



EUROMÉTROPOLE STRASBOURG

Safe drinking water network

We make ideas flow.

bürkert
FLUID CONTROL SYSTEMS

Everything in sight: modular, future-proof water analysis system with remote monitoring

WORKING TOGETHER WITH THE WATER AND WASTE WATER SERVICES OF THE STRASBOURG EUROMÉTROPOLE

Water is the elixir of life. Drinking and service water must be clean, and not harmful to health – to the highest degree in a distribution system. Suppliers are therefore given the responsibility of monitoring the quality of water from a wide variety of sources in urban and rural spaces. The Strasbourg Eurométropole introduced the compact Type 8905 online analysis system by Bürkert after a 6-month test phase. The supply of clean water to approximately 500,000 residents is therefore guaranteed by measuring a wide range of parameters. The special feature: the modular system combines all important water parameters into one platform with real-time representation and enables a quick and precise reaction, thanks to remote access.

Did you know?

The compact **Type 8905** online analysis system monitors all important water parameters. The multi-channel measuring system can be integrated into a cabinet solution and expanded at any time as desired by the operator, in order to measure additional parameters. Thanks to the microchip technology in the modular cubes, only low sample water flows are necessary and the smallest of changes in the sample water can be detected quickly. This also helps to reduce reagent consumption and maintenance expenses. The acquired process data can be retrieved at any time and is available for controlling, monitoring and documenting remotely.



Simple water monitoring platform for the Eurométropole

Tap on – and we already have access to good quality water. But the way from the sampling point to the home connection makes monitoring complex, with many pipes and measuring devices. The water supplies of the Strasbourg Eurométropole were also faced with this challenge: 17 million cubic metres of water per year must be distributed to 33 communities over a 1500 km long network. Strasbourg has now found an easy monitoring solution with the Type 8905 online analysis system by Bürkert. The compact system was developed for the continuous monitoring of water in supply networks, and storing important measuring parameters. The customer-specific analysis devices were installed in the network of the Eurométropole and tested over six months. “We were able to plan and check how everything functions ourselves. The joint installation and calibration went ahead without any problems at all, and our teams were quickly impressed by the easy handling,” explains Jean-Marc Weber, Head of the Project Planning and Water Quality Department Manager for the Strasbourg Eurométropole. He gives other reasons for choosing the Bürkert system: “The measurements are reliable and

maintenance costs low. The Bürkert service team are also quick to respond.” The design also plays a part: “The small cabinet systems are fine and provide our team with easy access.”

Flexible all-in-one solution: future-proof expansion of measuring parameters

In order to comply with applicable guidelines to ensure high water quality, drinking and service water quality must be monitored continuously. Several separate measuring devices are used in large measuring stations in conventional procedures. They are high-maintenance and require costly manual sampling and analysis procedures that also consume large quantities of water. An all-in-one solution was requested. With the modular Type 8905 online analysis system by Bürkert, the Strasbourg water services can now precisely and consistently monitor the parameters of pH, temperature, chlorine and conductivity with one system. The city is also equipped for the future if a larger spectrum of pollutants needs to be measured, thanks to the modular structure. Depending on requirements, other measuring modules that operate state-of-the-art technologies can be inserted into the compact system – for example,

“The test phase was an important aid in making decisions. We were able to plan and check how everything functions ourselves. The teams were quickly impressed by the handling and the installation and calibration went ahead without any problems at all.”

Jean-Marc Weber, Project Planning and Water Quality Department Manager for the Strasbourg Eurométropole

cloudiness, redox potential or iron measurements via plug & play with flow injection analysis. However, nitrate and SAC measurements are also possible.

Miniaturised sensor elements for economical and sustainable operation

A core part of the Type 8905 system are the modular sensor cubes. The ultra-compact “dice” work with MEMS (micro-electro-mechanical systems), which contain miniaturised sensors in the form of microchips. Up to six different water parameters can be measured with one device. Depending on the measurement parameters, different sensor elements are used, such as special electrodes, diaphragms, reinforcement elements or ion-sensitive field transistors. Compared to conventional procedures, MEMS technology enables considerably reduced water and reagent consumption.

Thanks to the reduction of previous measuring stations into compact, efficient analysis devices, the Strasbourg Eurométropole can avoid 3600 expensive samples per year, which used to be required for ensuring water quality. Maintenance costs are also reduced: compared to glass probes, the microchips in the cubes have

a significantly longer operating duration and greater calibration interval. The cubes can also be removed during operation for calibration or maintenance, even for continuous processes. The remaining cubes then measure the other water parameters uninterrupted.

Remote control also on the table thanks to networking

The online analysis system was implemented for the Strasbourg metropolitan region as a space-saving cabinet solution that contains all the necessary components for monitoring. All measured values are clearly displayed on a 7” touchscreen on site for the waterworks supervisors and technicians. The entire process can also be monitored remotely, thanks to the fieldbus connection. The analysis device transmits the current process values, faults and maintenance information directly to the control system via the ME43 gateway module. The Strasbourg Eurométropole can therefore view the water quality at any time, recognise contamination quickly and act accordingly, which increases safety while also reducing maintenance assignments.



Strasbourg.eu
eurométropole

“The measurements are reliable and maintenance costs low. The Bürkert service team are also quick to respond.”

Jean-Marc Weber, Project Planning and Water Quality
Department Manager for the Strasbourg Eurométropole

From left to right: Olivier Bertrand (Bürkert), Jean Marc Weber (Strasbourg Eurométropole), Yves Chenard (Bürkert)

Bürkert Fluid Control Systems

Christian-Bürkert-Straße 13-17
74653 Ingelfingen
Germany
Tel.: +49 7940 100
info@buerkert.de
www.buerkert.de

Bürkert Fluid Control Systems

Burkert France S.A.S.
20 Rue du Giessen
67220 Triembach-Au-Val
Tel.: +33 388 58 91 11 (0) 7940/10-0
burkert.france@buerkert.com
www.burkert.fr