

# Hycleen Automation System Optimized Drinking Water Hygiene

## A clean solution



The Erlabrunn clinical center has successfully implemented the Hycleen Automation System.

When drinking water is set at the wrong temperature and does not circulate enough in the piping, bacteria reproduce particularly fast. The Hycleen Automation System from GF Piping Systems was developed for exactly this type of situation, and ensures a perfect drinking water quality in hospitals, retirement homes, and schools.

Arnaud Andreolli, Product Manager for the building technology segment at GF Piping Systems in Sissach (Switzerland), knows the dangers of bacterial contamination in drinking water very well: "Especially elderly people or people with a weak immune system can get more easily infected with legionella and develop illnesses such as severe pneumonia." Owners or managers of properties in countries with particularly strict regulations, for example in Germany, Austria or Switzerland, have therefore increasingly been inquiring about solutions that ensure perfect drinking water quality, reports Andreolli.



Arnaud Andreolli is Product Manager for the building technology segment at GF Piping Systems in Sissach (Switzerland).

### Up to 15 percent less energy

GF Piping Systems responded to this demand and developed the Hycleen Automation System – the first solution of its kind worldwide. Based on a four-stage concept (see info box "Low effort, big impact"), it guarantees bacteria-free drinking water for single-family houses and residential buildings as well as retirement homes, schools, and hospitals. By circulating the water and creating a permanent hydraulic balance across all the pipes, the system ensures a constant high temperature of over 55°C and consequently a virtually sterile environment. This prevents any

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excessive formation of legionella bacteria, for which the ideal growth conditions are between 25°C and 50°C. The Hycleen Automation System only allows as much hot water to circulate in the pipes as necessary and in so doing prevents the loss of warmth and energy that would have been necessary to reheat the water. This enables owners or managers of large houses and buildings with multiple connections to save up to 15 percent in energy consumption.

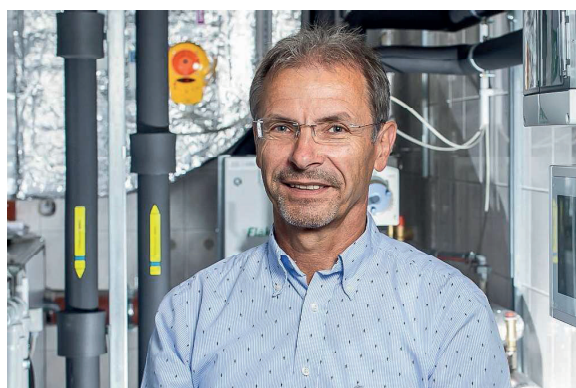
## German clinic is the first customer

The Erlabrunn clinical center in the Ore Mountains area, 130 kilometers south of Leipzig in Germany, is the first customer who has successfully implemented the Hycleen Automation System. Nine specialist clinics with around 320 beds, a medical supply center and an in-patient hospice are housed in the prominent building complex, which was once a miners' hospital. The water piping, consisting of five different widely-spread pipe systems, wind their way right through the complex. "Our previous drinking water supply circulated at high temperatures and high pressure," explains Gregor Günther, Technical Director at the Erlabrunn clinical center. "Therefore, we were looking for a circulation system with automatic adjustment capabilities to guarantee the best hygienic conditions and prevent the formation of germs over the long term," recalls Günther. The management team at the Erlabrunn clinic also chose the Hycleen Automation System from GF Piping Systems partly because they wanted to completely satisfy the official inspection and documentation requirements of the public health authorities. Due to the new solution, Gregor Günther can now quickly and easily access the relevant information when monitoring the quality of the drinking water.

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## Tapping into new markets

It took about two and a half years from the first Hycleen Automation System being developed to it being installed at the Erlabrunn clinical center. Plans are currently in progress to install such a system at a German daycare center as well as in an apartment block in Berlin. In Istanbul (Turkey), GF Piping Systems is supplying a hospital with 162 valves and four system masters. In addition to Germany and Turkey, the division also has plans to expand into the markets of Switzerland, Austria, Norway, Sweden, Finland, Denmark, France, Italy, Spain, Australia, India and the US.



Gregor Günther, Technical Director at the Erlabrunn clinical center: The Hycleen Automation System from GF reflects state-of-the-art technology.

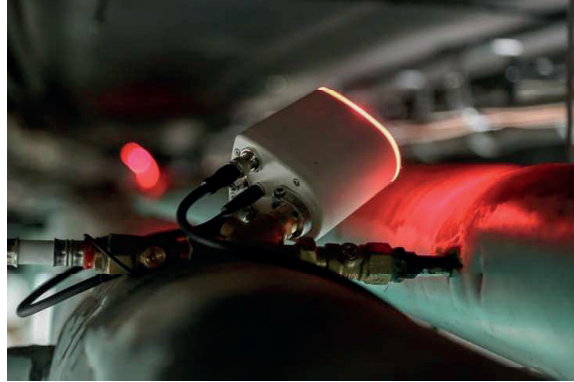


The Erlabrunn clinical center in the Ore Mountains area, 130 kilometers south of Leipzig in Germany was looking for a solution that ensures perfect drinking water quality.

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Five different widely-branched pipe systems wind their way through the building complex. The ideal challenge for the Hycleen Automation System.



When all 72 valves were installed, connected to two system masters and a control unit, and after a first automatic adjustment, the system functioned flawlessly.



Thanks to the installation, any irregularities which may occur, such as too low temperatures or defective valves and sensors, can now be monitored.

### Ideal for existing buildings

With its locally installed components, the Hycleen Automation System is especially well suited to existing buildings. "Because of all its different pumps, types of pipe and pipelines, the Erlabrunn clinical center was the ideal challenge for implementing this system for the first time," remembers Arnaud Andreolli. And the challenge was mastered successfully. After all 72 valves were installed, connected to two system masters and a control unit, and automatically adjusted, the system functioned flawlessly. Readjustments were made based on the recorded measurement data. As a result of the installation, any irregularities which may occur, such as too low temperatures or defective valves and sensors, can now be reported directly to the operator's PC via the building management system. A function for sending push notifications to the safety engineer's smartphone is in the planning stages.

# Hycleen Automation System

## Optimized Drinking Water Hygiene

### **Low effort, big impact**

The Hycleen Automation System from the Hycleen product range ensures optimum hygiene standards for drinking water in public and private buildings. Continuous monitoring and recording of the temperature is an important prerequisite for reliable assurance of drinking water quality. A unique system master with a control screen and easy-to-operate software manages up to 50 connected valves, sensors and applications. The Hycleen Automation System covers the four processes for ensuring drinking water quality: prevention, monitoring, intervention and risk assessment.

**Prevention:** Targeted preventive measures can make a difference to the quality of drinking water. Alongside ensuring the water is at the right temperature, these measures also include maintaining a constant hydraulic balance and regular flushing.

**Monitoring:** Monitoring refers to taking the existing drinking water quality as well as the type of building into consideration. A seamless temperature monitoring is just as important as the storing and documenting of measurements.

**Intervention:** An intervention should only be carried out as the last resort in ensuring high-quality drinking water. Some methods of intervention include thermal or chemical disinfection.

**Risk assessment:** Risk assessment is particularly important for larger projects. The wide range of data that can be obtained using the Hycleen system is a major help in assessing the condition of the drinking water and in recognizing risks.