



# 2021/2022 EUROPEAN ICE CLIMBING WEEK EQUIPMENT LIST

## EQUIPMENT CHECKLIST

You MUST bring all items listed on the clothing and equipment checklist below. The only exceptions are items listed as optional and this is very important. At the same time, you must keep your equipment weight to a minimum. Please contact us with any questions you may have about the equipment or clothing on this list.

### 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

### Head Wear

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

### Hand Wear

- Liner gloves
- Fleece gloves
- Mountaineering gloves

### Foot Wear

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

### Packs & Bags

- Small duffel/travel bag
- Climbing pack (40 litres)

### Accessories

- Surgical style face mask
- Hand sanitiser
- Headlamp plus spare batteries
- Stuff sacks and plastic bags
- Personal toiletries
- Personal first aid kit and medications
- Sunscreen 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)

### 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

### 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 that you have used which is different from what is on the list, so please read thoroughly and get back to us with any questions you may have.

### Fabrics/Garment Designs/Garment Selection

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://adventureconsultantsblog.com/optimum-layering/>.

## BODY WEAR

### Waterproof Shell Jacket

Bring a non-insulated, fully waterproof shell jacket with a good hood and water-resistant zip closures. The jacket should be easy to move in with your base and mid-layers on underneath, as well as providing a good overlap with your pants but should not be so long that it restricts access to your harness. Chest pockets are useful to things like snack bars and sunscreen during the day. Pit zips allow for increased ventilation and cooling.

There are numerous waterproof/breathable fabrics on the market such as Gore-Tex, eVent, MemBrain, PreCip and Entrant, etc. These fabrics can be expensive but can last for years, when well looked after.

Shell clothing should be seam-sealed during the manufacturing process or the garment will leak through the stitching. Shell clothing made of PVC or similar is waterproof but does not breath, which means you become damp from the inside out as moisture cannot escape while you are moving. This style of waterproof shell is not suitable for mountaineering.

*We recommend The North Face Summit L5 LT Futurelight Jacket, Arc'teryx Alpha AR Jacket, Montane Alpine Pro Jacket and the Rab Muztag GTX Jacket.*



Rab Muztag GTX Jacket



The North Face Dryzzle Full Zip Pants



Rab Neutrino Pro Down Jacket

### Waterproof Shell Pants

Your waterproof shell pants should allow good freedom of movement to enable you to lift your legs easily when worn with your softshell pants and base layer leggings during inclement weather.

Your shell pants should also have  $\frac{3}{4}$  or full-length (preferred) zips down each leg to allow you to easily put them on and take them off while wearing your boots and/or crampons.

Bib/salopette styles are warmer as they extend above the lower back/kidney area giving a good overlap with your jacket.

*We recommend The North Face Dryzzle Full Zip Pants, Arc'teryx Beta SL Pants, Marmot PreCip Full Zip Pants or the Rab Muztag GTX 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 waterproof unless they are seam sealed. Models with hydrophobic down are recommended.

*We recommend Mountain Equipment Vega, Montane Anti-Freeze Jacket or the Rab Neutrino Endurance Down Jackets.*



The North Face Summit L3 Ventrix 2.0 Hoodie



Montane Alpine Raid Hoodie



Marmot Scree Softshell Pants

## Midweight Insulated Jacket

A versatile insulating layer that can be worn while trekking and climbing. The jacket can be made from synthetic insulation like Primaloft or similar, insulated softshell or a 200–300 weight fleece (although, fleece has little wind-resistance).

This jacket should have a full front zip for ventilation and zip-up pockets to prevent items from falling out while on the move. A hood is a worthy addition for extra warmth.

*We recommend The North Face Summit L3 Ventrix 2.0 Hoodie, Rab Xenon Jacket, Montane Prism Jacket and the Arc'teryx Atom LT Jacket.*

## Lightweight Fleece Top

A lightweight, air-permeable fleece top made from Polartec Power Stretch, Polartec Power Grid, Polartec Alpha, Pontetorto Tecnopile micro-fleece or an expedition weight base layer is a good additional layer to add over your base layers when the temperature drops.

This layer can either be a pullover or a jacket. Hoods are optional but recommended and a zippered chest pocket can be useful for keeping sunscreen and snack bars accessible.

*We recommend The North Face Summit L2 Power Grid Lightweight Hoodie, Rab Alpha Freak Pull-on, Montane Alpine Raid Hoodie, Patagonia R1 Hoody or the Arc'teryx Konseal Hoody.*

## Softshell Jacket/Windshirt (Optional)

These jackets are ideal for aerobic activity in lighter 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.

*Softshell jackets we recommend include the Marmot ROM Jacket, Arc'teryx Gamma LT Hoody, Arc'teryx Gamma MX Hoody, Rab Kinetic Plus Jacket and Rab Torque Jacket.*

*Windshirts we recommend include the Marmot Ether Hoody and the Rab Vapour-rise Alpine Jacket.*

## Softshell Climbing Pants

Softshell pants are made from stretchy, comfortable, wind-resistant, water repellent materials that are also highly breathable. They are the perfect active layer for your legs. Your pants should fit comfortably with or without your base-layer bottoms.

Please note that while softshell pants shed light rain and snow as well as drying quickly when they get wet, they do not replace your Gore-Tex shell pants which will still be needed, if the weather turns bad.

*We recommend The North Face Summit L4 Hybrid Pants, Marmot Scree Pants, Rab Spire Pants and the Montane Terra Mission Pants.*

## Base Layer Top and Leggings x 1 Set

Base layers must be made from materials such as merino wool or polyester. No cotton, please!

Tops should have long sleeves and a high neck with a zip. This allows for better temperature control and sun protection than crew neck styles.

Base layer leggings should fit snugly without constriction. These can be worn as a single layer on hot days or under your shell or softshell pants when additional warmth is required.

*We recommend Icebreaker, The North Face Warm, Rab Forge and Pulse, Earth Sea Ski First Layer and Merino, Montane Primino and Smartwool Base Layer Ranges.*

## Underwear

Bring sufficient changes of your regular underwear. We recommend treated polyester or merino underwear instead of cotton as they wick away sweat from your skin, working with your thermal, fleece and shell layers to keep you dry. They also dry extremely quickly when washed. However, most people use their normal underwear.

*We recommend Icebreaker, Smartwool, Rab Forge, Earth Sea Sky Merino and Montane Primino Underwear.*



Smartwool Merino 150 Base Layer Quarter Zip



The North Face Bones Beanie



Julbo Explorer 2.0 Sunglasses

## 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 Logo Beanie.*

### Sunglasses

Bring sunglasses with good lenses and side-protection. The lens should be dark enough to withstand the intense reflection from the snow and MUST filter 100% of UVA, B and C radiation. Snow reflects up to 85% of solar radiation and the UV index increases 10% with every 1,000m gain in altitude, so it is of utmost importance that you protect your eyes. We recommend photochromic or category 4 polarized lenses with an anti-fog coating.

If you wear prescription glasses, we recommend you get prescription sunglasses with the above specifications.

If you wear contact lenses, bring a pair of prescription glacier glasses as a backup.

Leashes are essential and nose guards are optional.

*We recommend Julbo, Smith, Bollé, Oakley and Adidas 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, merino wool 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.*

## HAND WEAR

### Liner Gloves

These very thin, lightweight finger gloves form a base layer and are worn when climbing. On hot days, they protect against sunburn and can be worn under heavier gloves or mittens on colder days.

Ensure the gloves fit closely to allow you to handle ropes and carabiners easily. Wearing liner gloves will prevent cold injuries in situations requiring full finger dexterity. They can also be worn doubled up and should fit underneath your other glove combinations.

*We recommend Budget polypropylene gloves, available from most hardware or safety stores, Black Diamond Lightweight Fleece Gloves or the Rab Stretch Knit Liner Gloves.*

### Fleece Gloves

Bring a pair of fleece, softshell 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 Power Stretch Gloves, Black Diamond Midweight Gloves or the Rab Power Stretch Pro Gloves.*

### Mountaineering Gloves

Gloves with removable insulated liners are extremely versatile as you can wear them with or without the liners, depending on the temperature.

A good model will have abrasion-resistant palms, shaped fingers, a waterproof outer and an insulating removable liner. Cheaper models are not waterproof, so it's worth investing in a good quality pair.

Please ensure that you can fit your liner gloves underneath your mountaineering gloves.



Smith I/O Ski Goggles



Adventure Consultants Branded Buffs



Black Diamond Guide Gloves

Mountaineering gloves are not as warm as expedition mitts but have the advantage of being more dexterous. Because of the time that you will spend dealing with ropes and equipment, the dexterity your gloves provide will be extremely useful.

We recommend you attach wrist loops to your gloves to prevent them from being blown away by the wind.

*We recommend Black Diamond Guide Gloves and the Outdoor Research Alti Gloves.*

## FOOT WEAR

### 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.

Various combinations suit different people and some people prefer to wear just one pair of socks in their boots, while others wear two sets; a thicker pair over a thin liner sock.

Try your socks on with your boots before your trip to ensure a good fit as this will help minimise cold toes while you are climbing.

*We recommend Smartwool, Bridgedale, Darn Tough and Thorlos Socks.*



Smartwool PHD Outdoor Mountaineer Socks



Scarpa Phantom Tech Ice Climbing Boot



Sea to Summit Alpine eVent Gaiter

### 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 reasonably 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 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 Tower Extreme, Nepal Evo and G2 SM, the Scarpa Mont Blanc Pro GTX, Phantom Tech and Phantom 6000, or the Lowa Alpine Ice GTX Mountaineering Boots.*

### Snow Gaiters (Only Required, If Your Boots Do Not Have an Integrated Gaiter)

Calf-length gaiters with either a velcro or zip closure at the front keep the snow out and prevent you snagging your trousers with your crampons. They need a good tie-down system under the in-step to stop them from creeping up at the heel.

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



Osprey Mutant 38 Mountaineering Pack



Petzl Actik Headlamp



Personal First Aid Kit

## PACKS & BAGS

### Small Duffel/Travel Bag

This is for storing clothing and items left in town, while you are out climbing. Bring a lock and if you're particularly adept at losing keys, please make sure to buy a combination lock and set to an easy to remember number!

*We recommend The North Face Base Camp Duffels and Osprey Transporter Duffels.*

### Climbing Pack (40 Litres)

There are many models available which are suitable and the 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 ND38:48, Deuter Guide 35+, Grivel Zen 40, The North Face Phantom 38 or the Black Diamond Speed 40 Mountaineering Packs.*

## ACCESSORIES

### Surgical Style Face Mask

This is a requirement while travelling anywhere that you cannot self distance while COVID-19 restrictions are in place.

### Hand Sanitiser

For times when hand washing facilities are not available and to aid in the prevention of COVID-19.

### Headlamp and Spare Batteries

You will need a good headlamp and don't forget spare lithium batteries, which are not affected by the cold unlike alkaline batteries.

*We recommend the Petzl Actik, LED Lenser SEO 7R or the Black Diamond Storm 375 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 First Aid Kit and Medications

A basic personal first aid kit is necessary including blister tape, second skin, gauze pads, crepe and triangular bandages, and painkillers. Store the first aid kit in a waterproof container or a plastic bag inside a stuff sack.

Also bring any personal medication you may be using and please remember to inform your guide if you are on prescription medicine. Your standard medications can be dangerous at altitude.



## Personal Toiletries

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

## Sunscreen 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)

Wide mouthed plastic bottles are best. Camelbak style water bladders are fine in theory, but often freeze and are easily punctured.

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

## Thermos Flask

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

*We recommend the Primus Vacuum Bottles.*



Adventure Consultants Branded Nalgene 1 Litre Wide Mouth Water Bottles



Grabber hand and Tow Warmers



Petzl Nomic ice Tool

## 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. Don't forget to bring spare memory cards either!

## 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)

Feel free to bring your Kindle, music, audiobooks, movies on a hard drive, playing cards and a diary etc. to fill in any downtime during the expedition.

A smartphone used in flight mode to extend battery life can combine the functions of separate devices (camera, video, music and e-books etc.) into one.

## 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 mix for your water bottles.

## CLIMBING EQUIPMENT

### Technical Ice Tools x 2

For technical ice-climbing, you need a short tool 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. 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 handgrips. 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.*

### Crampons

Steel, clip-on crampon (no aluminium please!) with a steel toe bail and vertical front points are highly recommended for ice-climbing, but you can also use a crampon with a plastic toe harness as well. Ensure your crampons are fitted with 'anti-balling' plates.

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 Ice Climbing 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. All helmets must meet industry standards for impact protection, with the standard for overhead protection being greater than the side-protection standard.



Petzl Lynx Ice Climbing Crampons



Black Diamond Vapor Climbing Helmet



Petzl Aquila Climbing Harness

There are two kinds of climbing helmets available today—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 the 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 leg loops. 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 your harness on, to ensure it fits over all your clothing layers. Comfort is essential as you may be sitting in it for long periods while climbing.

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



Black Diamond ATC XP Belay Device



Petzl William Locking Carabiner



Edelrid Sewn Slings

## Belay Device

You'll need to bring a belay device. We 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.*

## Locking Carabiners x 3

Bring 3 locking carabiners which have either 'screw gate' or 'twist lock' gates. Do not purchase the ball lock type! Whichever type 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 knot used to attach a loop of cord around a rope. Prusiks are generally made from 6 mm cord.

You will need to bring 3 prusiks on this trip—one long prusik made from 3.2 m of cord and two short prusiks made from 1.6 m 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 Sewn Sling

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

## OTHER

### 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.

**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.