



2018 WINTER HAUTE ROUTE EQUIPMENT LIST

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.

1.0 Body Wear

- Waterproof shell jacket
- Waterproof shell pants
- Down jacket
- Midweight insulated jacket
- Lightweight fleece top
- Softshell pants
- Base layer tops x 2 and leggings x 1
- Underwear and socks

2.0 Head Wear

- Sun hat
- Warm hat
- Balaclava
- Sunglasses
- Ski goggles
- Scarf, bandana or Buff

3.0 Hand Wear

- Liner gloves
- Fleece gloves
- Ski/mountaineering gloves

4.0 Ski Gear

- One of the following combinations
 - a) Ski touring skis, boots and climbing skins
 - b) Split board, boots and climbing skins
 - c) Telemark skis, boots and climbing skins

- Ski poles
- Ski or snowboard bag
- Ski crampons
- Basic ski strap
- Repair kit
- Avalanche transceiver
- Avalanche probe
- Snow shovel

5.0 Technical Equipment

- Ice axe
- Crampons
- Climbing harness
- Locking carabiner x 1
- Prusiks (1 x short)
- Ski pack (35-40 litres)

6.0 Accessories

- Headlamp and spare batteries
- Stuff sacks and plastic bags
- Personal toiletries
- Personal first aid kit and medication
- Sun block and lip balm
- Water bottle (1 litre)
- Water bottle cover
- Small Thermos flask
- Camera and batteries
- Sleeping bag liner (A requirement for all huts)

Clothing and Equipment Information Guide

The following information is a guide to assist you in securing the required clothing and equipment for climbing in Europe, 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.

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 do 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 have to 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

Bring a jacket made from Gore-Tex or a similar waterproof breathable material. Look for a model with a full front zipper and a good attached hood with draw cord etc 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

Bring pants made from Gore-Tex or 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.

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.

		
Arc'Teryx Alpha SV Waterproof Shell Jacket	The North Face Summit L5 Fuse GTX Waterproof Shell Pants	Rab Xenon X Synthetic Insulated Jacket

Lightweight Fleece Top

A lightweight (Polartec 100 or similar) fleece sweater is a good addition layer to keep your thermoregulation perfect. Wear it as your top layer when warm and then put your fleece jacket over it, when it gets colder. It can be a light fleece pullover with either 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 Pants

Softshell pants suitable for skiing on the warmer days and general casual wearing, or with long underwear beneath for colder days.

We recommend The North Face Summit L4, Black Diamond Dawn Patrol, Rab Upslope, Dynafit Mercury or the Montane Champex Softshell Pants.

Base Layer Tops x 2 and Pants x 1 Pair

Long sleeve base layer tops made of polypropylene, polyester or merino wool are excellent. A high neck with a zip gives good temperature control. Bring two tops; one for climbing in and one for wearing in the evenings or to double up, if you get cold.

Long-johns made of the same materials as your tops are lightweight and provide a change, if your climbing pants are wet or too warm. They also provide lots of additional warmth if worn under your climbing pants.

We recommend The North Face Warm, Icebreaker, Rab Merino+, 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, most comfortable underwear.

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

Socks

Have at least two complete sets with you for a trip and either wool or a mix of fibres with good thermal properties are a good choice. Some people wear combinations of thick (wool socks) and thin socks (polypropylene or ski liner socks) rather than just one thick pair. Try your socks out with your boots, if possible, beforehand.

We recommend Smartwool, Icebreaker and the Darn Tough Ski Socks.

		
The North Face Summit L4 Softshell Pants	Rab Merino+ 160 Hoody	The North Face Bones Beanie

2.0 Headwear

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 or the Rab Shadow Beanies.

Sun Hat

A wide brimmed soft hat or baseball cap with a bandana will protect you from the sun. The sun is extremely strong at altitude, especially as there is less pollution in the air.

We recommend The North Face Adventure Consultants Branded Horizon Breeze Brimmer Sun Hat, available from our office.

Balaclava

You can choose to bring a lightweight balaclava made of silk or polypropylene, or a warmer model made of fleece or merino wool.

We recommend Smartwool and the Rab Power Stretch Balaclavas.

Sunglasses

Preferably a "glacier" style with side protection, although some wraparound glasses provide enough protection from reflected light. 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 the utmost importance that you protect your eyes. We recommend a photochromic or category 4 polarised lenses with an anti-fog coating. If you wear prescription glasses, we recommend you get grey or amber prescription glasses. If you wear contact lenses, it is advisable to bring a pair of prescription glacier glasses as a backup. Leashes and nose guards can be used.

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

Ski Goggles

It is good to have interchangeable lenses - one with a dark and/or a polarized lens and a second set with an amber lens for low visibility. If you wear prescription glasses, please ensure they fit under your goggles.

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

Bandana and/or Buff

A bandana and/or Buff are a useful addition to the cap to protect the back of your neck from the sun, or for dusty days trekking.

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

		
Julbo Monte Bianco Sunglasses	Smith I/O Ski Goggles	Rab Alliance Mountaineering Gloves

3.0 Hand Wear

Liner Gloves

These form a base layer and are worn, whenever climbing. Lightweight comfortable liner gloves are worn on hot days to protect against sunburn and under heavier gloves on cold days. Wearing these gloves will prevent cold injuries in situations requiring full finger dexterity. They can also be worn doubled up.

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

Fleece Gloves

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

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

Ski/Mountaineering Gloves

A warm pair with a wind and waterproof shell is essential. We generally use Gore-Tex (or a similar waterproof fabric) gloves with removable fleece liners, so that the liners can be removed to make drying easier. A good model will also have abrasion resistant palms and shaped fingers.

We recommend The North Face Kelvin, Black Diamond Guide, Marmot Randonee, Rab Alliance or the Outdoor Research Alti Ski and Mountaineering Gloves.

4.0 Ski Gear

Touring skis/split board/telemark skis, boots, poles and skins – bring the gear that you know well, ensure it is well tuned and in good condition, before you come. Do not bring gear that you are not capable of using as the Haute Route is not a good place to be trying skills out for the first time. Please see the notes below on the various options.

Touring Skis

The best touring skis are lightweight, wide and short, for superior performance in the difficult conditions found off-piste. Some general-purpose skis such as the Volkl Mantra or Dynastar Cham 2.0 97 are suitable, or specific touring skis are also available such as the DPS Wailer 99 Tour or Black Diamond Helio 105 Carbon. We recommend that you visit a reputed ski shop to assist you with purchasing the right ski for you.

Touring Bindings

Touring bindings are much lighter than the ‘standard’ ski binding and allow free heel lift for uphill touring, which then locks down for skiing. Technical style bindings have recently become the standard for ski touring. These bindings are extremely lightweight, but can only be used with Tech binding compatible boots. Companies such as Dynafit, Marker, Fritschi, Plum and G3 all make great examples of this type of binding.

The best step-in touring bindings are still the Fritschi Diamir Series. The ‘Eagle’ binding is suitable for those who will be mostly touring and the ‘Freeride’ binding is an excellent choice for those needing a hardwearing binding for on-piste and when touring. The Marker Duke and Baron bindings are also suitable, but are quite heavy in comparison to the Fritschi’s. All bindings must be fitted with brakes.

We recommend the Dynafit Radical ST and FT 2.0, G3 Ion and the Fritschi Vipec Touring Bindings.

Touring Boots

When selecting a touring boot, ensure that the hinge is flexible enough to allow for comfortable walking. It is important to have your boot fitted by a qualified technician and if you have problems with your feet, do consider purchasing foot beds as well.

We recommend Scarpa, Dynafit, La Sportiva and Scott Ski Touring Boots.

		
DPS Wailer 99 Tour Skis	Dynafit Radical ST Tech Binding	Black Diamond GlideLite Mohair Mix Climbing Skins

Climbing Skins

Climbing skins are available in different widths and should be wide enough to cover all, but the metal edges of your skis to maximize climbing ability; particularly when traversing hard snow. Your guide can help you fit your skins to your skis. Keep self-adhesive skins out of the dirt and store them dry in a sturdy plastic bag to prevent the glue from drying. Fold the ends of each skin to its centre, with the sticky sides together. Most commonly we use nylon skins which are more durable than other alternatives on the market such as mohair skins.

We recommend the Black Diamond GlideLite and G3 Alpinist Climbing Skins.

Split Board

Specifically designed with backcountry touring in mind, the split board halves lengthways to allow climbing skins to be attached, so you can skin like you were on skis. This eliminates the need for snowshoes, means much faster travel and more runs for the boarder! Your regular snowboard boots are suitable for use with a split board, but make sure that your crampons are compatible with the boots – contact us for advice.

We recommend Burton, Jones or Voile Split Boards and the Spark R&D Split Board Bindings.

Telemark Skis and Boots

Only use this option if you are already a competent telemark skier! Ensure that your telemark skis have runaway leashes, and if you are using a cable binding, bring a spare cable with you.

Scarpa and Crispi make excellent modern plastic telemark boots. Leather telemark boots are not suitable due to the telemark boots having a toe welt at the front of the boot, so it is important that you find crampons that will fit – contact us for advice.

Ski Poles

Regular ski poles are fine. Regular ski tourers often prefer a slightly longer pole than that used in downhill skiing. If you are snowboarder, you should use a strong, lightweight pair of telescopic ski poles, that you can stash easily on the side of your pack when riding.

We recommend Leki and Black Diamond Poles.

Ski Crampons

These are a highly recommended addition for touring and telemark systems. Please ensure that they are compatible with your binding system.

Ski or Snowboard Bag

Bring one bag to carry your skis/board in, when travelling. Given the restrictions that many airlines have with sports equipment, we recommend that you check this allowance when booking flights to avoid any excess baggage fees!

		
Black Diamond Razor Carbon Pro Ski Poles	Pieps DSP Sport Transceiver	Black Diamond Deploy 7 Snow Shovel

Basic Ski Strap

These are used to lash your ski tips together, when they are carried on your pack or to help carry skis on lifts and buses.

Repair Kit

Take a small kit containing any spare parts or specific Allen keys or spanners for your skis, boots and bindings.

Avalanche Rescue Equipment

Winter conditions necessitate these avalanche safety items be carried. However, if you have your own gear, then bring it along as it is best to use equipment that you are familiar with.

Transceivers are used to locate a buried victim in the least amount of time possible. If purchasing a transceiver, look for a digital model that is easy to use. All avalanche transceivers transmit on the same 457kHz frequency and are compatible with all other analogue or digital models.

Avalanche probes are made up of multiple aluminium sections, tensioned by a cable and extend to form a 2-3 metre pole for probing avalanche debris.

Your shovel should be a lightweight, avalanche-specific model. Plastic shovels are not recommended. A telescopic handle and a large, metal blade will allow you to move more snow quickly.

We recommend BCA, Pieps, Mammut/Barryvox or Ortovox Transceivers, and the Black Diamond, Ortovox or BCA Shovels and Probes.

5.0 Technical Equipment

Ice Axe

We recommend a lightweight ski mountaineering ice axe rather than a heavy tool. The axe should be 55-65cm in length, depending on your height. The axe should have a basic wrist leash of some sort.

We recommend the Black Diamond Raven Pro, Petzl Glacier Literide and Grivel Haute Route Ice Axes.

Crampons

A clip-on style with a toe harness is best and choose a lightweight aluminium or steel model. Check the crampons are secure on your ski/board boots, and that the strap is long enough.

We recommend the Grivel Air Tech Light New-Matic and Petzl Irvis Hybrid Crampons.

Climbing Harness

Bring a lightweight alpine climbing harness. It must have adjustable leg loops and waist to fit over the varying clothing combinations that are worn during the trip.

We recommend the Petzl Altitude, Mammut Zephir Altitude and Black Diamond Couloir Climbing Harnesses.

Locking Carabiner x 1

Bring a screw gate, pear-shaped carabiner. Do not get the ball lock type, just a simple twist lock.

We recommend Petzl and Black Diamond Locking Carabiners.

		
Black Diamond Raven Pro Ice Axe	Grivel Air Tech Light New-Matic Crampons	Petzl Altitude Climbing Harness

Prusik (1 x Short)

You will need a 1.8m untied length of 6mm cord. A double or triple fisherman's knot joins the ends to create the loop. If in doubt, bring 2m of cord and your guide will teach you how to tie them.

Ski Pack (35-40 Litres)

A 35-40 litre ski-touring specific pack and the required features include ice axe attachment points, skis/board attachment points, and somewhere to store your snow safety gear.

We recommend the Osprey Kamber, Black Diamond Cirque, Deuter Guide, BCA Stash and the Lowe Alpine Mountain Ascent ND 38:48 Ski Touring Packs.

6.0 Accessories

Headlamp & Spare Batteries

The new high-output LED headlamps are superb as they provide an excellent level of lighting and are also very light. Bring two NEW sets of lithium or alkaline batteries for the trip. Avoid the 'micro' or simple LED models as they have problems with battery life and light levels.

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 Sea to Summit Stuff Sacks and Dry Bags.

		
<p>Petzl Actik Headlamp</p>	<p>Nalgene 1 Litre Wide Mouth Water Bottle</p>	<p>Sea to Summit Silk Sleeping Bag Liner</p>

Personal Toiletries

Bring a small toilet kit - flannel, some soap, toothpaste and toothbrush. Keep it light and don't bring a full tube of toothpaste to carry around.

Personal First Aid Kit and Medications

A basic personal first aid kit is necessary and include items such as blister tape, 2nd skin (optional), gauze pads, crepe and triangular bandages, painkillers and any personal medication required. *(Please remember to inform your guide if you are on prescription medicine, as your standard medications can be dangerous at higher altitudes).* 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

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

Water Bottle (1 Litre)

Wide mouth plastic bottles are best, as Camelbak style water bladders can often freeze and are easily punctured.

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

Water Bottle Cover x 1

Bring an insulated water bottle cover will slow the rate of the freezing of your water.

We recommend the Outdoor Research Water Bottle Parka, Nalgene Insulated Sleeve and the Forty Below Bottle Boots.

Small Thermos Flask

A small vacuum insulated Thermos flask/bottle for hot drinks, which is made from stainless steel and about 500ml to 750ml in capacity.

We recommend Primus Vacuum Bottles.

Camera and Spare Batteries

Bring 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.

Sleeping Bag Liner (A requirement for all huts)

These are for use with the blankets supplied in the huts.

We recommend Sea to Summit Sleeping Bag Liners.

NOTE: If you find that you have forgotten anything when you arrive, do not worry as there are plenty of stores in Chamonix and Verbier that specialise in ski touring 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 when you book, and they will make sure that it is put aside and available for you, upon your arrival. If you have any questions, please ask.
