

# INVENT® 4.0

+ 100% SWISS ENGINEERED

## CYCLING

- + INCREASED COOLING
- + INTELLIGENT FUNCTIONS
- + HIGH COMFORT



### RETINA®

#### RESOLUTION AS PRECISE AS THE HUMAN EYE

**High Definition Texture** for improved functionality. **High Precision Body Zoning** for exact function placement.

**High Density** for uncompromising function transmission.



THE WORLD'S  
MOST AWARD-WINNING  
LUXURY SUPERSPORTSWEAR



X-BIONIC®

SWISS ENGINEERED

CRAFTED IN ITALY

ENGLISH

COLNAGO  
CYCLING FESTIVAL

SPECIAL EDITION

*All names of technologies, yarns and products  
are trademarks of X-Technology Swiss GmbH*

100% RESEARCH, DEVELOPMENT, DESIGN + COMMUNICATION DONE IN SWITZERLAND

# THE WORLD'S MOST AWARD-WINNING LUXURY SUPERSPORTSWEAR



AWARDED  
“THE MOST INNOVATIVE BRAND OF THE YEAR”  
13 TIMES IN A ROW

The PLUS X Award is world's biggest technology, sport and lifestyle contest. Renowned trade journalists and industry personalities form the expert panel who decides upon the quality seals of the innovation award: Innovation, Design, High Quality, Ease of Use, Functionality, Ergonomics and Ecology.

“THE MOST INNOVATIVE BRAND” in:  
2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021



56 AWARDS  
IN 4 CATEGORIES

2005, 2006, 2007, 2009, 2010,  
2011, 2012, 2013, 2014, 2015,  
2016, 2017, 2018, 2019, 2020

The iF DESIGN AWARD is among the most prestigious and largest design competitions in the world. An iF DESIGN AWARD is a seal of excellence, a testimony of quality, and a challenge to the competition. For users, it is a symbol of trust.



43 AWARDS  
17 YEARS IN A ROW

2005, 2006, 2007, 2008, 2009,  
2010, 2011, 2012, 2013, 2014,  
2015, 2016, 2017, 2018, 2019,  
2020, 2021

International seal for design-quality  
“Rewared for outstanding design quality,  
innovation, functionality, ergonomics and  
environmental compatibility.”



112 AWARDS  
IN 17 CATEGORIES

2009, 2010, 2011, 2012, 2013,  
2014, 2015, 2016, 2017, 2018,  
2019, 2020, 2021

Winning and rewarded for innovation,  
high quality, design and functionality at world's  
biggest technology-, sport- and lifestyle  
contest which honours manufacturers for their  
quality advantages.



**OVER 20  
YEARS** ▶  
OF RESEARCH AND  
DEVELOPMENT



LEADS TO

**OVER 3200**  
INTELLECTUAL  
PROPERTIES  
REGISTRATIONS

LEADS TO



**OVER 800**  
INTERNATIONAL AWARDS  
AND TEST WINS

IN INNOVATION, DESIGN, HIGH QUALITY,  
EASE OF USE, FUNCTIONALITY,  
ERGONOMICS AND ECOLOGY

LEADS TO



**OVER 1300**  
MEDALS\*:

WON BY ATHLETES WEARING  
X-BIONIC® & X-SOCKS® IN INTERNATIONAL  
CHAMPIONSHIPS INCLUDING THE OLYMPICS

\* as of September 2021

# INVENT<sup>®</sup> 4.0

## THE MOST POWERFUL X-BIONIC<sup>®</sup> GENERATION

AN UPDATE FROM THE PAST, BRINGING ULTRA-HIGH PRECISION AND ENHANCED PERFORMANCE TO THE NEW ERA OF X-BIONIC<sup>®</sup> 4.0

### 3D BIONIC SPHERE<sup>®</sup> SYSTEM

Unique and extremely effective temperature management.  
Cools when you sweat, warms when you're cold.

*3D Bionic Sphere<sup>®</sup> System was formerly patented in 29 countries until 02/2020:  
AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE,  
SI, SK, TR, AU, CA, CN, JP*

+ **ULTRA-HIGH DEFINITION  
TEXTURE**  
for improved functionality



**RETINA®**

**RESOLUTION AS PRECISE**

**AS THE HUMAN EYE**

+ **ULTRA-HIGH  
PRECISION BODY ZONING**  
for exact function  
placement

+ **ULTRA-HIGH  
DENSITY**  
for uncompromising  
function transmission

**RETINA®**

**FUNCTIONAL WEAR AS PRECISE AS THE HUMAN EYE**

The human retina is a miracle of evolution. With its millions of receptors, the multilayered specialized nerve tissue inside the eye defines our visual perception of the world – and provides our brain with high-resolution data for orientation and bodily coordination. Now X-BIONIC® 4.0 transfers this evolutionary achievement to the skin. The innovative RETINA® ultra-high-definition technology makes it possible to build a superior class of functional clothing for performance beyond anything ever achieved before.

# LEARN FROM NATURE, INCREASE YOUR PERFORMANCE

## 3D BIONIC SPHERE® SYSTEM

WHETHER IN EXTREME COLD OR EXCRUCIATING HEAT, YOU'LL ALWAYS HAVE A PERFECT PERFORMANCE CLIMATE

In the body, varying amounts of heat are produced in different areas, with that from the chest and back being particularly high. This is because of the need to protect internal organs. The 3D Bionic Sphere® System leaves a thin film of moisture on the skin without the body sensing wetness.

Sweat Traps® then transport excess sweat, allowing it to evaporate, then dispose of it via thermal dynamics. What remains is just a comfortable, thin, cooling layer of moisture. Of course: no sweat, no cooling. In freezing temperatures, the entire system of channels functions as insulation during both the rest and recovery phases. In this way, you avoid the risk of over-chilling during your activity. Only when your body begins to build up body heat and sweat does the cooling function start. No sweat means the insulating effect takes over.

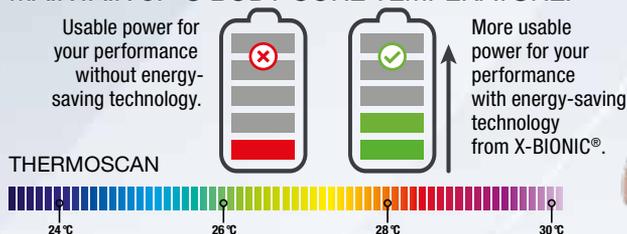
*3D Bionic Sphere® System was formerly patented in 29 countries until 02/2020: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, AU, CA, CN, JP*

## 37° C CCR-TECHNOLOGY

*"In extreme cases, endurance athletes consume up to 97% of their energy maintaining their body temperature at an optimal 37° C. Only 3% of the energy remains for their performance."*

**Dr. Ückert, Technical University of Dortmund**

ENERGY CONSUMPTION NEEDED TO MAINTAIN 37° C BODY CORE TEMPERATURE:



**DURING ACTIVITY:**  
COOLS WHEN YOU SWEAT

**A EVAPORATION SURFACE EXPANDER®**

Evaporation across a large surface to process excess moisture.

**B OUTERAIRCHANNEL**

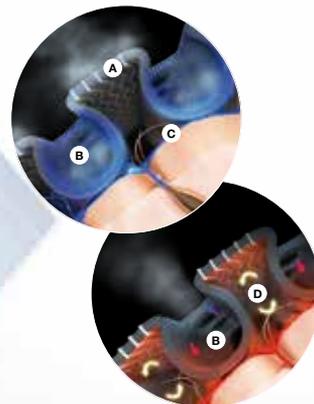
Excess moisture is continuously replaced by the subsequent flow of fresh air.

**C SWEAT TRAPS®**

Transfer excess sweat.

**D INNERAIRCHANNEL**

Warm air is stored inside.



**DURING RECOVERY:**  
WARMS WHEN YOU ARE COLD

An overheated or under-cooled body is not efficient. That's why it is always working to maintain an optimal body core temperature of 37° C. Depending on the weather, in extreme cold or heat, this effort can use enormous amounts of energy. According to scientific studies, up to 97% of the body's energy is used for temperature regulation. That leaves only 3% for your sporting performance.



## X-BIONIC® CORE TECHNOLOGY

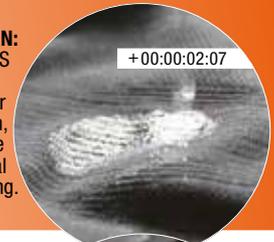
VICTORIES MADE EASY: ONLY 125 G\*  
WITH ALL X-BIONIC® CORE  
TECHNOLOGIES - SPECIAL KNITTED  
FABRIC REDUCED BY 36 % IN WEIGHT

The weight advantage of the shirt lets you increase your power while cycling. More explosive, agile and efficient. It weighs 36% less than its predecessor. The shirt therefore fits perfectly into the lightweight strategy, optimal for races. INVENT® has been reduced to pure function and is as light and reliable as possible.

## X-BIONIC® 4.0 HIGH TRANSPORT YARN

### HIGHLY ACTIVE X-BIONIC® 4.0 INVENT® HIGH TRANSPORT YARN: PROCESSES SWEAT AS SOON AS IT DEVELOPS

A fast dispersal of excess sweat over a large surface area is essential for performance-enhancing apparel. Due to special workmanship of the yarn, the surface area has been expanded and, thus, the efficiency of the sweat transport has been improved. Moisture is drawn into the material in a split second and, once there, can be utilised optimally for cooling.



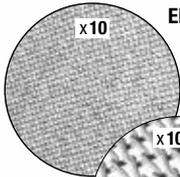
### TRADITIONAL "FUNCTIONAL" UNDERWEAR: PERSPIRATION REMAINS UNPROCESSED EVEN AFTER 1 MINUTE

Many manufacturers of "functional" underwear try to make the product softer, using a special coating. However, due to this treatment the material loses its functionality. At the same time the material gains a new but unwanted characteristic: it becomes water repellent. As you can see on the picture, even after one minute the liquid is not absorbed. The material feels soft and silky, but it does not work properly.



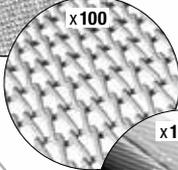
### ELASTICITY AND ROBUSTNESS

Apparent contrasts work together to provide more freedom of movement, perfect fit and long-lasting effect for years.



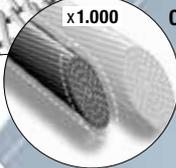
### WEIGHT-SAVING KNITTING PROCESS

The special mesh geometry ensures that with low material usage nevertheless a homogeneous, flexible surface is created.



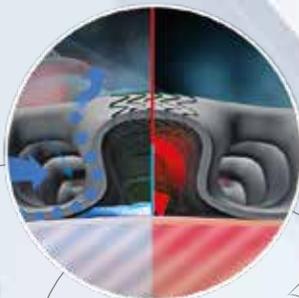
### OPTIMISED MASS-TO-SURFACE RATIO

The reduction of the fibre diameter by 20% results in a significant weight reduction of 36%. This increases the specific performance.



# INVENT BIB SHORT 4.0 L'OUTFIT COMPLETO PER MASSIME PERFORMANCE

WARMS WHEN YOU ARE COLD



COOLS WHEN YOU SWEAT



ADDED COOLING,  
PREVENTS  
DRIPPING



EXERTS  
PRESSURE,  
IMPROVES  
MUSCLE  
PERFORMANCE

KNITTED FABRIC WITH THE  
ZERO-INSULATION ZONE

### 1 3D BIONIC SPHERE® SYSTEM

Greater cooling performance thanks to the 30% larger surface, which is anatomically positioned based on scientific research. The 3D Bionic Sphere® System cools when you sweat and warms when you are cold, while preventing cool down or overheating.

*3D Bionic Sphere® System was formerly patented in 29 countries until 02/2020*

### 2 VENUS XT RIB

Vertical ventilation channel for an increased air exchange and thus sweat management.

### 3 SWEAT TRAPS®

Enlarged for better cooling efficiency and cooling power so as exact positioning to prevent dripping.

*Patented in 18 countries: AT, BE, CH, CZ, DE, DK, ES, FI, FR, GB, IT, LU, NL, PT, SE, SI, SK, TR*

### 4 KIDNEY RIBS

Enhanced insulation in the particularly temperature-sensitive kidney and pelvis area.

### 5 IDEO-WAISTBAND

The ergonomically shaped waistband provides a better fit during movement.

### 6 AKTIV-BUND

The highly elastic Aktiv-Bund provides a secure fit and support without constricting or impeding movement.

### 7 X-BIONIC® 4.0 PARTIALKOMPRESSION®

A new benchmark in compression technology. X-BIONIC® 4.0 Partialkompression® utilises the advantages of compression without neglecting cooling.

*Patented in 19 countries: AT, CH, DE, ES, FR, GB, IT, PL, TR, AU, BR, CA, IN, JP, KR, MX, NZ, RU, ZA*

### 8 INTERCOOLER

This 3D construction collects sweat on the upper thigh and maintains it directly on the skin surface; this allows the sweat to evaporate optimally from this important muscle group. Between periods of exertion, the Intercooler's Rib technology lies in a wavelike structure on the muscle to provide insulation. The locked-in air protects these vulnerable muscles from over-cooling.

### 9 TWO-STEP FRONT 3D BIONIC SPHERE® SYSTEM

The high-tech knitting is optimally positioned for more cooling power and perfect climate comfort. The varying construction of Sweat Traps® and 3D Bionic Sphere® System is able to solve the conflict of providing grip whilst transporting sweat and heat.

*3D Bionic Sphere® System was formerly patented in 29 countries until 02/2020*

### 10 INNERLAP AIRCONDITIONING ZONE®

The inner thighs are less reactive to the cold in terms of muscle performance. This is where the Innerlap AirConditioning Zone® is placed. It is a fine network of knitted fabric with the ZEROInsulation Zone. That's how cooling via air exchange is made possible. As soon as sweat develops, the cooling function increases since this process is in direct contact with the skin.

### 11 EXPANSIONKNEE®

Protects from the cold, even when the knee is bent.

*Patented in 27 countries: AT, BE, CH, CZ, DE, DK, ES, FR, GB, GR, IT, LU, NL, NO, PL, PT, SE, SI, SK, TR, AU, CA, CN, IN, JP, MX, RU*

### 12 ISO-PAD

Targeted insulation of individual body parts against ambient coldness can prevent the body from getting cold. This is why ISO-Pads over the hipbones retain body heat that is necessary to guarantee interior organ functionality.

### 13 AIRCONDITIONINGSPOT

The back of the knee sweats quickly and heavily. To process this sweat, a finely knit mesh allows the moisture to pass through, without impairing knee motion. Sweat evaporates and is pushed outward with the help of body warmth. The risk of over-cooling does not exist in this small area.

### 14 DOLPHIN RIDER NECK

Ergonomically optimized and streamlined collar, based on typical position during cycling, to avoid helmet-collar-collisions.

### 15 FLEXOR ARM CUFF

Asymmetrical arm cuff to avoid unpleasant sleeve movement.

### 16 BACK POCKETS

The practical rear pockets are positioned to provide maximum accessibility without restricting freedom of movement.

### 17 ELASTIC STRAPS

The soft and wide straps guarantee secure support and provide extra comfort.

### 18 ENDURANCE AND COMFORT 4000 FX BIKE PAD

The Bike Pad is anatomically formed and fits the human anatomy perfectly. It removes pressure from sensitive capillaries and nerves. The pad is not simply sewn onto the pants as traditional bike pads are. Instead, X-BIONIC® leaves off the chamois during the manufacturing of the pants and then sews it in separately by hand, so that the fit and elasticity of the pad is not affected by the pant material. This guarantees a never before experienced fit and comfort.

*Patented in 30 countries: AT, BE, CH, CZ, DE, DK, ES, FR, GB, IT, LU, NL, NO, PL, PT, SE, SI, SK, TR, AU, CA, CN, HK, JP, KR, MX, NZ, RU, US, ZA*

# INVENT® 4.0

+ 100% SWISS ENGINEERED



## RETINA®

Ultra-high definition quality for maximum functional density, precise functional zones and efficient functional transmission.

## INTELLIYARNS®

IntelliYarns® are protected X-BIONIC® 4.0 high-tech yarns with special functions. Depending on their composition, they accelerate moisture transport, dampen shocks, increase the cooling effect or stop bacteria and odours.



## SKIN NODOR®

High-tech down to the smallest molecule. Reduces bacterial growth - reduces odour formation. The skin-neutral ions released by Skin Nodor® are active against bacteria formation and thus reduce odour formation.

## XX-CROSS® H-DRY

### 37 °C CCR-TECHNOLOGY

X-BIONIC® technology reacts precisely to support the body in maintaining its optimal temperature for athletic performance of 37°C. The proof is in its controlled release of warmth without the risk of chilling. You save valuable energy for your performance.

# DESIGNED TO BOOST YOUR CYCLING RESULTS

X-BIONIC® INVENT® 4.0 CYCLING supersportswear is the most intelligent interface between you and the sports you do. Patented technologies as well as cycling specific functions provide the best support for your performance.



# TAKE CARE OF YOUR GARMENT!

## HAVE THE MAXIMUM RESULT LONG-LASTING

SINCE WE USE THREE-DIMENSIONAL STRUCTURES AND SPECIAL YARNS FOR OUR PRODUCTS IN ORDER TO IMPROVE PERFORMANCE IN ALL CONDITIONS, FOLLOW THE INSTRUCTIONS BELOW TO MAINTAIN THESE CHARACTERISTICS.

-  We suggest **WASHING AT 30°C OR 40°C** with low speed spin cycle. Ideal wash inside out in a garment bag.
-  We recommend a **SPORT-SPECIFIC DETERGENT** (such as Perwoll Sport activecare 3D). In the case of products with a high amount of wool, such as APANI® Merino products, we recommend using a **SPECIAL WOOL DETERGENT** (such as Perwoll Wool & Delicates).
-  Please **AVOID ANY SOFTENER/CONDITIONER** or bleaching as well as **TUMBLE DRYING** as these will ruin the yarn.
-  Do **NOT TUMBLE DRY** or **WRING OUT**. Do **NOT LEAVE TO SOAK**. Do **NOT IRON**. Do **NOT DRY CLEAN**. Hang upside down in the shade to dry.
-  Please **AVOID HAND WASHING**, as the mechanical influence may damage the fiber/yarn. Rather, we **RECOMMEND USING THE WOOL OR HAND WASH SETTINGS** of your washing machine on **LOW SPIN**.
-  **REMOVE ANY REMOVABLE PADDING** and **UNZIP BEFORE WASHING**.
-  **AVOID ROUGH SURFACES** and **EXCESSIVE HEAT**, especially for garments with shiny, reflective prints or delicate finishes
-  **FOR FLUORESCENT AND INTENSE COLORS:** do **NOT USE PERFUMES** or **BODY SPRAYS** that alter the ph of the skin. The first few times wash in cold water with a teaspoon of salt before use to verify a physiological release of color.

**QUESTIONS** about quality, size, clothes color? **PLEASE CONTACT US !**

**VIP CUSTOMER CARE:** [customercare@x-bionic.com](mailto:customercare@x-bionic.com)

We will reply to you within 24 hours



# ARE YOU HAPPY? SHARE WITH US!

**IF YOU DON'T KNOW HOW TO EXPRESS  
YOUR NEW-FOUND HAPPINESS  
WE'VE GOT A FEW SUGGESTIONS:**

- ENJOY living your slightly smarter smart life
- SHARE your experience with a review
- CONNECT with us on [www.x-bionic.com](http://www.x-bionic.com), Facebook, Instagram

**POST YOUR PHOTOS WITH OUR SPORTSWEAR**  
on Instagram and @X-Bionic International  
you could get a **20% DISCOUNT CODE!**



**MARCO ODERMATT**  
Swiss Olympic & World Champion

# ARE YOU NOT HAPPY? CONTACT US!

**OUR FRIENDLY AND HASSLE FREE SERVICE  
WILL WORK HARD TO PUT SMILE BACK  
ON YOUR FACE!**

- E-MAIL US: [customercare@x-bionic.com](mailto:customercare@x-bionic.com)
- SUBMIT online return forms at: [x-bionic.com](http://x-bionic.com)

*We are only able to offer returns and exchanges for orders placed through [x-bionic.com](http://x-bionic.com)*

# KEEPS YOU PERFORMING UNDER ALL CONDITIONS

## TWYCE® 4.0

+ 100% SWISS ENGINEERED

POWER YOUR PERFORMANCE  
WHEN EXPOSED TO LARGE  
TEMPERATURE VARIATIONS

## EFFEKTOR® 4.0

+ 100% SWISS ENGINEERED

UNLEASH YOUR BEST  
COMPETITION PERFORMANCE WITH  
X-BIONIC® PARTIALKOMPRESSIÖN®



## THE TRICK® 4.0

+ 100% SWISS ENGINEERED

START THE COOLING  
EFFECT OF SWEAT EARLIER,  
PREVENT OVERHEATING

## INVENT® 4.0

+ 100% SWISS ENGINEERED

IMPROVE YOUR  
PERFORMANCE AND  
COMFORT IN LEISURE  
SPORTS



POWER



PERFORMANCE



ENDURANCE



POWER PEAKS



COOLING

# YOUR DECISION LAYER WARDROBE

## ENERGY ACCUMULATOR 4.0

100% SWISS ENGINEERED



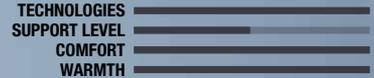
## ENERGY ACCUMULATOR 4.0

100% SWISS ENGINEERED

PATRIOT EDITION



BY



## RADIATOR 4.0

100% SWISS ENGINEERED



## ENERGIZER 4.0

100% SWISS ENGINEERED



## INVENT®4.0

100% SWISS ENGINEERED



\*TECHNOLOGIES - Based on 'Energy Accumulator® - Patriot Edition' Technology Levels  
 \*SUPPORT LEVELS - Based on 'Energy Accumulator® - Patriot Edition' Ultra High Support Levels

\*COMFORT - Based on 'Apani Merino's unique comfort level due to the Merino Wool used  
 \*WARMTH - Based on 'Apani Merino's unique warmth level due to the Merino Wool used



## EFFEKTOR® 4.0

+ 100% SWISS ENGINEERED

CYCLING, RUNNING AND MULTISPORT

### UNLEASH YOUR BEST COMPETITION PERFORMANCE

Designed for hot climates, EFFEKTOR® 4.0 has been proven to optimize muscle coordination, body temperature control, heart rate, performance duration, recovery time, lactation and nerve stimulation transmission.

EFFEKTOR® 4.0 is sophisticated hardware with patented technologies for maximum performance.



## TWYCE® 4.0

+ 100% SWISS ENGINEERED

CYCLING AND RUNNING

### TWYCE THE COOLING, FOR MORE PERFORMANCE

TWYCE® 4.0 is the best and most powerful high-tech interface for your skin when exposed to large temperature variations like when starting from a cool morning into a hot day.

TWYCE® 4.0 doubles the cooling effect, helps the body keep a stable body core temperature of 37°C and leaves even more energy reserves for your training and your sporting performance.



## THE TRICK® 4.0

+ 100% SWISS ENGINEERED

CYCLING AND RUNNING

### EARLIER COOLING, ENHANCED PERFORMANCE

Shorten the warm-up time in competitions and at time-limited training sessions. THE TRICK® 4.0 tricks your brain: A special weave along the spinal column simulates overheating. The brain interprets the signals as a sign that the entire body is overheating. Wilt kicks in sweat production although the body in fact is still near its optimal performance temperature. The result: Even before the body overheats, it's cooled by sweat effectively and more quickly.

**NATURE IS SOMETHING  
FASCINATING. EXPERIENCE IT  
ON YOUR OWN BODY.**



**X-BIONIC®**

 SWISS ENGINEERED

 CRAFTED IN ITALY

You will only find out what your body can really do when your bike wear delivers top performance. For example on the Sellaronda, one of the most fascinating high-alpine panoramic round tours. The most demanding stage: the Sella Pass with up to 13 % incline. During the ascent to 2,200 metres, X-BIONIC® maximises your endurance by optimising cooling, circulation and nutrient supply. At the peak, X-BIONIC® Partialkompression® supports quick regeneration. During the descent, intelligent sweat management protects you from cooling down. To the next peaks!

**FIND OUT MORE:** [www.x-bionic.com](http://www.x-bionic.com)





### BIKE RACE

**14** patent & protected functions



### BIKE HERO UL

**12** patent & protected functions



### BIKE PRO MID

**12** patent & protected functions





### MTB CONTROL WATER REPELLENT

**14** patent & protected functions



### WINTER BIKE

**11** patent & protected functions



### BIKE PRO CUT

**11** patent & protected functions



**X-SOCKS®**

 SWISS ENGINEERED  
 CRAFTED IN ITALY

## X-SOCKS 4.0 A NEW GENERATION OF CYCLING PERFORMANCE SOCKS.

Support your best form with outstanding equipment and show your best side in the X-SOCKS® 4.0.

In the new model from the 4.0 generation, the functional zones of the Suppronation Bandage® in the ankle area ensure stability.

The bandage fits all around the foot and incorporates the revised Air-Conditioning Channel® 4.0, which narrows upwards, optimizes ventilation and transports airflow under the sole of the foot. Effective ventilation works together with perfected protective functions to promote greater endurance on any bike course.

The AirFlow Ankle Pads 4.0 cushion the sensitive ankle zone against shock, pressure and friction.

With its reinforced two-part structure, the shape-optimized Lambertz-Nicholson Achilles Tendon Protector 4.0 also shields the area above the heel.

