes it excellent on-sight rope for hard climbing projects where every small detail matters.



D089TP42C000C • BLACK/BLUE



D089TP41C000C • BLACK/PINK



EN 892 / CE 1019

	①	
ROPE DIAMETER	9.7	mm
WEIGHT	65	g/m
NUMBER OF UIAA FALLS	9	
MAX. IMPACT FORCE	8.5	kN
SHEATH SLIPPAGE	-0.4	%
STATIC ELONGATION	9.8	%
DYNAMIC ELONGATION	30	%
KNOTABILITY	0.9	

MASTER PRO 9.7

EXPERT

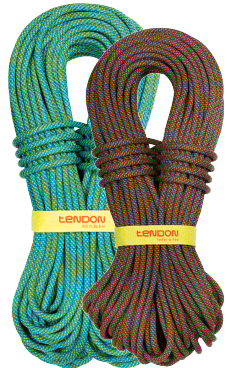
With MASTER PRO 9.7 we build on the success of the massively popular MASTER PRO 9.2. When our athletes field tested the rope, they were awestruck by the rope's outstanding durability. This incredible resilience is down to the unique braid SBS construction, which guarantees superior resistance to wear, greatly increasing the lifespan of the rope. It is the perfect choice for those who prefer durability and longevity over weight, including high performance climbers who are training for their projects.



D097TP42C000C • GREEN



D097TP41C000C • TURQUOISE



EN 892 / CE 1019

	①	
ROPE DIAMETER	9.4	mm
WEIGHT	58	g/m
NUMBER OF UIAA FALLS	6	
MAX. IMPACT FORCE	7.9	kN
SHEATH SLIPPAGE	0	%
STATIC ELONGATION	6.4	%
DYNAMIC ELONGATION	37	%
KNOTABILITY	0.9	

MASTER 9.4

EXPERT

MASTER 9.4 with a small diameter but durable SBS sheath construction. Ideal for average climbers who want to keep pushing their limits.



D094TM41S000C • VIOLET



D094TM42S000C • BLUE





EN 892 / CE 1019

ROPE DIAMETER	9.4 mm
WEIGHT	58 g/m
NUMBER OF UIAA FALLS	6
MAX. IMPACT FORCE	7.9 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	6.4 %
DYNAMIC ELONGATION	37 %
KNOTABILITY	0.9

①

MASTER 9.4 ECO

EXPERT

MASTER 9.4 with a small diameter but durable SBS sheath construction. Ideal for average climbers who want to keep pushing their limits. With new ECO impregnation which is PFC-free and enviromentally friendly.

D094TM44E000C • BRIGHT ORANGE



EN 892 / CE 1019

ROPE DIAMETER	9.7 mm
WEIGHT	61 g/m
NUMBER OF UIAA FALLS	8
MAX. IMPACT FORCE	8.2 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	8.0 %
DYNAMIC ELONGATION	35 %
KNOTABILITY	0.8

①

MASTER 9.7 TEFIX®

EXPERT

Technologies keep advancing. Favorite MASTER 9.7 with TeFIX® technology became even more safer and durable than its older brother. Permanent connection of a core and sheath ensures that the sheath cannot slip. Check the fresh design!

D097MF41S000C • TURQUOISE  
D097MF42S000C • PINK



EN 892 / CE 1019

ROPE DIAMETER	9.7 mm
WEIGHT	61 g/m
NUMBER OF UIAA FALLS	7
MAX. IMPACT FORCE	7.9 kN
SHEATH SLIPPAGE	0.1 %
STATIC ELONGATION	6 %
DYNAMIC ELONGATION	37 %
KNOTABILITY	0.9

①

MASTER 9.7

ADVANCED

One of the most favorite ropes among our customers. MASTER 9.7 is time-proven. It offers an ideal diameter, SBS sheath and a long lifespan. One of the best ropes for rock climbing you can get. Offers an excellent value for money.

D097TV41S000C • YELLOW  
D097TV42S000C • GREEN  
D097TV45S000C • BICOLOUR



EN 892 / CE 1019

ROPE DIAMETER	9.8 mm
WEIGHT	64 g/m
NUMBER OF UIAA FALLS	9
MAX. IMPACT FORCE	7.4 kN
SHEATH SLIPPAGE	0.05 %
STATIC ELONGATION	7.9 %
DYNAMIC ELONGATION	35 %
KNOTABILITY	0.9

①

AMBITION 9.8

BEGINNER

As its name suggests, this rope is both for beginners and ambitious climbers who pursue climbing outside and indoors. It offers outstanding value for money. It has a universal diameter.

- D098TR41S000C • YELLOW
- D098TR42S000C • GREEN
- D098TR45S000C • BICOLOUR
- D098TR48S000C • BRIGHT YELLOW



EN 892 / CE 1019

ROPE DIAMETER	10 mm
WEIGHT	67 g/m
NUMBER OF UIAA FALLS	9
MAX. IMPACT FORCE	8.9 kN
SHEATH SLIPPAGE	0.2 %
STATIC ELONGATION	5 %
DYNAMIC ELONGATION	33 %
KNOTABILITY	1

①

AMBITION 10.0

BEGINNER

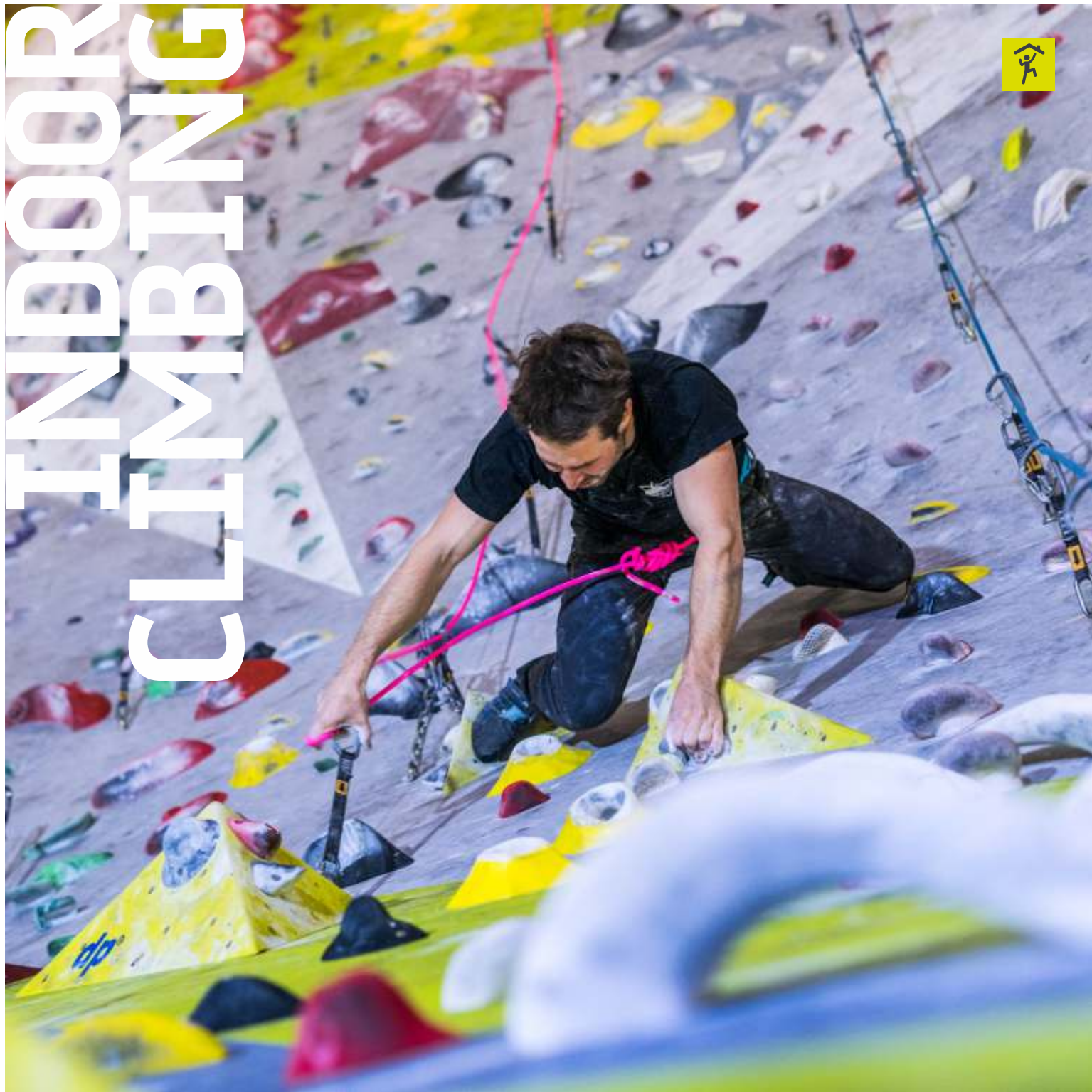
AMBITION 10.0 is designed especially for beginners. Wider diameter combined with SBS sheath offers an impressive performance and long lifespan.

- D100TA41S000C • RED
- D100TA42S000C • BLUE





# INDOOR CLIMBING





ELIŠKA

# ADAMOVSKÁ

## WHAT DOES CLIMBING MEAN TO ME?

That is a tricky question, I definitely needed to give it some thought. I mean, I have been climbing for so long (14 years) that it not only became an integral part of majority of my days, but it also became an integral part of who I am. Of course, it is mostly about freedom, but it also gives me an opportunity to express myself. Climbing has already given me lots of useful life lessons – and I am still learning. I found out that different problems may have different solutions, I learned how to handle my emotions as well as interpersonal communication, and much more. Whether it was all the hard work on the climbing gym, or the peaceful days spent out in the rocks, climbing made me the person I am now. But, above all, climbing, training and the related lifestyle bring me joy.

*Ella Adamovská*



**EN 892 / CE 1019**

ROPE DIAMETER	9.8 mm
WEIGHT	63 g/m
NUMBER OF UIAA FALLS	11
MAX. IMPACT FORCE	9 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	7.9 %
DYNAMIC ELONGATION	32 %
KNOTABILITY	0.9

①

**INDOOR 9.8**

BEGINNER

We present to you the brand new Indoor 9.8 rope, which is specially developed and tested for climbing on artificial walls and for Top Rope belaying. The top single rope with a diameter of 9.8 mm is therefore among the thinnest in our Indoor rope category. The specialty of this rope is its braided core, thanks to which the Indoor 9.8 keeps its round shape much longer and does not sag during top belaying. Although the rope has a narrower diameter, its braid is woven using TANDEM technology, which ensures a higher density of fibers and thus safer fall arrest.

**D098T142S000R • BLACK/ORANGE****D098T141S000R • BLACK/BLUE****EN 892 / CE 1019**

ROPE DIAMETER	10.2 mm
WEIGHT	68 g/m
NUMBER OF UIAA FALLS	7
MAX. IMPACT FORCE	8.8 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	8.3 %
DYNAMIC ELONGATION	34 %
KNOTABILITY	0.9

①

**INDOOR 10.2i**

BEGINNER

A rope with braided core developed especially for top-rope climbing at gyms. Suitable for climbing schools and rentals.

**D102T171S000C • RED/YELLOW****D102T172S000C • YELLOW/GREY****EN 892 / CE 1019**

ROPE DIAMETER	10.2 mm
WEIGHT	68 g/m
NUMBER OF UIAA FALLS	5
MAX. IMPACT FORCE	9.4 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	6.9 %
DYNAMIC ELONGATION	33 %
KNOTABILITY	0.9

①

**HATTRICK 10.2**

BEGINNER

A rope with SECURE technology that offers less UIAA falls but has much larger sheath that ensures durability and a long lifespan of the rope. Perfect choice for rentals and permanent use in the climbing gyms (top-ropeing).

**D102TH41S000C • BLUE****D102TH42S000C • RED**

**EN 892 / CE 1019**

①

ROPE DIAMETER	10.5 mm
WEIGHT	69 g/m
NUMBER OF UIAA FALLS	9
MAX. IMPACT FORCE	9.2 kN
SHEATH SLIPPAGE	0.1 %
STATIC ELONGATION	6.9 %
DYNAMIC ELONGATION	34 %
KNOTABILITY	0.8

**AMBITION 10.5**

BEGINNER

Thicker ropes are ideal for beginners because they make falls easier to catch using a belay device and thus they make climbing safer. You can use this rope at crags as well.



D105TA41S000C • RED



D105TA42S000C • BLUE



D105TA47S000C • BRIGHT GREEN

**EN 892 / CE 1019**

①

ROPE DIAMETER	10 mm
WEIGHT	67 g/m
NUMBER OF UIAA FALLS	9
MAX. IMPACT FORCE	8.9 kN
SHEATH SLIPPAGE	0.2 %
STATIC ELONGATION	5 %
DYNAMIC ELONGATION	33 %
KNOTABILITY	1

**AMBITION 10.0**

BEGINNER

AMBITION 10.0 is designed especially for beginners. Wider diameter combined with SBS sheath offers an impressive performance and long lifespan.



D100TA41S000C • RED



D100TA42S000C • BLUE

**EN 892 / CE 1019**

①

ROPE DIAMETER	10.2 mm
WEIGHT	67 g/m
NUMBER OF UIAA FALLS	11
MAX. IMPACT FORCE	8.3 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	6.9 %
DYNAMIC ELONGATION	33 %
KNOTABILITY	0.8

**AMBITION 10.2 TEFIX®**

BEGINNER

An new version of a robust rope AMBITION 10.2 enriched with TeFIX® technology. The fact that the core is connected with the sheath prevents the sheath from shifting and provides maximum possible safety in case of the sheath damage. An ideal rope which will guide you through many vertical miles.



D102AF41S000C • YELLOW



D102AF42S000C • ORANGE



**EN 892 / CE 1019**

①

ROPE DIAMETER	11 mm
WEIGHT	79 g/m
NUMBER OF UIAA FALLS	16
MAX. IMPACT FORCE	9.1 kN
SHEATH SLIPPAGE	0.4 %
STATIC ELONGATION	5.3 %
DYNAMIC ELONGATION	31 %
KNOTABILITY	1

**TRUST 11.0**

BEGINNER

Massive, safe rope with extremely long lifespan. Designed for heavy usage in rope training centers and climbing schools.



D110TT41S000C • RED

D110TT42S000C • YELLOW

**EN 892 / CE 1019**

①

ROPE DIAMETER	10.4 mm
WEIGHT	72 g/m
NUMBER OF UIAA FALLS	8
MAX. IMPACT FORCE	8.2 kN
SHEATH SLIPPAGE	0.1 %
STATIC ELONGATION	9.1 %
DYNAMIC ELONGATION	35 %
KNOTABILITY	1

**INDOOR 10.4**

BEGINNER

A rope has a braided core, developed especially for top-rope climbing at gyms. Suitable for climbing schools and rentals.



D104T141S000C • BLUE/GREEN

D104T142S000C • RED/GREY

**EN 892 / CE 1019**

①

ROPE DIAMETER	11.4 mm
WEIGHT	84 g/m
NUMBER OF UIAA FALLS	20
MAX. IMPACT FORCE	9.2 kN
SHEATH SLIPPAGE	0.3 %
STATIC ELONGATION	6.4 %
DYNAMIC ELONGATION	32 %
KNOTABILITY	1

**TRUST 11.4**

BEGINNER

Large diameter safe rope, with extremely long lifespan. Designed for heavy usage in rope training centers and climbing schools.



D114TA41S000C • YELLOW

D114TA42S000C • BLUE

# TENDON GEAR BAG

Backpack with volume of 45 l designed especially for climbers. The zipper, which encircles almost the whole edge enables an easy access into the main chamber, which contains more pockets and hanging loops for your gear. Upper part of the backpack contains a handy pocket for a guidebook or other small pieces of equipment. The back system includes removeable mat for sitting. The anatomically shaped shoulder straps, adjustable sternum strap, hip belt, and padded back ensure that the backpack fits comfortable on your back, even during a long approach. If you completely fill the main chamber, you can always fasten your rope to the top of the backpack using tightening straps. The backpack includes a rope tarp.

- Top material: robust polyester 1000D with PU coating and water-resistant treatment
- Volume 45 l (56 x 34 x 26 cm)
- Adjustable sternum strap and hip belt
- Padded back
- Includes coated rope tarp
- The rope can be fastened on top of the backpack using tightening straps



XTENDON GEAR BAG S

XTENDON GEAR BAG Z





# MOUNTAINEERING AND ALPINISM





DANNY

# MENŠÍK

## WHAT DOES CLIMBING MEAN TO ME?

For me, climbing is to clamber up somewhere, where I can see the world from a totally different perspective. And it is also the joy and excitement at movement and all those easy and difficult, smooth and tortuous moments.



**EN 892 / CE 1019**

	1/2	Ⓢ
ROPE DIAMETER	7.6	7.6 mm
WEIGHT	38	38 g/m
NUMBER OF UIAA FALLS	11	28
MAX. IMPACT FORCE	5.3	8.4 kN
SHEATH SLIPPAGE	-0.3	-0.3 %
STATIC ELONGATION	10.1	6.1 %
DYNAMIC ELONGATION	37	32 %
KNOTABILITY	1	1

**MASTER PRO 7.6****EXPERT**

Master PRO 7,6 mm is the first simple braided half and double rope, whose parameters are virtually unbeatable by any other rope in this category. Master PRO 7,6 mm is the only rope with diameter of less than 8 mm in the market which has a large number of UIAA falls (11 falls as a half rope, 28 falls as a double rope) and very low impact force at the same time. With the weight of 38 g/m and 7.6 mm diameter the rope is suitable for all kinds of climbers.



D076TP41C000C • GREEN



D076TP42C000C • ORANGE

**EN 892 / CE 1019**

	Ⓢ
ROPE DIAMETER	7 mm
WEIGHT	34 g/m
NUMBER OF UIAA FALLS	14
MAX. IMPACT FORCE	9.6 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	8.4 %
DYNAMIC ELONGATION	33 %
KNOTABILITY	0.9

**MASTER 7.0****EXPERT**

The lightest twin rope in the world. Only 34 grams per meter and still perfectly safe. Ideal for extreme climbing projects or as an ultra-light rope for ski-tourists. You won't even notice this rope in your bag due to its weight and size. Certified for use as a twin rope exclusively.



D070TM41C000C • RED



D070TM42C000C • BLUE

**EN 892 / CE 1019**

	1/2	Ⓢ
ROPE DIAMETER	7.9	7.9 mm
WEIGHT	38	38 g/m
NUMBER OF UIAA FALLS	5	16
MAX. IMPACT FORCE	5.7	8.5 kN
SHEATH SLIPPAGE	0	0 %
STATIC ELONGATION	10.5	8.0 %
DYNAMIC ELONGATION	38	35 %
KNOTABILITY	0.9	0.9

**ALPINE 7.9****EXPERT**

An ideal choice for various activities in the mountains. Mountain guides, ski-tourists as well as mountaineers will love its low weight of 39 g. We offer this rope even in short variants of 20 and 30 m.



D079TL41S000C • RED



D079TL42S000C • YELLOW



## EN 892 / CE 1019

	1	1/2	∞
ROPE DIAMETER	8.6	8.6	8.6 mm
WEIGHT	50	50	50 g/m
NUMBER OF UIAA FALLS	5	13	30
MAX. IMPACT FORCE	9.9	7.2	11.5 kN
SHEATH SLIPPAGE	0.2	0.2	0.2 %
STATIC ELONGATION	5.7	5.8	3.9 %
DYNAMIC ELONGATION	30	22	23 %
KNOTABILITY	0.8	0.8	0.8

## MASTER 8.6

EXPERT

The thinnest single rope we offer. Master 8.6 is the perfect rope for glacier crossings, alpine ascents, and anything you do in the mountains where you only want a single rope.

	D086TM42C000C • PINK
	D086TM43C000C • TURQUOISE



## EN 892 / CE 1019

	1/2	∞
ROPE DIAMETER	7.8	7.8 mm
WEIGHT	38	38 g/m
NUMBER OF UIAA FALLS	5	16
MAX. IMPACT FORCE	5.7	8.5 kN
SHEATH SLIPPAGE	0	0 %
STATIC ELONGATION	10.5	8 %
DYNAMIC ELONGATION	38	35 %
KNOTABILITY	0.9	0.9

## MASTER 7.8

ADVANCED

A light weight quality rope, for those who feel at home in the mountains. The Complete Shield technology protects the rope from water and dirt.

	D078TD42S000C • BLUE
	D078TD44S000C • RED



## EN 892 / CE 1019

	1/2	∞
ROPE DIAMETER	8.4	8.4 mm
WEIGHT	41	41 g/m
NUMBER OF UIAA FALLS	5	12
MAX. IMPACT FORCE	5.1	9.2 kN
SHEATH SLIPPAGE	0	0 %
STATIC ELONGATION	5.4	5.3 %
DYNAMIC ELONGATION	31	27 %
KNOTABILITY	0.8	0.8

## LOWE 8.4

ADVANCED

If you don't want extremely thin rope but you still aim for the lowest weight possible? There is no better option than this one. Our LOWE technology lowers the weight of the rope keeping an ideal diameter of 8.4. You can save 0.5 kg with sixty meter double ropes. Nothing better!

	D084TW41S000C • BLUE
	D084TW42S000C • YELLOW





EN 892 / CE 1019

ROPE DIAMETER	8.5	8.5 mm
WEIGHT	46	46 g/m
NUMBER OF UIAA FALLS	10	25
MAX. IMPACT FORCE	5.3	8.6 kN
SHEATH SLIPPAGE	0.1	0.1 %
STATIC ELONGATION	7	7 %
DYNAMIC ELONGATION	32	30 %
KNOTABILITY	0.8	0.8



MASTER 8.5

BEGINNER

You will choose this rope if you seek the best ratio of lifespan and a diameter. Perfect as you first rope for mountaineering. Complete Shield coating is a matter-of-course.

D085TF41S000C • GREEN/YELLOW

D085TF42S000C • KHAKI/BLUE



EN 892 / CE 1019

ROPE DIAMETER	8.5	8.5 mm
WEIGHT	45	45 g/m
NUMBER OF UIAA FALLS	9	
MAX. IMPACT FORCE	5.4	kN
SHEATH SLIPPAGE	0.1	%
STATIC ELONGATION	7.6	%
DYNAMIC ELONGATION	38	%
KNOTABILITY	1	



AMBITION 8.5

BEGINNER

A lightweight half rope with great versatility and very high durability. All its technical specifications are designed to increase safety and broaden the range of suitable usage.

D085TB41S000C • YELLOW

D085TB42S000C • BLUE





# BIGWALL







MARY

# EDEN

## WHAT DOES CLIMBING MEAN TO ME?

It's hard to put what climbing means to me in a few short words but I'd say climbing to me means fun and freedom. I've had the most fun in my life outside on small rocks, and tall walls. Rock climbing has given me the ability and freedom to be able to go places I didn't think were possible to access. Climbing has also given me the feeling of freedom and perfection during the 'flow state' (a calm focused feeling while climbing at your limit). Rock climbing is the funnest passion I've discovered and it allows me to free myself from the rest of life and enjoy the challenge of playing on the rocks. Why do I climb? Why do I like beautiful sunsets, margaritas, good laughs, shiny gear, and kittens? I'll never truly be able to explain the joy I find in climbing. I love the struggle, the community, the challenge, and growth I experience in this sport, and all that good stuff just translates over into every aspect of my life.

**EN 892 / CE 1019**

ROPE DIAMETER	9.7 mm
WEIGHT	61 g/m
NUMBER OF UIAA FALLS	8
MAX. IMPACT FORCE	8.2 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	8.0 %
DYNAMIC ELONGATION	35 %
KNOTABILITY	0.8

①

**MASTER 9.7 TEFIX®**

EXPERT

Technologies keep advancing, the favorite MASTER 9.7 now with TeFIX® technology. Even more safe and durable than its older brother. The permanent connection of core and sheath ensures the sheath cannot slip. Check the fresh design!

 D097MF41S000C • TURQUOISE  
 D097MF42S000C • PINK

**EN 892 / CE 1019**



ROPE DIAMETER	10.2 mm
WEIGHT	67 g/m
NUMBER OF UIAA FALLS	11
MAX. IMPACT FORCE	8.3 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	6.9 %
DYNAMIC ELONGATION	33 %
KNOTABILITY	0.8

①

**AMBITION 10.2 TEFIX®**

ADVANCED

An new version of a robust rope AMBITION 10.2 enriched with TeFIX® technology. The fact that the core is connected with the sheath prevents the sheath from shifting and provides maximum possible safety in case of the sheath damage. An ideal rope which will guide you through many vertical miles.

 D102AF41S000C • YELLOW  
 D102AF42S000C • ORANGE

**EN 892 / CE 1019**

ROPE DIAMETER	9.7 mm
WEIGHT	58 g/m
NUMBER OF UIAA FALLS	5
MAX. IMPACT FORCE	9.4 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	8.0 %
DYNAMIC ELONGATION	30 %
KNOTABILITY	1

①

**HATTRICK 9.7**

ADVANCED

If you prefer small diameters but you don't want to underestimate the safety, there is no better option than Hattrick 9.7 or Master TeFIX® 9.7. SBS construction of the sheath together with a SECURE technology make this rope safe, long-lasting and prevents the sheath from shifting.

 D097TH41S000C • GREEN/BLUE  
 D097TH42S000C • RED/BLUE





EN 892 / CE 1019

ROPE DIAMETER	10.2 mm
WEIGHT	68 g/m
NUMBER OF UIAA FALLS	5
MAX. IMPACT FORCE	9.4 kN
SHEATH SLIPPAGE	0 %
STATIC ELONGATION	6.9 %
DYNAMIC ELONGATION	33 %
KNOTABILITY	0.9

①

# HATTRICK 10.2

BEGINNER

A rope with SECURE technology that offers less UIAA falls but has much larger sheath that ensures durability and a long lifespan of the rope. Perfect choice for rentals and permanent use in the climbing gyms (top-ropeing).

D102TH41S000C • BLUE

D102TH42S000C • RED





# SPLEED AND CANYONING







LASO

# SCHALLER

## WHAT DOES CANYONING MEAN TO ME?

Canyoning...following the water stream from up to down...feeling the cold water, the fresh air, the view and diving into the pure nature with nothing else than just with some ropes and some climbing gear...that's freedom...my little world...



**CE 1019**

DIAMETER	10.2*	mm
WEIGHT	60	g/m
NUMBER OF FALLS	20**	min.
RELATIVE MASS OF SHEATH	41.7	%
SHEATH SLIPPAGE	0	%
ELONGATION (50 - 150 KG)	2.5	%
SHRINKAGE	0	%
STRENGTH	23	kN
MIN. STRENGTH WITH KNOTS	13	kN
USED MATERIAL	PA/PPV	
TYPE	-	
FLOATING	Ando	

**SALAMANDER 10.2**

The best choice among the canyoning ropes. Light, floating rope with our SECURE technology keeps its outstanding qualities for a long time. Its construction and applied materials help to minimize shrinking of the rope in wet conditions. It has stronger, coarser sheath and thanks to the production technology, this rope is very static, low stretch.

\*\* weight 55 kg, fall factor 1

\* tested according to EN 1891 type B except material and number of falls



**C102TS41S000C • YELLOW/RED • SALAMANDER**

**EN1891 / CE1019**

DIAMETER	9	mm
WEIGHT	59	g/m
NUMBER OF FALLS	16	min.
RELATIVE MASS OF SHEATH	44	%
SHEATH SLIPPAGE	0.2	%
ELONGATION (50 - 150 KG)	3.6	%
SHRINKAGE	1	%
STRENGTH	30	kN
MIN. STRENGTH WITH KNOTS	18.4	kN
USED MATERIAL	PA	
TYPE	A	

**CANYON DRY 9.0**

New polyamide (nylon) rope with a smaller diameter of 9 mm and Complete Shield dry treatment which coats core strands and sheath fibers. This reduces water absorption and increases abrasion resistance considerably. The highly visible colour guarantees that the user has under control any situation where bad conditions prevail. The rope is flexible and retains its softness even after a long period of use. CANYON DRY 9.0 will be especially appreciated by experienced canyoneers who want a quick and smooth descent, and who care about every gram of weight.



**C090TD41C000C • RED**

**CE 1019**

DIAMETER	10*	mm
WEIGHT	61	g/m
NUMBER OF FALLS	5**	min.
RELATIVE MASS OF SHEATH	47	%
SHEATH SLIPPAGE	-0.2	%
ELONGATION (50 - 150 KG)	3.2	%
SHRINKAGE	1.7	%
STRENGTH	18	kN
MIN. STRENGTH WITH KNOTS	12	kN
USED MATERIAL	PA/PPV	
TYPE	-	
FLOATING	Ando	

**CANYON GRANDE 10.0**

This rope is easily knotted and soft even after repeated immersion into the water. Its bright colours contrast well with the colour of the water, it is highly resistant to abrasion and offers increased water-resistance. Thanks to the materials used, the rope has lower absorbability and floats on the surface.

\*\* weight 55 kg, fall factor 1

\* tested according to EN 1891 type B except min. tenacity and material



**C100TC41S000C • YELLOW • CANYON GRANDE**



**EN 1891 / CE 1019**

DIAMETER	10	mm
WEIGHT	66	g/m
NUMBER OF FALLS	20	min.
RELATIVE MASS OF SHEATH	38	%
SHEATH SLIPPAGE	-0.3	%
ELONGATION (50 - 150 KG)	2.5	%
SHRINKAGE	0.8	%
STRENGTH	30	kN
MIN.STRENGTH WITH KNOTS	18	kN
USED MATERIAL	PA	
TYPE	A	

**CANYON WET 10.0**

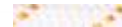
Rope variation which doesn't float on water due to materials used (PA) meets requirement of EN 1891 type A.

**C100TW48W000C • ORANGE • CANYON WET****EN 1891 / CE 1019**

DIAMETER	9	10	10.5	11	mm
WEIGHT	48	63	72	77	g/m
NUMBER OF FALLS	8	16	20	20	min.
RELATIVE MASS OF SHEATH	42	40	46	42	%
SHEATH SLIPPAGE	-0.3	0	0.1	-0.4	%
ELONGATION (50 - 150 KG)	4.1	3.7	3	3.3	%
SHRINKAGE	1	1.8	1.4	0.3	%
STRENGTH	19	27	28	33	kN
MIN.STRENGTH WITH KNOTS	12	16	18	17	kN
USED MATERIAL	PA	PA	PA	PA	
TYPE	B	A	A	A	

**SPELEO 9.0 – 11.0**

Low stretch, high static strength, and exceptional resistance to abrasion are the qualities most valued among cavers.

**S090TS41S000C • WHITE/ORANGE    S105TS41S000C • WHITE/ORANGE  
S100TS41S000C • WHITE/ORANGE    S110TS41S000C • WHITE/ORANGE****EN 1891 / CE 1019**

DIAMETER	10.5	mm
WEIGHT	76	g/m
NUMBER OF FALLS	12	min.
RELATIVE MASS OF SHEATH	51	%
SHEATH SLIPPAGE	0.5	%
ELONGATION (50 - 150 KG)	2.7	%
SHRINKAGE	1	%
STRENGTH	34	kN
MIN.STRENGTH WITH KNOTS	18	kN
USED MATERIAL	PES/PA	
TYPE	A	

**SPELEO 10.5 SPECIAL**

Low stretch, high static strength, and exceptional resistance to abrasion are the qualities most valued among cavers. Polyester sheath is built to endure higher thermal stress during abseiling on 10.5 special rope.

**S105TG41S000C SPECIAL • WHITE/BLUE**

# ARBORIST







EN 1891 / CE 1019

DIAMETER	11 mm
WEIGHT	88 g/m
NUMBER OF FALLS	20 min.
RELATIVE MASS OF SHEATH	57 %
SHEATH SLIPPAGE	0 %
ELONGATION (50 - 150 KG)	3.1 %
SHRINKAGE	0.7 %
STRENGTH	30 kN
MIN. STRENGTH WITH KNOTS	18 kN
USED MATERIAL	PES/PA
TYPE	A

TIMBER EVO 11.0

The lightest rope in the Tendon arbor line. Timber Evo 11.0 is a rope with excellent handling and smooth ascent and descent because of the 24 strand construction and specially designed sheath.

 L110TT41S000C • BRIGHT YELLOW

SPLICED LOOP AVAILABLE - ON REQUEST



EN 1891 / CE 1019

DIAMETER	11.5 mm
WEIGHT	90 g/m
NUMBER OF FALLS	20 min.
RELATIVE MASS OF SHEATH	54 %
SHEATH SLIPPAGE	0.5 %
ELONGATION (50 - 150 KG)	3 %
SHRINKAGE	1 %
STRENGTH	30 kN
MIN. STRENGTH WITH KNOTS	18 kN
USED MATERIAL	PES/PA
TYPE	A

TIMBER EVO 11.5

This improved version of the Timber Evo 11.5 working rope is characterized by a better abrasion resistance and consequently a longer service life thanks to the new construction of the sheath. 24 strand double braid construction makes this an excellent rope for professional arborists.

 L115TE42S000C • ORANGE/YELLOW

SPLICED LOOP AVAILABLE - ON REQUEST



EN 1891 / CE 1019

DIAMETER	12.5 mm
WEIGHT	104 g/m
NUMBER OF FALLS	20 min.
RELATIVE MASS OF SHEATH	48 %
SHEATH SLIPPAGE	0 %
ELONGATION (50 - 150 KG)	3 %
SHRINKAGE	0.6 %
STRENGTH	39 kN
MIN. STRENGTH WITH KNOTS	22 kN
USED MATERIAL	PES/PA
TYPE	A

TIMBER EVO 12.5

The combination of polyamide (nylon) core and polyester sheath lends to, among other features, an excellent abrasion resistance and also high strength in the ropes of the Timber Evo series. The 12.5 mm diameter guarantees good control during handling. Excellent for climbing as well as safety rigging line where some stretch is desired.

 L125TT41S000C • BRIGHT ORANGE

SPLICED LOOP AVAILABLE - ON REQUEST



DIAMETER	15 mm
WEIGHT	172 g/m
STRENGTH	61 kN
USED MATERIAL	PES

## LOWERING ROPE 15.0

Lowering rope 15 mm of a new construction with increased strength and reduced diameter. Very good handling during lowering and braking of loads.



L150TT41S000C • YELLOW/BLACK

## TIMBER SET



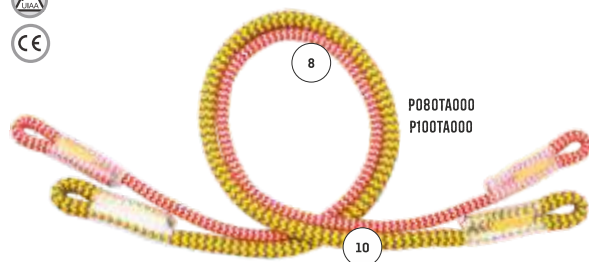
EN 813 / EN 358 / CE 1019

<b>Timber sit</b>	<b>WEIGHT</b>
Size M-XL	1 780 g
Size XXL	1 820 g
XPTH-030	

## TIMBER SIT

The Tendon Timber Sit is a fully adjustable arborist harness with a wide padded back and leg loops, making it really comfortable even for long days high in the trees. The quick release leg and waist buckles make putting it on and taking it off a snap. It comes equipped with one sliding ring on the bridge, two metal side attachment points for lanyard or flip line and three gear loops in the back.

Complies with EN 358 and EN 813.



## PRUSIKS 8 AND 10 MM

EN 566 / EN 795B / CE 1019

The use of the PES/TECHNORA material combination results in a better thermal and mechanical resistance of the sheath. Supplied in any length or as prusiks made to measure with sewn eyes.





## ACCESSORY CORD



A080TP41S000C  
EN 564



A100TP41S000C

### CE 1019

ROPE DIAMETER	8	10	mm
WEIGHT	54	73	g/m
TENACITY	20	25	kN
USED MATERIAL	PES/TECHNORA		



TIMBER 8	+	+
TIMBER 10	+	-

## THROW BAG



XTIMBERBAG300 / XTIMBERBAG350 / XTIMBERBAG400  
300 g      350 g      400 g

## TIMBER 3



ROPE DIAMETER	3	mm
WEIGHT	2.5	g/m
TENACITY	0.8	kN
USED MATERIAL	PE	

A030TT41S000C



# WORK AT HEIGHT AND RESCUE

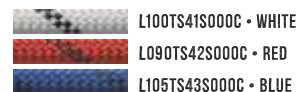






## STATIC 9.0 - 13.0

This excellent rope with low elongation and high static strength is intended primarily for work at height and for securing people above vertical drops. The thicker the diameter, the stronger the rope.



## EN 1891 / CE 1019

DIAMETER	9	10	10.5	11	12	13	mm
WEIGHT	50	69	72	80	90	109	g/m
NUMBER OF UIAA FALLS	15	20	20	20	20	20	min.
RELATIVE MASS OF SHEATH	49	38	36	39	34	45	%
SHEATH SLIPPAGE	0.4	0.1	0.1	0.3	0.5	0	%
ELONGATION (50 - 150 KG)	5	4.1	3.6	3.7	3.2	3.1	%
SHRINKAGE	0.6	2	1.9	1.9	1.8	0.6	%
STRENGTH	23	31	32	33	41	41	kN
MIN. STRENGTH WITH KNOTS	13	17	18	20	25	26	kN
USED MATERIAL	PA	PA	PA	PA	PA	PA	
TYPE	B	A	A	A	A	A	

SEWN TERMINATION IS AVAILABLE - ON REQUEST

## SECURE 10.5, SECURE 11.0

A rope for any application where the sheath and the core may suffer damage. When using this rope you will significantly increase your safety margins, in cases where mechanical damage to the rope due to sharp edges or falling objects. Thanks to the unique sandwichtype construction of braided layers and the use of specially developed staple fibers, the rope is able to hold the suspended person or load even in the event of considerable sheath or core damage. Even if the rope is heavily damaged, the suspended person has enough time to abseil to the ground or to a safe anchor point.



PATENT PENDING

## EN 1891 / CE 1019

DIAMETER	10.5	11	mm
WEIGHT	72	85	g/m
NUMBER OF UIAA FALLS	16	20	min.
RELATIVE MASS OF SHEATH	38	33	%
SHEATH SLIPPAGE	0	0	%
ELONGATION (50 - 150 KG)	4.6	4.5	%
SHRINKAGE	1.2	0.8	%
MIN. STRENGTH WITH KNOTS	28	35	kN
STRENGTH	17	18	kN
TYPE	A	A	

SEWN TERMINATION IS AVAILABLE - ON REQUEST

## STATIC 9.0 TYPE A

Thanks to the unique construction and the state-of-the-art technological finishing, the static rope offers a strength higher than 22 kN with a falling mass of 100 kg (in comparison with the standard falling mass of 80 kg for type B ropes). The strength of the rope with knots exceeds 15 kN for a period of 3 minutes without any damage to the core and the sheath (type B ropes are tested for 12 kN for a period of 3 minutes). This is an advantage which workers working at heights and rescue teams are eager for, because having a stronger rope in critical situations with full outfit and gear brings them to a higher standard.



## EN 1891 / CE 1019

DIAMETER	9	mm
WEIGHT	61	g/m
NUMBER OF FALLS (MIN.)	5	min.
RELATIVE MASS OF SHEATH	41	%
SHEATH SLIPPAGE	0	%
ELONGATION (50 - 150 KG)	3.3	%
SHRINKAGE	1.9	%
STRENGTH	24	kN
MIN. STRENGTH WITH KNOTS	15	kN
USED MATERIAL	PA	
TYPE	A	

STATIC NFPA 10.5 - 12.0

The excellent ropes with low elongation and high static strength are intended primarily for work at hight and for securing people above vertical drops. Recommended use are rescue operations, work positioning and military and police use. Occasional use for NFPA certificated ropes meet the life safety rope requirements of NFPA 2500 Standard on fire service life safety rope and equipment for emergency services, 2022 ED.

EN 1891 / CE 1019 / NFPA 2500 (1983), 2022 ED

PARAMETERS ACCORDING TO EN 1891

DIAMETER	10.5	11	12	mm
WEIGHT	74	82	87	g/m
NUMBER OF FALLS (MIN.)	20	20	20	min.
RELATIVE MASS OF SHEATH	34	33	35	%
SHEATH SLIPPAGE	0	-0.1	4	%
ELONGATION (50 - 150 KG)	3.6	3.5	3.2	%
SHRINKAGE	0.3	4.5	1.8	%
STRENGTH	32	40.5	42	kN
MIN. STRENGTH WITH KNOTS	17	15	25	kN
USED MATERIAL	PA	PA	PA	
TYPE	A	A	A	

PARAMETERS ACCORDING TO NFPA

DIAMETER	10.5	11	12	mm
DIAMETER	0.413	0.433	0.472	in
MBS*	32	40.5	42	kN
MBS*	7194	9 105	9 442	lbs
WEIGHT	72	83	87	g
ELONGATION AT 10% MBS	7	8.4	7.4	%
ELONGATION AT 1.35 KN (300 LBF)	4.1	3.6	2.3	%
ELONGATION AT 2.70 KN (600 LBF)	6.4	6.2	4.7	%
ELONGATION AT 4.40 KN (1000 LBF)	9.5	9.5	7.8	%
NFPA 1983 2017 EDITION	Ano	Ano	Ano	
CLASSIFIED	Technical use	General use		



L105NS41S000C • WHITE



L110NS41S000C • WHITE



L120NS41S000C • WHITE

CERTIFICATED ACCORDING TO NFPA 2500 (1983), 2022 ED

PARAMETERS ACCORDING TO NFPA

DIAMETER	16	mm
DIAMETER	0.629	in
MBS*	60	kN
MBS*	13 489	lbs
WEIGHT	160	g
ELONGATION AT 10% MBS	8.6	%
ELONGATION AT 1.35 KN (300 LBF)	1.2	%
ELONGATION AT 2.70 KN (600 LBF)	3.0	%
ELONGATION AT 4.40 KN (1000 LBF)	5.8	%
NFPA 1983 2017 EDITION	Ano	
CLASSIFIED	General use	

STATIC NFPA 16.0

The excellent ropes with low elongation and high static strength are intended primarily for work at hight and for securing people above vertical drops. Recommended use are rescue operations, work positioning and military and police use. Occasional use for NFPA certificated ropes meet the life safety rope requirements of NFPA 2500 Standard on fire service life safety rope and equipment for emergency services, 2022 ED.



L160NS41S000C • BLACK/RED





# MILITARY





## EN 1891 / CE 1019

DIAMETER	9	10	10.5	11	12	mm
WEIGHT	50	69	72	80	90	g/m
NUMBER OF FALLS (MIN.)	15	20	20	20	20	min.
RELATIVE MASS OF SHEATH	49	38	36	39	34	%
SHEATH SLIPPAGE	0.4	0.1	0.1	0.3	0.5	%
ELONGATION (50 – 150 KG)	5	4.1	3.6	3.7	3.2	%
SHRINKAGE	0.6	2	1.9	1.9	1.8	%
STRENGTH	23	31	32	33	41	kN
MIN. STRENGTH WITH KNOTS	13	17	18	20	25	kN
USED MATERIAL	PA	PA	PA	PA	PA	
TYPE	B	A	A	A	A	

## STATIC 9.0 - 12.0 MILITARY EDITION

Excellent ropes with low elongation and high static strength are designed for army and police.



L100TS44S000C • BLACK

L100TS45S000C • GREEN

L100TS46S000C • CAMOUFLAGE

L100TS4KS000C • DESERT STORM

L100TS47S000C • SOLID BLACK

SEWN TERMINATION IS AVAILABLE ON SOME TYPES - ON REQUEST



## EN 1891 / CE 1019

DIAMETER	10	11	mm
WEIGHT	65	81	g/m
NUMBER OF FALLS (MIN.)	10	5	min.
RELATIVE MASS OF SHEATH	50	48	%
SHEATH SLIPPAGE	0.1	1.9	%
ELONGATION (50 – 150 KG)	3.3	2.9	%
SHRINKAGE	1.9	0	%
STRENGTH	33	44	kN
MIN. STRENGTH WITH KNOTS	15	18	kN
USED MATERIAL	Aramid/PA	Aramid/PA	
TYPE	B	A	

## ARAMID 10.0, 11.0

A unique rope with aramid sheath and polyamide core, which features high firmness and increased resistance to cutting and abrasion. The rope is resistant to naked flame and radiant heat of up to 400 °C for short periods of time! This characteristic will be appreciated in particular by special police and army emergency squads for quick descent from a helicopter, when ordinary ropes are not able to tackle the heat energy.

\* tested according to EN 1891 except impact force



L100TA42S000C • BLACK

L110TA41S000C • BLACK



## EN 1891 / CE 1019

DIAMETER	11	mm
WEIGHT	80	g/m
NUMBER OF FALLS (MIN.)	20	min.
RELATIVE MASS OF SHEATH	39	%
SHEATH SLIPPAGE	0.3	%
ELONGATION (50 – 150 KG)	3.7	%
SHRINKAGE	1.9	%
STRENGTH	33	kN
MIN. STRENGTH WITH KNOTS	20	kN
USED MATERIAL	PA	
TYPE	A	

## REFLECTIVE 11.0

The newly developed rope with reflection control weaving reflects a beam of direct light, making it easier to identify the rope in the dark and in poor lighting conditions. The rope is particularly useful for rescue work, speleology, diving and as a tracing rope for mines.



L110TS49S000C • BLACK

SEWN TERMINATION IS AVAILABLE - ON REQUEST

**CE 1019**

DIAMETER	10*	11**	mm
WEIGHT	68	84	g/m
NUMBER OF FALLS (MIN.)	5	5	min.
RELATIVE MASS OF SHEATH	36	41	%
SHEATH SLIPPAGE	0	0.5	%
ELONGATION (50 – 150 KG)	3.5	3.6	%
SHRINKAGE	2.3	3	%
STRENGTH	24	26	kN
MIN. STRENGTH WITH KNOTS	13	15	kN
USED MATERIAL	PA/Steel	PA/Steel	
TYPE	B	A	

**FORCE 10.0, 11.0**

A special rope which makes use of a technology of combination of materials and the rope construction itself. There is internal sheath made of stainless steel wires in the rope. The product for use in extremely severe conditions (for instance rescuers, firemen, policemen and other special forces) due to its increased resistance to cutting.

\* tested according to EN 1891 type B excepted material and marking  
 \*\* tested according to EN 1891 type A excepted material and marking

	L100TF41S000C • BLACK
	L110TF41S000C • BLACK

**PATENT PENDING**

# FAST ROPE

## ROPE FOR RAPID DEPLOYMENT FROM HELICOPTERS FAST ROPE (2) AND VERSION FOR TRANSPORTATION AND EVACUATION F.R.I.E.S. (1)

In the production of the unique Fast Rope, special PA BCF fibres are used which give superior protection during descending, having high resistance to wear and rupture. The rope with a diameter of 44 mm and a unique construction offers the user good control during descending without additional belay. We are able to supply our key military clients in many countries with Fast Ropes also in diameters 40 mm and 32 mm.

ROPE DIAMETER, PRE-TENSIONED ACCORDING TO EN ISO 2307 (245 KG)	44	40	32	mm
ROPE DIAMETER, LOOSE (ZERO TENSION)	50	46	38	mm
ROPE WEIGHT, PRE-TENSIONED ACCORDING TO EN 2307 (245 KG)	77	60	42	kg/100 m
ROPE WEIGHT, LOOSE (ZERO TENSION)	96	75	52	kg/100 m
MINIMUM ROPE STRENGTH WITH SPLICED EYE	12 000	10 000	7 500	kg
MINIMUM ROPE STRENGTH WITH SEWN LOOP WITH TEXTILE PROTECTION	6 000	6 000	6 000	kg
MINIMUM ROPE STRENGTH WITH STEEL TERMINATION	3 000	3 000	-	kg
MINIMUM STRENGTH OF SUSPENSION SLING (F.R.I.E.S.)	2 250	2 250	2 250	kg
ROPE ELONGATION, PRE-TENSIONED ACCORDING TO EN ISO 2307 (245 KG)	25	25	25	%

**STANDARD TYPE OF TERMINATIONS**

- A) Metal termination
- B) Short termination (sewn loop) with textile protection
- C) Spliced loop with textile protection

- **spliced eye** with high strength and resistance, for frequent straining and loading (e.g. in practising).
- **eye made of express slings (ST-short termination)** - lightweight and especially short eye with high strength. Easy examination of seams and express slings after removal of the protector. In emergency the rope may be simply cut at the termination.
- **eye with metal termination (MT-metal termination)** for different types of metal connectors and hooks.

**1) ROPE F.R.I.E.S. FOR TRANSPORTATION AND EVACUATION PERSONNEL****2) FAST ROPE USED FOR RAPID DEPLOYMENT FROM HELICOPTERS****A****B****C**







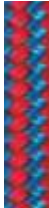




# ACCESSORIES





## ACCESSORY CORDS

CORD DIAMETER / mm  
WEIGHT / g/m  
MIN. STRENGTH / daN

4	5	6	7	8	FULL ARAMID	ARAMID	REFLECTIVE	TOUCH
12.7	18.9	25	34	43	6	6	6	6
340	510	1000	1300	1460	26	22.9	23.2	23.2
					2200	1650	1000	1000
								
A040TR41S100R blue / yellow	A050TR41S100R yellow	A060TR41S100R green	A070TR41S100R red	A080TR41S100R red	A060TF41S100R beige	A060T41S100R black	A060TR44S100R black	A060TT41S000R white/red
A040TR42S100R red	A050TR42S100R blue	A060TR42S100R red	A070TR42S100R yellow	A080TR42S100R orange				A060TT42S000R white/blue



EN 564 / CE 1019

Aramid accessory cord has an extremely high strength in spite of having the same weight as a standard PA accessory cord. You will appreciate also its low elongation and maintenance of high strength even with damaged sheath thanks to the braided core made of 100% aramid.

## POWER CORDS





CORD DIAMETER / mm  
WEIGHT / g/m  
MIN. STRENGTH / daN

2	3	9
2.8	6.5	54.4
120	190	1900
		
A020TH41S100R blue	A030TH41S100R blue	A090TR41S100R red
A020TH42S100R yellow	A030TH42S100R black	

## TUBULAR TAPE

WIDTH	TENACITY
19 mm	15 kN
25 mm	20 kN

A tubular tape for different applications, such as connection of a chest harness and a sit harness. Different widths, strengths and colours are available.

12C3PAPOPEXP20		19 mm
		19 mm
12C3PAPOPEXP25Ž		25 mm
12C3PAPOPEXP25Č		25 mm

## DUCK

EN 576

Weight 70 g / X888



Duck a rope clamp/positioner made by Kong, designed for ropes with diameters between 8 and 13 mm. The first and only device that may be used also with 10 to 15 mm wide flat and tubular slings. Due to its small dimensions, it is possible to use Duck with one hand only, the large diameter enables the karabiner to rotate. Intended for ascending activities, daisy chain positioning, self-belaying.

## ASCENDERS AND DESCENDER



	ASCENDERS TENDON 13	ASCENDERS TENDON 14	ASCENDERS TENDON 15	FIGURE 8 DESCENDER TENDON 09
WEIGHT / g	160	225	225	110
	EN 567	EN 567	EN 567	EN 15151-2

## CARABINERS



CARABINERS	TENDON 01	TENDON 02	TENDON 03	TENDON 04	TENDON 16	TENDON 17	TENDON 18	TENDON 19	TENDON 20
MAJOR AXIS STRENGTH / kN	22	30	27	27	27	23	23	23	21
MINOR AXIS STRENGTH / kN	8	10	10	10	10	10	10	9	8
OPEN GATE STRENGTH / kN	6	10	9	9	9	9	9	10	7
WEIGHT / g	90	70	56	55	60	55	55	39	31
EN	12275, 362 B	12275, 362 B	12275	12275	12275, 362 B	12275	12275	12275	12275





## HELMETS ORBIX

EN 12492 / CE 0497



- Low weight: 270 g
- ergonomic and padded interior
- ventilation with 17 vents
- 3 Headlamp clips
- size: UNI 54/62 cm, new easily and conveniently adjustable system
- fully adjustable chinstrap
- material: external shell polycarbonate, internal shell from EPS



XT-ORBIXGREEN



XT-ORBIXWHITE



XT-ORBIXRED



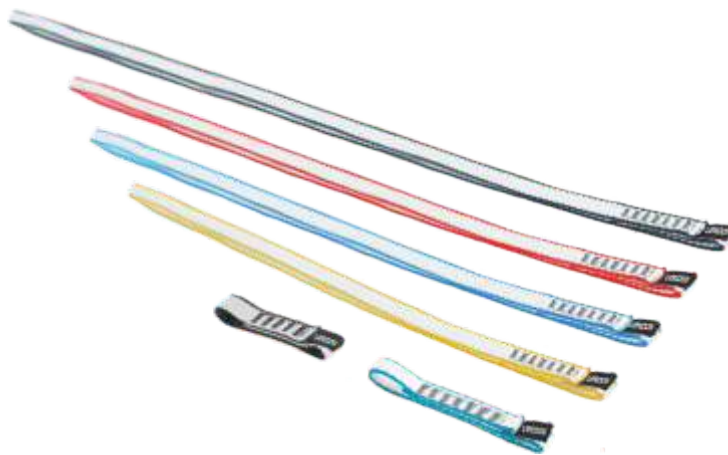
## QUICKDRAW AND SEWN SLINGS

EN 566 / CE 1019

	PA					
LENGTH / cm	10	15	20	60	120	180
WIDTH / mm	16	16	16	16	16	16
MIN. STRENGTH / kN	22	22	22	22	22	22

	DYNEEMA®					
LENGTH / cm	10	15	20	60	120	180
WIDTH / mm	11	11	11	11	11	11
MIN. STRENGTH / kN	22	22	22	22	22	22

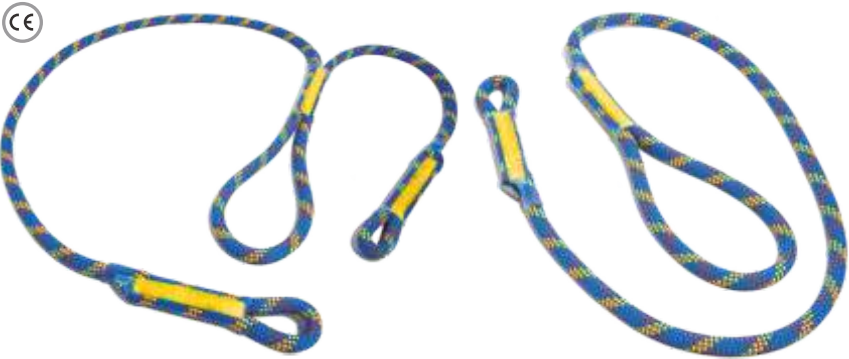


illustrative photo

DYNAPROT 10

CE 1019

STATIC TENACITY / kN	FALL FACTOR 1		FALL FACTOR 2	
	IMPACT FORCE / kN	NUMBER OF FALLS	IMPACT FORCE / kN	NUMBER OF FALLS
22	7.4	min. 20	10.7	9



DynaProt 10, the dynamic sling, is made of a dynamic rope and is therefore capable of absorbing the energy of a dynamic fall and to dampen this fall thanks to its elongation. DynaProt 10 has been tested with fall factors 1 and 2. It is able to arrest nine falls with a fall factor of 2. Even with a fall factor of 2, the impact force is lower than the maximum force permitted by EN 892.

**DYNAPROT 10 CLASSIC:**  
length 45 cm - DP100C045  
length 60 cm - DP100C060  
length 75 cm - DP100C075

**DYNAPROT 10 Y:**  
length 75 cm - DP100Y000

**DYNAPROT 10 Y SHORT:**  
length 45 cm and length 75 cm - DP100YS000

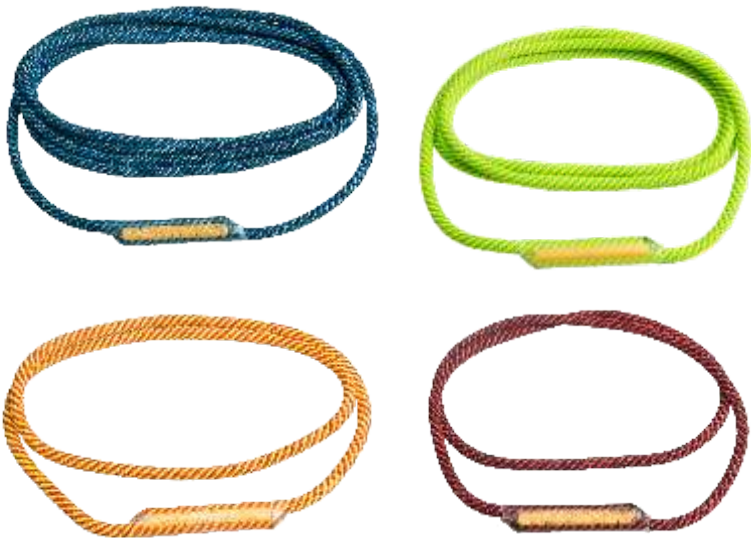
MASTERCORD 7.8

EN 566 / CE 1019

LENGTH / cm	60	120	180
MIN. STRENGTH / kN	22	22	22

MasterCord 7.8 is a dynamic sling that is certified to EN566 standard with a minimum strength of 22 kN. Additionally, the MasterCord 7.8 dynamic sling has been tested on a drop tower with an 80kg weight and a fall factor of 2. Made from a dynamic rope, this helps absorb the impact energy of a fall, potentially reducing the force on the users and the anchor points. The MasterCord 7.8 can be used as part of a quick anchor when securing your belay, or it can be used on the route in place of a conventional sling.

**MASTERCORD 7.8:**  
length 60 cm - MC078C060  
length 120 cm - MC078C120  
length 180 cm - MC078C180







JAMMY

EN 12277 / CE 1019



VELIKOST	OPASEK / cm		NOHAVICE / cm	
	min.	max.	min.	max.
JEDNA VELIKOST	60	120	42	66
HMOTNOST / g	370			

XT-JAMMY



Very lightweight uncushioned harness designed especially for via ferratas, mountains and glaciers. Available in one universal size for all figures, with reinforced attachment point, colour-differentiated belay loop for safe fastening and one loop for material attachment. The right choice also for artificial climbing walls, climbing schools and skialpinism.

COMP

EN 12277 / CE 1019



VELIKOST	OPASEK / cm		NOHAVICE / cm	
	min.	max.	min.	max.
JEDNA VELIKOST	65	120	42	66
HMOTNOST / g	505			

XT-COMP



Harness for via ferratas and for beginners. With reinforced leg loops and attachment points, with two loops for material attachment. It optimizes the position of the body when hanging on the rope or after a fall. It prevents the body from taking the upside down position.



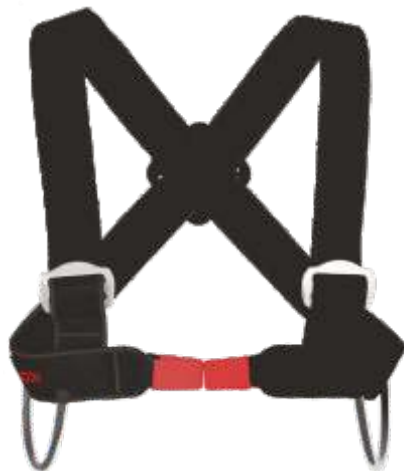
## CANYON SIT

EN 12277 / CE 1019

SIZE	WAIST / cm		LEG LOOPS / cm	
	min.	max.	min.	max.
ONE SIZE	60	120	42	66
WEIGHT / g	550			

### XT-CANYON

A simple, uncushioned harness for canyoning, based on the design of the popular sport harness Jammy. It is made of a strong material which is resistant to the water environment. With its removable neoprene protector, ergonomic design and reinforced attachment points, this harness is an ideal part of your gear for canyons.



## SCOUT

EN 12277 / CE 1019

SIZE	GIRTH OF CHEST / cm
ONE SIZE	75 - 110
WEIGHT / g	240



**DO NOT USE THE CHEST  
HARNESS SEPARATELY!**

### XT-SCOUT

Chest harness SCOUT must be used in combination with a sit harness. It has two buckles for adjustment purposes and the height of attachment may be selected according to its position.



MERCH







## TENDON HOODIE

Pleasant and comfortable full-length zipper sweatshirt with fluorescent parts and contrasting large hood with microperforated fabrica and two pockets.

Style: UNISEX

Size: S, M, L, XL, XXL

Color: black and lime

Material: 85% COTTON  
15% VISCOSE

cm	S	M	L	XL	XXL
width	50	53	56	59	62
length	63	66	69	72	75

**TENDON HOODIE BLACK S-XXL**



## TENDON T-SHIRT

Men's cotton t-shirt with short sleeves and round and lined neckline.

Comfortable fit.

Weight: 160 g/m2

Size: S, M, L, XL, XXL

Material: 100% COTTON

**TENDON MAN S-XXL BLACK**



## TENDON T-SHIRT

Women's cotton t-shirt with short sleeves. Fitted cut

Weight: 160 g/m2

Size: S, M, L, XL

Material: 100% COTTON

**TENDON WOMAN S-XL BLACK**



## TENDON CAP

Breathable elastic material of soft non-scratching construction with high thermal insulation even in extreme climatic conditions. Ideal under the helmet when climbing.

**XCAP**



## MICROFLEECE CAP

Material: 100% polyester mikrofleece

Size: onesize

**XTENDON\_HAT**



## TENDON SCARF

Practical multifunctional scarf. You can turn it into a headdress, balaclava, pirate, neckerchief, hair band. Suitable for all sports and leisure. Made of one piece without seams and antibacterial microfiber. Offers protection against wind, snow, sun, etc.

Material: 100% POLYAMIDE

Size: universal

**XHEADSCARF GREEN  
XHEADSCARF BLACK**



## CRUSHED MAG

Climbing chalk (magnesium carbonate) in a practical plastic screw dose, perfect grade natural chalk specifically designed for climbing activities.

Capacity: 100 g (3.5 oz) of chalk

**XTENDON MAGNESIUM**



## TENDON SNAPBACK

Straight peak  
Size: universal  
Color: various

**XTENDON CUP BLACK**



## TENDON CUP

Stainless steel mug with colored snap hook instead of handle.

Color: green

Volume: 300 ml

**TENDON CUP**





## TENDON STICKERS



XSTICKER



### TENDON PEN

Ballpoint pen for writing

TENDON PEN



### TAPING STRIPS

Dimensions: 1.25 cm x 10 m  
5 cm x 10 m

XTAPING STRIP  
XTAPING STRIP NEW





# ENVIRONMENTAL FRIENDLY BRAND



To sustain our unique natural riches, it is necessary that all economic subjects contribute by a more responsible approach to sustain our planet for future generations. We cannot just take, we also have to give. We too also try to adhere to this approach - therefore all of our customers can return their old and damaged rope to us and we will ensure a completely free of charge recycling of it at our costs. Informative labels on ropes as well as the reels, on which our ropes are wound, are made of an ecologically recyclable material. We use pfc- free eco impregnation on our rope, which is enviromentally friendly because it does not contain fluorinated hydrocarbons c8 or c6. We also recycled all unused sheed and made new products from them. The reels themselves are returnable and we reuse them to pack new ropes. Packagings of our dynamic ropes are packagings with an additional utility value - they may be reused for many other purposes after removing the ropes from them. We are glad that we can contribute to the maintenance of a high-quality environment by our approach.



## RECYCLED TENDON MERCH

TENDON merch are made of dynamic and static ropes residue.



### CHALK BAG ECO

Brand new chalk bag with new design. Quick closing system and reinforced edge allow convenient bag handling. Slot for brush, fleece inner material. Belt and parts of the bag are made from Master 8.6.



**BRACELET**  
XT-NÁRAMEK



**KEYCHAIN FROM 1 ROPE**  
XT-KLÍČENKA1/POPRU



**KEYCHAIN LONG**  
XT-KLÍČENKA KRK



**BELT WITH BUCKLE**  
XT-OPASEK KROUŽKY



## SELECTING A SUITABLE CLIMBING ROPE



# ADDITIONAL SERVICES



## MIDPOINT OF ROPE

The rope is distinctly marked in the midpoint of its length with an ink which does not affect its structure and its mechanical properties. In case of new ropes, the flexibility in the area of marking may be slightly stiff but this phenomenon disappears during the first use of the rope.

### THE MIDPOINT MARK:

- clearly identifies the rope midpoint during abseiling and guarantees that both rope ends have the same length,
- assists in quickly finding the rope midpoint and the climber knows when abseiling,
- that both rope ends hanging down have the same length without measuring,
- in sport climbing, informs the belayer that the climber is higher than a half of the rope and his/her descending or abseiling may be difficult,
- in the mountains, informs the belayer that a half of the rope (still or just) remains,
- assists in coiling the rope "from the midpoint".



If there is no midpoint mark on your rope or the mark is poorly visible, use the TENDON Rope Marker for making permanent black marks.

**XROPEMARKER**



**YOU SHOULD ALWAYS KNOW WHERE THE MIDPOINT OF YOUR ROPE IS, ESPECIALLY IF THE ROPE HAS BEEN SHORTENED.**



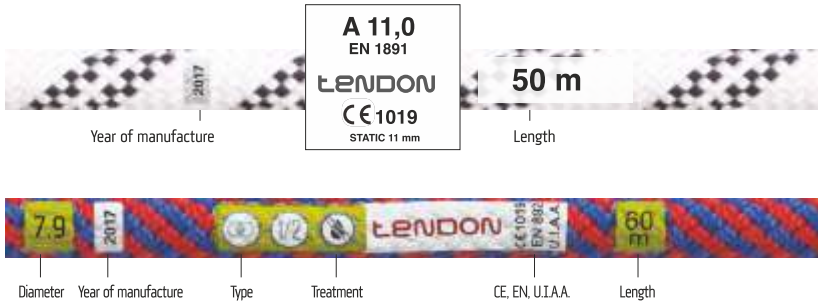
We develop the conception of the overall administration and registration of ropes which, thanks to NFC technology, offers amazing possibilities and brings user comfort to a new level. With a PC and a mobile phone you obtain a quick, effective and smart tool for examination and maintenance of your ropes.

## OUR ROPES WILL COMMUNICATE WITH YOU

INNOVATIVE AND MOBILE ACCESS TO IDENTIFICATION, MARKING AND REGISTRATION OF STATIC AND DYNAMIC ROPES.

MORE INFORMATION ON [WWW.MYTENDON.COM](http://WWW.MYTENDON.COM)





## END MARKING OF ROPES

End marking of ropes by TENDON Thermotransfer is relatively permanent, does not come off and doesn't cause formation of rope end widenings that could get caught when pulling down the rope after abseiling.



## ROPE IDENTIFICATION AND MARKING

### STATIC ROPE

There is an identification tape (two tapes in case of NFPA certified ropes) inside the rope which contains the following information: rope manufacturer, standard, rope type, material used, year of manufacture.

### DYNAMIC ROPE

Inside a dynamic rope there is a colour marker thread (one or more) identifying the calendar year of manufacture of the rope.

**MORE INFORMATION ON [WWW.MYTENDON.COM](http://WWW.MYTENDON.COM) OR IN USING INSTRUCTION.**



## SEWN AND SPLICED EYE

Certain types of ropes can be delivered with a sewn or spliced eye on request. Sewn and spliced eyes are always in conformity with relevant standards.



**BEAR IN MIND THAT THE STRENGTH OF EYES IS USUALLY LOWER THAN THE STRENGTH OF THE ROPE.**



## ROPE TERMINATION

A perfect rope termination is done by the COMPACT technology the core of the last 15 mm of the rope is joined to the sheath by means of ultrasound to form a compact end. This technology is currently considered to be the best method of rope termination.



## ROPE CUTTER + CUTTING BLADE

CUTTING BLADE TYPE R • XCEPEL-R  
HEAT CUTTER HSG • XPAJKA-HSGO

Rope shortening device.



## ROPE PROTECTOR

LENGTH 60 CM • XPROTECTOR60  
LENGTH 100 CM • XPROTECTOR100

Rope protector against rubbing when the rope runs over an edge.

A resistant sleeve made of PVC with easy closing by a velcro fastener.



## ROPE MADE TO MEASURE

We can make a rope in a length as required by you. Thanks to this possibility there is no need for you to shorten and mark the rope later. Just think economically and effectively — you can save time and money and avoid making useless waste.

## TENDON ROPE CLEANER

XPRACIGEL03



Do not use any detergent for cleaning and washing of ropes. Tendon Rope Cleaner is a highly effective detergent for safe and thorough washing of ropes in washing machines as well as by hand. It does not damage the rope in any way and in addition the rope is ageing more slowly and is easier to use after washing and proper drying.



**IF YOU BUY A NEW STATIC ROPE AND A SITUATION OCCURS THAT YOU HAVE TO USE IT IN A WET ENVIRONMENT, WE RECOMMEND YOU TO WASH THE NEW ROPE BEFORE THE FIRST USE. THIS WAY YOU WILL REMOVE GREASY ADDITIVES (USED DURING PRODUCTION OF PA FIBRE) THAT WOULD GET RELEASED FROM THE ROPE ON THE FIRST CONTACT WITH MOISTURE.**

## STORAGE LIFE AND LIFESPAN OF DYNAMIC ROPES

### STORAGE LIFE

#### THE MAXIMUM STORAGE LIFE IN UNUSED CONDITION WITHOUT LIMITATION TO LIFE SPAN MAKES UP TO 5 YEARS.

This is conditional on optimum storage conditions: clean place protected against light, without chemical, physical and mechanical effects, in a normal climate of 15 - 25 °C and a relative humidity of about 65 %. An examination of the rope by a competent person (person authorized by the manufacturer) once every six months is mandatory.

In the process of rope production, the fibres are mechanically doubled, twisted and braided in several stages. In this way the fibres finally attain a condition of mechanically induced stress. A long-term storage leads to retardation and relaxation. This means that stress in macromolecules is "relieving". This phenomenon is not harmful, on the contrary it is connected with an improvement of dynamic properties. Research works showed that the results of tests of dynamic performance of ropes that had been (optimally) stored for several years were often better than values measured immediately after production. Polyamide also does not contain additives and softeners like, for example, PVC that could diffuse out. This is the reason why no embrittlement occurs.

In addition, the in-the-meantime standardized finishing of fibres by nanotechnological treatment offers an additional protection. In case of present-time advanced materials, a considerable negative change of properties of the product in a time interval of 5 years can be excluded provided that optimum storage conditions are maintained.

Safety investigations performed by mountaineering associations in the past showed that some used and duly stored ropes made early in the sixties (!) still had a residual capacity of two standard falls!

### LIFESPAN

#### AGEING OF DYNAMIC ROPES IN USE

Due to different influences on use and specialities of use it is impossible to give an exact numerical value, only a roughly estimated time value can be specified.

Depending on frequency and intensity of use, external effects as abrasion, contamination, mechanical loading (static), rope work (lowering and/or abseiling), loading by falls (dynamic), intensive action of UV radiation, aggressive climatic conditions etc. lead to reduction of safety reserve of the dynamic rope.

- The consequences of abseiling and lowering are reduction of dynamic performance and reduction of safety reserve of the rope.
- Abrasion leads to gradual weakening of consistency of the sheath. Heavier abrasion makes the sheath "hairier" and reduces the loadability of the sheath and its protective effect on the rope core.
- Particles of impurities and rocks inside the rope, especially in combination with heavy performance of the rope, result in abrasion of fine fibres of the core and the sheath. The particles act as abrasive sand and lead to reduction of the load-bearing cross section of the fibres, especially during frequent abseiling/lowering.
- Dynamic load results in loss of rope performance – the ability of arresting dynamic (impact) energy decreases. This depends on the hardness of the fall considerably (hardness of the fall is given by the belay method and the fall factor; falls with a fall factor of  $> 1$  are classified as hard falls according to the general state of the art).

Safety investigations performed by mountaineering associations reveal that if the rope sheath is not excessively damaged and shows no signs of heavy abrasion, a loading by falls with a fall factor of  $< 0.5$  and correct dynamic belaying does not represent a safety risk provided that the rope is not resting on sharp edges.

### INVESTIGATIONS BY THE SAFETY COMMISSION OF THE GERMAN ALPINE CLUB

Investigations performed by the Safety Commission of the German Alpine Club in the nineties revealed that there was a hyperbolic relation between the loss in safety reserve and the rope performance. There is also a linear relation between the rope quality and the loss in safety reserve.

**The higher the safety reserve (number of falls) of the rope, the longer the life span of the rope, because the loss starts from the higher initial level.**

In practical use of mountaineering ropes, two factors of rope work with different effects on the rope may be defined essentially:

- The rope is drawn by dead weight and friction only (metres of climbing). The leader climbs up and draws the rope behind to the next belay station, the rope is drawn from above or by change of rope direction without being loaded by the weight of the climber. The influencing factors are only the surface of the ground and friction when drawing the rope, as well as ambient conditions (UV radiation, moisture, impurities etc.).

**The general load is very low.**

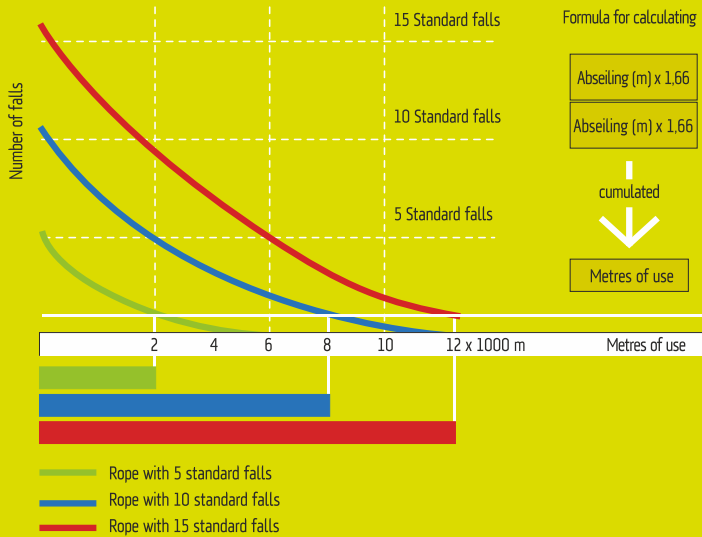
- The rope is used for lowering and abseiling (metres of abseiling). When using the rope for lowering with bending, a high performance induced by friction and movement is generated both in the belay/braking system (HMS, descender or belay device) and in the place of bending in the sheath and the core and is often connected with twisting which is brought about by the frequently-occurring false twist effect.

**The general load is much higher than in the aforementioned case!**

The user may use the following simple equation for making an approximate calculation:

$$\text{metres of climbing} \times 0.33 + \text{metres of abseiling} \times 1.66 = \text{metres of use}$$

When documenting the metres of use cumulatively, the user may estimate the safety condition of the rope (safety reserve of the number of falls) from the number of metres of use of the rope since the first day of use.



### GENERAL VALUES OF SAFETY CONDITION (SAFETY RESERVE)

According to curves depicted in the graph for individual rope types:

TENDON 11.4 mm Trust	20 standard falls on the day of production
TENDON 11.0 mm Trust	16 standard falls on the day of production
TENDON 10.5 mm Ambition	11 standard falls on the day of production

The number of cumulated metres may be used to estimate the remaining safety condition/safety reserve (number of standard falls) of the rope.

### Estimated safety condition of ropes used with different intensity (TENDON 11 mm Trust):

- **Safety condition  $\geq 5$  standard falls (up to approx. 6,000-8,000 metres of use)**  
If the rope is in perfect condition, it may be used to secure any climbing situation up to a fall factor of 2.

- **Safety condition  $> 2$  standard falls (up to approx. 12,000-14,000 metres of use)**  
If the rope is in perfect condition, it may be used to secure any climbing situation up to a fall factor of 1.

- **Safety condition  $\leq 2$  standard falls**  
If the rope is in perfect condition, it may be used to secure any climbing situation up to a fall factor of 0.3, if the rope sheath shows no signs of damage or extreme hairiness.

It is not easy to specify an exactly defined life span.

### The following information can be used as a guide:

- occasional use (e.g., five times a year, training use) with no heavy performance of the rope (no abseiling), without loading by hard falls, with the rope being correctly used and loaded by not more than 600-800 metres of use = the rope may be used safely for 10 years maximum.

Extreme loading by falls or other strong mechanical, physical, climatic or chemical effects can damage the rope so heavily that it must be discarded immediately.

The rope must be discarded immediately also in case the user has the slightest doubt about the safety and the perfect condition of the rope.



## STORAGE LIFE AND LIFE SPAN OF STATIC ROPES

### STORAGE LIFE

#### THE MAXIMUM STORAGE LIFE IN UNUSED CONDITION WITHOUT LIMITATION TO LIFE SPAN MAKES UP TO 5 YEARS.

This is conditional on optimum storage conditions: clean place protected against light, without chemical, physical and mechanical effects, in a normal climate of 15 - 25 °C and a relative humidity of about 65 %. An examination of the rope by a competent person once every six months is mandatory.

In the process of rope production, the fibres are mechanically doubled, twisted and braided in several stages. In this way the fibres finally attain a condition of mechanically induced stress. A long-term storage leads to retardation and relaxation. This means that stress in macromolecules is „relieving“. This phenomenon is not harmful, on the contrary it is connected with an improvement of dynamic properties. Research works showed that the results of tests of dynamic performance of ropes that had been (optimally) stored for several years were often better than values measured immediately after production. Polyamide also does not contain additives and softeners like, for example, PVC that could diffuse out. This is the reason why no embrittlement occurs.

In case of present-time advanced materials, a considerable negative change of properties of the product in a time interval of 5 years can be excluded provided that optimum storage conditions are maintained.

### LIFE SPAN

As to ageing of static ropes, it is impossible to give an exact numerical value, only a roughly estimated time value can be specified. This information does not relieve the user of the mandatory examination of the rope by a competent person (person authorized by the manufacturer) after use.

Depending on frequency and intensity of use, external effects as abrasion, contamination, mechanical loading (static), rope work (lowering and/or abseiling) loading by falls (dynamic), intensive action of UV radiation, aggressive climatic conditions etc. lead to reduction of static and dynamic performance (safety reserve) of the static rope.

The crucial influencing factors for safety of static ropes are external effects, as for instance:

- Sharp edges that may have fatal consequences even at a slight tension of the rope!
- Abseiling and lowering (rope work) lead to loss of dynamic and static performance. For instance, frequent abseiling with high load forms clusters of fused (melted) fibres in the rope sheath as a result of the heat inevitably developed by friction.
- Abrasion leads to gradual weakening of consistency of the sheath. Heavier abrasion makes the sheath „hairier“.
- Internal wear – particles of impurities and rocks inside the rope, especially in combination with heavy performance of the rope, result in abrasion of fine fibres of the core and the sheath. The particles act as abrasive sand and lead to reduction of the load-bearing cross section of the fibres, especially during frequent abseiling.
- Loading by falls  
Due to the low dynamic elongation, loading by falls with a fall factor of 0.3 or greater must be essentially excluded.

Because, unlike dynamic ropes, the main task of static ropes does not consist in safe catch of falls but in a quasi-static loading with a minimum dynamic stress only, a macromolecular stretching occurs when the rope is used correctly which, however, has no adverse effects on the maximum tensile force and the elongation of the rope. In case of an alternating to repeated (cyclic) loading of up to 20 % of the maximum tensile strength of the rope with approximately 10,000 loading cycles, a residual force at break of the rope of > 75 % may be expected.

#### EXAMPLE:

TENDON 11 mm Static

- maximum tensile force: 40.0 kN
- residual force at break – knot: 16.5 kN
- residual force at break after 10,000 cycles of repeated (cyclic) loading of up to 20 % (= 6 kN): 30.0 kN

The above parameters exceed the minimum requirements of EN 1891 for Type A static rope significantly.

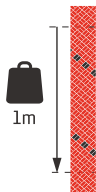
OCCASIONAL USE (SEVERAL TIMES A YEAR) WITH AN INTENSITY OF USE UNWORTHY OF NOTICE, WITHOUT CONSIDERABLE MECHANICAL LOADING OR FALL ARREST, WITHOUT RECOGNIZABLE WEAR OR CONTAMINATION.	8 - 10 YEARS
OCCASIONAL USE (SEVERAL TIMES A YEAR) WITH HIGH INTENSITY OF USE, MECHANICAL LOADING (SUSPENSION, OCCASIONAL LOWERING OR ABSEILING), WITHOUT FALL ARREST. <b>SIGNS OF USE:</b> SLIGHT WEAR, SLIGHT CONTAMINATION, NEGLIGIBLE HAIRINESS.	5 - 8 YEARS
FREQUENT USE (SEVERAL TIMES A MONTH) WITH LOW INTENSITY OF USE, WITHOUT CONSIDERABLE MECHANICAL LOADING (SUSPENSION, OCCASIONAL LOWERING OR ABSEILING) OR FALL ARREST. <b>SIGNS OF USE:</b> NO SIGNS OF HEAVY WEAR, SLIGHT CONTAMINATION, HARDLY RECOGNIZABLE HAIRINESS.	
VERY FREQUENT USE (SEVERAL TIMES A WEEK) WITH LOW INTENSITY OF USE, WITHOUT CONSIDERABLE MECHANICAL LOADING OR FALL ARREST. <b>SIGNS OF USE:</b> SIGNS OF HEAVY WEAR, SLIGHT CONTAMINATION, RECOGNIZABLE HAIRINESS.	3 - 5 YEARS
VERY FREQUENT USE (SEVERAL TIMES A WEEK) WITH HIGH INTENSITY OF USE, MECHANICAL LOADING (SUSPENSION), BUT WITHOUT FALL ARREST. <b>SIGNS OF USE:</b> SIGNS OF WEAR, OBVIOUS HAIRINESS, SLIGHT VITRIFICATION.	
INTENSIVE USE (EVERY DAY) WITH NORMAL INTENSITY OF USE, WITHOUT CONSIDERABLE MECHANICAL LOADING OR FALL ARREST. <b>SIGNS OF USE:</b> OBVIOUS WEAR, OBVIOUS HAIRINESS, HEAVY CONTAMINATION.	1 - 3 YEARS
INTENSIVE USE (EVERY DAY) WITH HIGH INTENSITY OF USE, MECHANICAL LOADING (SUSPENSION), BUT WITHOUT FALL ARREST. <b>SIGNS OF USE:</b> HEAVY WEAR, VITRIFICATION, CONTAMINATION AND HAIRINESS.	</=1 YEAR
<b>EXTREME LOADING BY FALLS OR OTHER STRONG MECHANICAL, PHYSICAL, CLIMATIC OR CHEMICAL EFFECTS CAN DAMAGE THE ROPE SO HEAVILY THAT IT MUST BE DISCARDED IMMEDIATELY. THE ROPE MUST BE DISCARDED IMMEDIATELY ALSO IN CASE THE USER HAS THE SLIGHTEST DOUBT ABOUT THE SAFETY AND THE PERFECT CONDITION OF THE ROPE.</b>	

## TESTING OF CLIMBING ROPES IN ACCORDANCE WITH EN 892

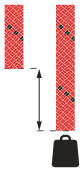
### DIAMETER



### WEIGHT



### STATIC ELONGATION



### SHEATH SLIPPAGE



### DIAMETER

This parameter is measured with a 10 kg load for single ropes, 6 kg for half ropes and 5 kg for twin ropes. This would imply that testing the exact diameter of ropes under domestic conditions is quite difficult.

### WEIGHT

The mass of a rope is measured for a length of one meter. A single rope without any added finish weights 52 to 88 grams per meter, a half rope about 50 grams and twin rope approximately 42 grams per meter. The rope's core must account for at least 50 % of its total mass.

### STATIC ELONGATION

Usable static elongation is tested by applying an 80 kg load to the rope. Elongation may not exceed 10 % for single ropes (one strand) and twin ropes (two strands tested in tandem) and 12 % for half ropes (one strand).

### SHEATH SLIPPAGE

Using a special machine, this test determines how much the surface of a rope will slip relative to the core when subjected to a load. The EN 892 establishes that slippage may not exceed 1 % (20 mm) when stretching a length of rope measuring 2250 (+ - 10 mm). If the sheath slides over the core during actual climbing, it can lead to bulges and so-called stockings. If the ends of ropes have not been sealed properly, the core at the end of the rope can come loose from the sheath or the sheath may extend longer than the core.

The ends of our ropes are sealed with ultrasound into one indivisible whole and if the limits for slippage are complied with, the situation described above will not occur.

### NUMBER OF STANDARD FALLS

This gives the number of falls the rope being tested under conditions given by the EN 892. This standard requires a minimum of 5 falls with a load of 80 kilograms for single ropes. Half ropes are tested with a 55 kg load. For twin ropes, the two ropes are under a constant load of 80 kilograms and the minimum number of falls is 12. The number of falls withstood during testing is a direct measurement of a rope's margin of safety (strength). In practice, no new rope will break under a sudden load if the rope is in good condition and has been properly handled. A rope will gradually become less

safe as its material ages and as it becomes worn from use, as these factors reduce its strength. Moisture can also reduce a rope's strength by degrading the polyamide fibers used for making the rope.

### MAXIMUM IMPACT FORCE

Impact force is the force that occurs during a first fall under defined conditions (mass of the load, fall factor, etc.) and that is absorbed by the rope. Under testing, the impact force increases for each additional test fall the rope is subjected to. How fast the impact force increases determines the number of standard falls withstood. The higher the number of standard falls, the longer the service life of the rope for the user. The practical use of ropes in real climbing or on training walls is different from laboratory conditions. During standard rope tests, the end of the rope is firmly secured, but in real climbing, belaying equipment and systems allow for some slippage of the rope, breaking the fall dynamically. Dynamic belaying dissipates some of the fall's energy, thereby lowering the impact force. For that reason, it is important to know how to use appropriate dynamic belaying.

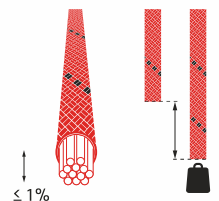
### DYNAMIC ELONGATION DURING A FIRST DROP

This parameter measures the elongation of the rope during the first standard drop. The maximum allowable dynamic elongation is 40 %. This measurement is a better indicator of the rope's properties than the static elongation value.

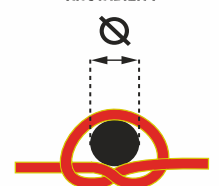
### KNOTABILITY

One of the most important requirements for mountain climbing rope is outstanding flexibility. How is this measured? A section of the tested rope is tied into a simple knot. Weight is then applied to the rope (10 kg for a single rope). Then the interior diameter of the knot is measured. The ratio between that diameter and the diameter of the rope gives the coefficient of knotability.

### DYNAMIC ELONGATION DURING A FIRST DROP



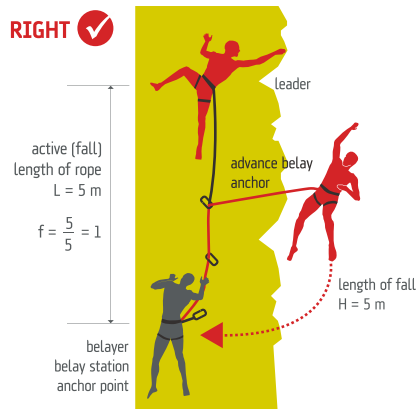
### KNOTABILITY



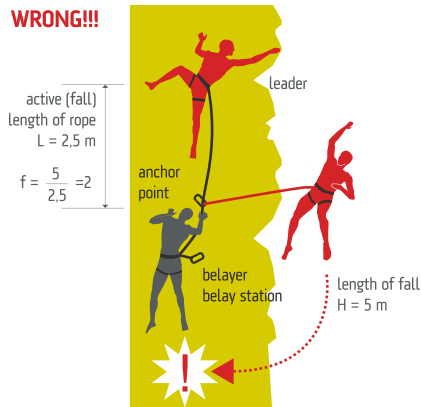


THE FALL FACTOR IS ALSO OF KEY IMPORTANCE FOR THE AMOUNT OF IMPACT FORCE. HOW FAR YOU FALL IS VIRTUALLY INSIGNIFICANT FOR THE IMPACT FORCE. THE AMOUNT OF THE FALL FACTOR IS MUCH MORE IMPORTANT. A FIVE METER FALL WITH A FALL FACTOR OF  $F = 1$  WILL RESULT IN A MUCH LOWER IMPACT FORCE THAN A FALL OF THE SAME LENGTH WITH A FACTOR OF  $F = 2$ . THE ENERGY OF THE CLIMBER'S FALL IS ABSORBED BY THE ACTIVE LENGTH OF THE ROPE (SHOWN IN THE ILLUSTRATIONS IN RED).

RIGHT 



WRONG!!!



A ROPE WITH POOR FLEXIBILITY IS HARDER TO TIE IN KNOTS AND SLIDES LESS EFFICIENTLY THROUGH THE CARABINERS OF A BELAYING SYSTEM. THE EFFECTS OF THE ELEMENTS OR OF IMPROPER CARE CAN REDUCE A ROPE'S FLEXIBILITY.

LANEX has built its own laboratory for testing its TENDON ropes, including its own drop tower. Newly developed ropes to European labs for certification already fully prepared and with known technical parameters. Most TENDON ropes are tested at the accredited TÜV lab in Vienna.

#### REQUIREMENTS OF THE NORM EN 892 - DYNAMIC CLIMBING ROPES

MONITORED PARAMETER	REQUIRED VALUES		
	SINGLE ROPE	HALF ROPE	TWIN ROPE
Rope diameter	Undefined	Undefined	Undefined
Rope weight	Undefined	Undefined	Undefined
Sheath slippage	1 % ( $\pm 20$ mm)	1 % ( $\pm 20$ mm)	1 % ( $\pm 20$ mm)
Static elongation	max. 10 % *	max. 12 % *	max. 10 % **
Dynamic elongation	max. 40 % +	max. 40 % ***	max. 40 % ++
Impact force of the first fall	max. 12 kN +	max. 8 kN ***	max. 12 kN ++
Number of falls	min. 5 +	min. 5 ***	min. 12 ++

\* test of one strand of rope / \*\* test of two strands of rope / \*\*\* test of one strand of rope, load: 55 kg  
+ test of one strand of rope, load: 80 kg / ++ test of two strands of rope, load: 80 kg

## TESTING OF ACCESSORY CORD

### DIAMETER

Accessory cords are tested in a manner similar to testing of ropes, except that the pretensioning is less. According to EN 564, cords should have diameters of 4, 5, 6, 7 and 8 mm. Smaller diameters (2 mm – avalanche cords, 3 mm – hammer cord and 9 mm – force cord) do not comply with the norm.

### STRENGTH

The minimum strength under to EN 564 is shown on the table below:

diameter (mm)	minimum strength kN
4	3.2
5	5.0
6	7.2
7	9.8
8	12.8



# TESTING ROPES WITH LOW ELONGATION (STATIC ROPES) IN ACCORDANCE WITH EN 1891

DIAMETER



DIAMETER

This quantity is measured with a 10 kg load on the rope. The ropes may have a minimum diameter of 8.5 mm and a maximum of 16 mm.

ELONGATION

Usable static elongation is measured by applying a test load of 150 kg (after 50 kg pretensioning). Elongation may not exceed 5 %.

STATIC STRENGTH

This is always stated on tags on the ropes. It varies according to the diameter of the rope and the kind of Used material. EN 1891 requires that group A ropes have a minimum static strength of 22 kN and that Type B ropes have a minimum static strength of 18 kN.



THE MAXIMUM RECOMMENDED LOAD IS 1/10 OF THE NOMINAL STRENGTH STATED ON THE PRODUCT LABEL.

REQUIREMENTS WITH RESPECT TO MATERIAL PROPERTIES

According to EN 1981, static ropes must be manufactured from a material that has a melting point higher than 195 °C, so they may not be made using polyethylene and polypropylene. Ropes made for those materials for canyoning are not subject to that norm, although they fulfill the norm with respect to static strength and other parameters.

SHEATH SLIPPAGE

This parameter is important mainly during rappelling on static ropes – if this parameter of a rope is insufficient, a safe descent could be endangered by the bunching of the rope’s sheath in front of the rappelling brake.

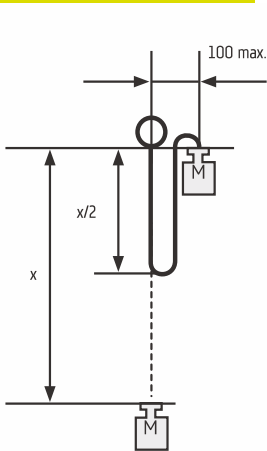
For Type A ropes, slippage may not exceed ca. 20 mm for a 2 m length of rope (this applies to ropes with a diameter of up to 12 mm). For Type B ropes, slippage may not exceed 15 mm.

KNOTABILITY

This is tested in the same way as mountain climbing ropes: it must not be possible to insert a bar with a diameter greater than a multiple of 1.2 times the diameter of the rope into the opening in the knot tightened by the testing force.

DYNAMIC PERFORMANCE

The testing equipment is similar to that used for testing climbing ropes, except that the rope is ca. 2 m long. At the ends it is tied in figure eight knots and it is tested with five falls with a fall factor of 1. During the test, the rope must withstand all five falls. Type A ropes are tested with a load of 100 kg. Type B ropes are tested with a load of 80 kg.





REQUIREMENTS OF THE NORM EN 1891 – STATIC ROPES

MONITORED PARAMETER	REQUIRED VALUES	
	ROPE TYPE A	ROPE TYPE B
Rope diameter	8.5 – 16 mm	8.5 – 16 mm
Knotability coefficient	max. 1.2	max. 1.2
Sheath slippage	max. 20 mm*	max. 15 mm*
Elongation	max. 5 %	max. 5 %
Shrinkage	Undefined	Undefined
Impact force	max. 6 kN	max. 6 kN
No. of falls with a fall factor of 1	min. 5	min. 5
Strength without knots	min. 22 kN	min. 18 kN
Strength with knots	min. 15 kN (3 minutes)	min. 12 kN (3 minutes)



\* 20 mm + 10 for ropes to diameter 12 mm. 20 mm + 5 for ropes with diameter between 12.1 – 16 mm

ROPE DIAMETER • [mm]  
WEIGHT • [g/m]  
NUMBER OF UIAA FALLS  
MAX. IMPACT FORCE • [kN]  
SHEATH SLIPPAGE • [%]  
STATIC ELONGATION • [%]  
DYNAMIC ELONGATION • [%]  
KNOTABILITY

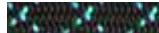

**MASTER PRO 7.6**

①②	③	ART. NO. • COLOUR
7.6	7.6	 ART. NO. • COLOUR
38	38	D076TP41C000C • GREEN
11	28	 ART. NO. • COLOUR
5.3	8.4	D076TP42C000C • ORANGE
-0.3	-0.3	
10.1	6.1	
37	32	
1	1	



**MASTER 8.6**

①	②	③	ART. NO. • COLOUR
8.6	8.6	8.6	 ART. NO. • COLOUR
50	50	50	D086TM42C000C • PINK
5	13	30	 ART. NO. • COLOUR
9.1	7.2	11.5	D086TM43C000C • TURQUOISE
0.3	0.2	0.2	
4.3	5.8	3.9	
30	22	23	
0.9	0.8	0.8	

**MASTER PRO 8.9**



①	②	③	ART. NO. • COLOUR
8.9	8.9	8.9	 ART. NO. • COLOUR
52	52	52	D089TP42C000C • BLACK/BLUE
6	18	40	 ART. NO. • COLOUR
9.1	6.7	10.7	D089TP41C000C • BLACK/PINK
0.2	0.2	0.2	
6.9	6.9	5.6	
31	26	24	
0.8	0.8	0.8	

**MASTER 9.7 TEFIX®**



①	ART. NO. • COLOUR
9.7	 ART. NO. • COLOUR
61	D097MF41S000C • TURQUOISE
8	 ART. NO. • COLOUR
8.2	D097MF42S000C • PINK
0	
8.0	
35	
0.8	

ROPE DIAMETER • [mm]  
WEIGHT • [g/m]  
NUMBER OF UIAA FALLS  
MAX. IMPACT FORCE • [kN]  
SHEATH SLIPPAGE • [%]  
STATIC ELONGATION • [%]  
DYNAMIC ELONGATION • [%]  
KNOTABILITY


**MASTER PRO 9.2**

①	ART. NO. • COLOUR
9.2	 ART. NO. • COLOUR
58	D092TP41C000C • RED
9	 ART. NO. • COLOUR
8.5	D092TP43C000C • TURQUOISE
0.1	
6.5	
31	
0.9	



**MASTER 9.4**

①	ART. NO. • COLOUR
9.4	 ART. NO. • COLOUR
58	D094TM41S000C • VIOLET
6	 ART. NO. • COLOUR
7.9	D094TM42S000C • BLUE
0	
6.4	
37	
0.9	

**MASTER 9.4 ECO**



①	ART. NO. • COLOUR
9.4	 ART. NO. • COLOUR
58	D094TM44E000C • BRIGHT ORANGE
6	
7.9	
0	
6.4	
37	
0.9	

**MASTER 9.0 TEFIX®**



①	②	③	ART. NO. • COLOUR
9.0	9.0	9.0	 ART. NO. • COLOUR
55	55	55	D090MF42C000S • TURQUOISE
5	19	33	 ART. NO. • COLOUR
8.9	6.5	10.8	D090MF41C000S • PINK
0	0	0	
9.6	9.6	9.6	
31	29	25	
0.9	0.9	0.9	

ROPE DIAMETER • [mm]  
WEIGHT • [g/m]  
NUMBER OF UIAA FALLS  
MAX. IMPACT FORCE • [kN]  
SHEATH SLIPPAGE • [%]  
STATIC ELONGATION • [%]  
DYNAMIC ELONGATION • [%]  
KNOTABILITY



**MASTER PRO 9.7**

①	ART. NO. • COLOUR
9.7	 ART. NO. • COLOUR
65	D097TP42C000C • GREEN
9	 ART. NO. • COLOUR
8.5	D097TP41C000C • TURQUOISE
-0.4	
9.8	
30	
0.9	



**MASTER 7.0**

①	ART. NO. • COLOUR
7	 ART. NO. • COLOUR
34	D070TM41C000C • RED
14	 ART. NO. • COLOUR
9.6	D070TM42C000C • BLUE
0	
8.4	
33	
0.9	




**MASTER 7.8**

②	③	ART. NO. • COLOUR
7.8	7.8	 ART. NO. • COLOUR
38	38	D078TD42S000C • BLUE
5	16	 ART. NO. • COLOUR
5.7	8.5	D078TD44S000C • RED
0	0	
10.5	8	
38	35	
0.9	0.9	





**MASTER 8.5**

②	③	ART. NO. • COLOUR
8.5	8.5	 ART. NO. • COLOUR
46	46	D085TF41S000C • GREEN/YELLOW
10	25	 ART. NO. • COLOUR
5.3	8.6	D085TF42S000C • KHAKI/BLUE
0.1	0.1	
7	7	
32	30	
0.8	0.8	



**MASTER 9.7**

①	ART. NO. • COLOUR
9.7	 ART. NO. • COLOUR
61	D097TV41S000C • YELLOW
7	 ART. NO. • COLOUR
7.9	D097TV42S000C • GREEN
0.1	 ART. NO. • COLOUR
6	D097TV45S000C • BICOLOUR
37	
0.9	



**AMBITION 9.8**

①	ART. NO. • COLOUR
9.8	 ART. NO. • COLOUR
64	D098TR48S000C • BRIGHT YELLOW
9	 ART. NO. • COLOUR
7.4	D098TR42S000C • GREEN
0.05	 ART. NO. • COLOUR
7.9	D098TR41S000C • YELLOW
35	 ART. NO. • COLOUR
0.9	D098TR45S000C • BICOLOUR




**AMBITION 10.0**

①	ART. NO. • COLOUR
10	 ART. NO. • COLOUR
67	D100TA41S000C • RED
9	 ART. NO. • COLOUR
8.9	D100TA42S000C • BLUE
0.2	
5	
33	
1	



**AMBITION 10.2 TEFIX®**

①	ART. NO. • COLOUR
10.2	 ART. NO. • COLOUR
67	D102AF41S000C • YELLOW
11	 ART. NO. • COLOUR
8.3	D102AF42S000C • ORANGE
0	
6.9	
33	
0.8	

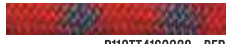

**AMBITION 10.5**

①	ART. NO. • COLOUR
10.5	 ART. NO. • COLOUR
69	D105TA41S000C • RED
9	 ART. NO. • COLOUR
9.2	D105TA42S000C • BLUE
0.1	 ART. NO. • COLOUR
6.9	D105TA47S000C • BRIGHT GREEN
34	
0.8	



## ALPINE 7.9

	⑫	③	ART. NO. • COLOUR
ROPE DIAMETER • [mm]	7.9	7.9	
WEIGHT • [g/m]	38	38	
NUMBER OF UIAA FALLS	5	16	D079TL41S000C • RED
MAX. IMPACT FORCE • [kN]	5.7	8.5	
SHEATH SLIPPAGE • [%]	0	0	D079TL42S000C • YELLOW
STATIC ELONGATION • [%]	10.5	8.0	
DYNAMIC ELONGATION • [%]	38	35	
KNOTABILITY	0.9	0.9	



## TRUST 11.0

	①	ART. NO. • COLOUR
	11	
	79	
	16	D110TT41S000C • RED
	9.1	
	0.4	D110TT42S000C • YELLOW
	5.3	
	31	
	1	



## TRUST 11.4

	①	ART. NO. • COLOUR
	11.4	
	84	
	20	D114TA41S000C • YELLOW
	9.2	
	0.3	D114TA42S000C • BLUE
	6.4	
	32	
	1	



## AMBITION 8.5

	⑫	ART. NO. • COLOUR
	8.5	
	45	
	9	D085TB41S000C • YELLOW
	5.4	
	0.1	D085TB42S000C • BLUE
	7.6	
	38	
	1	



## LOWE 8.4

	⑫	③	ART. NO. • COLOUR
ROPE DIAMETER • [mm]	8.4	8.4	
WEIGHT • [g/m]	41	41	
NUMBER OF UIAA FALLS	5	12	D084TW41S000C • BLUE
MAX. IMPACT FORCE • [kN]	5.1	9.2	
SHEATH SLIPPAGE • [%]	0	0	D084TW42S000C • YELLOW
STATIC ELONGATION • [%]	5.4	5.3	
DYNAMIC ELONGATION • [%]	31	27	
KNOTABILITY	0.8	0.8	



## HATRICK 9.7

	①	ART. NO. • COLOUR
	9.7	
	58	
	5	D097TH41S000C • GREEN/BLUE
	9.4	
	0	D097TH42S000C • RED/BLUE
	8	
	30	
	1	



## HATRICK 10.2

	①	ART. NO. • COLOUR
	10.2	
	68	
	5	D102TH41S000C • BLUE
	9.4	
	0	D102TH42S000C • RED
	6.9	
	33	
	0.9	


## INDOOR 10.2 I

	①	ART. NO. • COLOUR
	10.2	
	68	
	7	D102TI71S000C • RED/YELLOW
	8.8	
	0	D102TI72S000C • YELLOW/GREY
	8.3	
	34	
	0.9	

## INDOOR 10.4



	①	ART. NO. • COLOUR
	10.4	
	72	
	8	D104TI41S000C • BLUE/GREEN
	8.2	
	0.1	D104TI42S000C • RED/GREY
	9.1	
	35	
	1	

## INDOOR 9.8


	①	ART. NO. • COLOUR
	9.8	
	63	
	11	D098TI42S000R • BLACK/ORANGE
	9	
	0	D098TI41S000R • BLACK/BLUE
	7.9	
	32	
	0.9	

ROPE DIAMETER • [mm]	
WEIGHT • [g/m]	
NUMBER OF FALLS (MIN.)	
RELATIVE MASS OF SHEATH	
SHEATH SLIPPAGE • [%]	
ELONGATION (50 – 150 KG)	
SHRINKAGE • [%]	
STRENGTH • [kN]	
MIN. STRENGTH WITH KNOTS • [kN]	
USED MATERIAL	
TYPE	
FLOATING	

## CANYON DRY 9.0 / WET 10.0


	9	10	ART. NO. • COLOUR
	59	66	
	16	20	
	44	38	C090TD41C000C • RED
	0.2	-0.3	
	3.6	2.5	
	1	0.8	C100TW48W000C • ORANGE
	30	30	
	18.4	18	
	PA	PA	
	A	A	
	Ne	Ne	

## CANYON GRANDE 10.0\*\*

	10*	ART. NO. • COLOUR
ROPE DIAMETER • [mm]	61	
WEIGHT • [g/m]	5**	
NUMBER OF FALLS (MIN.)	47	C100TC41S000C • YELLOW
RELATIVE MASS OF SHEATH	-0.2	
SHEATH SLIPPAGE • [%]	3.2	
ELONGATION (50 – 150 KG)	1.7	
SHRINKAGE • [%]	18	
STRENGTH • [kN]	12	
MIN. STRENGTH WITH KNOTS • [kN]	PA/PPV	
USED MATERIAL	-	
TYPE	yes	
FLOATING		

\*\* weight 55 kg, fall factor 1  
\* tested according to EN 1891 type B except min. tenacity and material

## SALAMANDER 10.2

	10.2*	ART. NO. • COLOUR
ROPE DIAMETER • [mm]	60	
WEIGHT • [g/m]	20**	
NUMBER OF FALLS (MIN.)	41.7	C102TS41S000C • YELLOW
RELATIVE MASS OF SHEATH	0	
SHEATH SLIPPAGE • [%]	2.5	
ELONGATION (50 – 150 KG)	0	
SHRINKAGE • [%]	23	
STRENGTH • [kN]	13	
MIN. STRENGTH WITH KNOTS • [kN]	PA/PPV	
USED MATERIAL	-	
TYPE	yes	
FLOATING		





\*\* weight 55 kg, fall factor 1  
\* tested according to EN 1891 type B except min. tenacity and material




## SPELEO

	9	10	10.5	10.5 Special	11	ART. NO. • COLOUR
	48	63	72	76	77	
	8	16	20	12	20	
	42	40	46	51	42	
	-0.3	0	0.1	0.5	-0.4	S105TG41S000C SPECIAL • WHITE/BLUE
	4.1	3.7	3	2.7	3.3	
	1	1.8	1.4	1	0.3	
	19	27	28	34	33	
	12	16	18	18	17	
	PA	PA	PA	PES/PA	PA	
	B	A	A	A	A	
	-	-	-	-	-	

○ 9	S090TS41S000C • WHITE/ORANGE
○ 10	S100TS41S000C • WHITE/ORANGE
○ 10.5	S105TS41S000C • WHITE/ORANGE
○ 11	S110TS41S000C • WHITE/ORANGE



	TIMBER EVO 11.0		TIMBER EVO 11.5		TIMBER EVO 12.5		LOWERING ROPE	
ROPE DIAMETER • [mm]	11	ART. NO. • COLOUR	11.5	ART. NO. • COLOUR	12.5	ART. NO. • COLOUR	15	ART. NO. • COLOUR
WEIGHT • [g/m]	88		90		104		172	
NUMBER OF FALLS (MIN.)	20		20		20		-	
RELATIVE MASS OF SHEATH	57	L110TT41S000C	54	L115TE42S000C	48	L125TT41S000C	-	L150TT41S000C • YELLOW/BLACK
SHEATH SLIPPAGE • [%]	0	BRIGHT YELLOW	0.5	ORANGE/YELLOW	0	BRIGHT ORANGE	-	
ELONGATION (50 – 150 KG)	3.1		3		3		-	
SHRINKAGE • [%]	0.7		1		0.6		-	
STRENGTH • [kN]	30		30		39		61	
MIN. STRENGTH WITH KNOTS • [kN]	18		18		22		-	
USED MATERIAL	PES/PA		PES/PA		PES/PA		PES	
TYPE	A		A		A		-	



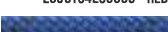
	TIMBER CORD 3.0		TIMBER CORD 8.0		TIMBER CORD 10.0	
ROPE DIAMETER • [mm]	3	COLOUR • ART. NO.	8	COLOUR • ART. NO.	10	COLOUR • ART. NO.
WEIGHT • [g/m]	2.5		54.3		73	
TENACITY • [kN]	0.8		20		25	
USED MATERIAL	PE		PES/TECHNORA		PES/TECHNORA	
		A030TT41S000C • RED		A080TP41S000C • WHITE/RED		A100TP41S000C • YELLOW/BLACK


	STATIC 9.0 MILITARY ED		STATIC 10.0 MILITARY ED		STATIC 10.5 MILITARY ED		STATIC 11.0 MILITARY ED		STATIC 12.0 MILITARY ED	
ROPE DIAMETER • [mm]	9	COLOUR • ART. NO.	10	COLOUR • ART. NO.	10.5	COLOUR • ART. NO.	11	COLOUR • ART. NO.	12	COLOUR • ART. NO.
WEIGHT • [g/m]	50		69		72		80		90	
NUMBER OF FALLS (MIN.)	15	L090TS44S000C • BLACK	20	L100TS44S000C • BLACK	20	L105TS44S000C • BLACK	20	L110TS44S000C • BLACK	20	L120TS44S000C • BLACK
RELATIVE MASS OF SHEATH	49		38		36		39		34	
SHEATH SLIPPAGE • [%]	0.4	L090TS45S000C • GREEN	0.1	L100TS45S000C • GREEN	0.1	L105TS45S000C • GREEN	0.3	L110TS45S000C • GREEN	0.5	L120TS45S000C • GREEN
ELONGATION (50 – 150 KG)	5		4.1		3.6		3.7		3.2	
SHRINKAGE • [%]	0.6	L090TS46S000C • CAMOUFLAGE	2	L100TS46S000C • CAMOUFLAGE	1.9	L105TS46S000C • CAMOUFLAGE	1.9	L110TS46S000C • CAMOUFLAGE	1.8	L120TS46S000C • CAMOUFLAGE
STRENGTH • [kN]	23		31		32		33		41	
MIN. STRENGTH WITH KNOTS • [kN]	13	L090TS4KS000C • DESERT STORM	17	L100TS4KS000C • DESERT STORM	18	L105TS4KS000C • DESERT STORM	20	L110TS4KS000C • DESERT STORM	25	L120TS4KS000C • DESERT STORM
USED MATERIAL	PA		PA		PA		PA		PA	
TYPE	B	L090TS47S000C • SOLID BLACK	A	L100TS47S000C • SOLID BLACK	A	L105TS47S000C • SOLID BLACK	A	L110TS47S000C • SOLID BLACK	A	L120TS47S000C • SOLID BLACK




	REFLECTIVE 11.0		ARAMID 10.0		ARAMID 11.0		FORCE 10.0		FORCE 11.0	
ROPE DIAMETER • [mm]	11	COLOUR • ART. NO.	10*	COLOUR • ART. NO.	11	COLOUR • ART. NO.	10*	COLOUR • ART. NO.	11**	COLOUR • ART. NO.
WEIGHT • [g/m]	80		65		81		68		84	
NUMBER OF FALLS (MIN.)	20		10		5		5		5	
RELATIVE MASS OF SHEATH	39	L110TS49S000C • BLACK	50	L100TA42S000C • BLACK	48	L110TA41S000C • BLACK	36	L100TF41S000C • BLACK	41	L110TF41S000C • BLACK
SHEATH SLIPPAGE • [%]	0.3		0.1		1.9		0		0.5	
ELONGATION (50 – 150 KG)	3.7		3.3		2.9		3.5		3.6	
SHRINKAGE • [%]	1.9		1.9		0		2.3		3	
STRENGTH • [kN]	33		33		44		24		26	
MIN. STRENGTH WITH KNOTS • [kN]	20		15		18		13		15	
USED MATERIAL	PA		Aramid/PA		Aramid/PA		PA/Steel		PA/Steel	
TYPE	A		B		A		B		A	



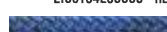
\* tested according to EN 1891 type B excepted material, marking  
 \*\* tested according to EN 1891 type A excepted material, marking

ROPE DIAMETER • [mm]  
WEIGHT • [g/m]  
NUMBER OF FALLS (MIN.)  
RELATIVE MASS OF SHEATH  
SHEATH SLIPPAGE • [%]  
ELONGATION (50 – 150 KG)  
SHRINKAGE • [%]  
STRENGTH • [kN]  
MIN. STRENGTH WITH KNOTS • [kN]  
USED MATERIAL  
TYPE

STATIC 9.0	
9	COLOUR • ART. NO.
50	
15	
49	L090TS41S000C • WHITE
0.4	
5	L090TS42S000C • RED
0.6	
23	L090TS43S000C • BLUE
13	
PA	
B	


STATIC 9.0 TYPE A	
9	COLOUR • ART. NO.
61	
5	
41	L090TS41A000C • WHITE
0	
3.3	
1.9	
24	
15	
PA	
A	


STATIC 10.0	
10	COLOUR • ART. NO.
69	
20	
38	L100TS41S000C • WHITE
0.1	
4.1	
2	L100TS42S000C • RED
31	
17	
PA	L100TS43S000C • BLUE
A	



STATIC 10.5	
10.5	COLOUR • ART. NO.
72	
20	
36	L105TS41S000C • WHITE
0.1	
3.6	
1.9	L105TS42S000C • RED
32	
18	
PA	L105TS43S000C • BLUE
A	



STATIC 11.0	
11	COLOUR • ART. NO.
80	
20	
39	L110TS41S000C • WHITE
0.3	
3.7	
1.9	L110TS42S000C • RED
33	
20	
PA	L110TS43S000C • BLUE
A	

ROPE DIAMETER • [mm]  
WEIGHT • [g/m]  
NUMBER OF FALLS (MIN.)  
RELATIVE MASS OF SHEATH  
SHEATH SLIPPAGE • [%]  
ELONGATION (50 – 150 KG)  
SHRINKAGE • [%]  
STRENGTH • [kN]  
MIN. STRENGTH WITH KNOTS • [kN]  
USED MATERIAL  
TYPE

STATIC 12.0	
12	COLOUR • ART. NO.
90	
20	
34	L120TS41S000C • WHITE
0.5	
3.2	L120TS42S000C • RED
1.8	
41	
25	L120TS43S000C • BLUE
PA	
A	

STATIC 13.0	
13	COLOUR • ART. NO.
109	
20	
45	L130TS41S000C • WHITE
0	
3.1	
0.6	
41	
26	
PA	
A	

SECURE 10.5	
10.5	COLOUR • ART. NO.
72	
16	
38	L105TE41S000C • RED
0	
4.6	
1.2	L105TE42S000C • YELLOW
28	
17	
PA	
A	

SECURE 11.0	
11	COLOUR • ART. NO.
85	
min. 20	
33	L110TE43S000C • YELLOW
0	
4.5	
0.8	L110TE44S000C • BLUE
35	
18	
PA	
A	

DIAMETER • [mm]  
DIAMETER • [in]  
MBS\* • [kN]  
MBS\* • [LB]  
WEIGHT • [g/m]  
ELONGATION AT 10% MBS • [%]  
ELONGATION AT 1.35 KN (300 LBF) • [%]  
ELONGATION AT 2.70 KN (600 LBF) • [%]  
ELONGATION AT 4.40 KN (1000 LBF) • [%]  
NFPA 2500  
CLASSIFIED

STATIC (NFPA)		
10.5	11	12
0.413	0.433	0.472
32	40.5	42
7 194	9 105	9 442
72	83	87
7	8.4	7.4
4.1	3.6	2.3
6.4	6.2	4.7
9.5	9.5	7.8
ano	ano	ano
Technical use	General use	General use

STATIC (NFPA) 16.0	
16	COLOUR • ART. NO.
0.629	
60	
13 489	L160NS41S000C • BLACK/RED
160	
8.6	
1.2	
3.0	
5.8	
Ano	
General use	

## ACCESSORY AND POWER CORDS

CORD DIAMETER • [mm]										FULL ARAMID	REEP ARAMID	REEP REFLECTIVE	REEP TOUCH
	4	5	6	7	8	2	3	9		6	6	6	6
WEIGHT • [g/m]	12.7	18.9	25	34	43	2.8	6.5	54.4		26	22.9	23.2	23.2
MIN. STRENGTH • [daN]	340	510	1000	1300	1460	120	190	1900		2200	1650	1000	1000
ART. NO. • COLOUR	A040TR41S100R • BLUE/YELLOW A040TR42S100R • RED	A050TR41S100R • YELLOW A050TR42S100R • BLUE	A060TR41S100R • GREEN A060TR42S100R • RED	A070TR41S100R • RED A070TR42S100R • YELLOW	A080TR42S100R • RED A080TR41S100R • ORANGE	A020TH41S100R • BLUE A020TH42S100R • YELLOW	A030TH41S100R • BLUE A030TH42S100R • BLACK	A090TR41S100R • RED		A060TF41S100R • BEIGE	A060TA41S100R • BLACK	A060TR44S100R • BLACK	A060TT41S100R • WHITE/RED A060TT42S100R • WHITE/BLUE
													

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UNITED KINGDOM	Dark Ventures Unit 12	Clarence Industrial Estate, Eastside Road, Chesterfield	Derbyshire	S41 9AT	+44(0) 790 429 1166	sales@darkventures.co.uk
UNITED ARAB EMIRATES	Global Climbing Trading LLC	PO Box 474476	Dubai Investment Park 1		+971 4 8829 361	info@globalclimbing.com
USA	SGT KNOTS Supply Co.	245 Orbit Rd.	Statesville	NC 28677	+1-855-727-2267	support@sgtknots.com

LANEX a.s.  
Hlučínská 96/1, 747 23 Bolatice  
Czech Republic  
Phone: +420 553 751 223  
E-mail: [info@mytendon.com](mailto:info@mytendon.com)  
[www.mytendon.com](http://www.mytendon.com)

**myTENDON**  
tied to be free

CE 1019 - WUÚ, a.s., Pikartská 1337/7  
716 07 Ostrava - Radvanice, Czech Republic