



# 2017/18 EUROPEAN ICE CLIMBING WEEK EQUIPMENT LIST

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## Equipment Checklist

You **MUST bring all items** listed on the enclosed clothing and equipment checklist. The only exception is the items listed as optional; this is very important. Please contact us with any questions you have pertaining to equipment or clothing. At the same time, you must keep your equipment weight to a minimum.

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### 1.0 Body Wear

- Waterproof shell jacket
- Waterproof shell pants
- Down jacket
- Midweight insulated jacket
- Lightweight fleece top
- Softshell jacket/Windshirt (*Optional*)
- Softshell climbing pants
- Base layer top and leggings x 1 set
- Underwear

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### 2.0 Head Wear

- Sun hat
- Warm hat
- Balaclava
- Sunglasses (*plus an Optional spare pair*)
- Ski goggles
- Bandana or Buff

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### 3.0 Hand Wear

- Liner gloves
- Fleece gloves
- Mountaineering gloves

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### 4.0 Foot Wear

- Socks
- Mountaineering boots
- Snow gaiters (*Only required if your boots do not have an integrated gaiter*)

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### 5.0 Packs & Bags

- Climbing pack (*40 litres*)

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### 6.0 Accessories

- Headlamp plus spare batteries
- Stuff sacks and plastic bags
- Personal toiletries
- Personal first aid kit and medications
- Sun block and lip balm
- Water bottle (*1 litre*)
- Thermos flask
- Camera and spare batteries (*Optional*)
- Chemical hand and toe warmers (*Optional*)
- Personal entertainment (*Optional*)
- Additional snack food (*Optional*)

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### 7.0 Climbing Equipment

- Technical ice tools x 2 (*50cm*)
- Crampons
- Climbing helmet
- Climbing harness
- Belay device
- Locking carabiners x 3
- Non-locking carabiners x 3
- Prusiks x 3 (*1 x Long and 2 x Short*)
- 120cm tape sling

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### 8.0 Other

- Casual wear
- Passport, documents and copies

# Clothing and Equipment Information Guide

The following information is a guide to assist you in securing the required clothing and equipment for climbing in the Alps in winter, along with recommended brands. You may have equipment you have used which is different to what is on the list, so please read thoroughly and get back to us with any questions you may have.

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## Fabrics/Garment Designs/Garment Selection

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Today there is a bewildering and ever-changing array of modern technical fabrics and garments on the market. Accordingly, suitable mountain attire can be derived from a wide variety of garments utilized in varying combinations. The clothing on our gear list can be creatively substituted according to your preferences but ensure your choices are functional and adequate. For example, a functional and often utilized garment that does not appear on our list is a vest.

A basic principle in selecting clothing and equipment is to minimize weight and bulk while still ensuring adequate warmth and functionality. It can be difficult to find a brand that has all the features you prefer which means you must make prudent compromises. In the description below and for certain items, we suggest brands and specific products that we have found to be suitable; this is by no means definitive. In some cases, there are multiple suitable brands on the market and hence we do not make specific suggestions.

Appropriate fabrics used in thermal underwear include polypropylene, silk and merino wool. The only cotton garment worn during the climb is your glacier shirt. Warmer insulating materials can be made from fleece, softshell or Primaloft. Varieties of fleece include Windstopper, Wind Pro, Power Shield, Windbloc, Power Dry and Power Stretch. Be aware that fleece garments that incorporate stretch fabric take longer to dry. Softshell garments integrate stretchy nylon fabrics to increase freedom of movement while also providing various degrees of wind and water resistance in a 'softshell'. They are often lined with a microfleece for increased insulation. Synthetic insulation materials such as Primaloft are advantageous as they are warm even when damp, are water resistant and quick-drying.

You can read Guy Cotter's thoughts on the ultimate lightweight layering system at:

<http://www.adventureconsultants.com/adventure/LightweightGear/>

## 1.0 Body Wear

### Waterproof Shell Jacket

This can be made from Gore-Tex or a similar waterproof breathable material. Look for a model with a full front zipper, a good attached hood with draw cord and so on for good adjustability, so that it will fit over a helmet. Preferably, the jacket should be long enough to allow a generous overlap with your shell pants, when you bend over. Obviously, a technical mountaineering jacket is ideal, but many general-purpose jackets are sufficient.

*We recommend The North Face Summit L5, Arc'teryx Alpha SV, Montane Endurance Pro or the Rab Latok Shell Jackets.*

### Waterproof Shell Pants

These are made from Gore-Tex or a similar waterproof breathable material. These must have full length zips down the legs, so they can be put on and taken off, when you are wearing boots and crampons. The bib/salopette types are warmer as they extend above the lower back/kidney area giving a good overlap with your jacket. Make sure they have sufficient movement to enable you to lift your legs high and enough room to wear light fleece pants underneath.

*We recommend The North Face Summit L5 Fuse GTX, Arc'teryx Alpha SL, Montane Alpine Pro or the Rab Latok Alpine Waterproof Shell Pants.*

### Down Jacket

During the colder winter months, a good quality down jacket can be a lifesaver! A midweight down jacket with a hood is recommended. Although some down jackets have a waterproof and breathable outer fabric, these fabrics are not totally waterproof unless they are seam sealed.

*We recommend The North Face Immaculator, Mountain Equipment Vega or the Rab Neutrino Endurance Down Jackets.*

		
Arc'teryx Alpha SV Jacket	The North Face Summit L5 Fuse GTX Waterproof Shell Pants	Rab Neutrino Endurance Down Jacket

### Midweight Insulated Jacket

This can be a synthetic insulated jacket (Primaloft, etc.), insulated softshell or thick fleece with a full front zip for ventilation. Zip up pockets help avoid losing items which are stored in there and a hood is also a bonus.

*We recommend The North Face Thermoball Hoody, Rab Xenon X, Montane Prism or the Arc'Teryx Atom LT Jackets.*

### Lightweight Fleece Top

A lightweight (100 weight) fleece or expedition weight thermal top is a good addition layer to keep your thermoregulation perfected. Wear it as your top layer when warm and then put your midweight jacket over it, when it gets colder. It can be a light fleece pullover or have a short or full zip. A zip chest pocket is useful for keeping sun cream and snack bars accessible.

*We recommend The North Face TKA ¼ Zip, Rab Power Stretch Pull-on, Montane Power Up Hoodie, Patagonia R1 Hoodie, Montane Allez Micro Hoodie or the Arc'Teryx Kenseal Hoody.*

### Softshell Jacket/Windshirt (Optional)

These jackets are ideal for aerobic activity in light weather conditions. They are wind-resistant, water repellent and highly breathable. They are used either alone or as an insulating layer under a waterproof shell jacket and models with a hood are best.

*We recommend the Marmot ROM, Arc'Teryx Gamma MX Hoody and Psiphon SL, Rab Kinetic Plus and Torque Softshell Jackets. Windshirts we recommend include the Marmot Ether Hoody and Rab Vapour-rise Alpine Jacket.*

### Softshell Climbing Pants

Softshell pants are made of high-performance synthetic stretch fabrics that are resistant to abrasions and tears. They hold up extremely well to mountain abuse. They are typically water-resistant (not waterproof), which means they are breathable, shed light rain and snow and dry quickly when they get wet, but do not replace Gore-Tex shell pants.

We recommend *The North Face Summit L4, Marmot Scree, Rab Vantage or the Montane Champex Pants.*

### Base Layer Top and Leggings x 1 Set

Long sleeve thermal tops made of polypropylene, merino or polyester are excellent. A high neck with a zip allows for better temperature control.

Thermal long-johns made of the same materials as thermal tops are lightweight and provide lots of additional warmth, if worn under your climbing pants.

We recommend *The North Face Warm, Rab Merino+, Patagonia Capilene, Icebreaker, Montane Primino or the Smartwool Base Layer Ranges.*

### Underwear

Bring sufficient changes of your regular underwear. It is possible to buy polypropylene, silk or merino briefs and singlets, which are warmer and dry faster if you get wet however, most people use their normal and most comfortable underwear.

We recommend *the Smartwool, Icebreaker, Montane Primino or the Rab Merino+ Underwear Ranges.*

		
The North Face Summit L4 Softshell Pant	Rab Merino+ 160 Long Sleeve Zip Tee	Julbo Monte Bianco Sun Glasses

## 2.0 Head Wear

### Sun Hat

A wide brimmed soft hat or baseball cap in conjunction with a bandana to protect you from the sun.

We recommend *The North Face Adventure Consultants Branded Caps, available from our office.*

### Warm Hat

Your hat can be wool, merino, Windstopper or fleece. It should extend over the ears and be snug enough not to fly off in a strong wind.

We recommend *The North Face Bones Beanie or the Rab Shadow Beanie.*

### Balaclava

A polypropylene, fleece or silk balaclava is necessary.

We recommend *the Smartwool or the Rab Power Stretch Balaclavas.*

### Sunglasses

Preferably the glacier glasses style with side protection, although there are some excellent 'wraparound' styles available now. Light reflecting in from the side can cause lots of damage with the high levels of sunlight in the mountains. The lens should be dark enough to withstand the intense reflection from the snow and must filter 100% of UV light.

We recommend *Oakley, Bollé, Adidas, Julbo and Smith Sunglasses.*

### Ski Goggles

High-quality goggles for sun and wind protection at altitude. The lens should offer visible light transmission (VLT) of no more than 30%. Those with light-sensitive eyes may wish to use a darker lens. Photochromatic models are ideal for use in changing conditions. If you wear prescription glasses, please ensure they fit under your goggles.

We recommend *Oakley, Bollé, Adidas, Julbo and Smith Ski Goggles.*

### Bandana or Buff

A fleece or silk neck gaiter, neck warmer or Buff is a great idea for added warmth and sun protection. A Buff makes a good face mask in windy cold weather and can replace a balaclava, when used with a warm hat.

We recommend the Adventure Consultants Branded Buff, available from our office.

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### 3.0 Hand Wear

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#### Liner Gloves

A couple of pairs of polypropylene, wool, silk or polyester base layer gloves to give your hands some extra warmth.

We recommend the Black Diamond Lightweight, Rab Stretch Knit or Budget Polypropylene, Gloves.

#### Fleece Gloves




Bring an additional pair of fleece or Windstopper gloves that can be used as spares for your removable liner gloves or doubled up, if it is really cold.

We recommend The North Face Powerstretch, Black Diamond Midweight or the Rab Power Stretch Pro Fleece Gloves.

#### Mountaineering Gloves

A warm pair with a wind and waterproof shell is essential for times of limited movement e.g. when belaying. Winter climbing is notoriously cold, so you will appreciate a good pair of gloves. We generally use Gore-Tex (or a similar waterproof fabric) gloves with separate insulated liners, so the liners can be removed to make drying easier. A good model will also have abrasion resistant leather palms and shaped fingers. We recommend that you attach wrist loops to these gloves to prevent them being blown away by the wind.

We recommend The North Face Vengeance, Rab Alliance or the Outdoor Research Alti Mountaineering Gloves.

		
Adventure Consultants Branded Buff	Rab Alliance Mountaineering Gloves	Scarpa Phantom Guide Mountaineering Boots

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### 4.0 Foot Wear

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#### Socks

Have at least two pairs of socks with you for the trip. Socks made from wool or a mix of fibres with good thermal properties are the best choice. Some people wear combinations of thick (wool socks) and thin socks (polypropylene or ski liner socks) rather than just one pair. Try your socks out with your boots before your trip to ensure a good fit.

We recommend Smartwool, Bridgedale and Thorlo Socks.

#### Mountaineering Boots

An insulated leather mountaineering boot is ideal for climbing in the Alps, but make sure they are waterproof, supportive and warm enough for snow and ice climbing. The right fit is more important with leathers than for plastics and they need to be worn in, so make sure you do several multi-hour hikes on rough terrain and hills before you wear them in the mountains.

The boots must have a reasonable sized welt at the back and front to accept 'clip on' crampons. You will need a fully rigid sole for climbing steep ice.

Plastic or new-generation synthetic rigid soled boots with removable liners can also be used for higher elevation ascents around Mont Blanc or when it is very cold. However, leather and synthetic boots are the status quo these days.

We recommend the La Sportiva G5, Trango Ice Cube, Nepal Evo and G2 SM or the Scarpa Mont Blanc, Phantom Guide or Phantom 6000 Mountaineering Boots.

#### Snow Gaiters (only required if your boots do not have an integrated gaiter)

Full calf-length gaiters keep the snow out and need a good tie down system under the in-step, to stop them creeping up at the heel and allowing snow in. A Velcro or zip closure at the front is best for putting them on and removing them easily.

We recommend the Sea to Summit Alpine or the Rab Latok Extreme Gaiters.

## 5.0 Packs & Bags

### Climbing Pack (40 Litres)

There are many models available which are suitable. Required features include a volume of about 40 litres as well as crampon and ice axe attachment points. Avoid trekking style packs with bulky side pockets.

We recommend the Osprey Mutant 38, Lowe Alpine Ascent or the Black Diamond Speed Mountaineering Packs.

		
Black Diamond Speed 40 Climbing Pack	Petzl Actik Headlamp	Nalgene 1 Litre Wide Mouth Bottles

## 6.0 Accessories

### Headlamp and Spare Batteries

You will need a good headlamp and don't forget spare batteries.

We recommend the Petzl Actik, LED Lenser SEO 7R or the Black Diamond Storm and Spot Headlamps.

### Stuff Sacks and Plastic Bags

For keeping your gear organised and dry.

We recommend the Sea to Summit Stuff Sacks and Dry Bags.

### Personal Toiletries

Bring a small toilet kit - flannel, small towel, some soap, toothpaste, toothbrush and a towel.

### Personal First Aid Kit and Medications

A basic personal first aid kit is necessary including blister tape, 2nd skin (optional), gauze pads, crepe and triangular bandages, and painkillers. Also bring any personal medication required. *(Please remember to inform your guide if you are on prescription medicine. Your standard medications can be dangerous at altitude).* Store the first aid kit in a waterproof container or a plastic bag inside a stuff sack is often adequate.

### Sun Block and Lip Balm

A small bottle or tube of maximum protection sun block and lip balm (with SPF 15 or higher) is worth carrying in your pocket for application during the day.

### Water Bottle (1 Litre)

The wide mouth plastic bottles are good. Camel back style water bladders are good in theory but can often freeze and are easily punctured.

We recommend the Nalgene 1 Litre and 500ml Wide Mouth Bottles.

### Thermos Flask

You can bring a small, insulated vacuum flask, made from stainless steel and about 500ml-1 litre in capacity for hot drinks.

We recommend the Primus Vacuum Bottles.

### Camera and Spare Batteries (Optional)

Your choice of SLR or fully automatic cameras. Be aware that batteries can be a problem in cold temperatures, so it is important you bring spare sets of batteries.



## Chemical Hand Warmers (Optional)

You could bring one or two sets of lightweight disposable chemical hand and toe warmers. Make sure they are designed for use in low oxygen environments.

*We recommend the Grabber Brand of Hand and Toe Warmers.*

## Personal Entertainment (Optional)

Consider taking an iPod and/or a good book.

## Additional Snack Food (Optional)

Bring any personal favourites that you wish. We recommend you bring at least 4 GU sachets for instant carbohydrate replacement on the climb. You may also bring electrolyte drink to mix in your water bottles.

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## 7.0 Climbing Equipment

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### Technical Ice Tools x 2

For technical ice-climbing, you need a short axe around 50cm in length and a reverse curve pick is ideal. The reverse curve picks hold better on steep ice, although they are more difficult to self-arrest with.




Many tools are modular, so do check that the bolts attaching your picks, hammer and adze are tight before each climb.

Many modern ice tools come without adzes or hammers, and whether you choose to have either on your tools is up to you. An adze is used a lot for clearing away rotten or old ice and must be a good angle to do so. A hammer is used for setting pitons and snow stakes, smashing ice and jamming in cracks, and can receive quite a lot of abuse on a climb. It must be very secure with a good striking surface.

Shafts are usually either metal or carbon fibre and some have rubber hand grips. A rubber grip at the base of the shaft makes it easier to hold, when climbing steeper ground. Most modern ice tools have bent shafts, which are useful for protecting your knuckles and for climbing over ice bulges. Some tools have ergonomic handles which makes leashless climbing much easier, but these are harder to plunge into snow than straight handles. The spike at the bottom of the tool should be sharp, yet not razor sharp (ouch!).

Wrist leashes may be needed for support when climbing on steeper ground. The correct length allows you to hold the bottom of the shaft with the sling tight. If not using leashes, an umbilical cord is highly recommended, to prevent losing your tool should you drop one on a climb.

*We recommend the Petzl Nomic or Quark, Black Diamond Fuel, Viper and Cobra, Grivel Light Machine and Tech Machine or the Singing Rock Bandit Tools.*

		
Petzl Quark Ice Tools	Black Diamond Cyborg Pro Crampons	Black Diamond Vapor Climbing Helmet

### Crampons

A clip-on crampon with a steel bail at the toe are highly recommended for ice-climbing, but you can also use a clip-on crampon with toe harness. Vertical front points penetrate steep ice much better than horizontal points. The front points of your crampons should stick out from the front of the boot about 2.5cm.

Be sure to check the heel-piece of the clip-on crampon is compatible with your boots and stays in place, when in the up position. Being familiar with your equipment before your trip is advantageous.

*We recommend the Petzl Sarken, Lynx and Dartwin, Black Diamond Cyborg or the Grivel G14 and G22 Crampons.*

### Climbing Helmet

Helmets designed for climbing are lightweight and designed to deflect falling ice and rocks. They also protect the head in a fall. Climbing helmets come in two main types – hardshell helmets and shelled foam helmets. Helmet makers use different terms for each type of helmet, so focus instead on telltale construction details like shell hardness, foam thickness and

number of vents. Plastic becomes brittle as it ages so if you are borrowing a plastic helmet, then it should not be more than 4 years old. Check the size and make sure that it will adjust for when you are wearing your hat underneath.

*We recommend the Petzl Sirocco and Meteor, and the Black Diamond Vapor or Vector Climbing Helmets.*

### **Climbing Harness**



A sit harness is used for most mountaineering situations. These should be lightweight and adjustable around the waist and legs. A specially designed alpine harness is easier to get in and out of (Important when nature calls!) when you have boots and crampons on than many rock climbing harnesses, which have fixed leg loops and hence cannot be adjusted for different clothing layers. Wear your mountaineering layers when trying a harness on, to ensure it fits over all your clothing layers. Comfort is essential as you may be sitting in it for quite some time whilst belaying your climbing partner.

*We recommend the Petzl Aquila, Adjama or Luna, Arc'Teryx AR-395A, the Black Diamond Xenos or the Technician Climbing Harnesses.*

### **Belay Device**

You'll need one belay device and we choose to use tubular style units which have two holes for the rope to pass through. They are lightweight, easy to use and are compatible with single or double ropes.

*We recommend the Black Diamond ATC-XP or the Petzl Verso Belay Devices.*

		
Petzl Adjama Climbing Harness	Black Diamond ATC XP Belay Device	Petzl William Screwgate Carabiner

### **Locking Carabiners x 3**

Bring 3 lightweight locking carabiners which have either a 'screw gate' or 'twist lock' gates. Do not get the ball lock type! Whichever you choose, please practice with them with your gloves on at home.

*We recommend Petzl and Black Diamond Locking Carabiners.*

### **Non-Locking Carabiners x 3**

Bring 3 lightweight non-locking or snap link carabiners.

*We recommend Petzl and Black Diamond Non-Locking Carabiners.*

### **Prusiks x 3 (1 x Long and 2 x Short)**

A prusik is a friction hitch or knot used to attach a loop of cord around a rope. Prusiks are generally made from 6mm cord. You will need to bring 3 prusiks on this trip - a long prusik made from 3.2m of cord and two short prusiks made from 1.6m lengths. Use a double or triple fisherman's knot to join the ends and create the loop. Your guide can help tie these during the course.

### **120cm Tape Sling**

Bring along a 120cm sewn/tied length of sling.

*We recommend Beal, Edelrid and Blue Water Sewn Slings.*

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## **8.0 Other**

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### **Casual Wear**

Bring along a casual range of clothes for when you have time in town.

### **Passport, Documents and Copies**

Make a copy of all of your important documents and keep them in a separate safe place.



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**NOTE: If you found you have forgotten anything when you arrive in Chamonix, do not worry as there are plenty of stores that specialise in mountaineering equipment. Your guide will be happy to help you with any purchases you would like to make.**

**If you would like to rent any equipment, please let the staff at the office know and they will make sure that it is put aside for you and available for you, upon your arrival. If you have any questions, please ask.**

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