
HELIX
Rope Range

About Us

HELIX

Helix Operations provide a complete capability for vertical access and rescue in mountain, maritime and urban environments.

We are based in the mountains of North Wales and have a heritage of over 40 years supplying tactical climbing solutions to end users. Over that time, we have worked with and become a main supplier of tactical climbing equipment to the UK MOD and have provided equipment, systems and training to many other nations.

The capability offered by our close relationship with DMM has been extended by partnering with manufacturers such as CTOMS, Henriksen, HQH, Protecttion, Rock Exotica, Highnovate and Cadex Defence to offer complete solutions for working at height in a tactical environment.

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Company Number: 10316654

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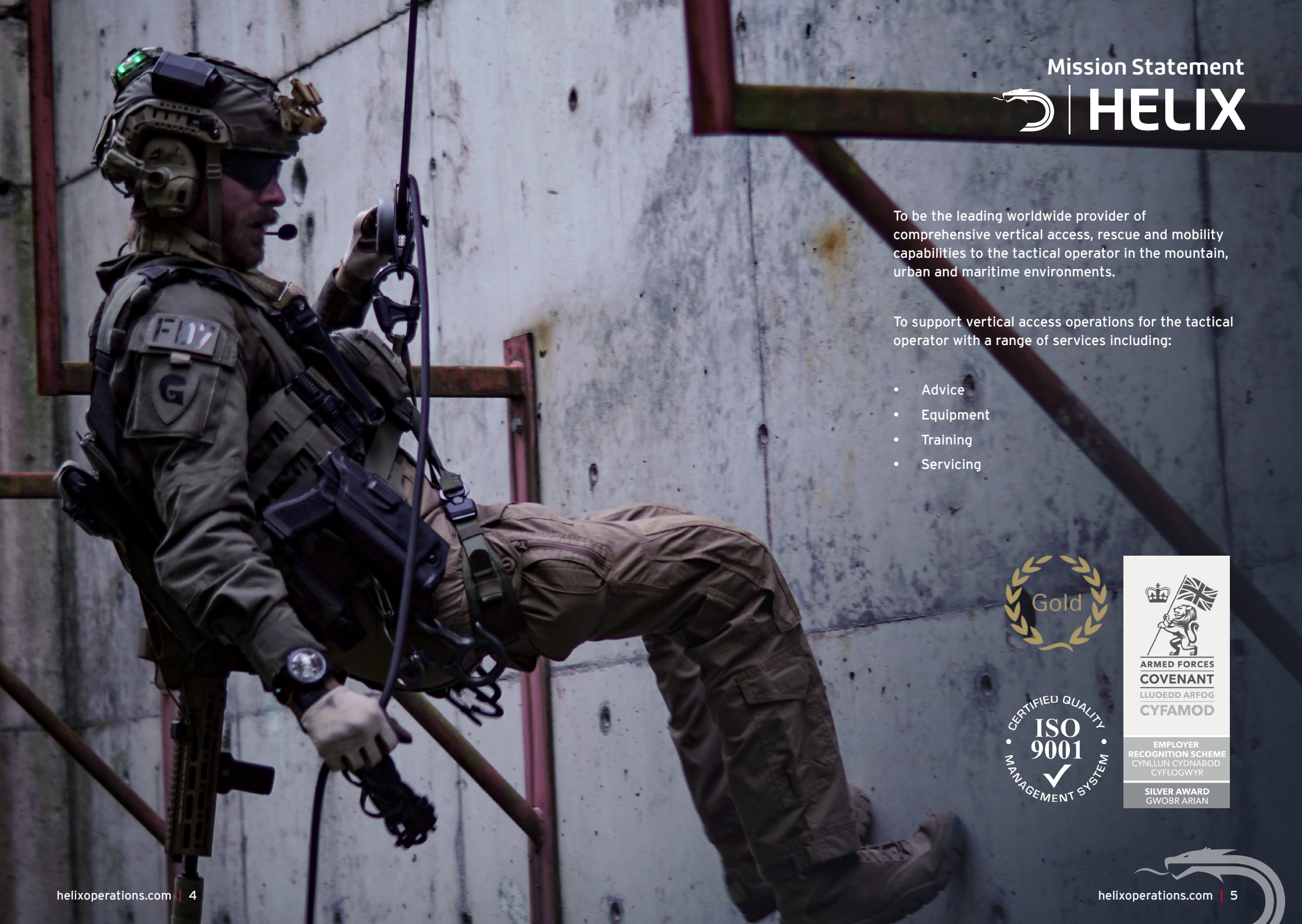
NCAGE: U1AG3



Mission Statement

HELIX

To be the leading worldwide provider of comprehensive vertical access, rescue and mobility capabilities to the tactical operator in the mountain, urban and maritime environments.

To support vertical access operations for the tactical operator with a range of services including:

- Advice
- Equipment
- Training
- Servicing

Gold

CERTIFIED QUALITY ISO 9001 MANAGEMENT SYSTEM

ARMED FORCES COVENANT
LLUOEDD ARFOG CYFAMOD

EMPLOYER RECOGNITION SCHEME
CYNLLUN CYDNABOD CYFLOGWYR

SILVER AWARD
GWOBR ARIAN

Key Brands

REBS supply many critical components of any maritime or urban access system. Rapid Entry Boarding Systems - the best maritime boarding equipment that also works well for urban operations. They supply the best grapnel launchers and the lightest carbon ladder systems on the market.

Robust carbon ladder systems - these are the go to ladders if TLC is in short supply. The FIX-LITE being the new ladder of choice for dismounted troops in urban environments with the ATV carbon bridge ladder demonstrating how tough carbon can be.

Founded in 1992, Sterling has been a leading manufacturer of innovative and high-quality ropes and cords. They were the first to introduce several features including a 48-carrier static sheath and 100% Technora heat-resistant ropes.

CTOMS was founded on the concept of evolving tactical medicine and expanded to encompass aspects of remote and improvised rescue. A key part of this evolution was the development of the TRACE™ system as micro rope system with a comprehensive capability that includes access, egress, hauling and high-lining. CTOMS are our longest standing partner and Helix are one of the very few authorised providers of training for the TRACE™ system.

LIBERVIT are an French company with over 25 years in design and manufacture of hydraulic tools and manual equipment for the industry, the special forces and the rescuers.

The DMM International group specialise in the manufacture of equipment and systems for operating safely at height. They have proudly manufactured all their hardware in the United Kingdom since 1981 and over that time they have established a reputation for innovation and quality.

As part of the same group of companies Helix Operations rely heavily on DMM to design, prototype and manufacture much of the core product in our range.

An impressive micro rope system that is very intuitive to use, fast to deploy and incredibly robust. The system that came top in a recent egress system tender and impressed with its ability to meet the criteria of EN341 with a 160kg load.

Masters of Gloves originated in 2017 from the awareness that for many professional users, they face serious threats on a daily basis. With feedback from end users, they have launched the combat gloves for NATO as well as other specialised tactical gloves.

Forward thinking equipment and systems designed by former operators to address gaps in current vertical assault capability. The QRAB is a class leading descender for medium diameter ropes that allows fast disengagement whilst the RAFA portable anchor gives security where normal anchors are not viable.

Tendon strives to be a leading brand in tactical mountaineering and safety equipment. They focus on building trust with customers by offering top-quality products, exceptional service, and continuous innovation.

Designed and manufactured in the United Kingdom with a reputation for outstanding quality and a long history of providing specialist rope solutions to military and rescue units. Marlow Ropes have a proven record as a key manufacturer of quality ropes for access, rescue and specialist products for use in helicopter operations.

Rope Types

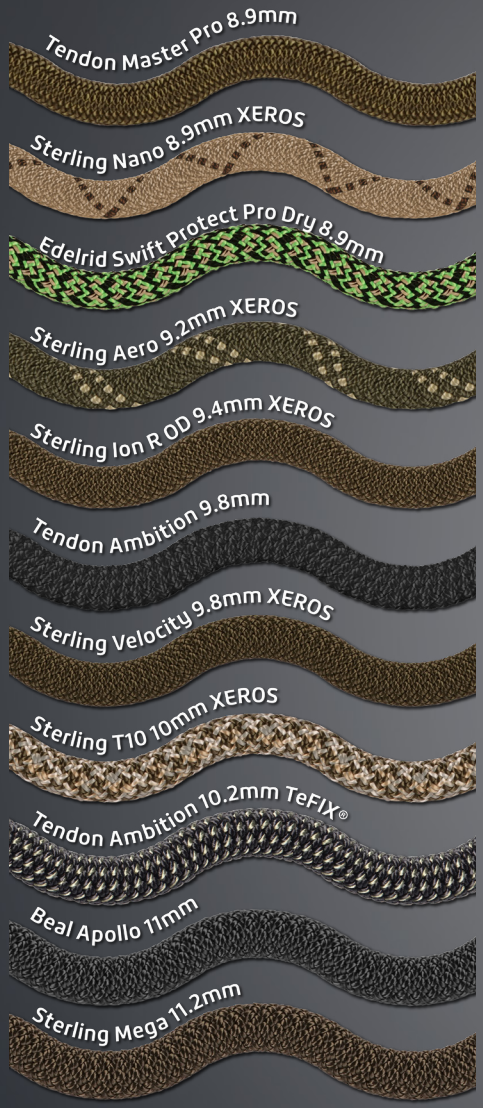
Ropes are an integral part of any access or egress system and tactical users demand a lot from their ropes systems. Static ropes are used for entry through broken windows, descent over sharp edges and exposure to high temperatures - all with heavier loads than normally used.

Low stretch tactical ropes often use aramid fibres in their construction to provide additional resistance to damage from abrasion, cutting or heat.

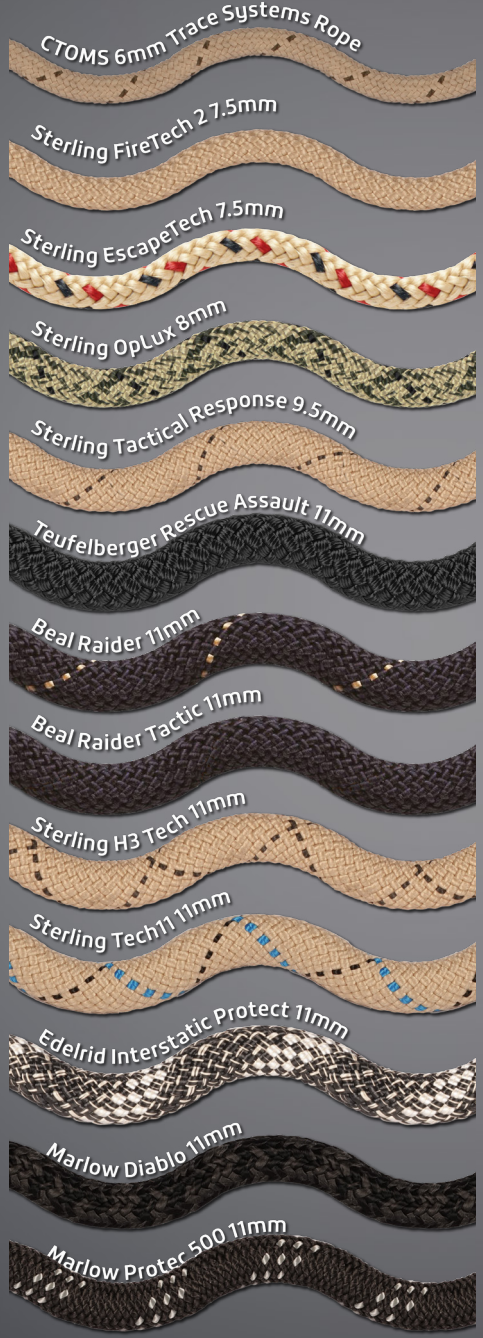
Dynamic ropes for operational tactical use have similarly high requirements, and those used in the mountains particularly so with the following properties all ideal; skinny, light, tough, dry treated, triple rated and in subdued colours.

Helix Operations has worked to create a comprehensive range of low stretch and dynamic ropes that gives the end users greater safety and better performance.

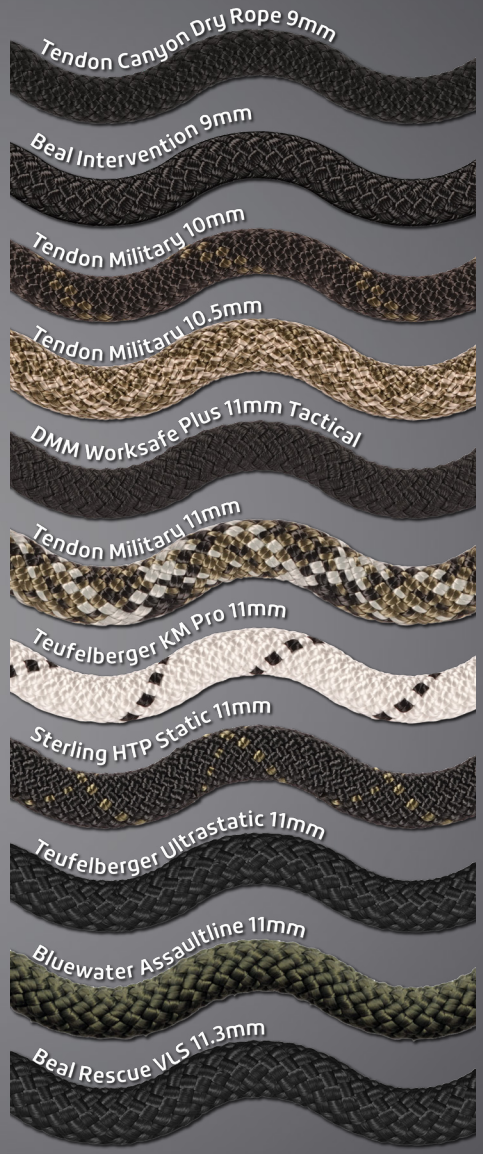
Dynamic Rope Range



Low Stretch Aramid Rope Range



Low Stretch Polyester & Nylon Rope Range



Dynamic Ropes

Helix Operations has worked with specialist rope manufacturers to put together a largely bespoke range of dynamic ropes designed for tactical operators.

All of the dynamic ropes we offer are certified to the European EN 892:2012 Dynamic mountaineering ropes.

The range includes:

- Skinny 8.9-9.1mm, triple rated dynamic ropes in subdued colours. These ropes are the ideal for the tactical operator as they can be used in a single or double rope system and are very compact and light. Plus they are normally dry treated so rain, snow and ice have limited effect on their performance.
- Work horse 9.4-10.2mm single ropes for general use where the ropes need to be able to take abuse, but still be light enough to carry.
- Heavy duty 10.5mm+ ropes for adventure training and repetitive use.

Comparing our Dynamic Rope Range

Diameter

- Tendon Master Pro 8.9mm
- Sterling Nano IX 8.9mm
- Edelrid Swift Protect Pro Dry 8.9mm
- Sterling Aero 9.2mm XEROS
- Sterling Ion R OD 9.4mm XEROS
- Ambition 9.8mm
- Ambition Dry 9.8mm
- Sterling Velocity 9.8mm XEROS
- Sterling T10 10mm XEROS
- Tendon Ambition 10.2 Tefix
- Top Gun Dry 10.5mm
- Beal Apollo 11mm
- Sterling Mega 11.2mm

Tendon Master Pro 8.9mm

Weight: 52 g/m

Impact force : 9.1 / 6.7 / 10.7 kN

Static elongation: 6.9 / 6.9 / 5.6 %

Dynamic elongation: 31 / 26 /24 %

EN 892 | UIAA 101

Sterling Nano IX 8.9mm

Weight: 52 g/m

Impact force : 8.5 / 6.6 /10.4 kN

Static elongation: -7.0 / 7.0 / 3.6%

Dynamic elongation: 33.1 / 27.6 / 25.3%

EN 892 | UIAA 101

Edelrid Swift Protect Pro Dry 8.9mm

Weight: 53 g/m

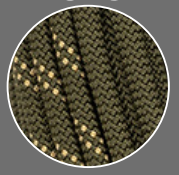
Impact force : 9,9 / 7,3 / 11,8 kN

Static elongation: 5,5 / 5,2 / 3,5 %

Dynamic elongation: 29 / 26 /25 %

EN 892 | UIAA 101

Sterling Aero 9.2mm XEROS



Weight: 56g/m

Impact force : 8.8 / 8.6 10.1kN

Static elongation: 7.5 / 6.6 / 6.1 %

Dynamic elongation: 30.2 / 28.9 / 23.6 %

EN 892 | UIAA 101

Sterling Ion R OD 9.4mm XEROS

Weight: 57g/m

Impact force : 8.7kN

Static elongation: 7.2%

Dynamic elongation: 33.1%

EN 892 | UIAA 101

Tendon Ambition 9.8mm

Weight: 64g/m

Impact force : 7.4kN

Static elongation: 7.9%

Dynamic elongation: 35%

EN 892 | UIAA 101

Sterling Velocity 9.8mm XEROS

Weight: 62g/m

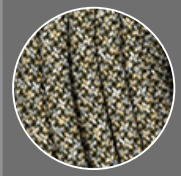
Impact force : 8.6kN

Static elongation: 8.8%

Dynamic elongation: 28.8%

EN 892 | UIAA 101

Sterling T10 10mm XEROS



Weight: 65g/m

Impact force : 9.0kN

Static elongation: 8.0%

Dynamic elongation: 30.0%

EN 892 | UIAA 101

Tendon Ambition 10.2 Tefix

Weight: 67 g/m

Impact force : 8.3kN

Static elongation: 6.9%

Dynamic elongation: 33%

EN 892 | UIAA 101

Beal Top Gun Dry 10.5mm

Weight: 68g/m

Impact force : 7.4kN

Static elongation: 9.7%

Dynamic elongation: 37%

EN 892 | UIAA 101

Beal Apollo 11mm

Weight: 75g

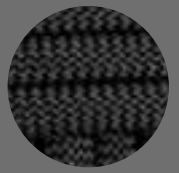
Impact force : 7.7kN

Static elongation: 9.5%

Dynamic elongation: 35%

EN 892 | UIAA 101

Sterling Mega 11.2mm



Weight: 79g/m

Impact force : 8.7kN

Static elongation: 9.4%

Dynamic elongation: 30.8%

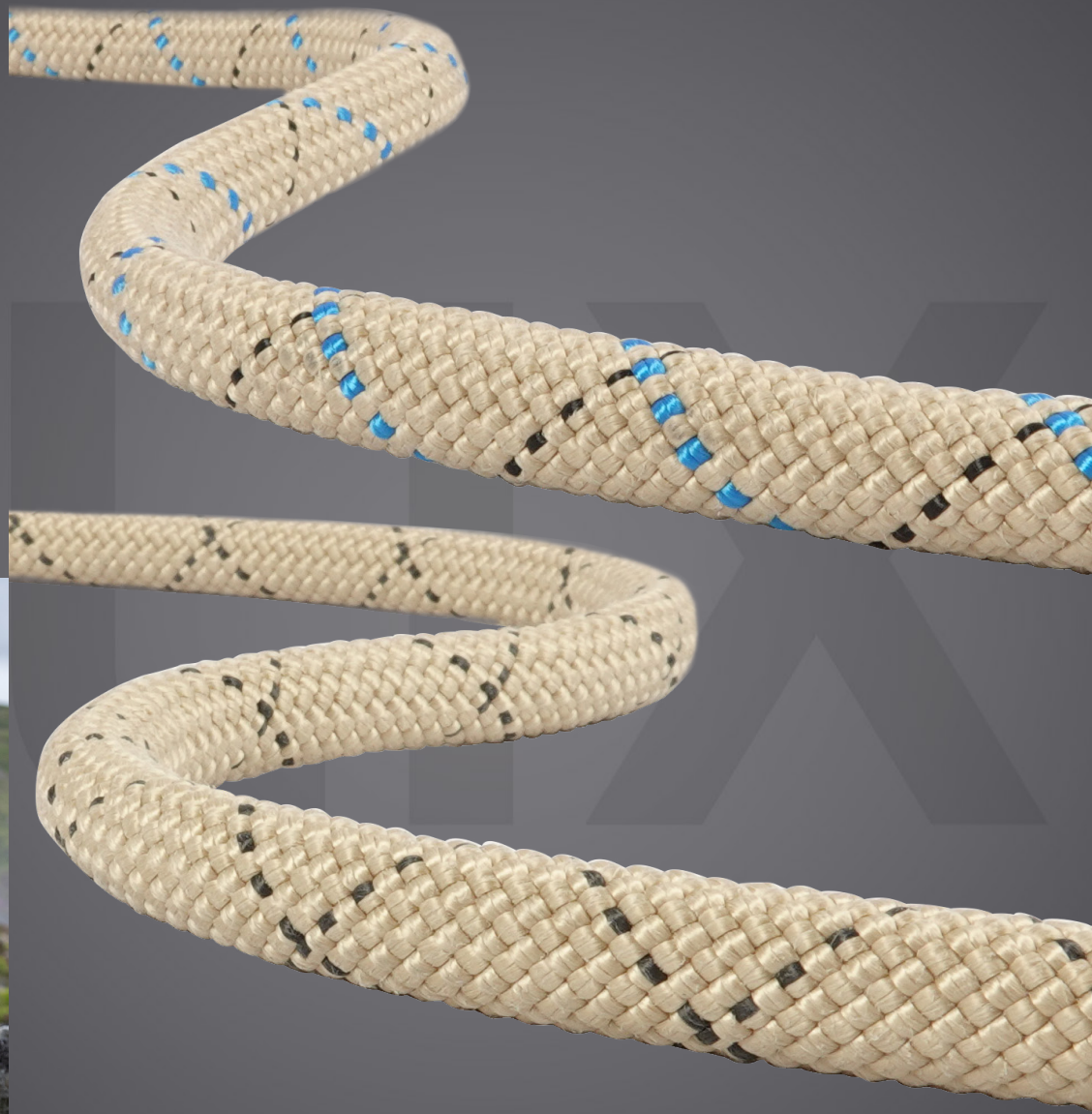
EN 892

Ropes with Aramid Fibres

Aramid fibres are widely used in tactical ropes because of the increased protection these fibres offer against abrasion, cutting and heat.

This gives an added level of safety when going into breached entry points that still contain broken glass or sharp edges. Plus, aramid fibres are resistant to much higher temperatures than polyester or nylon - very roughly 220-260 centigrade versus 450+ centigrade for aramids.

Aramid fibers also have a higher tensile strength than their equivalent nylon or polyester fibers this allows ropes to be made thinner for a given strength. Aramid is expensive though and is less resistant to repeated flexing or UV light than polyesters or nylons.



Comparing Low Stretch Aramid Heat Resistant Ropes

Diameter

- CTOMS Trace Systems Rope 6mm
- Sterling FireTech 2 7.5mm
- Sterling EscapeTech 7.5mm
- Sterling OpLux 8mm
- Sterling Tactical Response 9.5mm
- Beal Raider 11mm
- Beal Raider Tactical 11mm
- Sterling H3 Tech 11mm
- Sterling Tech11 11mm
- Marlow Diablo 11mm
- Marlow Protec 500 11mm

CTOMS Trace Systems Rope 6mm

weight: 29g/m

MBS: 16kN

Elongation: 6%

Material: Nylon Core / Technora sheath

-

Sterling FireTech 2 7.5mm

Weight 43g/m

MBS Rating (kN): 25.5kN

Elongation: 1.6%

Material: Technora Core / Technora Sheath

Certification: NFPA 1983 (FE)

Sterling EscapeTech 7.5mm

Weight: 42g/m

MBS Rating : 17.4kN

Elongation: 5.8%

Material: Nylon Core /Technora Sheath

Certification: NFPA 1983 (FE)

Sterling OpLux 8mm

Weight: 42g/m

MBS Rating: 24.2kN

Elongation: 3.3%

Material: Spectra Core / Technora Sheath

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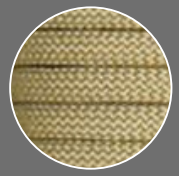
Sterling Tactical Response 9.5mm



Weight: 62g/m

MBS Rating (kN): 30kN

Elongation: 3.9%

Material: Nylon Core /Technora Sheath

Certification: FPA 1983 (T) / EN 1891| Type B

Teufelberger Rescue Assault 11mm

Weight: 77g/m

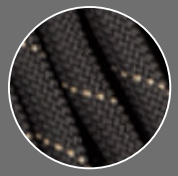
MBS Rating (kN): 30kN

Elongation: 3%

Material: Polymide Cores, Protect Technology with Aramid intermediate Sheath, Polymide Sheath

EN 1891 Type A

Beal Raider 11mm



Weight: 81 g/m

MBS Rating (kN): 26kN

Elongation: 3.3%

Material: Polyamide Core / Aramid Sheath

Certfication: EN 1891 | Type B

Beal Raider Tactical 11mm

(Smaller ratio of braid (30%) to core (70%) - compared to BEAL Raider 11mm)

Weight: 81gm

MBS Rating: 24kN

Elongation: 3.2%

Material: Polyamide Core / Aramid Sheath

Certification: EN1891 | Type A

Sterling H3 Tech 11mm

Weight: 89g/m

MBS Rating: 42.6kN

Elongation: 1.1%

Material: Technora Core / Technora Sheath

Certified to ANSI Z 359.15 and ASTM F 2621-2012 (6.5 min at 400 centrigrade and 6.8 minutes at 600 centrigrade)

Sterling Tech11 11mm

Weight: 88g/m

MBS Rating: 40.1kN

Elongation: 3.4%

Material: Technora Core / Technora Sheath

Certification: NFPA 1983 (G) / EN 1891 | Type A

Marlow Diablo 11mm

Weight: 82.5g/m

MBS Rating (kN): 35.5kN

Elongation: 3.4%

Material: Polyester and Aramid sheath / Nylon Core

Certification: EN1891 | Type A

Marlow Protec 500 11mm

Weight: 82.5g/m

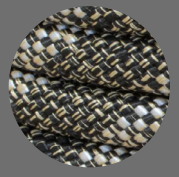
MBS Rating: 24kN

Elongation: 3%

Material:High tenacity Polyamide (Nylon) Core / Technora Sheath

Certification : EN1891 Type A

Edelrid Interstatic Protect 11mm



Weight: 77g/m

MBS Rating: 35kN

Elongation: 2%

Material: Aramid fibers are integrated into the rope sheath

Certification: EN 1891 Type A

Low Stretch Static Ropes

Low stretch "Static" ropes are an essential component for many vertical access tasks and Helix Operations has sourced a comprehensive range of ropes for the tactical end user.

These include:

- A range of ropes for motorised ascenders and grapnel launchers
- Aramid sheathed ropes for edge and heat protection
- Very low stretch polyester/specialist fibre ropes for rigging and rescue

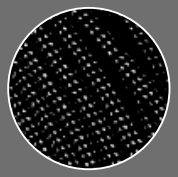
In the range are heavy duty 12.5mm ropes all the way through to 9mm Type A ropes and 7.5mm / 8.0mm Technora/Dyneema ropes for specialist tasks.

Comparing Low Stretch Polyester & Nylon Ropes

Diameter

- Tendon Low Stretch Rope 9mm
- Beal Intervention 9mm
- Tendon Military 10mm
- Tendon Military 10.5mm
- DMM Worksafe Plus 11mm
- Tendon Military 11mm
- Edelrid Interstatic Project 11mm
- Teufelberger KM III 11mm
- Teufelberger Ultrastatic 11mm
- Sterling HTP Static 11mm
- Bluewater Assaultline 11mm
- Teufelberger Ultrastatic 11mm
- Beal Rescue VLS 11.3mm

Tendon Low Stretch Rope 9mm



Weight: 59g/m

MBS Rating (kN): 23kN

Elongation: 3.6%

Certification: EN1891 Type A

Beal Intervention 9mm

Weight: 51g/m

MBS Rating (kN): 18kN

Elongation: 3.6%

Certification: EN1891 Type B

Tendon Military 10mm

Weight: 69g/m

MBS Rating : 31kN

Elongation: 4.1%

Certification: EN 1891, CE 1019

Tendon Military 10.5mm

Weight: 72g/m

MBS Rating: 32kN

Elongation: 3.4%

Certification: EN 1891, CE 1019

DMM Worksafe Plus 11mm Tactical

Weight: 75g/m

MBS Rating (kN): 32kN

Elongation: 3%

Certification: EN1891 Type A

Tendon Military 11mm

Weight: 80g/m

MBS Rating (kN): 33kN

Elongation: 3.7%

Certfication: EN 1891, CE 1019

Teufelberger KM III 11mm

Weight: 92g/m

MBS Rating: 37.6kN

Elongation: 1.8%

Certification: EN1891 | NFPA 1983:2015

Teufelberger KM Pro 11mm

Weight: 86g/m

MBS Rating: 35kN

Elongation: 2%

Certification: EN1891A and CI1801

Sterling HTP Static 11mm

Weight: 96.73g/m

MBS Rating: 30.5kN

Elongation: 2%

Certification: ANSI Z133

Teufelberger Ultrastatic 11mm

Weight: 88g/m

MBS Rating: 40kN

Elongation: 2%

Certification: EN1891 Type A

Bluewater Assaultline 11mm

Weight: 90g/m

MBS Rating: 32.9kN

Elongation: 2.9%

Certification: CE EN1891

Beal Rescue VLS 11.3mm

Weight: 94g/m

MBS Rating: 36kN

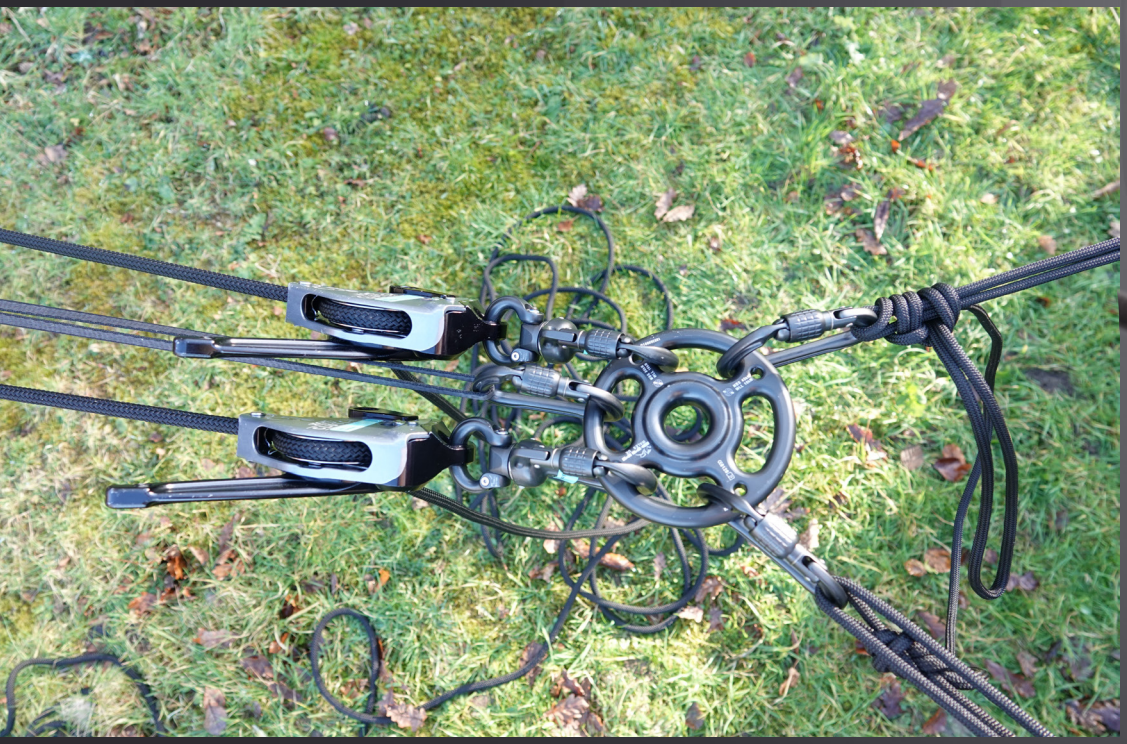
Elongation: 1.9%

Certification: EN1891 Type A

Accessory and Rigging Cords

Small diameter ropes and cords have always been important components within personal climbing and anchor systems whether it is personal prusiks or cordlette we have all relied on them for safety and back up.

With advances in modern materials utilising up to date construction techniques and technologically advanced fibres the strengths and properties of modern cords have become significantly improved allowing their use in high strength anchors and focal points for rescue systems.



Rope Standard Awarding Bodies

CE and EN Standards.

CE stands for Conformité Européenne and the logo on a product indicates that the product meets the European Union safety requirements for that class of product.

The European Economic Community establishes standards for products sold within the European Union.

The actual requirements for a class of product are set out in a European Norm (EN) - thus for example any product classified as a dynamic rope by the European Union needs to comply to the Dynamic Rope EN standard (EN 892) to be sold in the European market. Similarly Low Stretch Ropes need to comply to EN Standard 1891 and Accessory Cords to EN 564.

These will be indicated on your rope label and the markings at the ends of your rope.

UIAA

UIAA stands for Union Internationale des Associations d'Alpinisme (UIAA). Translated that is The International Climbing and Mountaineering Federation.

The UIAA is a Swiss-based organization founded in 1932 to, "promote(s) the growth and protection of mountaineering worldwide."

They have their own set of certifications that are largely built on the existing CE EN certifications. The UIAA 101 dynamic rope certification is an instance where the UIAA standard is better than the original EN 892 certification, largely because of the water-repellent testing requirement. The UIAA 107 Low Stretch Rope standard on the other hand does not, unfortunately, add anything significant to the badly ageing EN 1891 Low Stretch Rope standard.

NFPA

Related to static ropes. NFPA 2500 (Formerly NFPA 1983) Requirements for Escape Ropes.

This standard specifies requirements for life safety rope and associated equipment used to support emergency services personnel and civilians during rescue, fire fighting, or other emergency operations, or during training.

Dynamic Rope Standards

EN 892 - Mountaineering equipment - Dynamic mountaineering ropes - Safety requirements and test methods

This European Standard specifies safety requirements and test methods for dynamic ropes (single, half and twin ropes) in kernmantel construction for use in mountaineering including climbing.

EN 892 stipulates that dynamic rope tested in the following parameters: diameter, weight, number of standard falls, maximum impact force, static elongation, sheath slippage, dynamic elongation during the first fall, knottability.

Please be aware this does not contain the full details of the test methods and requirements given in these standards. This is give an overview of the testing and methods in a simplified presentation. For the full details please consult EN892 and UIAA 101.

Conditioning of Test Samples

All tests shall be done after conditioning as follows:

24 h (50∔ 5)°C and ∔ 20% rel. humidity, after that 72 h (23 ∔ 2) °C and 50 ∔ 2) rel. humidity, after that testing shall start within 10 min. at (23 ∔ 2) °C.

Marking

EN 892 requires durable bands UIAA 101 permits the option of marking that is printed directly on the rope, and that this includes:

- Length and diameter of rope
- Year of manufacture
- Name of manufacturer

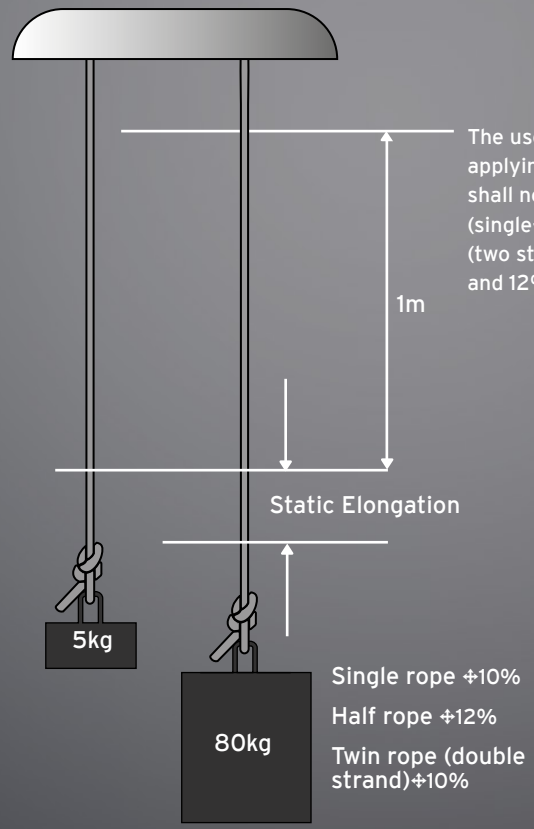
Diameter

This parameter is measured after applying a load of 10 kg to single ropes, 6 kg to half ropes and 5 kg to twin ropes.

Weight

The parameter is expressed as the weight of the rope per 1 m of its length. The weight of single ropes free of any finishes ranges from 52 to 88 grams, half ropes weigh approx. 50 grams, and twin ropes approx. 42 grams per metre. The rope core must account for at least 50% of its total weight.

Static Elongation Test



The useful static elongation is tested by applying a load of 80 kg to the rope and shall not exceed 10% for single ropes (single-strand ropes) and twin ropes (two strands tested at the same time) and 12% for half ropes (single strand).

Single rope ∔10%

Half rope ∔12%

Twin rope (double strand)∔10%

Sheath Slippage Test

Sheath slippage occurs when the core and the sheath shift relative to each other.

Although sheath slippage is rare issue for modern ropes. Manufacturers such as Beal and Tendon have developed technologies such as "Unicore" and "TeFix®" to bond the core with the sheath.

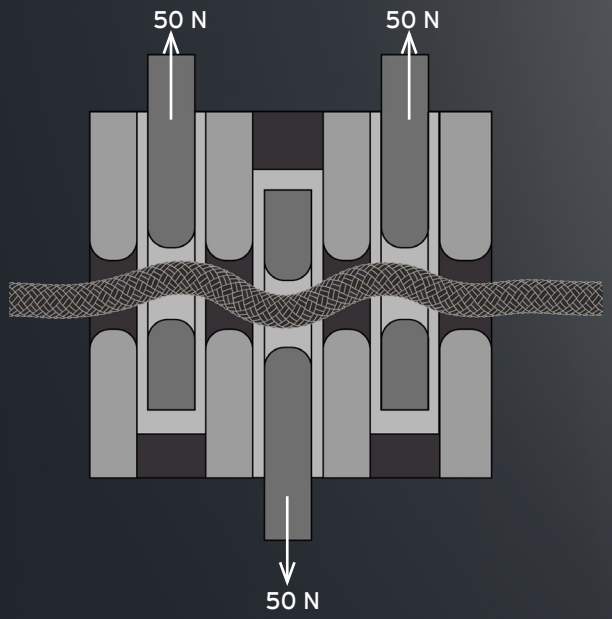
This test is conducted by drawing the rope through apparatus in illustrated below.

This device measuring for sheath slippage consists of four fixed plates and three movable plates capable of sliding radially.

Each of the movable plates is applying a radial force of 50 N (~5 kg).

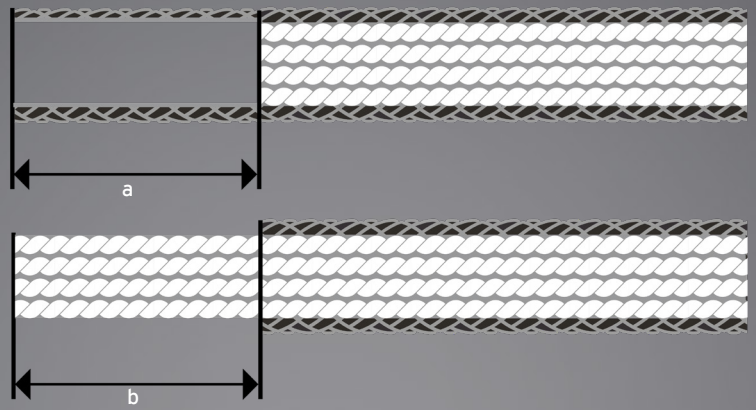
The rope is pulled through a small opening in the device at a speed of 0.5 ∔ 0.2 m/s for a distance of 1930 mm. The ropes movement is restricted by the radial forces causing a frictional force causing slippage of the sheath in relation to the core.

After resetting, the test is performed five times in total per subjected rope.



The forces 50 N are spaced 120degrees apart radially.

When tested, the resulting sheath slippage is measured in a longitudinal direction relative to the core (in positive or negative direction). This shall not exceed 20 mm.



a) Positive sheath slippage

b) Negative sheath slippage

Fall Test

All dynamic ropes are subjected to the 'Fall Test' as part of EN 892. The standard fall test are used to determine three characteristics of climbing ropes:

- Number of falls (Must conform to 5 successive drops without breakage, however manufacturers tend to test to destruction).
- Impact Force
- Elongation during the first fall

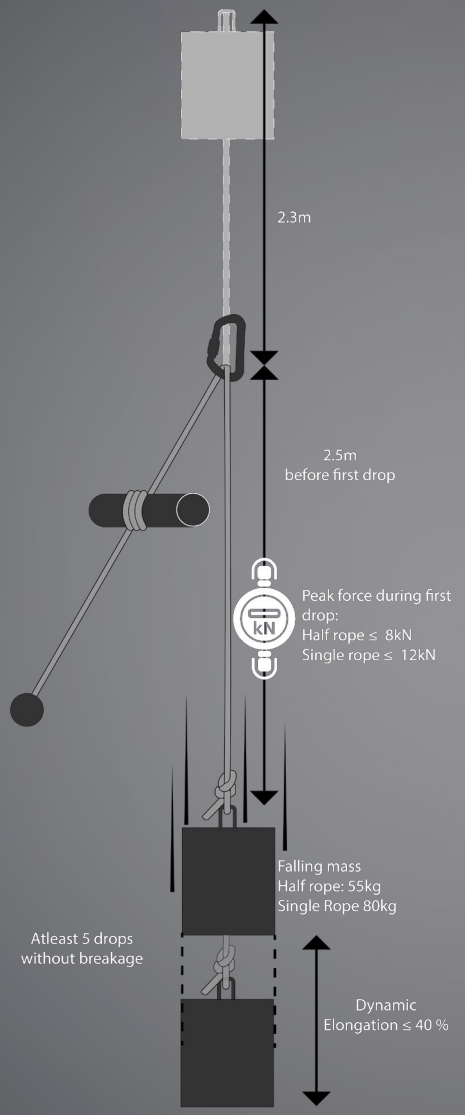
The test is conducted by firstly securing the rope at one end to a fix point. The rope is then fed over a standardised edge. The rope is lifted to a height of 4.8m and dropped from this point.

Single ropes will be tested with a load of 80 kg, half ropes with a load of 55 kg on the single rope, and twin ropes with 80 kg on the two ropes.

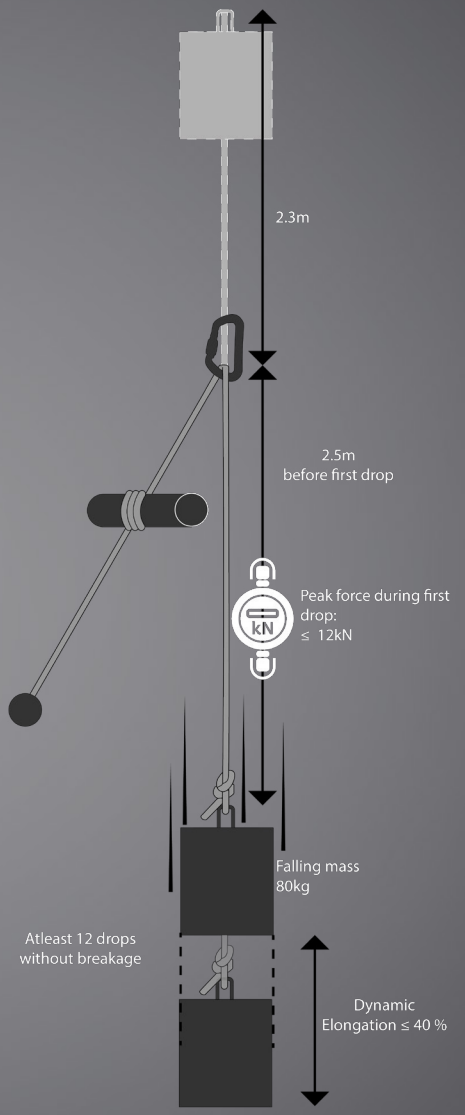
The fall simulates a factor 1.77 fall on a fixed point.

The force transmitted to the mass, when the fall is arrested, is limited to:

- 12 kN for single ropes (one strand of rope)
- 8 kN for half ropes (one strand of rope)
- 12 kN for twin ropes (two strands of rope)



Fall Test: Half Rope / Single Rope

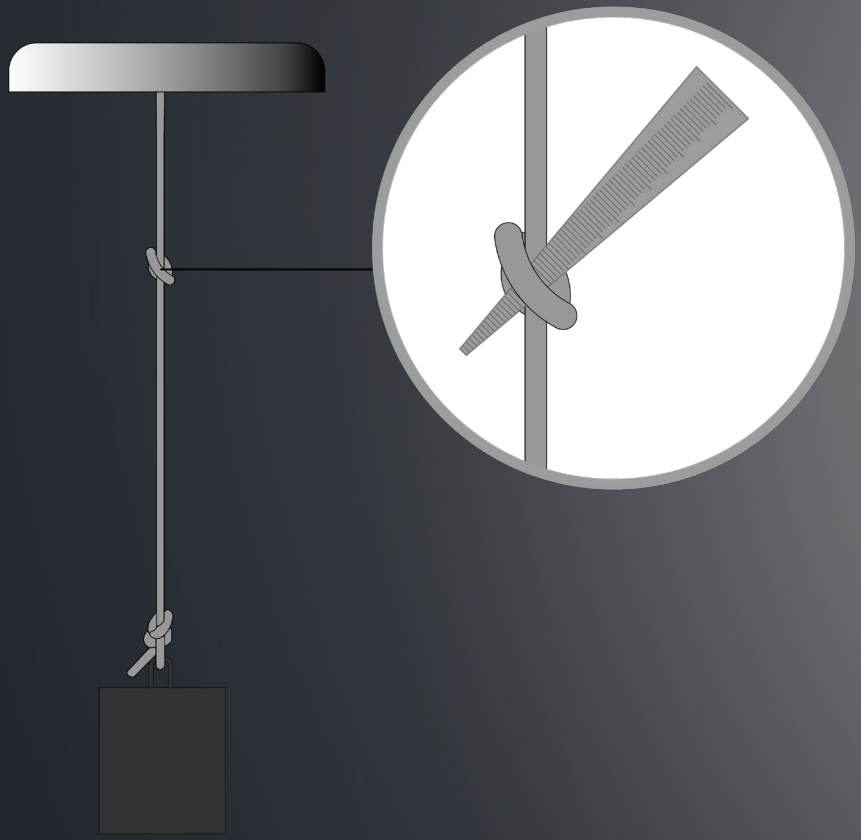


Fall Test: Twin rope

Knotability

The flexibility of the rope is an important requirement of climbing ropes to compare the ease of using the rope.

This is tested by creating a simple knot with the rope and a 10kg weight is then applied. The internal diameter of the knot is recorded to produce a calculated knottability ratio. The value of which shall not exceed 1.1 times the rope diameter.



UIAA 101 Dynamic Ropes

The UIAA Label can only be granted to dynamic ropes that meet the requirements of the EN 892:2012 + A1:2016, as well as the additional requirements. AIAA 101 includes water-repellent test, Measurement of energy absorbed before rupture.

Additionally, the ropes must have a rope end marking which is printed directly onto the rope. The packaging is dictated by if the rope is supplied on a drum and consists of more than one piece, the ends of the pieces shall be clearly visible and not joined together, the number of pieces shall be stated on the drum.

If the rope has a middle marker, the mark shall be +/- 1% of the ropes published length from the physical middle of the rope when tested.

The length shall be equal or greater than the published length of the rope.

Semi-Static Rope Standards

EN 1891 Type A & B

Standard for Static Ropes

In line with certified standards, a static rope is allowed to have a minimum diameter of 8.5mm and a maximum of 16mm.

The static strength will vary depending on the material the rope is made from and its diameter. To classify as Type A, EN1891 standards state that a static rope must have a minimum strength of 22kN

According to EN1891, static ropes must be manufactured from a material with a melting point higher than 195˚C – thereby ruling out polyethylene and polypropylene.

Standards and Characteristics	EN 1891 Type A	EN 1891 Type B
Characteristics	Ropes intended for use as safety ropes for working at heights (in combination with the relevant equipment) and as rescue ropes. Diameter 8.5-16mm. Test weight dynamic test 100kg.	Ropes of smaller diameter and lower strength than Type A. Test weight dynamic test 80kg. Usually used in combination with specially developed abseiling equipment according to EN 341 (Descenders).
Diameter	Ø8.5 to 16mm.	Ø8.5 to 16mm.
Capacity for knotting	k < 1.2 D	k < 1.2 D
Sheath Slippage	≠ 30mm	≠ 15mm
Dynamic Performance	M = 100kg 2 m rope, 0.60 m fall F < 6kN	M = 100kg 2 m rope, 0.60 m fall F < 6kN
Static Strength without Termination	≠ 22kN	≠ 18kN
Static Strength with Termination	≠ 15kN	≠ 12kN
Extension at 150kg	≠ 5%	≠ 5%

NFPA 1983

Until 2021/22 the NFPA standard that outlined the requirements for personal protective equipment for working at height was NFPA 1983 – Standard on Life Safety Rope and Equipment for Emergency Services.

However this is now superseded as far as product markings go by NFPA 2500: Standards for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services.

NFPA 2500 combines 3 existing standards, NFPA 1983 plus:

NFPA 1858 – Standard on Selection, Care, and Maintenance of Life Safety Rope and Equipment for Emergency Services

And

NFPA 1670 – Standard on Operations and Training for Technical Search and Rescue Incidents

Thus as of 2023 all relevant NFPA certified safety equipment will carry the NFPA 2500 marking, but the technical parameters are the same as in NFPA 1983.

The NFPA 1983 and, hence 2500, requirements are as follows:

NFPA 1983 Requirements for Escape Ropes: Minimum tensile strength of 13.5kN. Elongation of at least 1% at 10% of the MBS.

Diameter no smaller than 7.5mm and no larger than 9.0mm. Sewn eyes shall have a minimum breaking strength of at least 85% of the strength of the rope, or shall have an MBS of not less than 13.5kN. Fibre cannot melt at less than 400 °F.

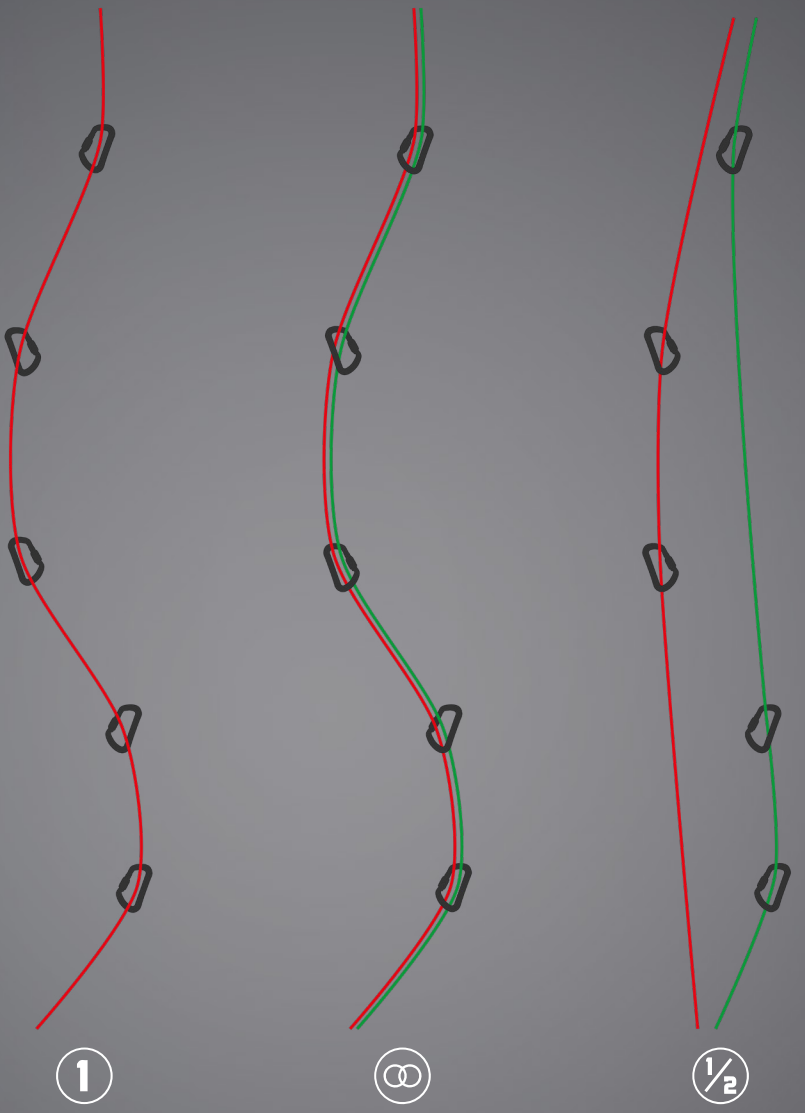
NFPA 1983: 2017 Requirements for Fire Escape Ropes: The ropes must hold 300lb for 5 minutes at 725°F and must old for 30 seconds at 112°F.

Rope Markings

Single ropes are the most common type of climbing rope, which are good for recreational climbing, established trad routes with straightforward placements, and simple alpine climbing. They are easy to use since you have only one line to manage.

Double ropes (or half ropes) are great for more challenging routes. The ability to clip into separate protection points offer the user flexibility on long runouts, and reduces force on placements in the case of a fall. On long meandering routes, double ropes can be great for reducing rope drag.

Twin ropes, again to use as pairs but to be used in each piece of protection. Twin ropes offer added protection over single ropes, but do not mitigate rope drag as well as double ropes. They work well in straighter terrain, and tend to be lighter than double ropes for long climbs. They can be used for rappelling on a single strand (if they're rated for it). They may serve as a good option for big wall climbs where rappelling flexibility are a priority. Though more experience from the climber may be required, as good rope management is important to avoid tangles which can happen on skinnier ropes.



Single rope: Used as a single strand clipped through each protection point.

Twin Ropes: Used in pairs, both ropes clipped through every protection point.

Double Ropes (half ropes): Used in pairs which can be clipped individually through the separate protection points.

Connect With Us

HELIX

Keep updated with Helix operations across platforms such as helixoperations.com, Tactical and Rescue Instagram accounts as well as LinkedIn. We share exciting information regarding products we manufacture ourselves as well as key products from brands we work with.

Stay informed with key innovations across all product ranges in the tactical and rescue field as well as new courses.

Our website lists our entire range, including any certifications, technical specifications, and variations of products. You can also find information regarding courses and training, including our accreditation.

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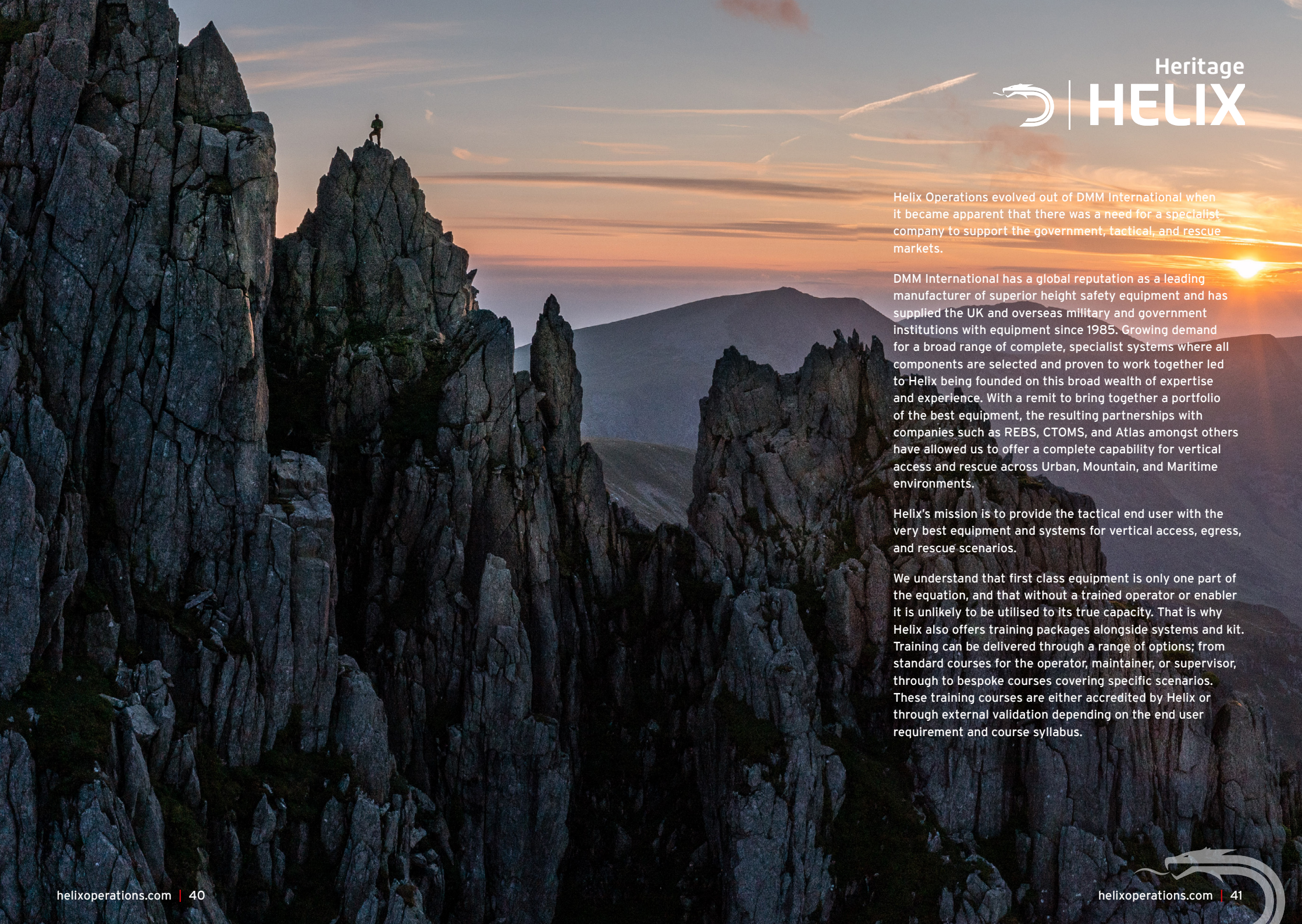

Heritage

HELIX

Helix Operations evolved out of DMM International when it became apparent that there was a need for a specialist company to support the government, tactical, and rescue markets.

DMM International has a global reputation as a leading manufacturer of superior height safety equipment and has supplied the UK and overseas military and government institutions with equipment since 1985. Growing demand for a broad range of complete, specialist systems where all components are selected and proven to work together led to Helix being founded on this broad wealth of expertise and experience. With a remit to bring together a portfolio of the best equipment, the resulting partnerships with companies such as REBS, CTOMS, and Atlas amongst others have allowed us to offer a complete capability for vertical access and rescue across Urban, Mountain, and Maritime environments.

Helix's mission is to provide the tactical end user with the very best equipment and systems for vertical access, egress, and rescue scenarios.

We understand that first class equipment is only one part of the equation, and that without a trained operator or enabler it is unlikely to be utilised to its true capacity. That is why Helix also offers training packages alongside systems and kit. Training can be delivered through a range of options; from standard courses for the operator, maintainer, or supervisor, through to bespoke courses covering specific scenarios. These training courses are either accredited by Helix or through external validation depending on the end user requirement and course syllabus.

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