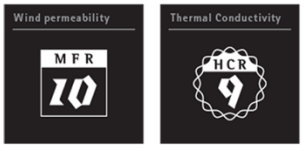
System Overview

Art of Mountaineering is a system for highlighting and iconifying the know-how embedded in Klättermusen equipment. By applying the icons we can elevate more obscure facts like production and sourcing methods, alongside more obvious elements of construction. Excellence in all aspects of creation is part of the Klättermusen legacy and the brand identity.

MFR & HCR



Fabrics

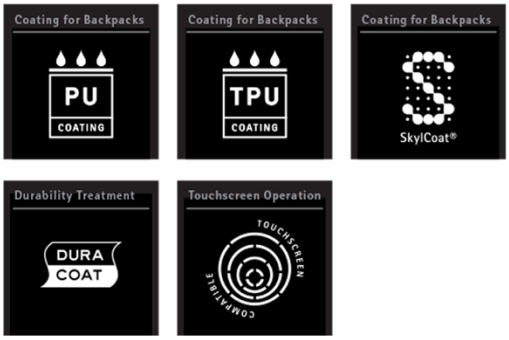
External fabrics / brands

External fabrics / brands

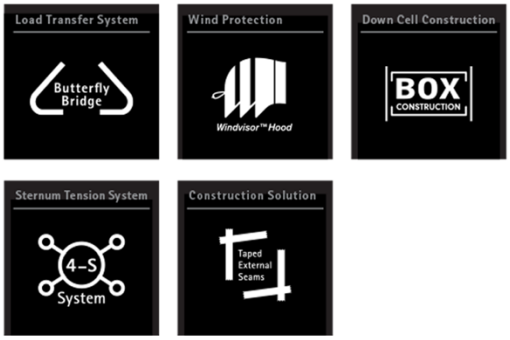
Sustainable sourcing

External certifications

Enhancements



Technical & Mechanical solutions



Core Fabrics

Hirsutum & Organic Cotton
Environmental & Social Responsible Cotton

Hirsutum are the technical cotton weaves we use for our equipment with unique characteristics.

At Klättermusen, we work exclusively with organic cotton to lessen our environmental impact. Conventional cotton is considered one of the most polluting crops due to the heavy use of pesticides and insecticides in production. There are also concerns regarding worker's rights, child labor and unsustainable water consumption.

Organic cotton is grown without any pesticides, chemical fertilizers or GMO crops. Instead methods like beneficial insects and mechanical weeding help to reduce the environmental strain on the crop. Cultivation is done with care for the environment, and workers are protected from hazardous chemicals in their work, and also the surrounding communities by preventing the pollution of drinking water.

We work with two different third-party certifications for organic cotton: GOTS-certification, the highest possible certification in the world of organic cotton, and the EU Council Directive on Organic Farming.

Wuru
Wool Blends for Performance and Warmth

Wool outperforms any other fabrics when it comes to moisture wicking, warmth and odor fighting capabilities. We use wool from different sources depending on the purpose, placement and performance.

Wool fibers have scales that are removed to make the fiber soft and comfortable. We use a unique process for scale removal that is chlorine-free.

Recycled wool requires compensating for the loss of length in fibers during the recycling process, which is why small amounts of synthetic fibers can be added before spinning for enhanced durability of the resulting yarn.
Our wool is always 100% mulesing and chlorine-free.

Levitend & Retina
Strong Polyamides

Polyamide (Nylon) is a synthetic fiber creating extraordinarily strong and versatile fabrics. Levitend are the fabrics based on polyamides that we use for apparel. Retina fabrics are based on polyamides but geared toward use in backpacks which places different requirements on the fabric.

The polyamides we use are derived from both recycled, bio-feedstock and virgin sources.

Recycled Polyamide
Post-consumer Waste since 2009

Recycling polyamide adds another layer of complexity to the production process, but the result is a reliable, long lasting fabric that is lightweight, quick-drying and wind resistant, and uses what would otherwise become waste while saving energy and resources. We were the first outdoor company to use recycled polyamide across our entire backpack line in 2009.

Post-consumer waste is our first-hand choice since we want to encourage people to hand in their worn products for recycling. Pre-consumer waste used for recycled polyamide includes discarded industrial fishing nets, packaging materials from factories and old carpets.

Ultramid® Biomass Balance Polyamide
Replacing Fossil Resources with Renewable Feedstock

Ultramid® Biomass Balance Polyamide has the same high-quality features as conventional polyamide, but is far more sustainable. In production of Ultramid® Biomass Balance Polyamide a certain amount of fossil resources is replaced with an equivalent amount of renewable feedstock, such as biogas or bio-naphtha.

Klättermusen invests in nothing but 100% renewable feedstock. This is a significant step towards a more sustainable product, contributing to lower greenhouse gas emissions and saving of fossil resources. The amount of renewable resources used is monitored by a third-party certification system.

We are the first outdoor brand to apply this fiber in our production and hope to inspire others to become more aware of the choices they make.

Lyocell
Resource Efficient Fibers

Tencel® is the brand name for lyocell, a fiber that is more absorbent compared to cotton, softer than silk, and cooler than linen. Key to using Tencel® next to skin are the natural anti-bacterial properties that come from the moisture being transported to the inside of the fiber which prevents a film of water from forming on the fiber.

Tencel® is a regenerated fiber, meaning that it's made from wood pulp that has been dissolved and made into a fiber. It's a cellulosic fiber like viscose, but uses a production process that is gentler on the environment. Tencel® requires less energy and water, no chlorine is used and the waste products are minimal and considered harmless.

Oculus & Molle
Polyesters for Smooth Performance

Polyester has some unique qualities that makes it attractive for outdoor use in both apparel and packs. Oculus are the polyester based fabrics we use for apparel, while Molle describes the corresponding materials in packs.

Recycled Polyester
Post-industrial Waste & Post-consumer PET-bottles

Recycled polyester creates a net benefit from a sustainability perspective. The recycling process is significantly less harmful than virgin polyester production while material that would end up in a land-fill is put to good use.
The process reduces water, air and soil pollution and saves energy compared to virgin polyester manufacturing, and reduces existing waste. Our recycled polyester is made from post-industrial waste and post-consumer PET-bottles, which makes it a double win. The resulting fabrics not only match but out-perform fabrics made from virgin polyester. Our process replaces virgin resources with superior know-how to create a wider benefit in both performance and sustainability.

RDS Certified Down
Audited Superior Quality Insulation

At Klättermusen, we use only 800+ fill power goose down of the highest quality as insulation in our down products. Few competitors can match our warmth-to-weight ratio, and our down keeps its shape and insulating properties for decades if taken care of properly.

All the down we use is RDS Certified (Responsible Down Standard).

RDS Certified means that the entire supply chain is audited, and the welfare of the birds is respected during their entire life cycle. For example, live-plucking and force-feeding of the animals is strictly forbidden and all the down is fully traceable back to the farm.

We have chosen to work with chlorine-free, unbleached down, which means that a few feathers in every down product will be dark. If you encounter a feather visible through the outer fabric, gently squeeze or shake it until the feather has disappeared.

Enhancement

PrimaLoft® Gold
Improved Wicking Insulation

PrimaLoft® has always had the benefit of being more resistant to humidity than ordinary down. Light-weight and slim volume warmth that is breathable and resistant to humidity.

PrimaLoft® Gold Insulation Active+ has a significantly improved wicking ability in addition to four-way stretch, making it particularly suited for intense activity in cold weather conditions. PrimaLoft® Gold Insulation Active+ is made from 55% post-consumer recycled content.

Cutan®
Proprietary Waterproof
Membrane Technology

Cutan® is a proprietary Klättermusen waterproof and ventilating technology developed to improve on existing fabrics both in performance as well as sustainability by developing PTFE-free membranes to become fluorocarbon-free in production. Cutan® fabrics are soft, flexible, have great stretch and are fluorocarbon-free.

Our Cutan® fabrics consist of either 3-layer or 2,5-layer membrane fabrics with great waterproofing and breathable capabilities. The membranes are made out of polyurethane and are hydrophilic.

Cutan® fabrics are impregnated with a fluorocarbon-free water repellent impregnation. Cutan® fabrics are sourced from Bio-mass balanced Polyamide, recycled materials and virgin stock.

WindStretch™
Softshell with Outstanding
Abrasion Resistance & Stretch

WindStretch™ is a softshell fabric with outstanding abrasion resistance and stretch to allow big movements. Well-suited for high-intensity activities the material also is ventilating, moisture wicking and dries quickly. WindStretch™ has very good wind resistance and we use it in softshell products where flexibility and durability are important. WindStrech™ will retain its visual appearance even after heavy use without losing color or pilling. WindStretch™ fabrics are bluesign® approved.

WindStretch™ 180 g/m^2 is versatile soft-shell with excellent durability and stretch and a fluorocarbon-free water repellent.

Light WindStretch™ 159 g/m^2 is our lightest, fast-drying and most stretchy softshell fabric with a fluorocarbon-free water repellent.

Flytja Material
Active Humidity Transport Through Fabric

By combining hydrophilic and hydrophobic fabrics in layers, humidity is actively absorbed from the body by the inner fabric, before being expelled from the material itself by the outer fabric.

Duracoat™
Proprietary Treatment for
Improved Durability

Duracoat™ is a unique proprietary surface treatment that Klättermusen has developed to improve durability in high-abrasion areas. It is a coating that is applied to particularly vulnerable places such as the shoulders or elbows, increasing wear resistance by up to five times.

Duracoat™ is a surface treatment, meaning that no extra seams or layers of fabric are added, while keeping it very flexible. Durability is improved without increasing the weight of the garment or weakening the fabric with seams. The cut and construction is kept intact as Duracoat™ doesn't distort the shape or impede movement in any way, making it ideal for the agility required by mountaineers.

Duracoat™ has become a symbol of both the scientific know-how and innovative thinking of the Klättermusen tradition.

Hardur
Lifetime Durability

Aramide fibers are woven together with elastic fibers generate an exceptionally durable Kevlar® fabric offering stretch capabilities and softness.

Kevlar® or different qualitites has been used in wide range of functions and types of application and remains unsurpassed for ensuring durability and function in areas exposed to high amounts of wear and abrasion. Typical applications are cuffs, storm flaps, knees and backpack bottoms.

Regular Kevlar® is used for wear protection that has a fixed shape, and StretchKevlar® for pants, jackets and other equipment where if offers protection without impeding movement or flexibility. All Aramide fabrics used are bluesign® approved.

Katla Cotton
Organic Alternative to Synthetic Performance Fabrics

Through the use of principles derived from Bionics, the study of natural processes and phenomena, cotton is given characteristics resembling those of synthetics.

The cotton is subjected to pressure and heat in anaology with geological compaction. The resulting fabric is wind-proof, water repellent and breatble. By adding rip-stop to the fabric the strength is geartly enhanced and able to withstand significant loads.

EtaProof®
Highly Technical Organic Cotton Weave

EtaProof® is a highly technical weave using organic cotton. Cotton is quiet in use, ages very well with a nice patina like denim, and most importantly for outdoor use it's a material permissive to air and moisture. By selecting particular long fibers woven densely, a very dynamic and adaptable fabric is obtained.

EtaProof® offers good natural wind resistance in addition to which it's an adaptive fabric as the fibers swell when exposed to moisture sealing the fabric. EtaProof® offers a fair amount of water resistance in combination with the DWR making this a very advanced and flexible material. During heavy or continuous rain conditions a shell garment must be used to prevent the fabric from saturation.

The dense weave has additional benefits like increased durability and resistance to abrasion, and is attractive for mountaineering in cold temperatures as good ventilation is retained in dry winter air.

EtaDry®
Highly Technical Light Organic
Cotton Weave

EtaDry® is a highly technical weave made using organic and GOTS-certified cotton. Cotton is quiet in use, ages very well with a nice patina like denim. The material has excellent ventilation properties and provides a comfortable and dry feeling on the inside. It's a material permissive to air and moisture and an organic water-resistant treatment on the surface, but rain requires the use of a waterproof shell.

EtaDry® is made of long and densly woven fibres wich have benefits like increased durability and resistance to abrasion, and is attractive for mountaineering in cool temperatures as good ventilation is retained.

Technical Solutions & Certifications

RECCO®
Professional Rescuers Dectectors

The RECCO® Rescue Reflector makes you searchable by professional rescuers equipped with RECCO® detectors in the event of an avalanche accident or if you are lost in the outdoors.

Most Klättermusen shell jackets and pants contain a RECCO® Reflector, which require no power or activation to function. RECCO® technology is not a substitute for an avalanche transceiver.

Box Construction
Thermally Insulating Cells

Klättermusen's down products use Box Construction. This keeps the down evenly distributed using internal sidewalls, instead of penetrating seams.

Most down products on the market are sewn through the outer and inner fabric with a single seam, resulting in thousands of tiny holes letting wind pass through the material and eliminating much of the insulating effect of the down.

V3 Pivot Harness System™
Lightweight Load Transfer System

The V3 Pivot Harness System is an updated and lightweight version of the much loved Klättermusen pivoting carrying system. This lightweight implementation brings the benefits without the weight or complexity of the older versions.

By letting the hip belt pivot independently of the backpack, the belt can move with your hips with each step. Instead of lifting the entire side of the backpack the weight is carried on the pivot point. The pivot also helps rest the weight of the backpack directly on the hips, lessening strain. The fixed loop construction makes it easily adjustable regardless of height.

4-S system
Dynamic Tension System

Replacing the conventional sternum strap with a cord system allows for improved regulation and control.

The cord can be be placed freely by leveraging the loop webbing system. This adjustment ability allows for easy regulation of the tension, and quick changes on the move.

Lightweight cord and hooks transfrom the conventional static sternum strap into a dynamic tool with many dynamic options for use.

Butterfly Bridge
Harness Load Transfer System

Klättermusen's harness system is based on the principle of carrying on your bones, not on your muscles.

The Butterfly Bridge implements a load transfer system, rather than the conventional solution of distributing the load over a greater area.

By placing the load on the bony protrusions, you avoid squeezing the circulation in your muscles and help you ligaments move freely. The system results in reduced pain and tiredness as your blood circulation can work unimpeded.

The Butterfly Bridge system is especially helpful for trekkers in supporting heavier loads than usual.

Durable Water Repellent
100% Fluorocarbon Free since 2008

Durable water repellent — commonly referred to as DWR, is a treatment which creates a water repellent (hydrophobic) surface on a fabric. The water repellent prevents the fabric from becoming saturated with water which both affects the function of the garment and the user experience.

All types of DWR become less effective over time, because of wear, washing and ultra-violet radiation from the sun. This degradation over time requires re-proofing the fabrics. Re-proofing can be performed at home using wash-in or spray-on DWR.

Klättermusen uses DWR's 100% free of fluorocarbons. We were the first outdoor company to completely remove PFOA (one of the most hazardous fluorocarbons) from all garments already in 2008.

Skylcoat
Protection for Backpacks

Surface coating applied internally to backpacks and packs for increased water resitance and humidity protection. Treating the fabric itself directly increases the longevity of the treatment and its performance.

Cordura
Abrasion Resistant Nylon

Cordura is a group of nylon based fabrics renowned for durability and used for reinforcement in particularly exposed areas for increased longevity.

Klättermusen has used Cordura since it was sold with DIY backpack kits in the 80's and remains a preferred reinforcement fabric for its high resistance to abrasion.

Cordura is used when fabrics come into prolonged contact with exposed ground and rock surfaces. This is of particular importance to frameless backpacks, but also applies to some backpacks with frames.

bluesign®
Global Standard for Environmental Health & Safety

bluesign® is a standard for environmental health and safety in textile manufacturing. The bluesign® organization provides independent auditing of textile mills, closely examining manufacturing processes from raw materials and energy inputs to water and air emissions outputs.

bluesign® helps us to keep control over the supply chain and choose manufacturing partners based on their commitment to safety and environment.

The bluesign® approval on our fabrics means that it complies with the highest standards of consumer safety by using materials and techniques that save resources and minimize environmental impact. Klättermusen has been a bluesign® system partner since 2007.

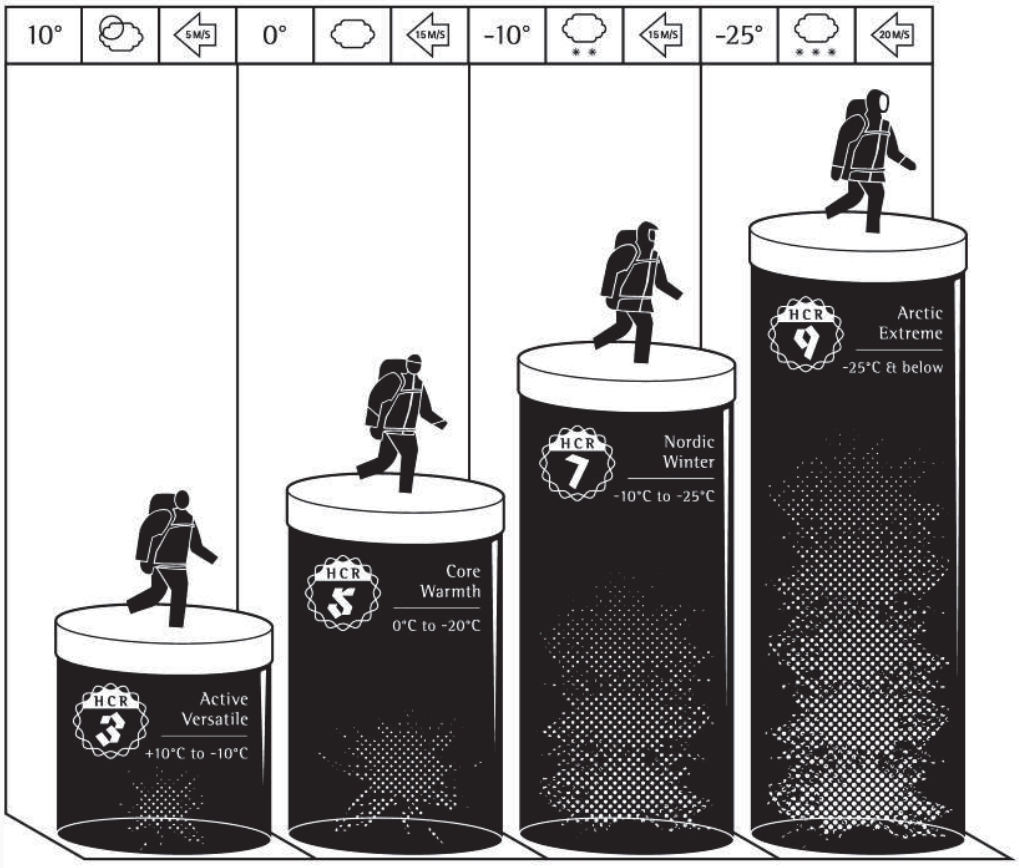
GOTS-certification
Worldwide Standard for Organic Fibers

The Global Organic Textile Standard (GOTS) is the worldwide leading textile processing standard for organic fibers. Both ecological and social criteria are considered and backed up by independent certification of the entire textile supply chain.

The GOTS standard covers the processing, manufacturing, packaging, labelling, trading and distribution of all textiles made from at least 70% certified organic natural fibers. The final products include fiber products, yarns, fabrics, clothes and home textiles.

GOTS aims to define globally and commonly recognized requirements for textiles. From the harvesting of raw materials via environmentally and socially responsible manufacturing up to labelling in order to provide a credible level of assurance to the end consumer.

Klättermusen HCR

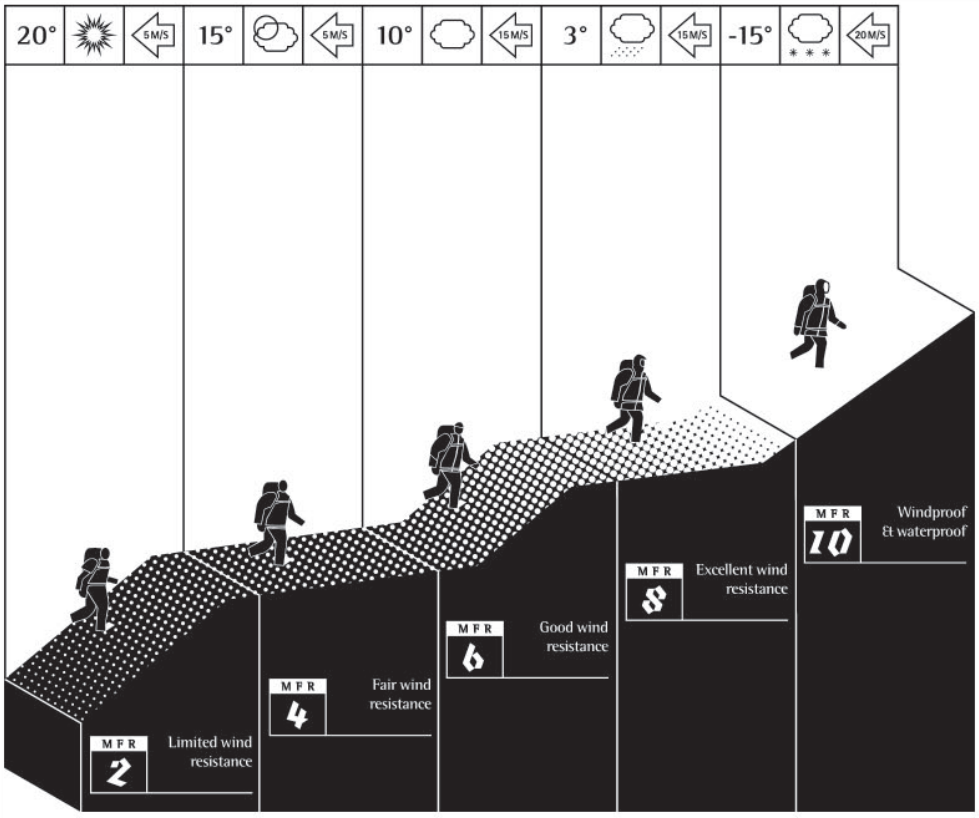


HEAT CONDUCTIVITY RESISTANCE HCR 3	HEAT CONDUCTIVITY RESISTANCE HCR 5	HEAT CONDUCTIVITY RESISTANCE HCR 7	HEAT CONDUCTIVITY RESISTANCE HCR 9
Air permeable layers that provide some warmth and protection, made for in-motion activities year-round. Relying primarily on recycled or bio-based synthetic insulation techniques to match good heat-to-weight ratio and good response in humid conditions.	Everyday warmth, designed to keep you warm in periods of inactivity, relying primarily on down insulation to allow for a lightweight, excellent compression, and long-lived materials. Spacious garments, to be worn over other layers. Ideal for cold and dry conditions.	Inspired by Nordic winter conditions and made for everyday warmth. Relying primarily on down insulation to ensure performance longevity while allowing for an excellent, lightweight compression. Complemented by recycled or bio-based synthetic insulation reinforcements for complete warmth retention.	Designed for survival and working conditions in the coldest and harshest environments on earth. Relying primarily on down insulation to ensure performance longevity while allowing for an excellent, lightweight compression. These garments are made from 2L Cutan® fabric with MFR 10 value, ensuring complete wind and water protection.

The Heat Conductivity Resistance System

HCR System
Expedition Grading

Klättermusen MFR



MASS FLOW RESISTANCE MFR 2	MASS FLOW RESISTANCE MFR 4	MASS FLOW RESISTANCE MFR 6	MASS FLOW RESISTANCE MFR 8	Waterproof
The Klättermusen MFR system is devloped to keep you as well ventilated as possible, while adapting to changing cicrumstances. At its most basic level it is a combination of UV exposure protection and permitting enough free flow of air over your skin to carry away moisture when active.	Moderate tempratures require retaining more body heat and limiting air flow more precisely. Excessive moisture build up can become problematic if more challenging conditions are engaged before drying out fully.	In windy or cool conditions the need for protection becomes more important. Active strategies to avoid trapping moist air within your layers are required, especially as the level of physical exertion changes. Mechanical ventilation options may be limited by the activity.	At cold temperatures trapped moisture leads to rapid cooling and loss of body heat. Precipitation is a double challenge in the way ambient air becomes more saturated with moisture, and by lessening the mass flow of the fabric.	Fully water and wind proof fabrics need clear design principles to allow for easy, but balanced regulation of the ventilation. The shell principle can easily be lost when ice crystals form inside the fabric. Keeping the insulating air layer in equilibrium is the priority to retaining heat.

The Mass Flow Resistance System

MFR System
Expedition Grading