



Access the inaccessible



2014  
VERTICALITY - LIGHTING





## Access the inaccessible

Petzl's roots lie in the desire of its founders to serve one passion: exploration. Beginning with caving, over the years this mission has emerged: to invent real tools that allow people to commit, both day and night, in the most...inaccessible places ! Today, this pioneering spirit, this passion for exploration and innovation, is still at the heart of Petzl's approach. An approach that serves climbers, mountaineers, cavers, and runners everywhere.

The 2014 catalog continues in this vein. The solutions pages aim to share our knowledge and experience with you. Advice, recommendations, and tips for moving around more safely and efficiently - at the top, on the bottom, at night, in the day. In solutions for verticality, the rope holds an essential place. It is both the real and symbolic connection between partners. In direct contact with harnesses, connectors, belay-rappel devices, and/or ascenders, it is also at the heart of managing progression and safety. For obvious reasons of complementarity, Petzl now offers a complete line of dynamic single and half ropes for climbing and mountaineering. These ropes were developed with durability and handling criteria that we hope will satisfy users.

In terms of lighting, we have updated a large part of our headlamp line. We now have four families: CLASSIC, ACTIVE, PERFORMANCE and SPECIALIZED, to meet different needs simply and efficiently, whether for straightforward quality lighting, for engaging in outdoor sports, or when striving for performance. Check out the new versions of the TIKKINA, TIKKA, ZIPKA, TIKKA +, TIKKA XP compact headlamps with upgraded performance, and of course the TIKKA R+, TIKKA RXP and NAO with REACTIVE LIGHTING technology.

Happy reading.

**Paul Petzl**  
President

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# COMMITMENT



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... The success of the first rope progression tools rapidly spread beyond the caving world. Mountaineers, whose gear at the time was still somewhat rudimentary, started taking a closer look at these little metallic wonders. In 1968, before taking on the East Pillar of Fitz Roy in Patagonia, Bernard Amy, the well-known climber from Marseille, went to the workshop to purchase a supply of descenders. Although his team did not reach the summit, the equipment allowed them to easily descend the hundreds of meters of fixed rope installed on the very difficult granite peak. Two years later, Fernand would be contacted to design the bivouac platforms for the Makalu expedition.

Meeting people from the mountain climbing community allowed Fernand to better understand the specific needs of mountaineers. What they needed, for example, was a mechanical system for rappels that could be used in the same way as a Prusik hitch. All too often, this friction hitch would get stuck on wet, frozen, or too-thick ropes. In 1972, the craftsman developed the first prototype to resolve the issue. Using a lever, his backup device redirected the friction force of the rope. Called the SHUNT, the device's geometric shape has never changed, and is still sold in Petzl catalogs today, over forty years later.

Fernand paid particular attention to the ergonomics of the devices he made: they needed to be safe, easy, and comfortable to use. At the time, one of the most highly sought-out pieces of equipment was the legendary Jumar, designed by Swiss duo Jüsy and Marti. This is a type of ascender that slides up a rope in one direction and locks, making it easy to ascend a fixed rope. Although the Jumar revolutionized climbing in the Himalayas, climbers complained that it was too cumbersome and often too fragile. So in 1974, the Saint-Nazaire-les-Eymes workshop developed a new, lighter ascender. The ZEDEL would be an essential piece of equipment for the French K2 expedition in 1979, and would also become wildly popular with cavers.

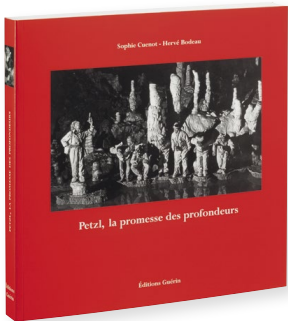
This initial success made it necessary to reorganize the workshop, especially since Fernand was reluctant to dive into the now-important business side of the company. Pierre helped him design the machines and handle most of the production side of the business. And every weekend, Lucienne and Pierre shipped packages to customers who lived too far away to pick up the equipment directly at the workshop. However, a more ambitious strategy was in the works. The craftsman was nearing sixty, and although he had no intention of retiring, he figured that his youngest son, Paul, would be able to run the business with Pierre's help. Fernand had been contemplating the idea ever since Paul entered college to study engineering in 1970. At barely twenty years of age, he already demonstrated strong entrepreneurial spirit. While some of his classmates were swept up in the idealism of the post-1968 era, he focused his attention elsewhere. His obsession: to build a prosperous business, however difficult it may prove to be...

”

# Petzl, products designed for progression



© Joseph Berger



## From the deep: the Petzl adventure

### A story about a company and its environment

Though rarely in the spotlight, climbing equipment represents more than a simple accessory for mountaineers. The evolution of such carefully designed gear bears witness to the intelligence climbers use to overcome increasingly challenging terrain, and embodies their ethical choices. The tools climbers use clearly reflect their approach to the mountains.

For forty years, Petzl and its founders have played a major role in the history of the mountains. With the golden age of caving as the starting point of its legacy – in which Fernand Petzl played a pioneering role – the manufacturer has explored the different realms of the vertical world: rock, ice, snow, nighttime... The company has also successfully applied its expertise to rescue and to work-at-height.

To read about the Petzl adventure is to follow women and men committed to the vertical world, and to exploration. In constant interaction with an ever-evolving world, they invent new modes of progression.

- Authors: Sophie Cuenot and Hervé Bodeau
- Preface by Lynn Hill
- 272 pages
- Available in French or English
- Editions Guérin - Chamonix Mont-Blanc

[www.petzl.com/en/petzl-book](http://www.petzl.com/en/petzl-book)  
[www.editionsguerin.com](http://www.editionsguerin.com)

# The Petzl Foundation: opening up new directions



The Petzl Foundation supports or initiates public interest projects related to vertical activities. It works on behalf of our community in three areas:

- accident prevention and risk management education
- preserving the environment
- supporting scientific research

## Some of the projects we support



### REVALUING THE MONT BLANC EXPERIENCE

At 4,810 m, a successful ascent of Mont Blanc remains the province of mountaineers. It is not for everyone. It takes preparation, knowledge and equipment.

A symbol of mountaineering par excellence, Mont Blanc sometimes exemplifies poor mountaineering practices. The crowding on certain days, the lack of respect for the site and for others, the failures and dramas all tarnish the image. Filled with talent, the mountaineering community can lead the way so that the highest peak in the Alps remains an exceptional place, by putting renewed value on the Mont Blanc experience.

With Coordination Montagne, the Petzl Foundation has launched an information campaign in nine languages. A flier with a map, photo and route was put together to provide the minimum knowledge that any participant should have before an ascent. Before jumping into this adventure, it is essential to understand all the risks. Specific information is given on the pitfalls of the normal route, particularly the traverse of the Couloir du Goûter, which was the focus of a study by the Petzl Foundation. This flier is mainly distributed on site, on the web, and in mountaineering magazines. Thanks to Petzl's translation network, it exists in French, English, German, Italian, Spanish, Polish, Czech, Dutch and Russian.

#### Propose a project for the environment

Every year the Petzl Foundation supports associations or NGOs that work for the protection of the environment and are related to verticality or mountain sports. To present a project: [www.fondation-petzl.org/en/propose-project](http://www.fondation-petzl.org/en/propose-project)

To read about all Foundation projects: [www.petzl-foundation.org](http://www.petzl-foundation.org)

# The Petzl Foundation: opening up new directions



## A NEW TRAIL FOR LES CONSCRITS (FRANCE)

Since 2012, an entirely redesigned route brings the climber to the des Conscrits refuge by crossing a suspended bridge to avoid the increasing danger posed by the retreating Tré-la-Tête glacier.



## TOWARDS INDEPENDENT TRAINING IN NEPAL

By providing technical and basic leadership skills and knowledge, the Petzl Foundation contributes to the training of Nepalese trekking leaders, who then progress towards independence and UIAA recognition.



## PRESERVING THE BIRDS IN BRITTANY (FRANCE)

The protection of the red-billed cough, a crow symbolic of the coastal cliffs of Brittany, includes regular tracking of these populations in a vertical world that is not always easy to access.



## PIEDRA PARADA (ARGENTINA), RESPECTING A MAJOR SITE

The Petzl Foundation encourages the development of climbing practices respectful of the environment and history of this exceptional climbing site in the heart of the Patagonian desert.



## PROTECTING THE CANYONS IN UTAH (USA)

Since his 127 hours of misfortune, Aron Ralston has worked with SUWA to help protect these great wild spaces, among the most beautiful canyoning and climbing areas in the world.



## UNDERGROUND... TRAINING IN BIZERTE (TUNISIA)

Nine members of the Spéléo club de Toulon went to Bizerte to train the Tunisian cavers in rescue techniques.



## FIRST TOWN HALL MEETINGS FOR THE MOUNTAINS (FRANCE)

At these first meetings in Grenoble, people of the mountains discussed the issues related to these environments, and began to think about new solutions.



## CAMP IN THE HEART OF PAYS MANDÉ (MALI)

The Petzl Foundation assisted the young climbers of Siby, 45 km from Bamako, in the development of their activity by creating a camp.

© Gilles Lansard, Fondation Petzl, Romain Guenard, Guillaume Vallot, James Kay, Spéléo Club de Toulon, Jacques-Marie Francillon / Ville de Grenoble, Sotafrika.



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Choosing headlamps  
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# Climbing

## Peace forever

A new route on Tioman Island, Malaysia. Arnaud Petit, Stéphanie Bodet.

Just after the monsoon, we arrived at Dragon's Horns, the most beautiful big wall camp that we've ever seen! Bungalows two steps from a white, sandy beach, 28° C water, small fishing village... And the jungle, dense and stifling... We curse the thorns and finally reach the foot of this 300 meter granite wall. It's steep. What if it's too hard? The usual opening doubts. But let's see! The first pitch is overhanging and completely smooth, but we don't really need any bolts before the anchor. Magic? No, this time we are thankful to the jungle for providing a tree to climb! Then? Just good surprises: the rock is featured and sometimes overhanging, and the climbing is satisfying without being harder than 6c+. Bolts and nuts follow each other over eight dream pitches. It takes us four days to put up the route, and we spend every evening among the multi-colored fish of the South China Sea.



© David Kaszlikowski

# Climbing



## Fall factor and impact force (theory)



Fall factor and impact force are two important concepts in the physics of climbing falls. To understand these two concepts, it is important to recall a basic law of physics: when an object falls, it stores kinetic energy. In climbing, the energy generated by the fall of a climber is dissipated through the entire belay chain, particularly the rope, and the body of the climber.

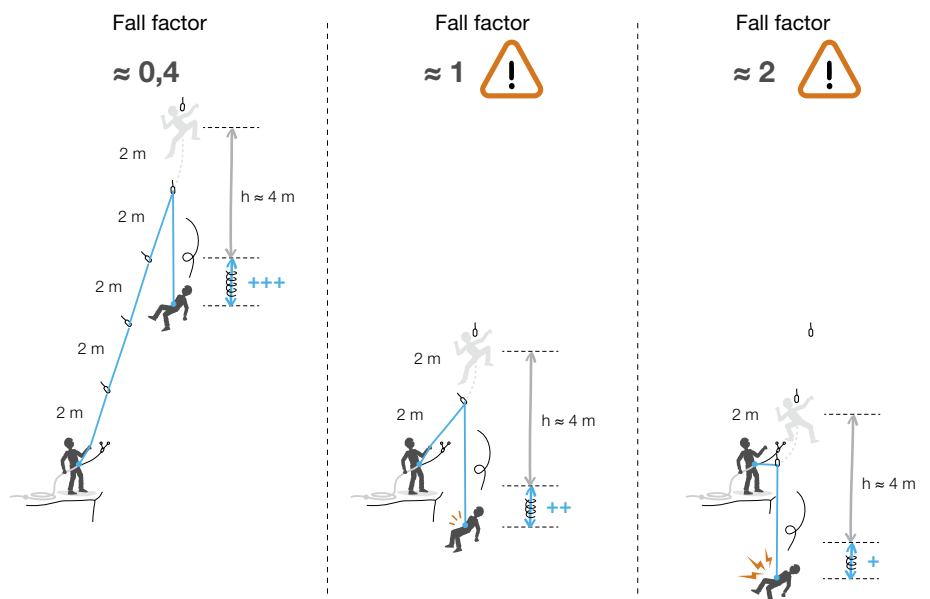
### Theoretical fall factor

The fall factor is often used to quantify the severity of a climbing fall. It can have a value between 0 and 2 for a dynamic rope.

$$\text{Fall factor} = \frac{\text{Free fall length}}{\text{Deployed rope length}}$$

In the case shown here, the length of the free fall is the same: it is the length of the deployed rope that varies. The longer the available rope, the better the absorption of the energy of the fall.

- $h$  Free fall length
- Rope elongation
- Deployed rope length



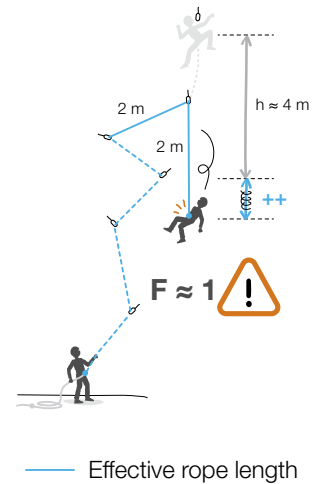
Information is non-exhaustive. Refer to the other pages as well as to the instructions for Use and technical manuals. Technical training is essential.

## Fall factor and impact force (theory)

### Actual fall factor

Theoretical fall factor does not take into account the rope friction against the rock and in quickdraws. This friction limits the distribution of the energy of the fall along the entire length of the rope. Therefore, only a part of the rope (solid line) will absorb the energy of the fall: this is called effective rope length. It is therefore important to talk about actual fall factor.

$$\text{Actual fall factor} = \frac{\text{Free fall length}}{\text{Effective rope length}}$$



The actual fall factor is therefore higher than the theoretical fall factor. It is clear that if a climber does not take the necessary steps to avoid rope drag, the actual fall factor can quickly increase. The impact received by the climber during the fall, called impact force, is therefore greater.

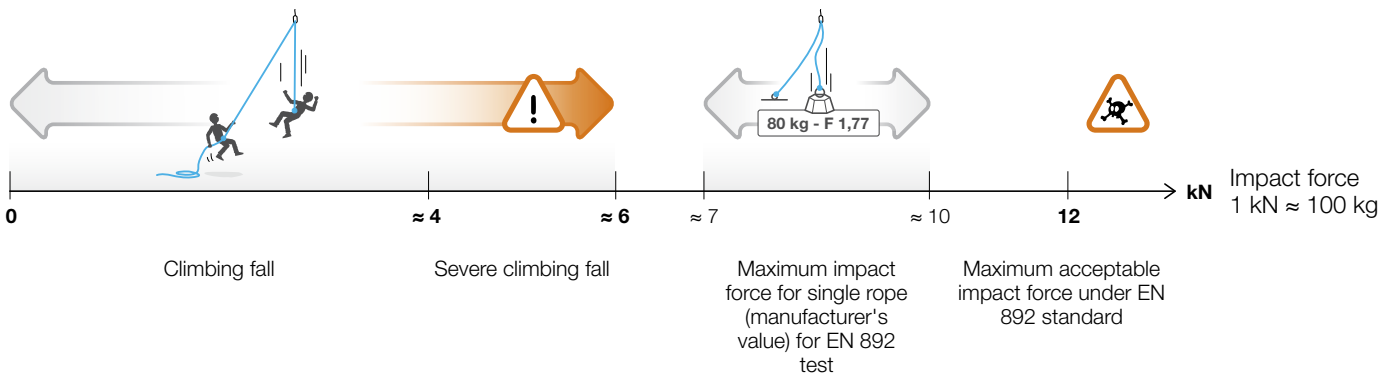
**➡ Fall factor alone is not enough of a criterion on its own to characterize the severity of a fall because it considers only the rope itself. It is better to think about the impact force because this is the force directly received by the climber during a fall.**

### Impact force

The impact force includes other important factors in the absorption of the energy of a fall: movement of the belayer, body of the belayer, rope sliding through the device... These factors are central to the absorption of the energy of the fall.

It is important to differentiate the different impact forces actually at play in the field from the impact force values assigned to ropes through testing in the lab under the EN 892 standard. In fact, when testing single ropes for this standard, the maximum impact force is measured on a factor 1.77 fall of an 80 kg rigid mass, with the rope attached to the ground.

Comparison of impact force values in the field with maximum impact force values obtained in EN 892 standard tests.



**➡ The climber therefore almost never experiences the maximum impact force values assigned to ropes. The rope is not solely responsible for absorbing the energy of a fall. Other factors are more significant, such as the belayer's body and his movements.**

## Fall factor and impact force (in practice)

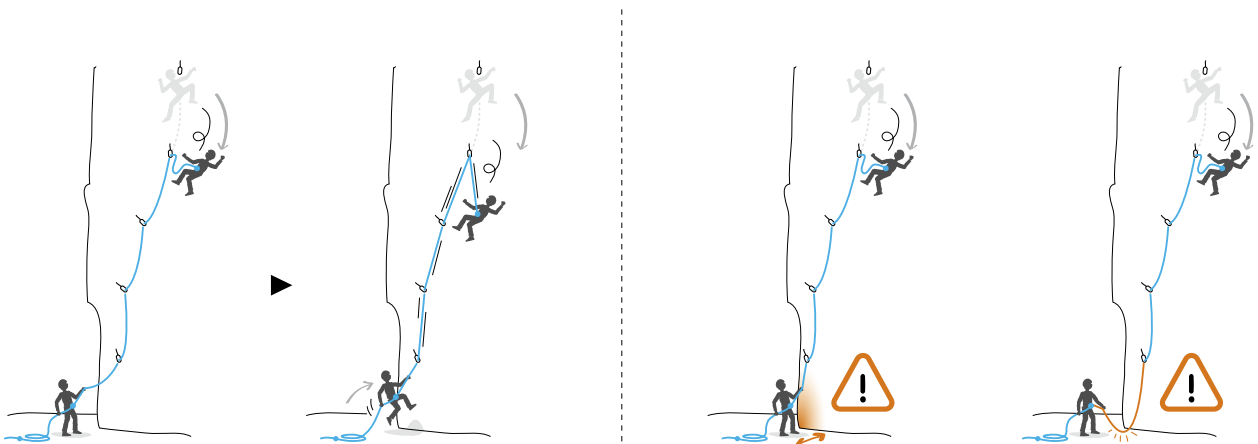
Understanding the above notions allows us to adopt the appropriate reflexes when climbing in order to limit the impact force on the climber.

### 1. Dynamic belaying

Dynamic belaying does not imply leaving 3-4 m of slack: the length of a potential fall becomes that much greater and the landing that much more severe!

It is the belayer, not the belay device, that plays the primary role in dynamic belaying. The belayer should aim to accompany the climber's fall to absorb it. The technique for dynamic belaying is to make a step or small jump forward at the moment of

impact, i.e. at the moment the rope will go taut. This moment is important: making that move too early or too late is useless, and could be harmful. If you are belaying someone heavier than you, it is much easier to give a dynamic belay, as you generally only need to let yourself go. Be careful to keep your feet forward for a good contact/landing for yourself and to always hold the rope under the belay device.



**Knowing how to belay dynamically requires experience and instinct, gained through practice.**  
 On multi-pitch routes, movement is limited because the belayer is tied into the anchor, so we suggest that you tie in far enough below the anchor.

### 2. Reducing rope drag

#### A. Impact on anchors, pulley effect

In case of a fall, the last clipped anchor point sustains both the force of the climber, or impact force, and the force from the belayer arresting the fall (equilibrium of forces principle). For an impact force  $F$  of 5 kN (as in a very severe climbing fall), the force on the anchor is  $1.6 F$  or 8 kN.

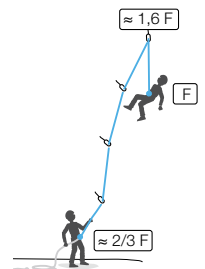
Compared with the UIAA and CE strength requirements of 25 kN in perpendicular tension on an anchor point, it is possible to deduce that in such a case, the climber has a margin of safety before breaking the last clipped anchor point, in the case of a solid anchor.

However, in the case of anchor points of dubious strength (e.g. corroded anchors, old pitons, improperly placed nuts or ice screws), care must be taken to limit the force on the anchor and therefore the impact force on the climber.

#### Distribution of forces in case of a fall

Considering the friction in quickdraws and on the rock, the distribution of forces is as follows:

- impact force =  $F$
- force on the anchor =  $1.6 F$
- force on the belayer =  $2/3 F$

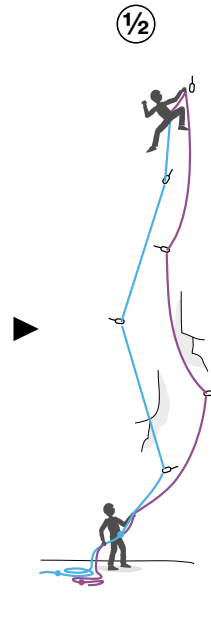
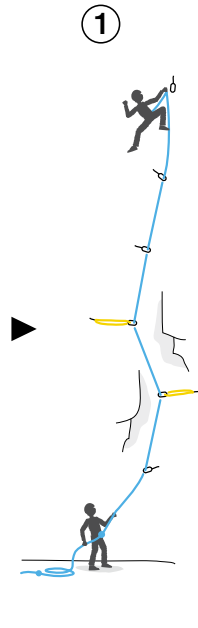
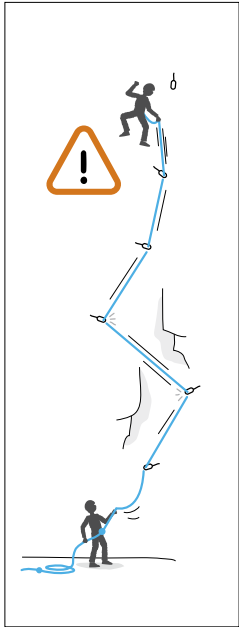


Information is non-exhaustive. Refer to the other pages as well as to the instructions for Use and technical manuals. Technical training is essential.

## Fall factor and impact force (in practice)

### B. Rope management

By limiting rope drag, the energy of a fall is more favorably distributed along the entire length of the rope, so impact force on the climber is minimized. To this end, you can use extendable quickdraws and/or clip the two ropes separately and intelligently when using half ropes.



Find more information on rope techniques in the Instructions For Use and Product Experience supplement, available at [www.petzl.com/ropes](http://www.petzl.com/ropes)

Information is non-exhaustive. Refer to the other pages as well as to the Instructions for Use and technical manuals. Technical training is essential.

Single ropes				Half ropes		
VOLTA 9.2 mm	ARIAL 9.5 mm	CONTACT 9.8 mm	MAMBO 10.1 mm	PASO 7.7 mm	SALSAS 8.2 mm	TANGO 8.5 mm

### Dynamic ropes

Whether you are looking for a single rope, a half/twin rope or a rope with multiple certifications (single and half/twin), you will find one that meets your needs in the line of Petzl ropes. Each rope diameter corresponds to specific activities: gym, rock, snow and ice climbing. These ropes were designed to meet Petzl's quality requirements. They therefore incorporate the latest technologies: EverFlex treatment stabilizes the core strands and improves consistency. Provides excellent grip and handling over time. For certain ropes designed for use in snow and ice, the DuraTec Dry treatment guarantees that the rope stays easy to handle; the UltraSonic Finish bonds the core and sheath at the rope ends for reinforcement; the ClimbReady coil makes the rope easy to uncoil and ready to use; and finally, all ropes are marked at the center for easier manipulation.

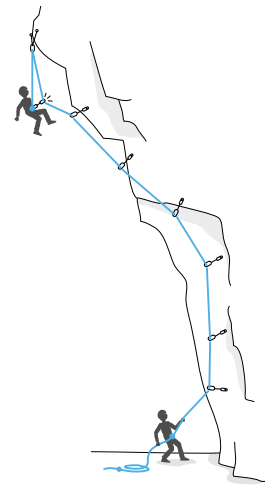
## Recovering quickdraws in an overhang while descending



It is difficult to clean quickdraws from an overhang. The "cable car technique" allows the climber to conserve energy and avoid doing a pendulum at each draw. The greatest risk of hitting an obstacle comes when approaching the ground. Some solutions for reducing the risks:

### 1. Descending the route

Once the rope is installed in the anchor, the climber connects a quickdraw to his harness and to the belayer's side of the rope. This draw allows him to remain close to the quickdraws he is removing.



At each quickdraw, the climber must unclip the bolt end of the quickdraw.

There are two techniques:

- the climber uses a hold to pull closer to the rock and unclip the quickdraw
  - using a dynamic movement while holding the carabiner, the climber moves toward the rock and unclips
- Once the draw is unclipped, the climber will pendulum and so the belayer must be well braced.

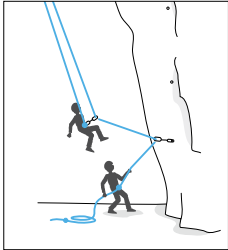




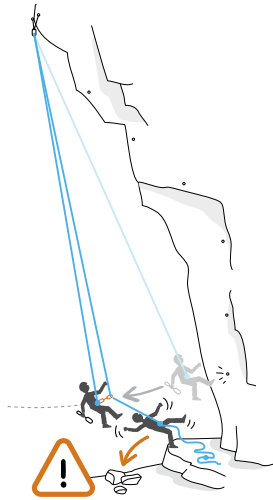
## Recovering quickdraws in an overhang while descending

### 2. Approaching the ground

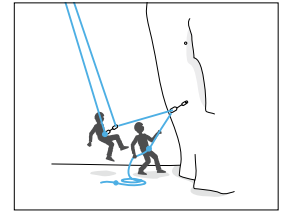
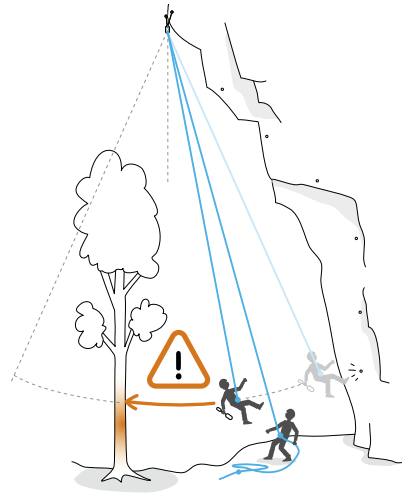
The risk of a pendulum is greater when the overhang is bigger.



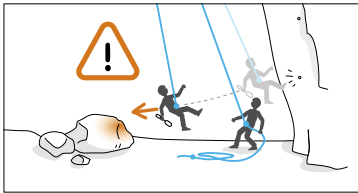
Before removing the last draw, the climber must unclip the "cable car" quickdraw to avoid destabilizing the belayer.



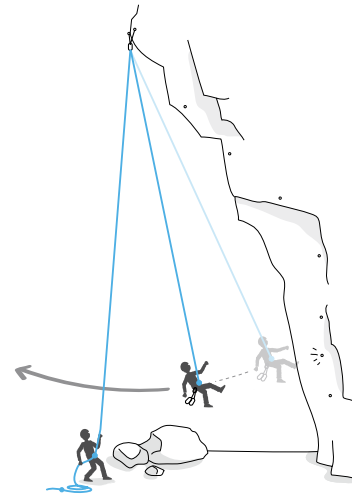
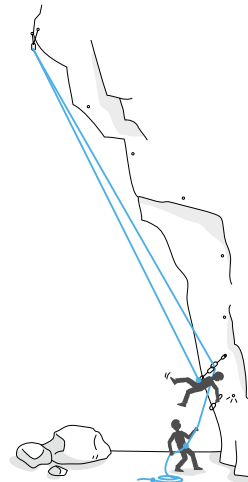
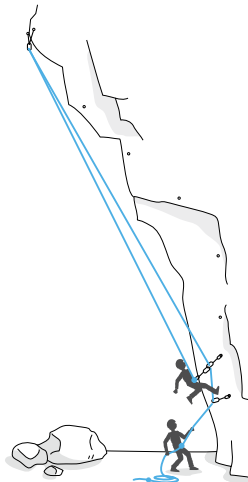
At the last quickdraw, the climber must look behind to see that there are no obstacles in the line of the pendulum.



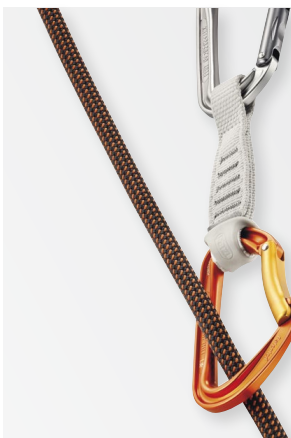
When an obstacle is unavoidable and the quickdraw is recoverable from the ground, the climber may be lowered with the last draw left in place. This technique works if the quickdraw is not too high or difficult to access.



If the pendulum at the last draw is risky and the bolts are relatively close to one another, the climber can clip into the second-to-last draw. He then unclips the last draw and frees the belayer's rope (draws and "cable car"). The belayer takes up all the slack; the climber grabs onto a hold and unclips his lanyard.



Information is non-exhaustive. Refer to the other pages as well as to the Instructions for Use and technical manuals. Technical training is essential.



### SPIRIT EXPRESS

For outdoor sport climbing, the SPIRIT EXPRESS is the best choice. Thanks to the Keylock system, the nose of the carabiners doesn't snag on the anchor or the rope when unclipping. Exceptionally smooth use! The lower bent gate carabiner and the EXPRESS sling, equipped with a STRING to hold the carabiner in place, also facilitate clipping and unclipping. The shape of the EXPRESS webbing offers ergonomic grip for grabbing the quickdraw while working a difficult section. The SPIRIT EXPRESS quickdraw is also lightweight (less than 100 g), which makes it very easy to wear on the harness.

# Mountaineering

## Mountaineering marathon

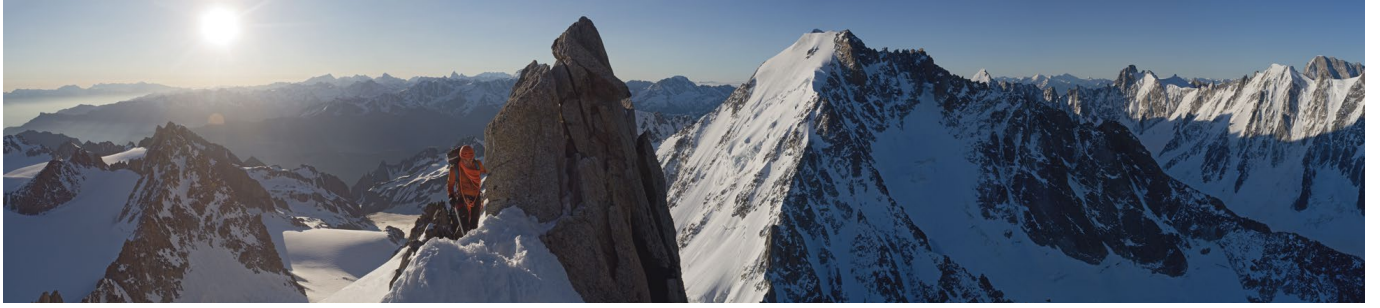
Mont-Blanc massif Jeff Mercier, Ally Swinton and Jonathan Griffith.

In winter, he seeks the pure difficulty of steep North faces. In summer, Jeff Mercier stretches his legs on the beautiful wild ridges of the Mont-Blanc massif. Respectful of the summits he frequents, he takes on his routes independently and within the safety limits imposed by the environment. What motivates him? Pushing his physical limits into the red and staying just lucid enough to allow him to return home in good health. It is never in record time, but always as an unforgettable experience with his climbing partners. An acclimatization outing: leaving on foot from the village of Tour, bivouac near the Albert 1st refuge. Ascent of Chardonnet (3824 m) by the Forbes ridge, descent by the South-East couloir, ascent by the border ridge of the Aiguille d'Argentière (3901 m) and descent by the Y-Couloir. Bivouac on the glacier and ascent the next day of the Aiguille du Tour Noir (3836 m).

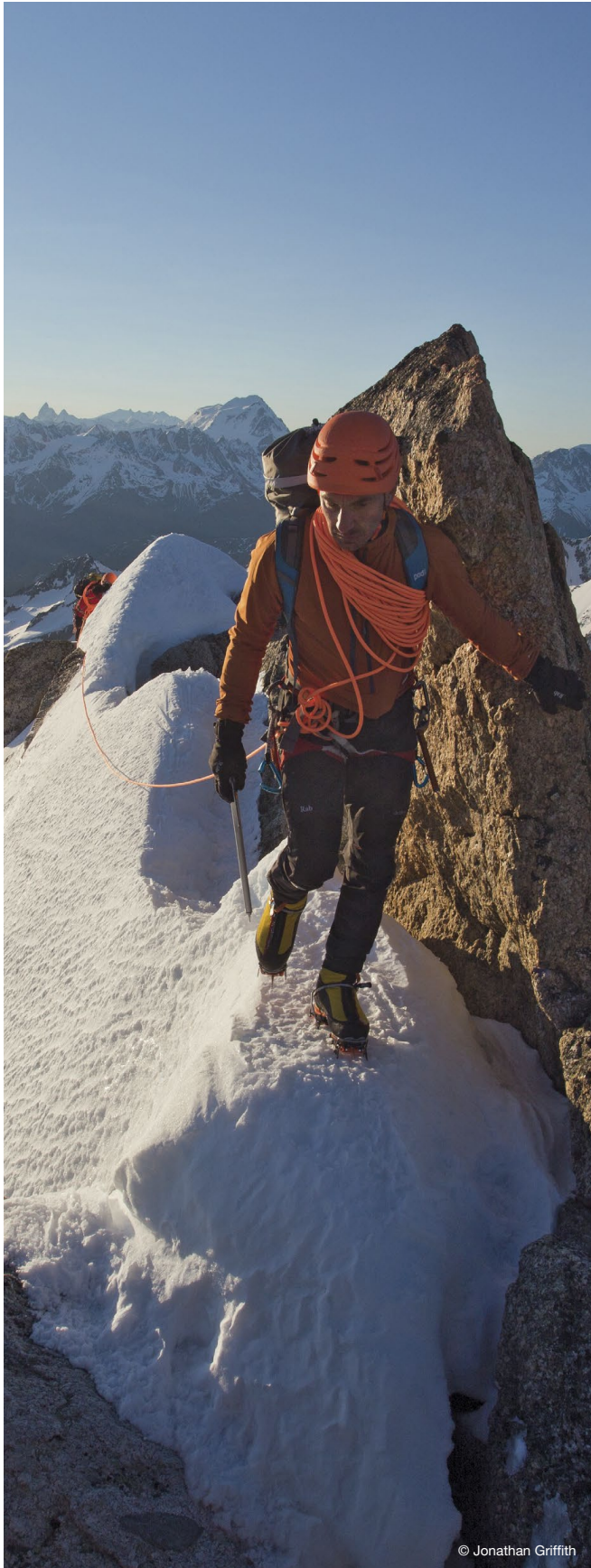


© Jonathan Griffith

# Mountaineering

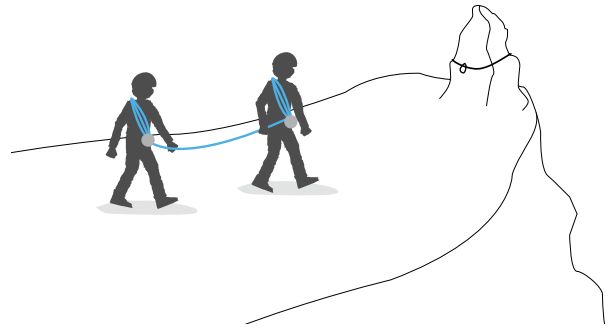


## Rappelling quickly on a ridge climb



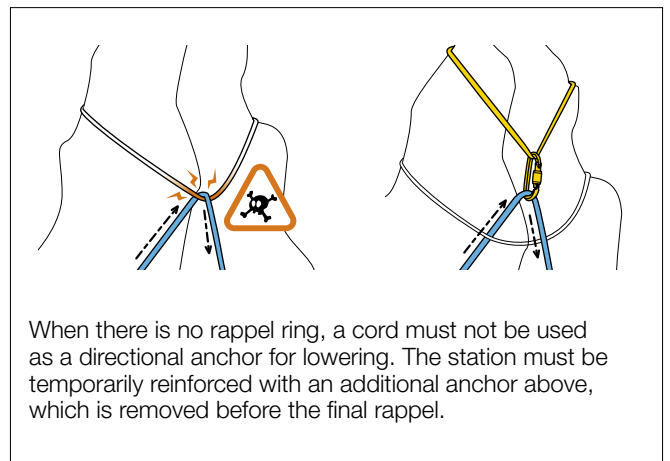
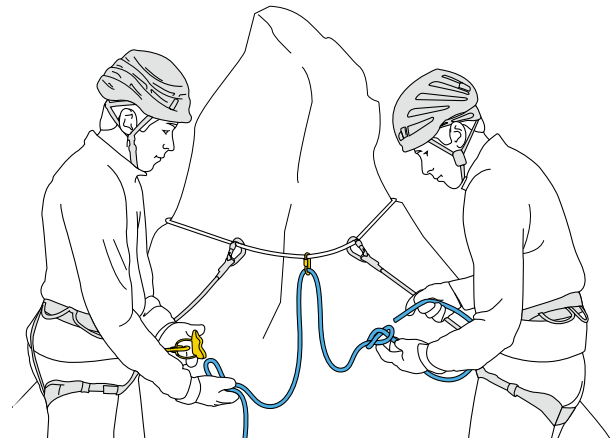
© Jonathan Griffith

Speed and efficiency are often key to a successful ridge climb. A short descent that interrupts progression needs to be negotiated quickly. Therefore, lowering one of the team members optimizes rope installation and limits the risk of the rope snagging or tangling, or of rock fall.



### 1. Preparation at the belay station

The team members anchor themselves and then untie from the rope, running the rope through the rappel ring. The first team member to descend ties in again.



When there is no rappel ring, a cord must not be used as a directional anchor for lowering. The station must be temporarily reinforced with an additional anchor above, which is removed before the final rappel.

Information is non-exhaustive. Refer to the other pages as well as to the instructions for Use and technical manuals. Technical training is essential.

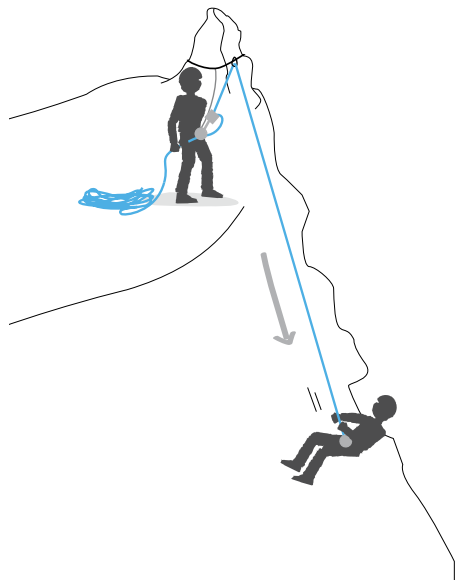
## Rappelling quickly on a ridge climb

### 2. Lowering the first team member

The descending team member chooses the best route and establishes the landing area.

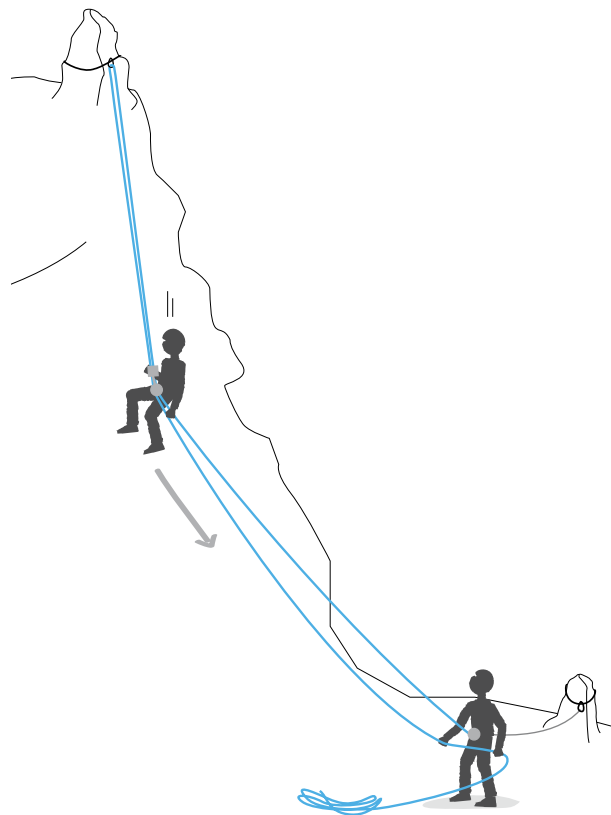
He can also bring down the free end of the rope.

- ➕ Less risk of a bad throw and loss of time.
- ➖ The belayer must manage the two rope ends at the same time.



### 3. The second team member descends on rappel

The first member down anchors into the lower station, remains tied into the rope and ensures the free end is well positioned.



Information is non-exhaustive. Refer to the other pages as well as to the Instructions for Use and technical manuals. Technical training is essential.



### ADJAMA

In mountaineering, it is often useful to have a harness with adjustable leg loops in order to put it on with crampons already on the feet, and also to adapt it to different thicknesses or layers of clothing, depending on the season. The ADJAMA is the solution. With EndoFrame construction, which distributes the load between the leg loops and waistband, it is very comfortable during suspension and is barely felt when walking or climbing. The ADJAMA has four equipment loops; the two rear ones are flexible in order to not interfere with wearing a pack. In order to bring everything required for a mountaineering trip, it also has retainers for the CARITOOL tool holder. Finally, the ADJAMA is durable, with Dyneema reinforced tie-in points.

## Setting up a station for a non-alternating lead

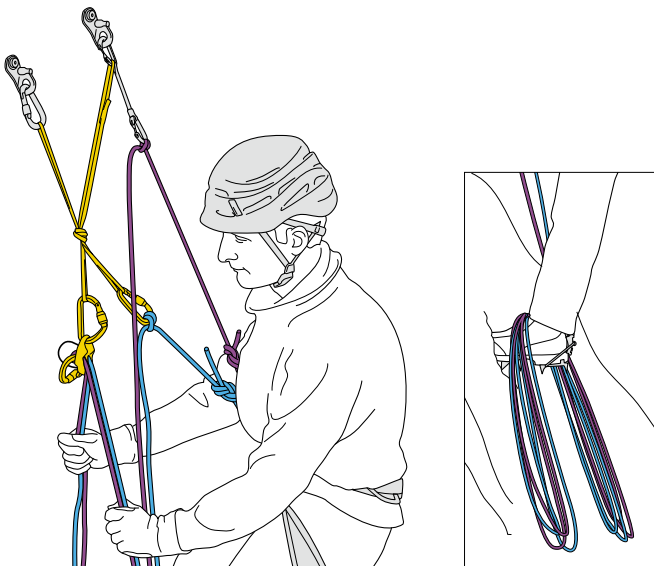


© Jonathan Griffith

In a gully, precious time can be gained or lost with rope management. When climbing without swapping leads, the climb is managed by one person, which can be physically demanding. This type of climbing has the advantage of maintaining a good climbing rhythm, and the time spent waiting in the cold at each station is reduced. At the beginning, it is important to take the time to establish clear communication, to prepare the rope over its entire length and to do a partner check.

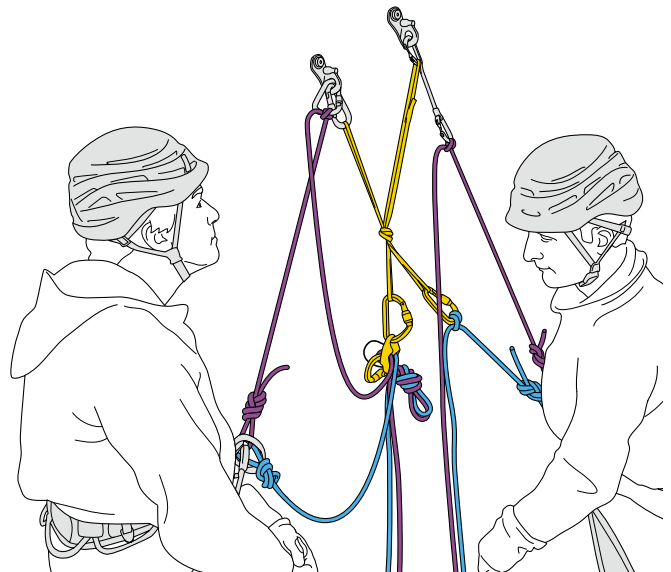
### 1. Building the station

The leader arrives at the station and ties into the first screw. He creates a triangulation with an overhand bend. By separating each sling loop, he can make each connection point independent. He can then belay the second. The belayer ensures that the rope is stacked, on his feet or in front of him. He avoids making loops that are too long, as they could snag on an ice stalactite or rock.



### 2. Second arriving at station

When the second arrives at the station, the leader makes a knot under the REVERSO 4 and tethers the second to an anchor. The second then tethers himself to the triangulation.

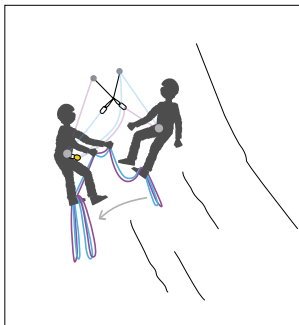
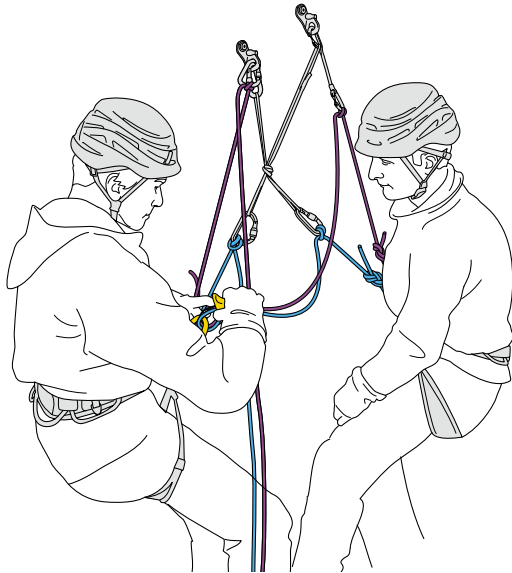


Information is non-exhaustive. Refer to the other pages as well as to the instructions for Use and technical manuals. Technical training is essential.

## Setting up a station for a non-alternating lead

### 3. Before the leader climbs

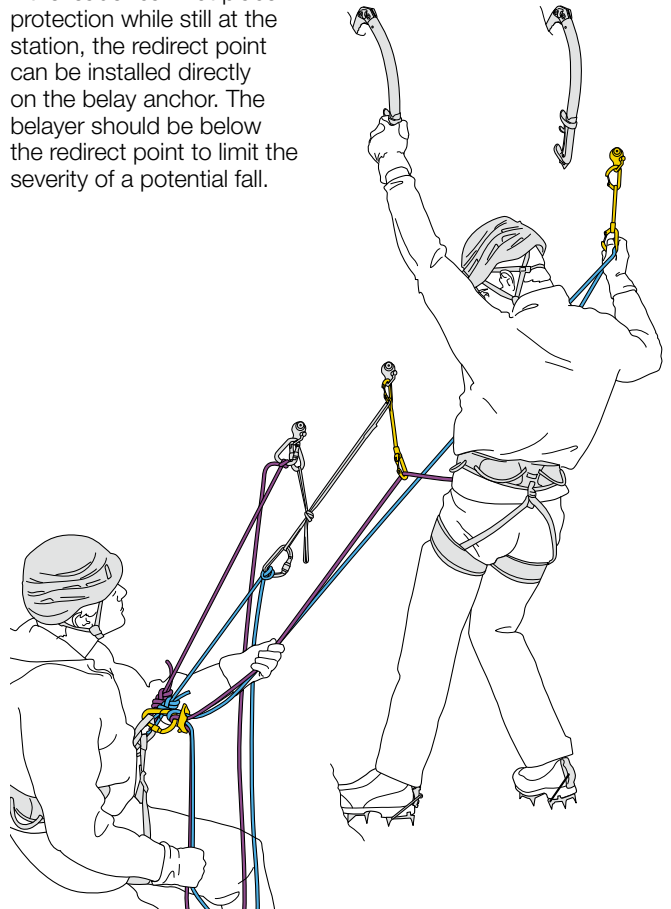
The second installs his belay device.



While the leader organizes the ice screws and quickdraws on his harness, the second stacks the rope on his feet so that it feeds properly during the climb.

### 4. Leaving the belay

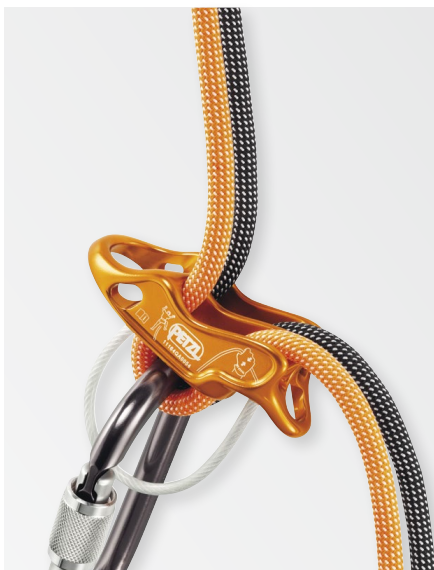
In order to limit the stress on the anchors, the leader installs an ice screw very close to the station. This way, he is not anywhere near a factor 2 fall. If the leader can not place protection while still at the station, the redirect point can be installed directly on the belay anchor. The belayer should be below the redirect point to limit the severity of a potential fall.



Information is non-exhaustive. Refer to the other pages as well as to the Instructions for Use and technical manuals. Technical training is essential.

### REVERSO 4

Very lightweight (59 g), the REVERSO 4 is the belay-rappel device for the versatile climber or mountaineer. Designed for use on all types of ropes (half ropes  $\geq 8$  mm, twin ropes  $\geq 7.5$  mm and single ropes  $\geq 8.9$  mm), the REVERSO 4 is multi-use: belaying a leader, or one or two seconds (Reverso mode), or rappelling. When alternating leaders, switching from belaying in Reverso mode to belaying a leader is simple and quick for great ease of use. Thanks to its V-shaped channels with asymmetrical lateral grooves, it offers optimal control of the friction on the rope.



See video with additional information at [www.petzl.com/REVERSO](http://www.petzl.com/REVERSO)

# Ice climbing





# Ice climbing



## Ice Climbing trip

Shuangqiao Valley (Shuangqiaogu: the valley of the double bridge), Szechuan Province, China. Erwan Le Lann, Mathieu Maynadier and Guillaume Vallot.

What did it feel like to be the first mountaineers surveying the valleys of Chamonix and Yosemite? It was an emotion of this magnitude that Erwan Le Lann and Mathieu Maynadier had in February 2013 - 10 years after François Damiéano and Stéphane Husson - when they went to climb the ice routes of the Shuangqiao Valley. At the border of Szechuan Province and the foothills of the Himalayas, the Valley of the Double Bridge rolls out, over 35 km, a hundred or so ice and mixed climbing routes, surmounted by practically untouched 6000 meter big walls. They got the urge, with the help of Marcos Costa, to open wide the lid of the treasure chest that was merely cracked by the pioneers. Whether for exploring the most obviously classic routes or for putting up new ones, the Shuangqiao Valley promises to be one of the most exotic and celebrated ice climbing destinations of the decade.

© Guillaume Vallot

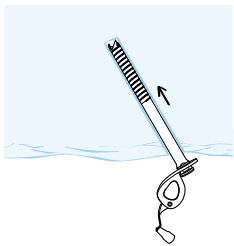


© Guillaume Vallot

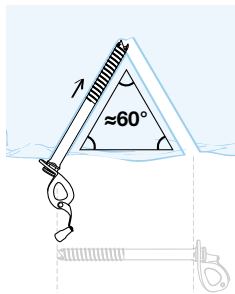
**A**t the end of an ice climb, there are several descent options: walking, rappelling on fixed anchors or rappelling on Abalakovs. It is the latter that is described here.

### 1. Creating an Abalakov

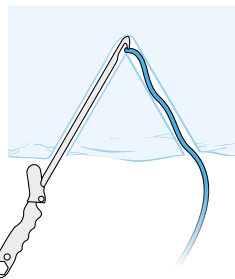
To create an Abalakov, you will need a 7 mm minimum diameter cord, an Abalakov hook such as the MULTIHOOK, a knife and a long (21 cm for example) ice screw. Remember that you will also need some practice and skill before getting it right.



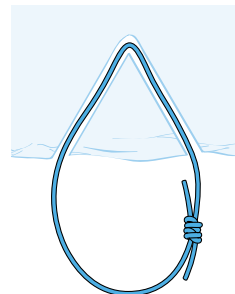
1. Cleaning the surface and making the first hole.



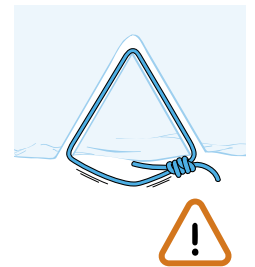
2. Making the second hole. To create a 60° angle, make the second hole at a distance approximately equal to the length of the screw. You will then get an equilateral triangle and thus an approximate 60° angle.



3. You can clean out the hole with the MULTIHOOK before threading the cord. Pull the cord through the other hole with the MULTIHOOK.



4. Tying the loop with a double fisherman knot. Cut any surplus cord.



Don't make your loops too short.

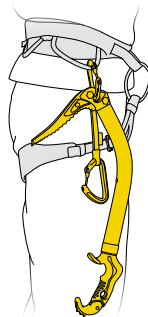
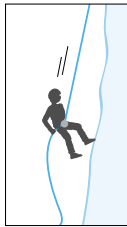
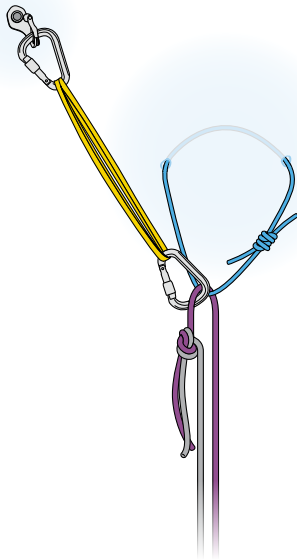
The strength of the Abalakov depends greatly on ice quality and on the way it is made (distance between holes, angle...). Beware of existing Abalakovs, as they may have hidden damage and turn out to be dangerous if reused.

## Rappelling on an Abalakov

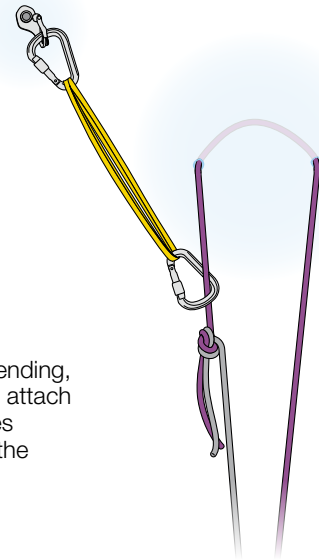
### 2. Rappelling

Run the rappelling rope directly through the loop. To secure the first person's descent, the Abalakov can be combined with another ice screw. Be careful to connect this back-up screw to the rappel rope, not just to the Abalakov sling.

To link up the rappels more quickly without needing to leave gear behind, you can opt to thread the rappel rope directly through the holes of the Abalakov. Watch for the rope possibly freezing in the Abalakov; before descending, always ensure that the rope slides properly through the Abalakov.



When descending, take care to attach your ice axes securely to the harness.



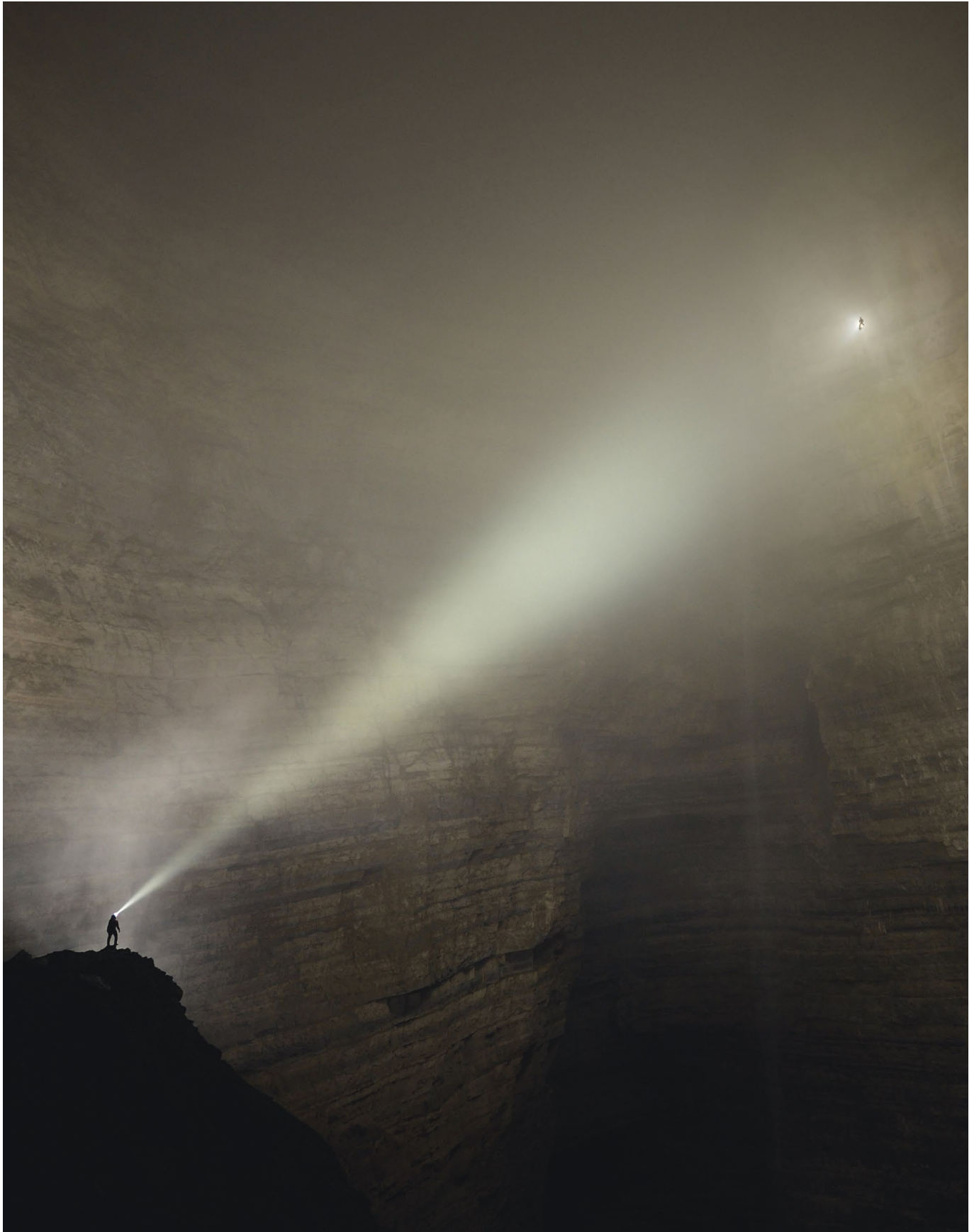
Information is non-exhaustive. Refer to the other pages as well as to the Instructions for Use and technical manuals. Technical training is essential.



### LASER SPEED

In ice climbing, placing an ice screw quickly is crucial to a smooth ascent. The LASER SPEED ice screw's teeth are optimized for easy starts. Its folding integrated crank is also a valuable feature when it needs to be screwed in as quickly and efficiently as possible. With its reduced weight (between 113 and 161 g depending on length), the LASER SPEED is also easy to carry, as it does not weigh down your harness.

# Caving



# Caving



## The veins of the big dragon

Chongqing Province, China. Hong Meigui Caving Club and Robbie Shone.

The mountains around the small town of Tongzi, in Chongqing Province, are riddled with some of the biggest caves ever explored. In early 2013, a US-GB team descended into the bowels of the earth to explore this labyrinth. Under the idyllic rice fields of the village of Ranjigou, is a world where water has over millennia bored out a giant subterranean network. The impressive cavern of Cloud Ladder Hall is so huge that it generates its own micro-climate! In the caves of Tongzi lie the mysteries of the earth. Thousands of stalactites descend from the ceiling, and forests of stalagmites carpet the ground. In March 2013, a team of cavers discovered 13 kilometers more of galleries. Here, the arduous exploration makes the discovery all the more exciting. More humans have probably landed on the moon than have visited a good number of these caves.

© Robbie Shone



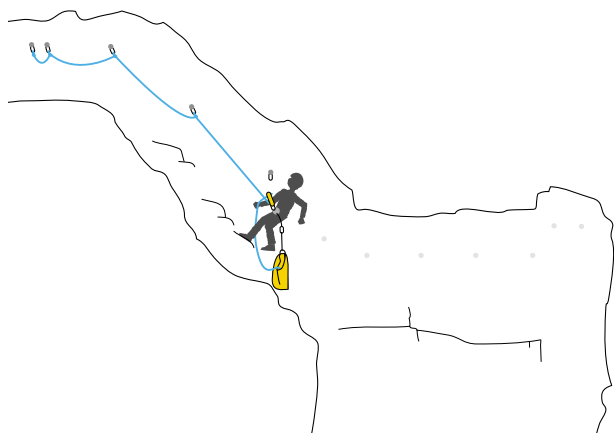


© Robbie Shone

The first member to descend installs the ropes that will belay the team and allow them to move efficiently. He must choose the appropriate configurations of equipment for ascent and descent and maximize the team's safety. During these manipulations, the desire for speed should not be at the expense of the leader's own safety.

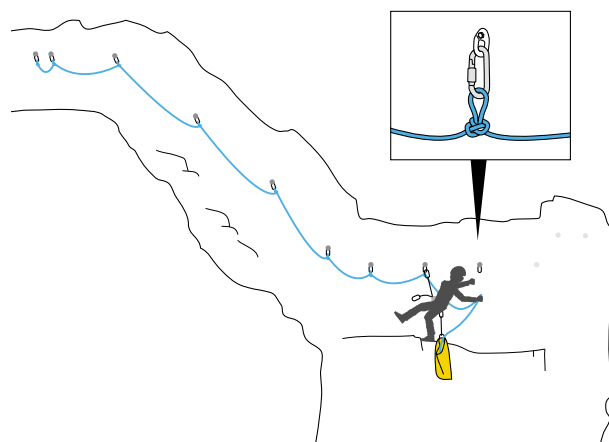
### 1. Installing a fixed traverse line

The rest of the team can walk while tethered into the fixed line. The leader always stays in tension on his STOP and never releases the brake side of the rope.



### 2. Installing a fixed traverse line for progression

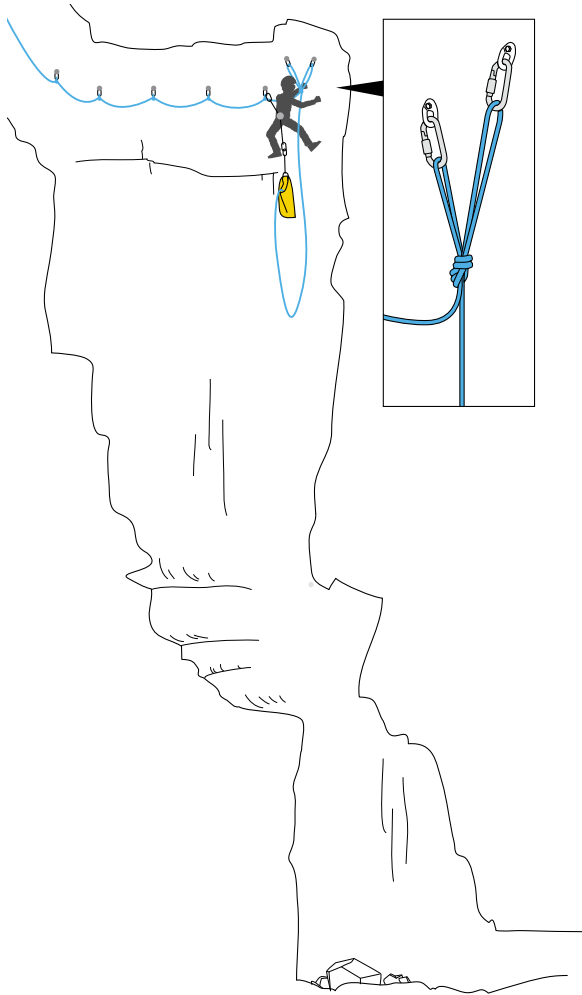
The rest of the team will use the taut fixed line for aid and the closely spaced anchors for climbing. The butterfly knot adjusts easily for tensioning the rope.



## Rigging a pit

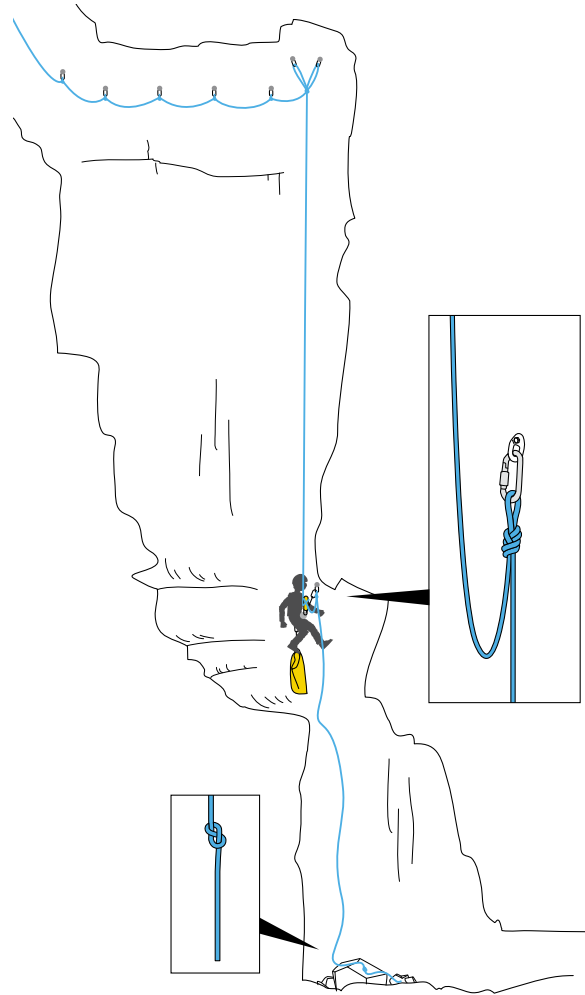
### 3. Installing the rope at a pitch head

A double anchor must be used at pitch heads. A Y knot distributes the load on the anchors and allows the direction of the rope to be more easily chosen.



### 4. Creating a rebelay

Breaking up rope lengths reduces elasticity and the risk of abrasion and allows several members of a team to progress simultaneously, with one user maximum per section.



Information is non-exhaustive. Refer to the other pages as well as to the Instructions for Use and technical manuals. Technical training is essential.

## STOP

The STOP is a descender with assisted braking designed for caving descents. The assisted braking function facilitates rope maneuvers. The STOP installs on the rope without removing it from the harness, thanks to its safety gate. This is important so as not to lose the device when passing rebelays. By adding a FREINO locking carabiner, you can easily adjust the braking and thus the speed of the descent, which is very useful during long descents.



# Lighting

---







## The mountains, differently

Lac des Cheserys, Mont-Blanc massif, France. Photo workshop by Mario Colonel.



For 30 years, Mario Colonel has been taking photos in the mountains. What used to be a club reserved for the contemplative few with a mountaineering spirit, has become a mass phenomenon in the digital age. Where it once required days of patience, now a few milliseconds are all it takes to see the photo just taken. With a wide angle, a tripod, a remote control and a headlamp, we can capture the rise and fall of the stars in the night sky. In the Alps, the celestial vault is closest to the summits in June and July and can be captured at this special time from a bivouac. Above the Chamonix valley, the Lac des Cheserys reflects the range in its entirety. With a mat and a sleeping bag, we can connect intimately with the legendary summits, from the North face of the Grandes Jorasses to the Drus, l'Aiguille Verte, not to mention Mont-Blanc, which is particularly clear, glaciers sparkling, even in the dark of night...



© Mario Colonel

## Choosing headlamps for everyday lighting

### CLASSIC headlamps

*Simply... hands-free lighting!*



© John Evans

### CLASSIC series

NEW  
2014



#### TIKKINA®

Headlamp for proximity lighting



**60** ↘ 5 lumens  
STANDARD LIGHTING

NEW  
2014



#### TIKKA®

Headlamp for proximity lighting and some movement



**80** ↘ 5 lumens  
STANDARD LIGHTING

NEW  
2014



#### ZIPKA®

Ultra-compact headlamp for proximity lighting and some movement



**80** ↘ 5 lumens  
STANDARD LIGHTING



#### e+LITE®

Ultra-compact emergency headlamp



**26** ↘ 5 lumens  
STANDARD LIGHTING

Information is non-exhaustive. Refer to the other pages as well as to the instructions for Use and technical manuals. Technical training is essential.

## Choosing headlamps for everyday lighting

### Proximity lighting for everyday use

**Needs:** lightweight, compact, simple and practical, for occasional use

**Activities:** walking, travel, family, children, camping, DIY, home use, repair work

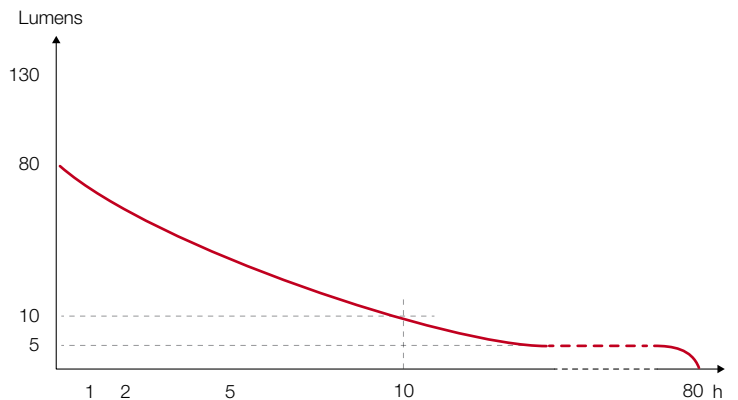
### STANDARD LIGHTING technology



**Technology:** the headlamp supplies energy "directly" to the light source

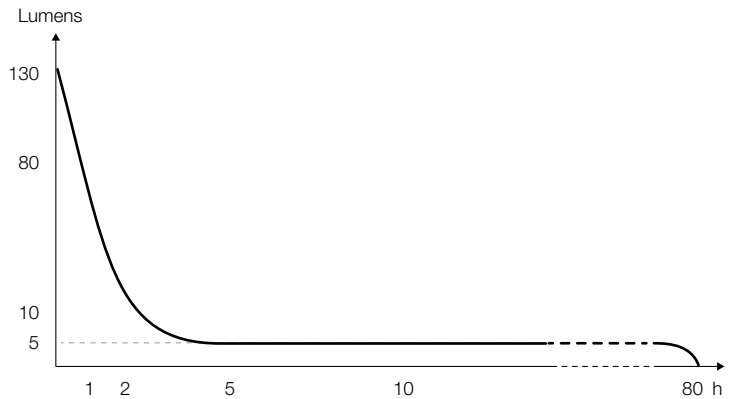
**Advantages:** good balance between power and burn time for entry level headlamps

Light output decreases gradually as the energy source discharges. The headlamp lights very intensely for the first minutes, and then decreases gradually over time. The rated brightness is the maximum light output, measured when the lamp is first turned on. This is the initial light output.



Lighting curve for Petzl headlamps equipped with STANDARD LIGHTING technology with initial light output of 80 lumens.

In the case of powerful headlamps (e.g., 130 lumens), the real burn time available at such a power level is very low; maximum brightness is halved in less than an hour. To avoid this rapid drop in light output, Petzl has chosen to integrate CONSTANT LIGHTING technology in all our high-power headlamps (see following page).



Generic curve shows declining light output for headlamps with initial power of 130 lumens.

Information is non-exhaustive. Refer to the other pages as well as to the instructions for Use and technical manuals. Technical training is essential.

## Choosing headlamps for outdoor activities

### ACTIVE headlamps

*Power... non-stop!*



© Dan Patitucci

#### ACTIVE series

NEW  
2014



#### TIKKA® +

Headlamp with CONSTANT LIGHTING technology for outdoor activities



**110 lumens**

CONSTANT LIGHTING

**BOOST**

**140 lumens**

NEW  
2014



#### TIKKA® XP

Multi-beam headlamp with CONSTANT LIGHTING technology for outdoor activities



**120 lumens**

CONSTANT LIGHTING

**BOOST**

**160 lumens**

Information is non-exhaustive. Refer to the other pages as well as to the instructions for Use and technical manuals. Technical training is essential.

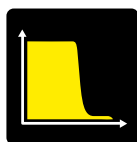
## Choosing headlamps for outdoor activities

Versatile, stable lighting for outdoor activities

**Needs:** constant lighting power, adapted beams and compact size

**Activities:** hiking, trekking, backpacking, mountaineering...

### CONSTANT LIGHTING technology



**Technology:** the headlamp has an integrated electronic regulation system

**Advantages:** unlike headlamps with STANDARD LIGHTING technology, light output is constant for a predetermined period. This duration corresponds to truly usable burn time.

- **Constant brightness**

Petzl headlamps with CONSTANT LIGHTING technology ensure constant brightness for at least 90 minutes in maximum mode because a shorter burn time does not correspond to the reality of use. This choice of burn time defines the maximum available output.

Constant lighting allows the user to benefit completely from comfortable lighting that does not decrease over time.

- **BOOST mode**

Headlamps in the ACTIVE line have a Boost mode, which temporarily provides lighting that is brighter than Maximum mode.

- **Reserve lighting**

Looking to optimize energy use, all of Petzl's CONSTANT LIGHTING headlamps automatically switch to reserve lighting mode when the constant lighting phase is over. Reserve lighting mode offers lower light output, allowing the user to complete an activity (duration: several dozen hours).

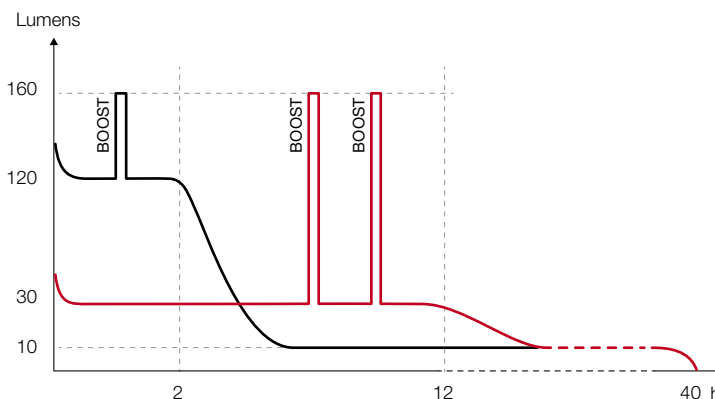
- **Brightness or burn time: a question of balance**

Brightness and burn time are two inextricably linked parameters of any headlamp, regardless of its lighting technology. For a given quantity of energy, increasing the brightness automatically decreases burn time, and vice versa.

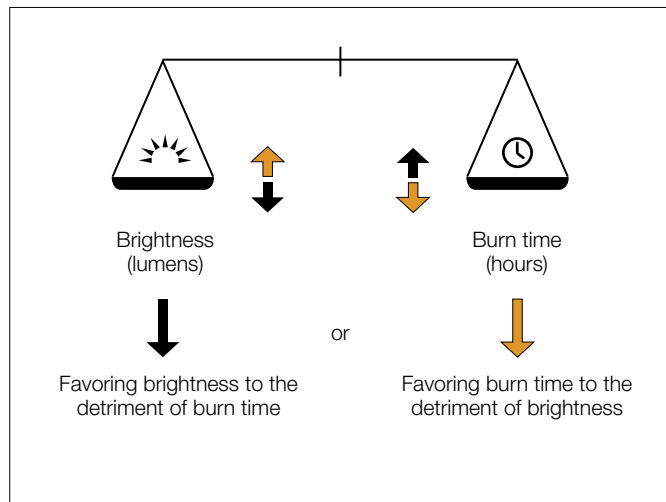
(To obtain 100 lumens of brightness for 50 hours, for example, the equivalent of 75 AAA batteries would be required.)

- **Double the burn time**

By replacing your ACTIVE headlamp's alkaline batteries with lithium or rechargeable Ni-MH batteries, you can double the burn time of your headlamp (with identical lighting performance).



Lighting curves for the TIKKA XP headlamp equipped with CONSTANT LIGHTING technology in proximity mode (30 lumens, red curve) and in movement mode (120 lumens, black curve).



Brightness or burn time: a question of balance

Information is non-exhaustive. Refer to the other pages as well as to the instructions for Use and technical manuals. Technical training is essential.

## Choosing headlamps for dynamic activities

### PERFORMANCE headlamps

*Beyond power... intelligence!*



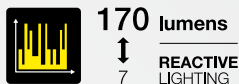
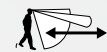
#### PERFORMANCE series

NEW 2014



#### TIKKA® R+

Compact, powerful and rechargeable headlamp with REACTIVE LIGHTING technology for performance



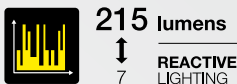
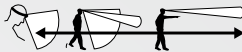
USB Rechargeable - Li-Ion battery

NEW 2014



#### TIKKA® RXP

Compact, powerful, multi-beam rechargeable headlamp, with REACTIVE LIGHTING technology for performance

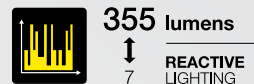
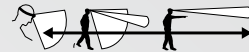


USB Rechargeable - Li-Ion battery



#### NAO®

Rechargeable headlamp with self-adjusting lighting - REACTIVE LIGHTING technology



USB Rechargeable - Li-Ion battery

Information is non-exhaustive. Refer to the other pages as well as to the Instructions for Use and technical manuals. Technical training is essential.

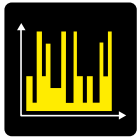
## Choosing headlamps for dynamic activities

Reactive, powerful lighting for dynamic and challenging activities

**Needs:** optimized lighting power, rechargeable batteries for intensive use and ease of use

**Activities:** trail running, expeditions, technical mountaineering, back-country skiing, multi-activity races...

### REACTIVE LIGHTING technology



**Technology:** REACTIVE LIGHTING technology uses a light sensor to adapt the beam pattern and light output of the headlamp instantly and automatically to the need

**Advantages:** the user enjoys comfortable, adapted lighting, while keeping the hands free

- **Optimal power**

For greater comfort to the user, REACTIVE LIGHTING technology continuously optimizes brightness in relation to the chosen burn time. This refers to minimum burn time, as it can be longer depending on how the product is used.

- **Adapted, comfortable lighting**

Light output and/or beam pattern instantly adjust to the user's needs for:

- proximity lighting
- moving around
- distance vision

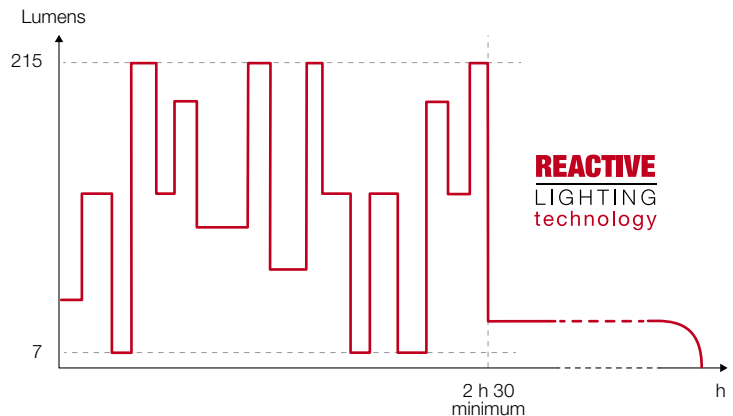
The result: simply outstanding visual comfort!

- **A minimum of manual intervention**

The headlamp automatically manages changes to beam pattern and light output, allowing the user to remain entirely focused on the activity without worrying about lighting.

- For close-range vision: looking at an object at close range, for example when reading a map, tying a knot or setting up a tent. Lighting adjusts automatically to avoid blinding
- For movement: looking ahead to walk, run... the beam intensifies in order to illuminate obstacles in the path
- For distance vision: when looking up to see into the distance, looking for a trail marker or a belay station, for example, the light output increases

- This innovative technology works on headlamps equipped with a rechargeable battery. It is particularly suitable for intensive use.



Lighting curve for the TIKKA RXP headlamp equipped with REACTIVE LIGHTING technology.

# VERTICAL EQUIPMENT

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© Lafouche

## Mountaineering and climbing harnesses

HIRUNDOS



Ultralight harness for high-level performance

SAMA



Men's climbing harness with elastic leg loops

ADJAMA



Men's climbing and mountaineering harness with adjustable leg loops

SELENA



Women's harness with elastic leg loops

LUNA



Women's climbing and mountaineering harness with adjustable leg loops

CORAX



Versatile and adjustable harness

CALIDRIS



Comfortable and ventilated adjustable harness for extended periods of hanging

ASPIR



Adjustable harness with padded waistbelt and leg loops

PANDION



Basic adjustable harness with gear loop

GYM



Basic adjustable harness for beginners and group programs

## Full body harnesses

OUISTITI



Full body harness for children less than 30 kg

SIMBA



Full body adjustable harness for children less than 40 kg

VOLTIGE



Adjustable chest harness for seat harness

## Caving harnesses

FRACTIO



Caving harness with double waistbelt

SUPERAVANTI



Basic lightweight caving harness

TORSE



Shoulder strap for positioning a CROLL

## Canyoning harness

CANYON



Canyoning harness with padded waistbelt and protective seat

## Harness accessories

CARITOOOL



Harness tool holder

➔ Find all products at [petzl.com](http://petzl.com)



## HIRUNDOS

### Ultralight harness for high-level performance

Frame Construction technology is pushed to the maximum. An ultralight and super compact harness for maximum climbing performance. Four equipment loops mean this harness is not limited to short sport climbs.

## SAMA

### Men's climbing harness with elastic leg loops

The SAMA harness is ideal for sport climbing. With its EndoFrame construction, it provides excellent weight distribution around the waist and legs to ensure greater comfort. The elastic leg loops remain adjusted and offer complete freedom of movement. The DoubleBack Light buckle on the waistbelt ensures quick and easy adjustment. The tie-in points are made of Dyneema in order to improve resistance to rope friction.



The DoubleBack Light buckle allows easier and quicker waistbelt adjustment.



See video with additional information at [www.petzl.com/SAMA](http://www.petzl.com/SAMA)



## ADJAMA

### Men's climbing and mountaineering harness with adjustable leg loops

The adjustable leg loops of the ADJAMA harness make it an ideal piece of equipment for mountaineering and ice climbing. With its EndoFrame construction, it provides excellent weight distribution around the waist and legs to ensure greater comfort. The DoubleBack Light buckles on the waistbelt and leg loops ensure quick and easy adjustment. The tie-in points are made of Dyneema in order to improve resistance to rope friction.



## SELENA

### Women's harness with elastic leg loops

The SELENA women's harness is ideal for sport climbing. With its EndoFrame construction, it provides excellent weight distribution around the waist and legs to ensure greater comfort. The elastic leg loops remain adjusted and offer complete freedom of movement. The DoubleBack Light buckle on the waistbelt ensures quick and easy adjustment. The tie-in points are made of Dyneema in order to improve resistance to rope friction.

## LUNA

### Women's climbing and mountaineering harness with adjustable leg loops

The adjustable leg loops of the LUNA harness make it an ideal piece of equipment for mountaineering and ice climbing. With its EndoFrame construction, it provides excellent weight distribution around the waist and legs to ensure greater comfort. The DoubleBack Light buckles on the waistbelt and leg loops ensure quick and easy adjustment. The tie-in points are made of Dyneema in order to improve resistance to rope friction.



Adjustable leg loops allow donning the harness while wearing mountaineering or ski boots, and to easily adjust the size for different clothing.



See video with additional information at [www.petzl.com/LUNA](http://www.petzl.com/LUNA)



NEW  
2014

## CORAX

### Versatile and adjustable harness

The CORAX is the versatile harness par excellence: easy to use and comfortable, it is designed for rock climbing, mountaineering or via ferrata. This adjustable harness is available in two colors and in two sizes to adapt to all body shapes.

Find a complete description of all harnesses at [PETZL.COM](http://PETZL.COM)



© Lafouche



© Lafouche

## Mountaineering and climbing helmets

SIROCCO®



Ultra-lightweight climbing and mountaineering helmet

METEOR



Lightweight and versatile helmet

ELIOS®



Durable multi-purpose helmet

ELIA



Durable, comfortable helmet for women

PICCHU



Children's climbing and cycling helmet

## Helmet accessories

VIZION



Eye shield for SIROCCO, METEOR and ELIOS helmets

## Caving helmets

TRIOS



Caving helmet with integrated ULTRA VARIO headlamp

SPELIOS



Caving helmet with integrated DUO LED 14 headlamp

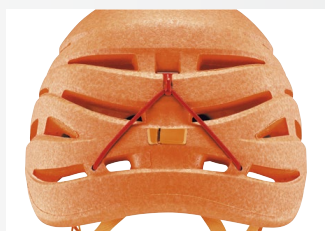
➔ Find all products at [petzl.com](http://petzl.com)



## SIROCCO®

### Ultra-lightweight climbing and mountaineering helmet

With a maximum weight of 165 g, the SIROCCO helmet becomes the new standard in terms of lightness. The monobloc construction minimizes helmet weight while retaining excellent impact resistance, due to the mechanical properties of expanded polypropylene (EPP). The textile adjustment system also contributes to its lightness. This helmet comes with a new magnetic buckle which allows the chinstrap to be attached with one hand. The SIROCCO helmet also has excellent ventilation distributed around the helmet.



The new monobloc construction minimizes helmet weight while retaining excellent impact resistance, due to the mechanical properties of expanded polypropylene.



The magnetic buckle (Petzl patent) allows the chinstrap to be attached with one hand.



One of the most ventilated helmets: the METEOR is particularly appropriate for summer activities.

## **NEW 2014** METEOR

### Lightweight and versatile helmet

Lightness and comfort have made the METEOR helmet a signature product for climbing and mountaineering. This model has the advantage of large openings for excellent ventilation. Its innovative adjustment system allows each climber to adjust his/her helmet to head shape. The METEOR also comes with a new magnetic buckle which allows the chinstrap to be attached with one hand.



Headband adjustment system buttons are easy to access and quick to use.



© Marc Daviet

**NEW 2014** ELIOS®  
**Durable multi-purpose helmet**

Very versatile and durable, the ELIOS helmet is suitable for climbing, mountaineering, caving, via ferrata, canyoning... It offers effective impact protection with its ABS shell and polystyrene foam liner. It is entirely adjustable and adapts to all head shapes. The sliding ventilation shutters allow the user to open or close them depending on conditions.



Sliding shutters for helmet ventilation only when necessary.



Headband adjustment system buttons are easy to access and quick to use.

**NEW 2014**



## ELIA

**Durable, comfortable helmet for women**

The ELIA helmet was designed and developed to respond specifically to the needs of women. The innovative OMEGA headband system (Petzl patent) allows the helmet to be put on and removed easily and offers maximum comfort. In addition to this exclusive feature, the helmet has a new headband and webbing adjustment mechanism. It allows the helmet to be precisely adjusted for different head shapes.

Find a complete description of all helmets at [PETZL.COM](http://PETZL.COM)





© Marc Daviet

## Belay devices

GRIGRI 2



Belay device with assisted braking for 8.9 to 11 mm rope

REVERSO 4



Ultra-light multipurpose belay/rappel device with braking adapted to different rope diameters and suppleness; Reverso mode

UNIREVERSO

NEW 2014



Belay system that combines a REVERSO 4 and an ATTACHE

VERSO



Petzl's lightest belay/rappel device with adaptive rope control technology

## Descenders

PIRANA



Descender for canyoning

HUIT



Figure 8 descender

HUIT ANTIBRULURE



Figure 8 descender with anti-burn grip

STOP



Descender with assisted braking for single rope

SIMPLE



Single rope descender

RACK



Variable friction descender with braking bars



## GRIGRI 2

### Belay device with assisted braking for 8.9 to 11 mm rope

The GRIGRI 2 belay device with assisted braking is designed to facilitate belay maneuvers. The GRIGRI 2 works equally well for lead climbing and top roping. It may be used on all single dynamic 8.9 to 11 mm ropes (optimized for 9.4 mm to 10.3 mm ropes). Both compact and ultra-light, the GRIGRI 2 will accompany you on climbs around the world for many years. The GRIGRI 2 features a new design that allows excellent control of the descent.



See the video with additional information at [www.petzl.com/GRIGRI2](http://www.petzl.com/GRIGRI2)



Stainless steel friction plate and cam for long life.



Excellent control of the descent.



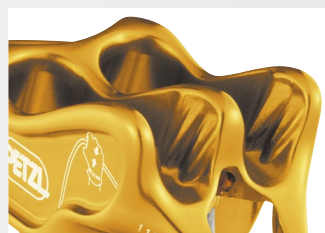
## REVERSO 4

### Ultra-light multipurpose belay/rappel device with braking adapted to different rope diameters and suppleness; Reverso mode

This belay/rappel device is lightweight and easy to use. V-shaped friction channels, with asymmetrical lateral grooves, adapt the rope friction for better control (braking adapted to half, twin and single dynamic ropes). Reverso mode for belaying one or two seconds.



See the video with additional information at [www.petzl.com/REVERSO](http://www.petzl.com/REVERSO)



The friction channels adapt the friction on the rope.



NEW  
2014

## UNIREVERSO

### Belay system that combines a REVERSO 4 and an ATTACHE

The UNIREVERSO is a complete and lightweight belay system that is particularly comfortable and efficient to use on all rope diameters. This system is composed of a REVERSO 4 belay device and an ATTACHE locking carabiner, held in optimal position by a sliding connection piece. The unit is loss-resistant and reliable. This belay-rappel device is versatile and allows adapted braking.



© Marc Daviet

## Dynamic single ropes

- |                   |  |  |  |
|-------------------|--|--|--|
| VOLTA<br>9.2 mm   |  |  | Multi-standard, ultra-light 9.2 mm diameter rope for classic mountaineering and elite climbing performance |
| ARIAL<br>9.5 mm   |  |  | 9.5 mm diameter single rope for high-end climbing  |
| CONTACT<br>9.8 mm |  |  | Single 9.8 mm diameter rope is versatile and appropriate for progression toward high-end climbing          |
| MAMBO<br>10.1 mm  |  |  | Single 10.1 mm diameter rope is versatile and appropriate for progression toward high-end climbing         |

## Dynamic half ropes

- |                 |  |  |   |
|-----------------|--|--|---|
| PASO<br>7.7 mm  |  |  | 7.7 mm diameter half rope for technical mountaineering and ice climbing |
| SALSA<br>8.2 mm |  |  | 8.2 mm diameter half rope for multi-pitch climbing and mountaineering   |
| TANGO<br>8.5 mm |  |  | 8.5 mm diameter half rope for multi-pitch climbing                      |

## Technical hiking cord

- |                 |  |  |   |
|-----------------|--|--|---|
| CONGA<br>8.0 mm |  |  | 8 mm diameter cord for installing a handline when on a hike |
|-----------------|--|--|---|

## Cordage

- |         |  |  |   |
|---------|--|--|---|
| Cordage |  |  | Semi-static cordage: 4 mm, 5 mm, 6 mm, 7 mm |
|---------|--|--|---|

## Rope bags

- |       |  |  |  |
|-------|--|--|--|
| KAB   |  |  | Large volume rope bag with bandolier, integrated belt and tarp |
| BOLSA |  |  | Lightweight rope bag with shoulder straps and integrated tarp  |

➔ Find all products at [petzl.com](http://petzl.com)

## Types of Petzl ropes

### • Single ropes

Ropes that can be used as a single strand, these are sport climbing ropes, used mainly for climbing single-pitch routes or on easy mountain terrain.

### • Half and twin ropes

Certified for two standards: half and twin.

- Half ropes: ropes used in pairs that can be clipped separately, they are recommended for rappels and managing rope drag. They provide extra safety in case one of the ropes is cut by a falling rock or a sharp edge

- Twin ropes: ropes used in pairs that (unlike half ropes) must be clipped together. They are recommended for rappels. They provide extra safety in case one of the ropes is cut by a falling rock or a sharp edge

### • Multi-standard ropes

Ropes certified as single, half and twin for multiple uses, for maximum versatility according to the terrain.

## Manufacture, finish and treatment: Petzl's choices



### Duratec Dry Treatment

Dry treatment, making the rope more resistant to water, dirt and abrasion. Handling, grip and other characteristics are retained longer in cold, wet conditions.



### EverFlex Treatment

Special thermal treatment stabilizes the core strands and improves consistency. Provides excellent grip and handling over time.



### UltraSonic Finish

Ultrasonic welding bonds the core and sheath together at the rope ends. Gives greater durability and avoids frayed ends.



### ClimbReady Coil

Specific coil makes the rope ready to use. Helps the user avoid initial uncoiling mistakes, and increases longevity.



### Middle Mark

Indicates the middle of the rope to facilitate maneuvers.

## Different ropes for different activities

### • For indoor climbing

In a gym, a single rope is used for climbing. The rope must be designed for intensive use: repeated top-rope belays and descents, working routes, many falls. An appropriate diameter is necessary; it is important to have excellent control of the rope, and great durability without sheath slippage.

### • For crag climbing

For versatile crag climbing, look for a single rope designed for intensive use, that is robust and abrasion resistant on all types of rock (durable sheath) and capable of withstanding repeated falls. It should have good grip for excellent control.

### • For high-end climbing

In high-end climbing, the goal is to reduce gear weight in order to focus on performance. The single rope must above all be lightweight and with a small diameter to reduce bulk. Fluidity is important, whether when clipping, or when using a GRIGRI 2 type belay device.

### • For multi-pitch climbing

Half and twin ropes are designed for multi-pitch climbing: they allow long rappels and provide extra safety in case one of the ropes is cut by a falling rock or a sharp edge. When a single rope is used, it should be used with a second rope for rappels. Ropes for multi-pitch climbing must be durable, with good grip. A dry treatment can be useful against moisture and water.

### • For glacier travel, mountaineering, ice climbing and mixed climbing

Single ropes are adequate for ridge traverses, glacier travel and single-pitch ice climbing. Half or twin ropes are used for technical routes, ice climbing and mixed climbing. They allow easy rappels and provide extra safety in case one of the ropes is cut by a falling rock or a sharp edge. These ropes must be durable in order to resist rock abrasion. They need a dry treatment to resist water absorption, which adds weight, reduces strength and in the case of freezing can make the rope difficult to use and change its elongation properties.

The diameter should be chosen by taking into consideration the weight and the durability of the rope as well as desired performance.

Find the video and additional information on Petzl's dynamic ropes at [www.petzl.com/ropes](http://www.petzl.com/ropes)

## Choosing your rope

	 MAMBO 10.1 mm	 CONTACT 9.8 mm	 ARIAL 9.5 mm	 VOLTA 9.2 mm	 TANGO 8.5 mm	 SALSA 8.2 mm	 PASO 7.7 mm
Rope type	Single rope			Multi-standard rope	Half rope and twin rope		
 DuratecDry			●	●		●	●
 EverFlex	●	●	●	●	●	●	●
 UltraSonic Finish	●	●	●	●	●	●	●
 ClimbReady	●	●	●	●	●	●	●
 Middle Mark	●	●	●	●	●	●	●
Ice climbing, mixed climbing			■*	■*		■	■
Mountaineering				■		■	■
Glacier travel			■	■			
Multi-pitch climbing		■*	■*	■*	■	■	■
High end rock climbing		■	■	■			
Sport climbing	■	■					
Indoor climbing	■	■					

 Ideal use

 Possible use

\* Should be used with a second rope for rappelling, if required.

## Dynamic single ropes

NEW  
2014



### VOLTA 9.2 mm

**Multi-standard, ultra-light 9.2 mm diameter rope for classic mountaineering and elite climbing performance**

The VOLTA 9.2 mm single rope has the light weight necessary for elite users, offering maximum longevity and performance in any conditions, thanks to its Duratec Dry treatment. Certified for all uses: single, half and twin, for multiple uses and maximum versatility according to the terrain.



NEW  
2014



### ARIAL 9.5 mm

**9.5 mm diameter single rope for high-end climbing**

With a 9.5 mm diameter, the ARIAL 9.5 mm single rope is designed for experienced climbers, offering maximum longevity and performance in any conditions, thanks to its Duratec Dry treatment.



NEW  
2014



### CONTACT 9.8 mm

**Single 9.8 mm diameter rope is versatile and appropriate for progression toward high-end climbing**

With a 9.8 mm diameter, the CONTACT 9.8 mm single rope is designed for climbers looking to progress in their rock climbing practice. This rope offers an excellent balance of light weight and durability for greater versatility.



NEW  
2014



### MAMBO 10.1 mm

**Single 10.1 mm diameter rope is versatile and appropriate for progression toward high-end climbing**

The MAMBO 10.1 mm single rope has a 10.1 mm diameter for greater versatility and ease of use in the gym or on the rock. This rope has a thick sheath for greater durability and better control.



## Dynamic half ropes



### PASO 7.7 mm

#### 7.7 mm diameter half rope for technical mountaineering and ice climbing

With a diameter of 7.7 mm and an extremely light weight, the PASO 7.7 mm rope is designed for ice climbing or technical mountaineering in cold, wet conditions. This rope benefits from the Duratec Dry treatment to improve longevity and performance in any conditions.



### SALSA 8.2 mm

#### 8.2 mm diameter half rope for multi-pitch climbing and mountaineering

The SALSA 8.2 mm half rope has an 8.2 mm diameter, offering greater versatility. This rope benefits from the Duratec Dry treatment to improve longevity and performance in any conditions.



### TANGO 8.5 mm

#### 8.5 mm diameter half rope for multi-pitch climbing

With an 8.5 mm diameter, the TANGO 8.5 mm half rope is designed for multi-pitch climbing. Thanks to the thickness of its sheath, its flexibility and its durability, it is easy to use with belay devices.



## Technical hiking cord



### CONGA 8.0 mm

#### 8 mm diameter cord for installing a handline when on a hike



© Marc Daviet

## Rope bags



Adjustable bandolier with belt for a more stable and comfortable carry when moving around.



Trapezoidal protective tarp is integrated into the bag, providing a clean, 140 cm long area for the rope.

### **NEW 2014** KAB

**Large volume rope bag with bandolier, integrated belt and tarp**

The KAB rope bag has an integrated trapezoidal tarp that provides a clean, 140 cm long place for the rope, while protecting it from dirt, leaves, gravel... Worn bandolier style, it has great stability thanks to its concealable belt. The pockets and equipment loops inside the bag make it very practical.



### **NEW 2014**

## BOLSA

**Lightweight rope bag with shoulder straps and integrated tarp**

The BOLSA rope bag is designed for climbing: worn on the back or as a bandolier, it allows the user to move around quickly with his gear. Unfolded, the 1.4 m square tarp creates a place for the rope, while protecting it from dirt, leaves, gravel... After climbing, the rope is easily stacked and stored.

Find a complete description of all ropes and rope bags at [PETZL.COM](http://PETZL.COM)





© Lafuèche

## Locking carabiners

Am'D



D-shaped carabiner for connecting devices to the harness

WILLIAM



Pear-shaped carabiner for belay stations and belaying with Munter hitch

ATTACHE



Lightweight, compact, pear-shaped screw-lock carabiner

SPIRIT SCREW-LOCK



Compact, ultra-lightweight screw-lock carabiner

OK



Oval-shaped carabiner for use with pulleys

## Special locking carabiners

FREINO



Carabiner with friction spur for descenders

OMNI



Semi-circle carabiner for closing a harness

VERTIGO WIRE-LOCK



Carabiner for progression lanyard

## Non-locking carabiners

ANGE FINESSE



Quickdraw with ultra-light ANGE carabiners

ANGE S



Ultra-light, compact carabiner with MonoFil Keylock system

ANGE L



Light carabiner with MonoFil Keylock system

SPIRIT EXPRESS



Quickdraw for sport climbing

SPIRIT



Versatile carabiner for sport climbing, available in straight and bent gate versions

DJINN AXESS



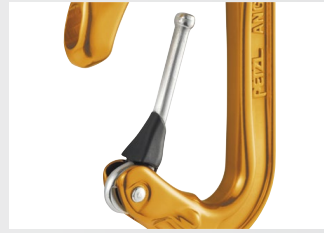
Durable quickdraw for outdoor climbing

DJINN



Rugged carabiner for crag climbing, available in straight and bent gate versions

➔ Find all products at [petzl.com](http://petzl.com)

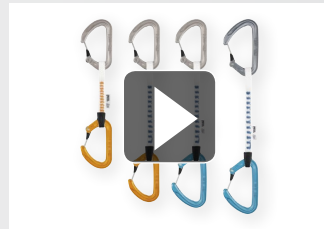


Petzl's MonoFil Keylock ensures smoother opening and closing of the carabiner and a much longer lifetime compared to traditional wire gate carabiners.

## ANGE FINESSE

### Quickdraw with ultra-light ANGE carabiners

ANGE FINESSE quickdraw is equipped with the new ANGE S and ANGE L carabiners. Petzl's MonoFil Keylock technology and the H-profile make these carabiners ultra-light and optimize their strength-to-weight ratio. They are also extremely durable, as are the new FINESSE Dyneema slings. The ANGE FINESSE quickdraw is equipped with the STRING S to correctly position the rope end carabiner for clipping, and to protect the webbing from abrasion.



See the video with additional information at [www.petzl.com/ANGE](http://www.petzl.com/ANGE)



## SPIRIT EXPRESS

### Quickdraw for sport climbing

The SPIRIT EXPRESS quickdraw offers better clipping for sport climbing. Weighing less than 100 g, it is versatile and moves easily from the crag to long sport routes. It has a straight-gate SPIRIT carabiner on top and a bent-gate version on bottom. The top carabiner, equipped with the Keylock system and a special nose shape, facilitates clipping and unclipping the anchor. The second carabiner, with bent gate and Keylock system, facilitates clipping the rope. The EXPRESS sling is equipped with a STRING protector to hold the lower carabiner in position. Its ergonomic shape offers excellent grip when working a route.



The straight gate version, equipped with the Keylock system and a special nose shape, facilitates clipping and unclipping the anchor.



The bent gate version of the SPIRIT carabiner has been reworked to facilitate clipping the rope. The profile of the SPIRIT is thicker on the bottom to facilitate rope glide and reduce wear on the carabiner.



© Marc Daviet

**NEW  
2014**



## DJINN AXESS

### Durable quickdraw for outdoor climbing

The DJINN AXESS quickdraw is a reliable, durable solution for initiation to outdoor climbing. It has an AXESS sling and two DJINN carabiners: one straight-gate carabiner on top and one bent-gate carabiner on the bottom. The top carabiner, equipped with the Keylock system and a special nose shape, facilitates clipping and unclipping the anchor. The bottom carabiner is equipped with STRING sling protection to hold the carabiner in position and to facilitate clipping the rope.

**NEW  
2014**



## SPIRIT SCREW-LOCK

### Compact, ultra-lightweight screw-lock carabiner

The SPIRIT SCREW-LOCK is based on the SPIRIT carabiner and uses Petzl's manual screw-lock locking system. This carabiner is designed for specific applications, for example for use at belay stations. It is very compact, and has an H cross section to reduce weight, as well as the Keylock system to avoid snagging of the carabiner during maneuvers.

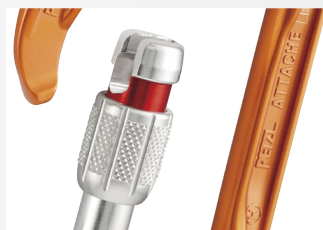


**NEW  
2014**

## ATTACHE

### Lightweight, compact, pear-shaped screw-lock carabiner

Thanks to its compact shape and SCREW-LOCK locking system, the ATTACHE is designed for multiple uses related to belaying: connecting a belay system to a harness, belaying with a Munter hitch... It has an H cross section to reduce weight, as well as the Keylock system to avoid snagging of the carabiner during maneuvers.



SCREW-LOCK locking sleeve for good handling and effective locking. Visual indicator facilitates checking that the carabiner is locked.



The bottom of the carabiner is wide for better rope glide and reduced wear on the carabiner.



## Am'D

### D-shaped carabiner for connecting devices to the harness

The shape and size of this carabiner makes it great for most uses, from connecting a belay device to your harness to using it as a connector at the end of a lanyard. The D-shape makes it one of the strongest and lightest locking carabiners Petzl makes. Available in three locking systems.



© Thomas Vialletet

## Ice climbing axes

ERGO



High-end dry tooling and ice climbing axe

NOMIC



Dry-tooling and ice climbing tool

QUARK



Ice axe for technical mountaineering and ice climbing

## Technical classic mountaineering ice axes

SUM'TEC



Lightweight ice axe for technical mountaineering

SUM'TEC 43



Ultra lightweight and compact hammer / ice axe for technical mountaineering

## Classic mountaineering ice axes

SUMMIT



Classic modern mountaineering ice axe

## Glacier travel ice axes

SNOWWALKER



Glacier touring ice axe

SNOWRACER



Lightweight axe for ski mountaineering and light climbing

## Ice axe accessories

ICE



Ice and mixed climbing pick for QUARK, NOMIC and ERGO

DRY



Dry tooling pick for QUARK, NOMIC and ERGO

ALPIX



Spare pick for SUM'TEC

HAMMER



Hammer for QUARK, NOMIC and ERGO

MINI HAMMER



Lightweight hammer for QUARK, NOMIC and ERGO ice axes

ADZE



Adze for QUARK, NOMIC and ERGO

CLIPPER



Quick attach leash for ice climbing

FREELOCK



Fixed leash for ice climbing

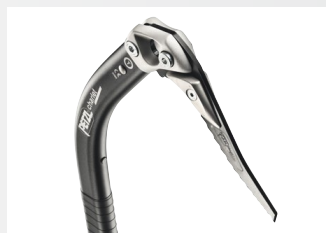
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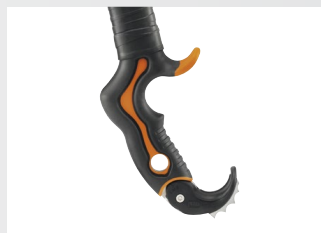
## NOMIC

### Dry-tooling and ice climbing tool

The NOMIC ice axe allows the entire rock climbing repertoire to be transferred to ice. Thanks to its adjustable ergonomic handle, it offers multiple grip modes and limits the risk of snagging when switching hands. The ICE pick allows easy penetration in any type of ice, and pulls out easily. The modular head has two removable pick weights to balance the axe and propel it into the ice with an exceptional swing. The NOMIC ice axe can also be equipped with a hammer when placing pitons.



Interchangeable ICE pick is tapered at the tip (3 mm) for easy penetration, even in cold ice. Its shape allows stable hooking on both ice and rock



Ergonomic over-molded handle offers multiple grip options. Handle length is adjustable to fit different hand and glove sizes



## QUARK

### Ice axe for technical mountaineering and ice climbing

QUARK is a versatile ice axe, designed primarily for technical mountaineering and for ice climbing. Because of the head's modular construction, it adapts to any situation. The QUARK ice axe is easy to use: its balance and its ICE pick allow solid placements on any type of ice. Hooking is more efficient, thanks to the clearance under the head and to the shape of the pick. The GRIPREST and the TRIGREST hand rests ensure a comfortable, powerful grip adapted to leashless climbing.



## SUM'TEC

### Lightweight ice axe for technical mountaineering

A compromise between a classic mountaineering ice axe and an ice climbing axe, the SUM'TEC is a versatile, lightweight, technical ice axe. It is easy to use in piolet-canne mode with its stainless steel spike and its slightly curved shaft. In piolet-traction, the ALPIX pick (forged into banana shape) and the new TRIGREST hand rest (adjustable without tools) ensure the efficiency required for technical passages, as well as bergschrunds, ice gullies... Available in adze or hammer versions.



© Jonathan Griffith

## Ice climbing crampons

DART



Mono-point crampon for ice and mixed climbing

DARTWIN



Dual-point crampon for ice and mixed climbing

D-LYNX



Screw-in mono-point crampons for ice climbing, mixed climbing and dry tooling

LYNX



Modular crampon for ice and mixed climbing; Leverlock universal bindings

## Technical mountaineering crampons

SARKEN



Technical mountaineering crampons

VASAK



Classic 12-point mountaineering crampons

## Glacier travel crampons

IRVIS



10-point crampons for ski touring and glacier travel

## Special purpose crampons

SPIKY PLUS



Anti-slip soles

## Crampon accessories

FAKIR



Carrying bag for crampons

ANTISNOW



Pair of antibottles

Long linking bars



Long linking bar for sizes 41 to 50

Long curved linking bars



Long linking bar for asymmetric boots

➔ Find all products at [petzl.com](https://www.petzl.com)



## DART

### Mono-point crampon for ice and mixed climbing

The DART is the crampon for extreme mixed and ice climbing. The mono-point is designed to displace less ice and make for precise placements on micro-edges. The third row of points is angled towards the rear for hooking in steep terrain or around ice columns. Ultra-light.



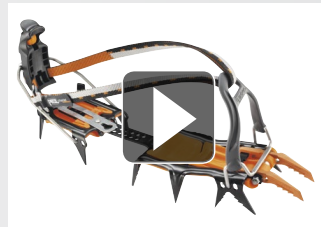
## LYNX

### Modular crampon for ice and mixed climbing; LEVERLOCK universal bindings

From snow couloirs to dry tooling, the LYNX is a versatile crampon. Modular front points allow for many options: dual or mono-point, long or short, and/or asymmetrical. They come with two types of interchangeable front bindings to adapt to boots with or without toe welts.



Configuration and length of front points can be modified: dual point in short, long or asymmetrical position, or offset mono-point in short or long position.



See the video with additional information at [www.petzl.com/LYNX](http://www.petzl.com/LYNX)





LEVERLOCK



LEVERLOCK FIL



SPIRLOCK

## SARKEN

### Technical mountaineering crampons

Re-designed to improve durability, SARKEN crampons are now better than ever. This is the crampon for anybody headed out into variable, mixed terrain. The 4x4 of crampons. The T-shaped front points are designed for excellent penetration of hard ice and stable positioning on mixed terrain while providing solid purchase in snow and névé.



FLEXLOCK



LEVERLOCK



LEVERLOCK FIL



SPIRLOCK

## VASAK

### Classic 12-point mountaineering crampons

VASAK crampons are designed for mountaineering. Twelve points ensure maximum traction in all conditions, from steep slopes to ice couloirs. Available in all four lightweight binding systems for solid boot interface.



FLEXLOCK



LEVERLOCK

## IRVIS

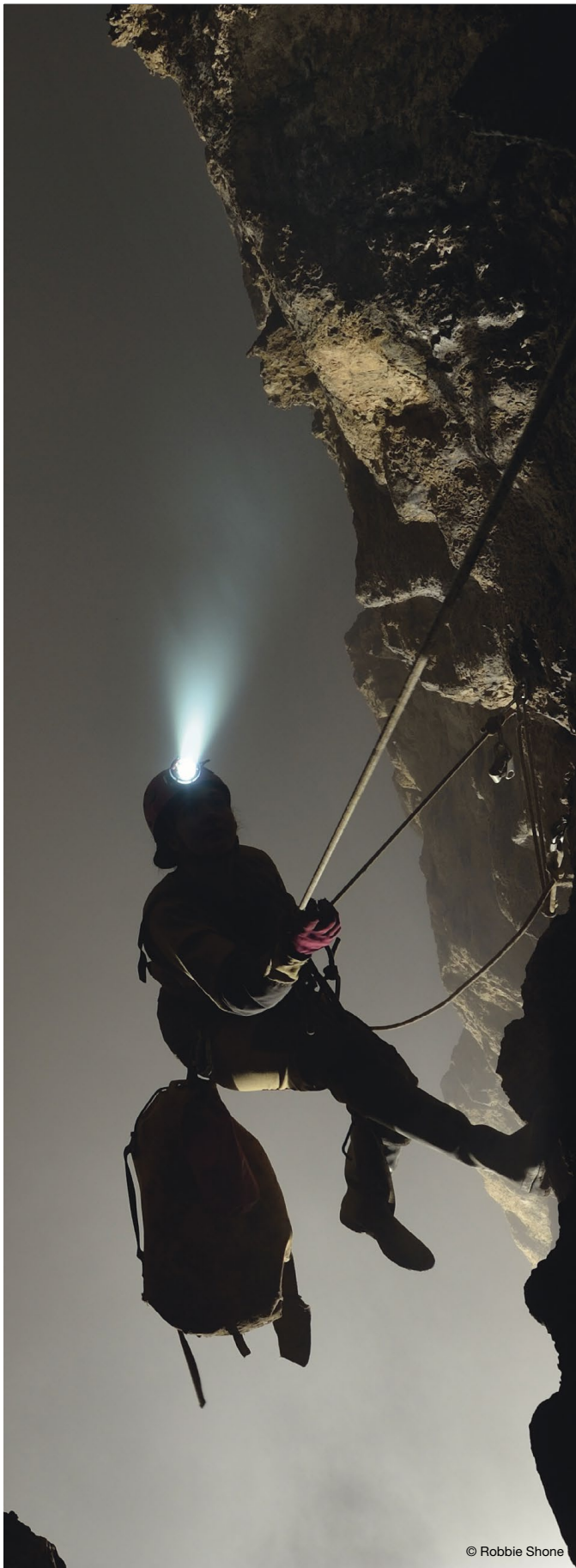
### 10-point crampons for ski touring and glacier travel

At 820 g per pair (FLEXLOCK), the 10-point IRVIS crampons are designed for glacier travel, ski mountaineering and snowy or icy approaches. They are lightweight and easy to use, making them a favorite in any conditions. Available with two different binding systems, these crampons can fit most boots, even those without welts. Durable and easy to adjust.

Find a complete description of all crampons at [PETZL.COM](https://www.petzl.com)



© Guillaume Vallot



© Robbie Shone

## Ascenders

ASCENSION



Ergonomic handled ascender

CROLL®



Chest ascender

PANTIN



Foot ascender - right and left

## Multi-purpose ascenders

BASIC



Multi-purpose compact ascender

SHUNT



Back-up ascender

TIBLOC



Compact emergency ascender

## Ascender accessories

FOOTAPE



Adjustable webbing foot loop

FOOTCORD



Adjustable cordage foot loop

## ASCENSION

### Ergonomic handled ascender

Our handled ascenders have been improved to provide greater comfort, efficiency, and ease of use. The ergonomically shaped handle is over molded with dual density grip for greater friction and better grip. The grip is wider at the bottom, providing better comfort for your pinkie fingers during use. The index finger indent has also been increased, offering greater efficiency when pulling on the ascender. The cam has been redesigned to minimize friction when sliding the ascender up the rope while the angled teeth provide secure grip in the worst conditions (wet, icy, or muddy ropes). The geometry of the single piece aluminum frame ensures optimal handle orientation when the device is loaded and will maintain solid, comfortable performance for ascents of any length.



The safety catch allows the ASCENSION handled rope clamp to be installed or removed anywhere on the rope with one hand. It can be easily manipulated, even with gloves.



The molded dual-density grips have an area for the index finger and a wide, supportive base to keep the hand from slipping.



## CROLL®

### Chest ascender

The CROLL chest ascender is unmatched for efficiency on fixed lines. Compact and lightweight, it does not interfere with progression. The stainless steel wear plate improves durability by reinforcing the rope friction zone.

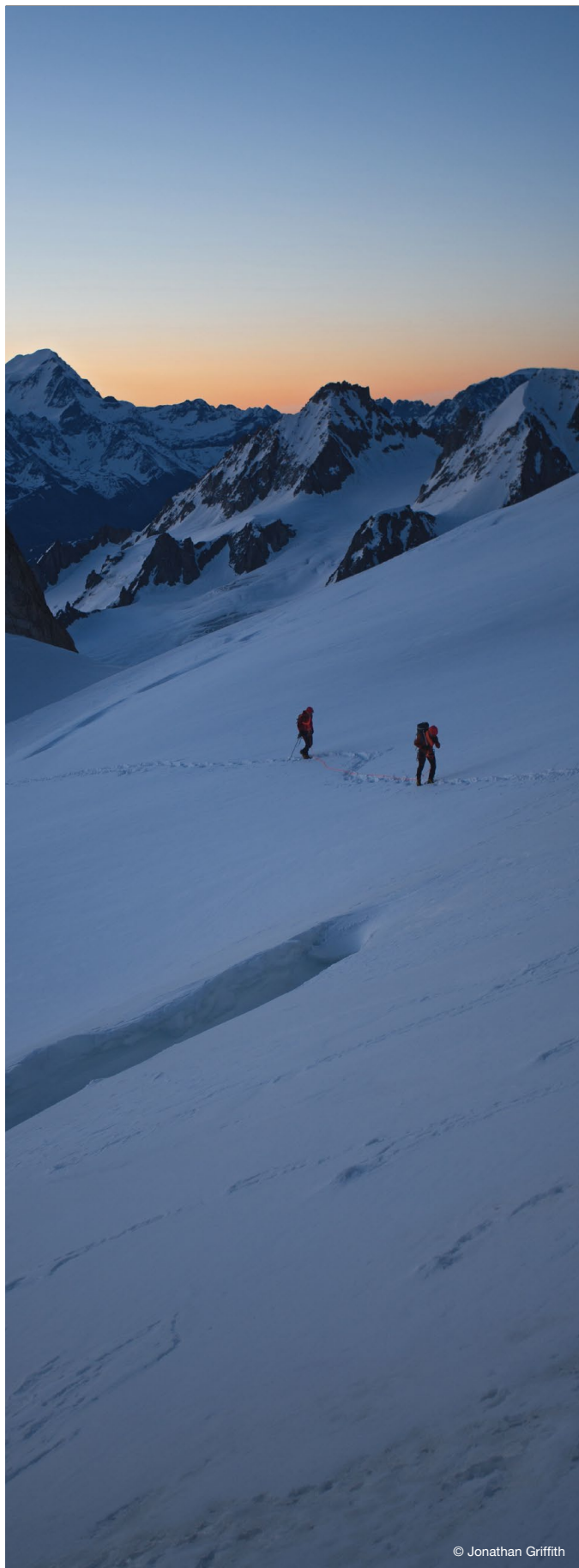


## BASIC

### Multi-purpose compact ascender

The BASIC is a compact ascender that fits well in the hand for rope ascents. The lower attachment hole is large enough to hold the carabiners for the lanyard and the footloop.


Find a complete description of all ascenders at [PETZL.COM](https://www.petzl.com)



© Jonathan Griffith

## Progress capture pulleys

PRO TRAXION   Very efficient loss-resistant progress capture pulley

MICRO TRAXION  Very efficient ultra-light progress capture pulley

## Single pulleys

ULTRALEGERE  Emergency pulley

OSCILLANTE  Swing-sided emergency pulley

FIXE  Pulley with fixed side plates

PARTNER  Compact pulley with swinging side plates


RESCUE  High-strength pulley with swinging side plates

## Prusik pulleys

MINI  Lightweight Prusik pulley

GEMINI  Double Prusik pulley

## Crevasse rescue kit

Crevasse rescue kit  Kit for hauling and self-rescue from crevasses

## Transport pulleys

TANDEM  Double pulley for use with ropes

TANDEM CABLE  Double pulley for use with ropes and cables

TANDEM SPEED  Efficient double pulley for use with ropes and cables

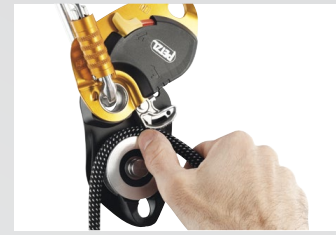
➔ Find all products at [petzl.com](http://petzl.com)

**NEW  
2014**

## PRO TRAXION

### Very efficient loss-resistant progress capture pulley

The PRO TRAXION progress capture pulley was designed to allow rope installation while the pulley is connected to the anchor. With its large diameter sheave and great efficiency, it is particularly appropriate for hauling heavy loads on big walls. The side plate locks when loaded and prevents opening of the pulley during use.



Loss-resistant pulley: rope may be installed when pulley is connected to the anchor.

## MICRO TRAXION

### Very efficient ultra-light progress capture pulley

The MICRO TRAXION is an ultra-light (85 g), ultra-compact progress-capture pulley that is exceptionally efficient (91 %) thanks to its sealed ball bearings. The cam can be locked in open position so the device can be used as a simple pulley. The cam can be locked in open position so the device can be used as a simple pulley. Upper button releases the cam to enable progress capture.



Cam can be locked in open position so device can be used as a simple pulley. Upper button releases the cam to enable progress capture.

## Crevasse rescue kit



MICRO TRAXION



OK SCREW-LOCK



TIBLOC



PARTNER



ST'ANNEAU (120 cm)

### Kit for hauling and self-rescue from crevasses

The kit contains everything needed for setting up a hauling system or a rope ascent in case of a fall into a crevasse: 1 MICRO TRAXION pulley, 2 OK SCREW-LOCK carabiners, 1 TIBLOC ascender, 1 PARTNER pulley and 1 ST'ANNEAU 120 cm sling. This kit is essential for glacier travel (on skis or on foot).



© Lafouche

## Via ferrata lanyards

SCORPIO  
VERTIGO

NEW  
2014



Retractable via ferrata lanyard with tearing energy absorber and VERTIGO WL carabiners

SCORPIO  
EASHOOK

NEW  
2014



Retractable via ferrata lanyard with tearing energy absorber and EASHOOK carabiners

SCORPIO

NEW  
2014



Retractable via ferrata lanyard with tearing energy absorber

VIA FERRATA kit

NEW  
2014



Via ferrata kit containing ELIOS helmet, PANDION harness and SCORPIO VERTIGO lanyard

## Caving lanyard

SPELEGYCA



Asymmetric double lanyard



**NEW 2014** **SCORPIO VERTIGO**  
Retractable via ferrata lanyard with tearing energy absorber and VERTIGO WL carabiners

The SCORPIO VERTIGO lanyard for via ferrata is equipped with two VERTIGO WIRE-LOCK carabiners. It has two arms that are retractable to avoid interfering with movement, and a tearing energy absorber located in a zippered protective pouch, enabling the condition of the absorber to be easily checked. The lanyard also has a third arm to facilitate traverses or to allow attachment to a bar (in order to rest, for example).



Special VERTIGO WIRE-LOCK carabiners for via ferrata: offer excellent grip and facilitate manipulations while passing intermediate anchors thanks to the WIRE-LOCK automatic locking system.



Protective pouch with zippered closure for the tearing energy absorber enables its condition to be easily checked.



**NEW 2014**

SCORPIO VERTIGO



ELIOS



PANDION

## VIA FERRATA kit

Via ferrata kit containing ELIOS helmet, PANDION harness and SCORPIO VERTIGO lanyard

The VIA FERRATA kit offers climbers ready-to-use equipment specific to via ferrata, composed of a PANDION harness, an ELIOS helmet, and a SCORPIO VERTIGO lanyard.





© Lafouche

## Ice anchors

LASER SPEED LIGHT   Lightweight ice screw with integrated crank


LASER SPEED   Ice screw with integrated crank

LASER   Ice screw

## Ice protection accessories


LIM'ICE   Sharpener for ice screws

MULTIHOOK  Multipurpose hook

NITRO 3  Energy absorber for use as a quickdraw

## Rock anchors

V CONIQUE LIVANOS  Chromoly steel channel piton

UNIVERSEL ROCHER MIXTE U  Semi-hardened steel forged piton

COEUR  Bolt hanger

COEUR GOUJON  Complete anchor assembly


BAT'INOX  14 mm resin anchor

COLLINOX  10 mm resin anchor

## Rock and caving anchors

VRILLEE COUDEE  Caving bolt hangers

## Quick links

GO  Oval maillon

DEMI ROND  Semi-circular maillon

## Rock and caving anchor accessories

BONGO  Piton hammer

TAM TAM  Caving hammer

ROCEC  SDS-bit hand drill

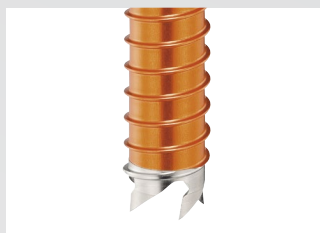
BOLTBAG  Bolting equipment pouch

PROTEC  Rope protector

SWIVEL S  Ball bearing swivel

PAW S  Rigging plate

➔ Find all products at [petzl.com](http://petzl.com)



The aluminum tube makes the screw considerably lighter.



Better handling and screwing speed thanks to the ergonomics of the aluminum hanger and its integrated crank. One-handed use: the screw starts with a single quarter turn.

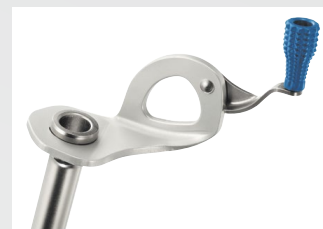
## **NEW 2014** LASER SPEED LIGHT

**Lightweight ice screw with integrated crank**

Ultra-light screw with aluminum tube is ideal for mountaineering. Starting is facilitated by the optimized shape of the steel drill. The integrated folding crank gives an optimized lever, making it easier and faster to screw in.



The drill shape gives excellent starting and facilitates screwing.



Better handling and screwing speed thanks to the ergonomics of the aluminum hanger and its integrated crank. One-handed use: the screw starts with a single quarter turn.

## **NEW 2014** LASER SPEED

**Ice screw with integrated crank**

The LASER SPEED ice screw starts easily due to the optimized drill shape. Strength and durability are improved due to the steel tube and specific threading. The integrated folding crank gives an optimized lever, making it easier and faster to screw in.

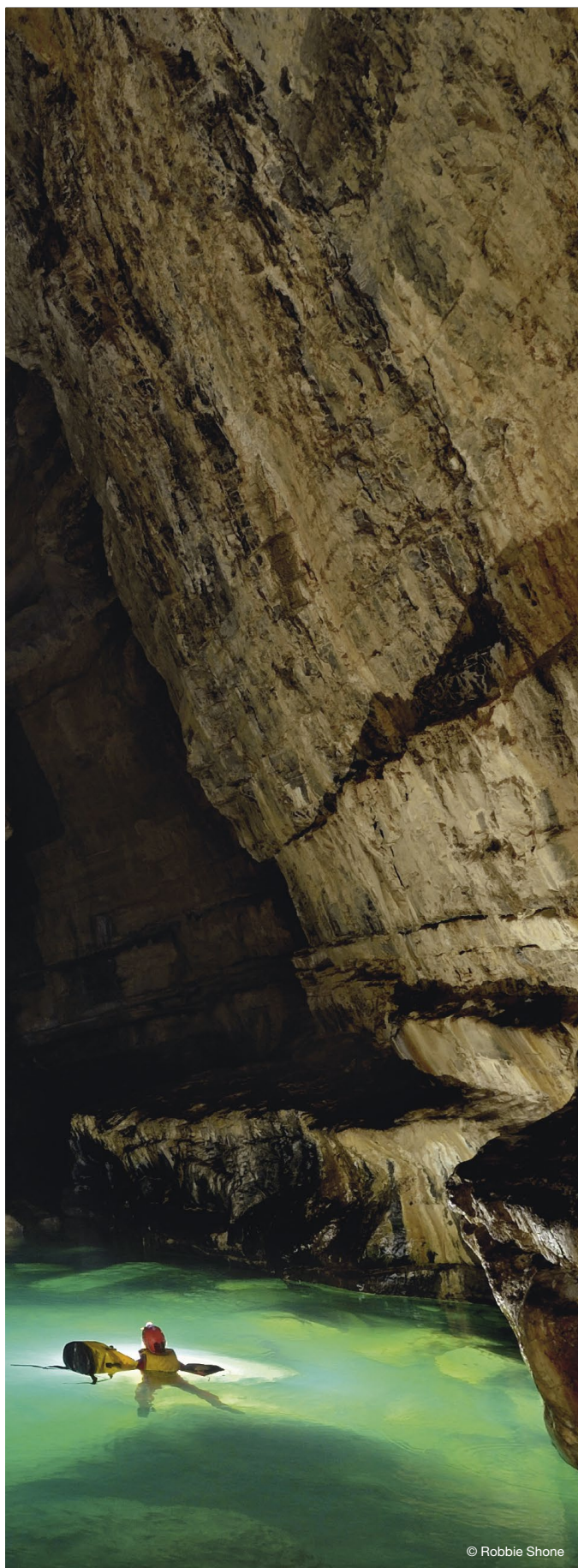


**NEW 2014**

## LIM'ICE

**Sharpener for ice screws**

The simplified handling of the LIM'ICE screw sharpener makes drill sharpening faster and easier. The two sharpening guides optimize precision sharpening on both sides of the drill teeth.



© Robbie Shone

## Chalk bags

SAKAPOCHE



Ergonomically shaped chalk bag with pocket

SAKA



Chalk bag with ergonomic shape

BANDI



Classic cylinder shaped chalk bag

## Chalk

POWER CRUNCH



Chunky chalk

POWER CRUNCH BOX



Chunky chalk in a box

POWER BALL



Chalk ball

POWER LIQUID



Liquid chalk in a tube

## Multi-pitch climbing pack

BUG



Backpack for single-day multi-pitch climbing

## Caving packs

TRANSPORT 45L



Durable and comfortable large capacity pack for caving (45 liters)

PORTAGE 30L



Durable medium capacity pack for caving (30 liters)

CLASSIQUE 22L



Durable medium capacity pack for caving (22 liters)

PERSONNEL 15L



Durable small capacity pack for caving (15 liters)

## Rescue litter

NEST



Rescue litter for cave rescue

Find all products at [petzl.com](http://petzl.com)



## SAKAPOCHE

### Ergonomically shaped chalk bag with pocket

The SAKAPOCHE chalk bag is a variation of the SAKA chalk bag with a zippered bellows pocket. This pocket is sized for storing your keys, money, a granola bar, a small e+LITE headlamp, topo map... The ergonomic shape makes it easy to access the chalk. The soft fabric won't cause discomfort when wearing a pack or when your back is against a rock wall. The closure system is efficient, thanks to the cordlock. It can be opened with only one hand should you forget to open it before you start climbing.



## BUG

### Backpack for single-day multi-pitch climbing

The BUG was specifically designed for multi-pitch long routes climbed in a single day. Its rounded-edge rectangular shape maximizes volume and minimizes interference while in use. Suitable for carrying gear on the approach and when climbing (hydration system, food, clothing, shoes). Everything has been designed for maximum comfort while climbing with the BUG on the back: minimal bulk, shoulder straps allowing freedom of arm movement, comfortable and ventilated back panel, foldaway waistbelt, high positioning for access to back of harness (for chalk bag, gear), side compression straps.



## TRANSPORT 45L

### Durable and comfortable large capacity pack for caving

The TRANSPORT is a particularly comfortable 45 liter backpack designed for caving. It is made of TPU (PVC-free) material, and its welded construction provides greater strength. The TRANSPORT is ideal for long-distance carries with its padded shoulder straps, waistbelt and back panel. The pack also has two molded handles.



Waistbelt, shoulder straps and back panel are padded for comfort.



The cordlock closure is easy to manipulate and functions in difficult environments.



© Jocelyn Chavy

## Gloves

CORDEX PLUS



Belay/rappel gloves

CORDEX



Lightweight belay/rappel gloves

## Sewn slings

FIN'ANNEAU



Ultralight Dyneema sling

ST'ANNEAU



Dyneema sling

ANNEAU



Polyester sling

## Aid climbing accessories

FIFI



Suspension hook for aid climbing

GOUTTE D'EAU



Large radius progression hook

REGLLETTE



Small radius progression hook

QUICKSTEP



Adjustable single-step etrier for aid climbing

LOOPING



4-step etrier for aid climbing

GRADISTEP



Lightweight 5-step etrier for aided sections on free climbs

## Other accessories

SPATHA

NEW  
2014



Knife with carabiner hole

CARNET



Topographic notebook for caving



## CORDEX

### Lightweight belay/rappel gloves

These lightweight belay/rappel gloves combine the durability of a work glove with the precise fit and dexterity of a fine driving glove. Double-layered leather protects the palm and other high-wear areas. The back is made of abrasion resistant, breathable stretch nylon, ensuring comfort and fit. The low profile neoprene cuff with Velcro closure features a reinforced carabiner hole for attaching the gloves to your harness.



## FIN'ANNEAU

### Ultralight Dyneema sling

The lightest and most compact of all our slings, we use 8 mm Dyneema/nylon webbing to cut down on weight without sacrificing strength.



**NEW  
2014**

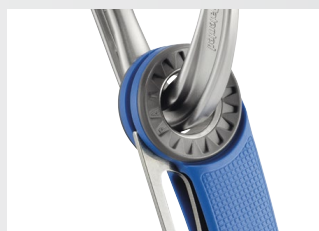
## SPATHA

### Knife with carabiner hole

The SPATHA clippable knife is designed to accompany the climber on every outing. The profile of the blade allows easy cutting of ropes and cordage. It has a hole for a carabiner to attach it to the harness. It is easy to manipulate with its textured wheel, even when wearing gloves, and can be locked in the open position.



Smooth/serrated combo blade easily cuts ropes and cordage.



Carabiner hole allows the knife to be easily attached to the harness.

# LIGHTING EQUIPMENT

78

CLASSIC  
headlamps

80

ACTIVE  
headlamps

82

PERFORMANCE  
headlamps

86

SPECIALIZED  
headlamps



# CLASSIC headlamps



© Dan Patitucci

**NEW 2014**

TIKKINA®



Headlamp for proximity lighting

**NEW 2014**

TIKKA®



Headlamp for proximity lighting and some movement

**NEW 2014**

ZIPKA®



Ultra-compact headlamp for proximity lighting and some movement

e+LITE®



Ultra-compact emergency headlamp

➔ Find all products at [petzl.com](http://petzl.com)

Lighting performance is subject to change; don't hesitate to check [petzl.com](http://petzl.com)





**NEW 2014** TIKKINA®

**Headlamp for proximity lighting**

The TIKKINA headlamp is perfect for proximity lighting, whether camping, in a hut or in a pinch. Its small size and wide beam make it an excellent everyday headlamp. Maximum brightness is 60 lumens, with a range of 30 meters. This headlamp has two lighting modes to adapt the brightness to each situation.



**60** ↘ 5 lumens

**STANDARD LIGHTING**



Wide, uniform lighting for comfortable close-range vision



**NEW 2014** TIKKA®

**Headlamp for proximity lighting and some movement**

The wide beam and two lighting modes of the TIKKA headlamp provide comfortable proximity lighting and allow for some movement. Maximum brightness is 80 lumens, with a range of 40 meters. This headlamp has two lighting modes to adapt the brightness to each situation.



**80** ↘ 5 lumens

**STANDARD LIGHTING**



Wide, uniform lighting for comfortable proximity lighting and movement over short distances.



**NEW 2014**

ZIPKA®

**Ultra-compact headlamp for proximity lighting and some movement**

The ZIPKA headlamp will accompany you wherever you go. Its exclusive retractable cord makes it extremely compact, practical to transport and versatile to wear. It offers comfortable proximity lighting that allows for some movement. Maximum brightness is 80 lumens, with a range of 40 meters. This headlamp has two lighting modes to adapt the brightness to each situation.



**80** ↘ 5 lumens

**STANDARD LIGHTING**

Find a description and the performance of all CLASSIC headlamps at [PETZL.COM](http://PETZL.COM)



© Dan Pattitucci

NEW  
2014



TIKKA® +

Headlamp with CONSTANT LIGHTING technology for outdoor activities

NEW  
2014



TIKKA® XP

Multi-beam headlamp with CONSTANT LIGHTING technology for outdoor activities

➔ Find all products at [petzl.com](http://petzl.com)

Lighting performance is subject to change; don't hesitate to check [petzl.com](http://petzl.com)



**110 lumens**

**CONSTANT LIGHTING**

**BOOST**

**140 lumens**

**NEW 2014** TIKKA® +

Headlamp with **CONSTANT LIGHTING** technology for outdoor activities

The TIKKA + headlamp meets the need for versatility during outdoor activities: proximity lighting, lighting for travel (110 lumens, 50 meters), Boost mode (140 lumens, 60 meters) for temporary access to maximum power, red lighting and strobe mode usable at any time to signal one's presence. **CONSTANT LIGHTING** technology: brightness does not decrease gradually as the batteries are drained.



Mixed beam designed for proximity lighting and movement. Boost mode provides temporary access to maximum power.



Headband has fabric and elastic components for improved comfort and positioning during dynamic activities.



**120 lumens**

**CONSTANT LIGHTING**

**BOOST**

**160 lumens**

**NEW 2014** TIKKA® XP

Multi-beam headlamp with **CONSTANT LIGHTING** technology for outdoor activities

The TIKKA XP headlamp is designed for all scenarios encountered during outdoor activities. With its multi-beam, it offers comfortable proximity lighting, allows movement, and provides long-range vision (120 lumens, 50 meters). The headlamp also has a Boost mode (160 lumens, 70 meters), offering temporary access to maximum power, and red lighting and strobe mode, usable at any time to signal one's presence. **CONSTANT LIGHTING** technology: brightness does not decrease gradually as the batteries are drained.



Multi-beam headlamp designed for proximity lighting, moving around and distance vision. Boost mode provides temporary access to maximum power.



Headband has fabric and elastic components for improved comfort and positioning during dynamic activities.

Find a description and the performance of all ACTIVE headlamps at [PETZL.COM](http://PETZL.COM)



© Lafouche

NEW  
2014

TIKKA® R+



Compact, powerful and rechargeable headlamp with REACTIVE LIGHTING technology for performance

NEW  
2014

TIKKA® RXP



Compact, powerful, multi-beam rechargeable headlamp, with REACTIVE LIGHTING technology for performance

NAO®



Rechargeable headlamp with self-adjusting lighting - REACTIVE LIGHTING technology

### Accessories

EU/US USB wall charger



Charger with European and North American USB wall adapters

USB charger



Charger with USB wall and car adapters

### TIKKA R+, TIKKA RXP accessories

ACCU TIKKA® R+, TIKKA® RXP



Rechargeable battery for TIKKA R+ and TIKKA RXP headlamps

TIKKA® R+, TIKKA® RXP battery pack



Pack for 3 LR3/AAA batteries for TIKKA R+ and TIKKA RXP headlamps

### NAO accessories

NAO® belt kit



Extension cord and belt clip for NAO headlamp

ACCU NAO®



Rechargeable battery for NAO headlamp

Lighting performance is subject to change; don't hesitate to check [petzl.com](http://petzl.com)



**170 lumens**  
 ↓  
 7  
**REACTIVE LIGHTING**  
 USB Rechargeable - Li-Ion battery

**NEW 2014** TIKKA® R+

**Compact, powerful and rechargeable headlamp with REACTIVE LIGHTING technology for performance**

REACTIVE LIGHTING technology now maximizes performance of the TIKKA, the standard in compact headlamps. Light output adapts instantly to the environment and is optimized to guarantee the chosen burn time. The mixed beam gives the advantage of lighting adapted to close-range vision and to moving around (from 7 to 170 lumens, from 2 to 65 meters). The rechargeable Lithium-Ion battery with USB connection is suitable for frequent use.



REACTIVE LIGHTING mode: light output and beam pattern adapt instantly, due to the light sensor. High-power LED for a versatile mixed beam.



Comfortable headband is easy to adjust. Two-part construction at the back of the head for excellent support during dynamic activities.



**215 lumens**  
 ↓  
 7  
**REACTIVE LIGHTING**  
 USB Rechargeable - Li-Ion battery

**NEW 2014** TIKKA® RXP

**Compact, powerful, multi-beam rechargeable headlamp, with REACTIVE LIGHTING technology for performance**

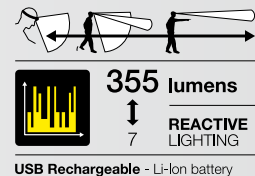
REACTIVE LIGHTING technology now upgrades the TIKKA, the standard in compact headlamps. Light output and beam pattern instantly adjust to the environment. Light output is optimized to ensure the chosen burn time. The wide, mixed or focused beam gives lighting that can be adapted to any situation, from close-range to distance vision (from 7 to 215 lumens, from 2 to 110 meters). The rechargeable Lithium-Ion battery with USB connection is suitable for frequent use.



REACTIVE LIGHTING mode: light output and beam pattern adapt instantly, due to the light sensor. Two high-power LEDs for a wide, mixed or focused beam.



Comfortable headband is easy to adjust. Two-part construction at the back of the head for excellent support during dynamic activities.



## NAO®

### Rechargeable headlamp with self-adjusting lighting - REACTIVE LIGHTING technology

The rechargeable NAO headlamp adapts its two high power LEDs instantly and automatically to lighting needs for greater comfort, fewer manual interventions and longer burn time. The OS by Petzl software, free for download at [www.petzl.com/OS](http://www.petzl.com/OS), allows the NAO's potential to be maximized with the option to customize the headlamp and its performance.



Light sensor allows the headlamp to adapt its beam pattern and the power of its two LEDs instantly and automatically to lighting needs.



The rechargeable Li-Ion battery is easy to charge with its integrated USB plug (compatible with all USB chargers).



## NAO® belt kit

### Extension cord and belt clip for NAO headlamp

The kit contains an extension cord and clip for attaching the rechargeable battery to a bag, a belt... With the NAO belt kit, the NAO's rechargeable battery can be put in a pocket or on a belt to reduce the weight worn on the head. In winter, this system protects the rechargeable battery from cold and thus increases its burn time.



## ACCU NAO®

### Rechargeable battery for NAO headlamp

The spare Lithium-Ion rechargeable battery guarantees high performance for the NAO headlamp, even at low temperatures. It recharges directly via USB with its integrated connection.



Lighting performance is subject to change; don't hesitate to check [petzl.com](http://petzl.com)

© Lafouche



© John Evans

## Orienteering races, cycling

ULTRA RUSH®  
BELT



Ultra-powerful headlamp with CONSTANT LIGHTING technology ACCU 4 remote rechargeable battery

ULTRA RUSH®



Ultra-powerful headlamp with CONSTANT LIGHTING technology ACCU 2 rechargeable battery

## Caving

ULTRA VARIO®  
BELT



Ultra-powerful multi-beam headlamp with CONSTANT LIGHTING technology and ACCU 4 remote rechargeable battery

ULTRA VARIO®



Ultra-powerful multi-beam headlamp with CONSTANT LIGHTING technology ACCU 2 rechargeable battery

TRIOS

NEW  
2014



Caving helmet with integrated ULTRA VARIO headlamp

DUO® LED 5  
DUOBELT LED 5



Hybrid waterproof headlamp: halogen/5 LEDs

DUO® LED 14  
DUOBELT LED 14



Hybrid waterproof headlamp: halogen/14 LEDs with 3 constant lighting modes

SPELIOS

NEW  
2014



Caving helmet with integrated DUO LED 14 headlamp

## Hunting and fishing

TACTIKKA® +

NEW  
2014



Headlamp with CONSTANT LIGHTING technology for hunting and fishing

TACTIKKA® +RGB

NEW  
2014




Headlamp with CONSTANT LIGHTING technology and lighting that allows for stealth and night vision preservation for hunting and fishing

Lighting performance is subject to change; don't hesitate to check [petzl.com](http://petzl.com)



Orienteering races, cycling

**760 lumens**

**CONSTANT LIGHTING**

Rechargeable - Li-Ion battery



Ultra-powerful, uniform and long-distance lighting adapts to intense, demanding activities.

## ULTRA RUSH® BELT

**Ultra-powerful headlamp with CONSTANT LIGHTING technology and ACCU 4 remote rechargeable battery**

Both durable and extremely powerful at 760 lumens, the ULTRA RUSH BELT rechargeable headlamp is the lighting solution designed for intense, demanding activities. It is ideal for fast-paced activities where lighting is crucial, such as trail running, skiing, or mountain biking at night. The four lighting modes allow the user to choose between power and burn time according to his needs. The high-capacity ACCU 4 ULTRA remote rechargeable battery allows the user to reduce the weight worn on the head while keeping the battery warm, for example under clothing, in order to optimize burn time in cold conditions. Ergonomics and construction make the ULTRA RUSH BELT headlamp particularly intuitive and reliable in any situation.



## ULTRA harness

**Harness for carrying the ULTRA headlamp's remote battery pack on the back**

Light, ergonomic harness designed for comfortably carrying the ULTRA headlamp's remote battery pack. Worn close to the body, this sculpted harness is completely adjustable to guarantee excellent comfort while remaining stable and securely positioned.



## ULTRA mount for cycling helmet

Plates for mounting ULTRA headlamp on cycling and mountain biking helmets with thick or thin edges



## ULTRA mount for bicycle handlebars

Plates for mounting ULTRA headlamps on bicycle handlebars and for carrying battery packs

## Caving



**520 lumens**

**CONSTANT LIGHTING**

Rechargeable - Li-Ion battery

### ULTRA VARIO®

**Ultra-powerful multi-beam headlamp with CONSTANT LIGHTING technology and ACCU 2 rechargeable battery**

Multi-beam lighting up to 520 lumens makes the ULTRA VARIO rechargeable headlamp suited for the most demanding activities. It is ideal when lighting needs and precision are crucial, as in caving or mountaineering. This headlamp has four lighting modes that allow the user to adapt the lighting to different situations: ambient lighting, proximity lighting, lighting for movement, or long-distance lighting. The compact ACCU 2 ULTRA rechargeable battery offers the perfect balance between capacity and compactness, making it comfortable on the head. Ergonomics and construction make the ULTRA VARIO headlamp particularly intuitive and reliable in any situation.



Multi-beam lighting to address different situations encountered in the field.

**NEW**  
2014



### TRIOS

**Caving helmet with integrated ULTRA VARIO headlamp**

The TRIOS helmet is designed for cavers looking for a two-in-one solution that is complete, durable and comfortable. Lighting is ensured by the rechargeable ULTRA VARIO headlamp. With four multi-beam lighting modes, it is ideal under any conditions, for example for proximity vision with maximum burn time or for long-distance vision.

## Hunting and fishing



	<b>110 lumens</b>
	<b>CONSTANT LIGHTING</b>
<b>BOOST</b>	<b>140 lumens</b>

**NEW 2014** TACTIKKA® +  
Headlamp with **CONSTANT LIGHTING** technology for hunting and fishing

The TACTIKKA + headlamp is designed for activities where stealth is key: hunting, fishing, nature watching... Its mixed beam (wide base with focused component) is adapted for proximity lighting and movement. Red lighting for stealth when necessary. **CONSTANT LIGHTING** technology: brightness does not decrease gradually as the batteries are drained. Maximum brightness is 110 lumens, with a range of 50 meters. Boost mode allows temporary access to a brightness of 140 lumens (60 meters).



	<b>120 lumens</b>
	<b>CONSTANT LIGHTING</b>
<b>BOOST</b>	<b>140 lumens</b>

**NEW 2014** TACTIKKA® +RGB  
Headlamp with **CONSTANT LIGHTING** technology and lighting that allows for stealth and night vision preservation for hunting and fishing

The TACTIKKA +RGB headlamp meets the need for versatility required for activities where stealth is key: hunting, fishing, nature watching... Its mixed beam (wide base with focused component) is adapted for proximity lighting and movement. Its three lighting modes, red, green and blue, allow the user to be discreet and to preserve night vision when necessary. **CONSTANT LIGHTING** technology: brightness does not decrease gradually as the batteries are drained. Maximum brightness is 120 lumens, with a range of 50 meters. Boost mode allows temporary access to a brightness of 140 lumens (60 meters).



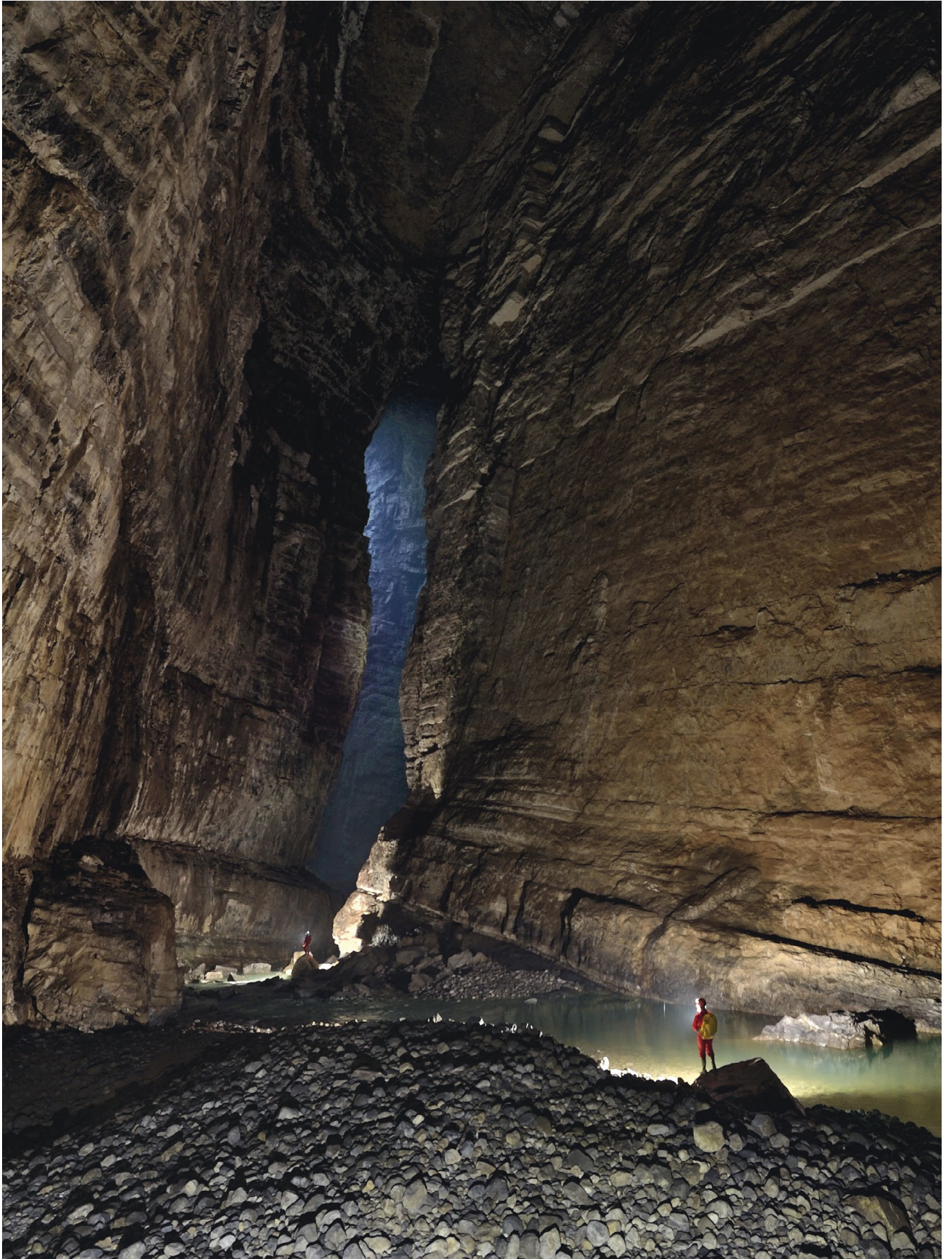
Several modes and lighting colors adapt to each situation:

- proximity lighting, movement, and Boost mode
- red, green and blue lighting for stealth and preservation of night vision
- strobe mode for signaling one's presence



Elastic headband is easy to adjust with a simple buckle.

Find a description and the performance of all SPECIALIZED headlamps at [PETZL.COM](http://PETZL.COM)



## Warning

Activities at height are inherently dangerous and may result in serious injury or death. Take the time to fully read and understand the information presented in this catalog, as well as the instructions for use that come with the products. Gaining an adequate apprenticeship is your own responsibility. The information presented in this catalog is believed to be correct at press time. But it is not guaranteed to be exhaustive, correct, understandable, or up-to-date. Petzl reserves the right to modify this information at any time. Petzl's civil liability does not extend to products that have been modified or repaired outside our factories. Contact Petzl if you have any doubts or difficulty understanding the information presented in this catalog. ([www.petzl.com/contact](http://www.petzl.com/contact))



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Headquarters  
PETZL INTERNATIONAL  
Z.I. Crolles  
38920 CROLLES  
FRANCE  
[www.petzl.com](http://www.petzl.com)

### Design

Petzl

### Graphic design

Pierre Bena design - Annecy, France  
[www.pierrebenadesign.com](http://www.pierrebenadesign.com)

### Technical drawings

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### Product photos

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