

## Vaisala's viewLinc System Monitors the Tissue Bank in the New Children's Hospital in Helsinki



*"Without a high-quality tissue bank, we would have to order the heart tissue transplants from abroad or the children would have to be sent to have surgery abroad. Approximately two heart tissue transplants are used per week, and they help treat about 100 children annually."*

*Sari Tähtiharju,  
Responsible nurse,  
New Children's hospital's  
homograft bank*

Vaisala is an honorary donor of the New Children's Hospital, opened in Helsinki in 2018. Vaisala provided the hospital with measurement instruments for monitoring humidity, carbon dioxide, and temperature in the wards and treatment facilities. Furthermore, Vaisala's viewLinc Continuous Monitoring System monitors the conditions in the hospital's vital tissue bank around the clock, every day of the year.

The new hospital treats patients from all around Finland. The construction of the building started in 2014, and the hospital opened its doors to the little patients gradually during the autumn 2018. In addition to brand new facilities, the new hospital hosts novel building automation technology as well as healthy indoor air. Vaisala provided the children's hospital with measurement instruments for indoor air humidity, temperature, and carbon dioxide measurements

as well as with the viewLinc Continuous Monitoring System.

Most of Vaisala's measurement instruments have been installed in the hospital's common areas that are in use around the clock. The measurement data from Vaisala's instruments is used to monitor and optimize the heating, ventilation and air conditioning of the building. The critical conditions in the tissue bank are controlled by Vaisala's viewLinc Continuous Monitoring System.

### The Tissue Bank Stores Vital Spare Parts

The tissue bank of the New Children's Hospital is part of the hospital's operational unit that handles the treatment, preservation, and distribution of human tissue. The most common materials in the tissue bank are blood vessels, such as lower extremity veins and arteries, cardiac valves as well as parts of the pulmonary artery and the aorta. The majority of stored tissue



is used for in-house procedures on patients suffering from congenital heart defects.

The tissue bank has been a significant part of the Operating and Anesthesia Unit of the hospital since 1973. The new facilities made it possible to install new technology to control the conditions of the tissue bank.

“Without a high-quality tissue bank, we would have to order the heart tissue transplants from abroad or the children would have to be sent to have surgery abroad,” says Sari Tähtiharju from the tissue bank of the New Children’s Hospital. “Approximately two heart tissue transplants are used per week, and they help treat about 100 children annually,” Tähtiharju concludes.

### Continuous Monitoring Ensures the Quality of Tissue Transplants

The critical parameters in the tissue bank, such as temperature, humidity, and air quality, need to be monitored and observed continuously. The Continuous Monitoring System guarantees constant control of the conditions and helps to ensure that the conditions related to the treatment and storage of the tissue transplants are appropriate, considering the consistency and cleanliness of the tissue.

The parameter values need not only be controlled but also saved in order to prove that the conditions have been in line with the required storage conditions. Tissue banks are regulated by

Finnish and EU legislation and overseen by the Finnish Medicines Agency (Fimea). Vaisala’s Continuous Monitoring System was developed for the needs of the pharmaceutical industry from the start, thus the system corresponds to hospitals’ hygienic and maintenance guidelines. It also aids in compliance with GxP regulations and standards, such as FDA 21 CFR Part 11, EU Annex 11, and ICH. Vaisala’s viewLinc Continuous Monitoring System provides web-based monitoring, complete and accurate data, and reports for compliance with regulatory guidelines. In addition to accurate measurement data, the system alerts personnel if environmental conditions exceed permitted values.

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