



Press release  
28/01/2018

## **X-BIONIC leads the textile industry into the future**

The Swiss idea factory for highly functional clothing offers an exclusive insight into their new, revolutionary textile technologies at the ISPO Munich

**At the ISPO Munich 2018, the expert audience is offered an exclusive insight into the future of X-BIONIC. With ThermoSyphon, Tentacle Technology, and PolarFur, the Swiss textile experts introduce visitors to three new textile innovations that will revolutionise the world of functional clothing. X-BIONIC is the international market leader in functional clothing inspired by bionics. The innovative technologies of the Swiss specialists for highly functional clothing are protected by more than 820 international patent registrations.**

### **Moisture management 4.0**

“ThermoSyphon” is a further development of the 3D BIONIC Sphere System that has enjoyed great success over the last years. The system redefines the promise to “Cool you off when you are sweating and warm you up when you are freezing”. Following X-BIONIC’s principle to “turn sweat into energy”, “ThermoSyphon” improves the performance of athletes, using the power of thermodynamics and gravity. The technology consists of a highly complex system of tunnels and channels that is integrated into the textile. These fulfil a unique double function. During active phases, they guarantee even more efficient moisture management. Sweat is dosed cleverly and lead to the correct locations to cool down the body efficiently. When resting, the textile innovation insulates the body reliably.

In the ThermoSyphon channels, sweat moisture changes from liquid to vaporous. Heavier sweat trickles downwards, where it creates a cooling film on the skin, and is collected in channels again to be fed continuously onto the evaporation surfaces. On the other hand, the pressure of the vapour pushes excess moist air upwards. Additionally, the innovative, Y-shaped structure of the ThermoSyphon channels support this process.

### **Smart sweat magnet**

The positive effects of the highly complex X-BIONIC technologies are brought out most effectively if they are worn directly on the skin. This allows for the useful processing of sweat, and the cooling, evaporating effect is actually used by the athletes, instead of leading it away from the body unused.

Now, X-BIONIC offers a first look at the **“Tentacle Technology” at the ISPO Munich 2018**. An entirely new development in three-dimensional textile technology that offers a combination of a looser-fit cut with the performance of a tight functional shirt. This allows those people who prefer a wide cut to benefit from the comfort and



performance of a tight-fitting shirt as well. At the same time, X-BIONIC taps into a completely new, broader customer base with “Tentacle Technology”.

The technology builds on the combination of hydrophilic and hydrophobic yarns, which are integrated at those parts where people sweat the most, taking into consideration the various climate zones of the body. As an athlete moves, they are activated and caress the skin, similar to tentacles, absorbing some of the sweat. The film of moisture that remains on the skin allows for the X-BIONIC to cool itself. The tentacles transport excess sweat outwards efficiently through the mixture of hydrophilic and hydrophobic yarns. Here, the sweat evaporates, resulting in a pleasant cooling effect. The tentacles additionally separate the supporting knitted fabric and skin by a set distance, which prevents the unpleasant, clammy feeling sweaty textile.

### **Partial insulation**

“PolarFur”, the third innovative technology X-BIONIC presents to the audience at the ISPO Munich for the first time, resembles a fur. The developers allow it to “grow” to various thicknesses on the inside of the clothing, allowing for a customisation of the **insulation** performance. In contrast to traditional “brushed” clothing, the PolarFur zones can be separated precisely from wafer-thin, knitted HeatRelease zones. This way, excess body heat can be led away without running the risk of cooling. PolarFur is particularly well-suited for low temperatures, up to mild cold conditions.

With these three innovative technologies, X-BIONIC once again asserts its role as a technology leader, with a very impressive showing of how bionic, natural elements can be integrated into highly functional clothing.

### **About X-BIONIC®**

X-Technology, the ideas factory for highly functional clothing, has been combining Swiss precision and traditional Italian craftsmanship since 1998, creating products for the X-BIONIC®, X-SOCKS®, and Apiani® brands. In just a few years, X-BIONIC® and X-SOCKS® revolutionised the world of functional clothing. As the brand name X-BIONIC® already shows, the X-Technology® developers use their knowledge of bionics inspired by nature to develop functional clothing that improves the physical performance and well-being of athletes. Innovative technologies are used to realise this ambition. The more than 820 international patent registrations strive to release, for example, the body’s own energy reserves through thermoregulation. More than 560 international prizes and tests won for innovation, product quality, functionality, and material quality substantiate this approach.

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