



Sales Manager and Board Director Pentti Kouhio from Arctest has chosen the Vaisala humidity and temperature transmitters to ensure reliable measurement.



Strong in extreme conditions

Environmental test chambers - investigating product durability

Arctest is a Finnish company that develops environmental test chambers and rooms for companies and research organizations. Product durability and quality is tested in Arctest's chambers, which can simulate a variety of demanding environmental conditions.

Arctest was established in 1986 by two test chamber experts who understood that the durability and reliability of some products was not an accidental by-product but a sought-after feature. "Before environmental test chambers became available, people used to test products using very creative methods. For example, they would stuff electronic devices in ovens, freezers and even saunas to create demanding environments," says Sales Manager and Board Director Pentti Kouhio from Arctest.

Creating different testing environments

Arctest's chambers are mainly used in Scandinavian countries, but deliveries have been made all over the world, from Germany to Botswana.

Test chambers and rooms are tailor-made to meet customer requirements. The design and construction of the chambers is time-consuming and precise work. They need to be extremely durable, stable and reliable during long tests, and modifiable for different testing requirements.

The customer decides what kind of space and test conditions they require, and Arctest builds and delivers the full package. Chamber sizes vary between 50 and 2,000 liters, and room sizes from a few square meters to over 100 m². The adjustable features can include many different variables depending on customer needs, for example temperature, humidity, light, carbon dioxide, wind, rain, radiation, gas and pressure. Temperature conditions can be simulated between -70 C and +180 C.

The conditions in the chambers are controlled with software and the

changes in the conditions can be viewed on a computer either graphically or numerically.

From mobile phones to medicines and more

Many different products are tested in Arctest's chambers. "Mobile phones are a good example. They can be left inside a car on the dashboard on a very hot summer's day, or accidentally dropped in snow. They need to endure it all. The pharmaceutical industry is a growing business for us as they are faced with very strict storage regulations. Arctic clothing is also tested in our chambers. We have even helped build extreme cold rooms for healthcare purposes; for example, some people with rheumatism or asthma find that a couple of minutes in a room at -110 C significantly reduces their symptoms. Athletes also use them for recovering from demanding physical strain," Kouhio explains.

The health benefits of this kind of "cold care" are based on the shock that extreme cold causes in the central nervous system. The shock launches many physiological changes, which have a beneficial impact on many pains and symptoms, and also improve the immune system.

Vaisala's sensors have proved durable and reliable

Arctest uses the Vaisala HUMICAP[®] Humidity and Temperature Transmitter Series HMT330 in its chambers. The sensors are particularly designed for demanding industrial applications where stable measurement and wide customization is important.

"Vaisala's sensors are durable and reliable, and the availability is good. We have trusted in Vaisala since the beginning of our operations, and the cooperation works very well. Vaisala also uses our chambers to test their own products, as quality and durability are extremely important to them," Kouhio says. ■

Further information:

www.vaisala.com/hmt330

<http://arctesten.onet.tehonetti.fi>