



Processing treated domestic sewage for municipal use

Butterfly valves GEMÜ R488 Victoria and GEMÜ R487 Victoria in use in sand filtration and UV disinfection for extended waste water treatment.

Process description

Between 2020 and 2024, the municipality of Villefranche-Beaujolais-Saône (CAVBS) in the French département of Rhône made extensive upgrades to the Villefranche-sur-Saône sewage treatment plant. The aim was to adapt the plant to meet the current demands placed on water management.

As part of the upgrade works, the existing infrastructure has been made more efficient and an additional processing stage has been installed so that treated waste water can be recycled for municipal and internal purposes – especially in response to increasing dry periods and stricter specifications for sustainable water use. Today, the treated water is now used to water public green spaces, to clean traffic areas and sewer systems and for internal processes within the sewage treatment plant itself.

To ensure this reliable treatment, the plant is relying on a combination of cutting-edge filtration and disinfection technologies with the help of valve technology from GEMÜ.

Key process data

- Working medium: Treated domestic sewage
- Ambient temperature: 10–30 °C
- Operating pressure: 2–4 bar
- Volumetric flow: Approx. 20 m³/h (part flow)
- Filtration medium: Gravel and glass beads
- Disinfection: UV reactor + additional hypochlorite dosage
- Control: Automatic control system incorporating pressure differential, time interval or forced operation

Suitable GEMÜ products

- GEMÜ R488 Victoria – butterfly valve with electric actuator and position indicator for automated filtration and back-wash processes
- GEMÜ R487 Victoria – manually operated butterfly valve for the UV disinfection stage



Sand filtration using motorized butterfly valves GEMÜ R488 Victoria and UV disinfection with manual butterfly valves GEMÜ R487 Victoria

Plant design

The plant processes some 50,000 m³ of domestic sewage every day. A small portion of the waste water – less than 1% – is treated specifically for reuse. This additional treatment is split into two steps:

1. Sand filtration: Very fine solid matter is removed using an automatic filter system suitable for backwashing.
2. UV disinfection: Germs are reduced using ultra-violet radiation; additional safety from a subsequent additional dose of hypochlorite.

Multiple sensors (measuring pressure, flow and cloudiness) ensure the process is automatically monitored and a reliable quality of treated water is achieved.

This is where the GEMÜ valves come in

In the filtration plant, the motorized butterfly valves GEMÜ R488 Victoria automate the control of the filtration and back-wash cycles. The electrical operation and integrated position indicators ensure reliable operation in the face of variable process conditions.

Manual butterfly valves GEMÜ R487 Victoria are used in the UV disinfection plant. This robust and low-maintenance solution is ideal for shut-off processes that do not require any automation and also offers an excellent price-performance ratio.

The GEMÜ butterfly valves in the Victoria series boast high-quality epoxy coating (250 µm) that guarantees optimal corrosion protection and a long service life – especially in damp environments containing chloride, such as sewage treatment plants.

All you need for water treatment from a single source

Through a combination of technical robustness, flexibility to adapt and proximity to customers, GEMÜ offers a future-proof solution for sustainable water recycling in municipal applications.

Added value for the operator: The advantages of collaborating with us

- Local presence and technical support via GEMÜ France
- Flexible product configurations due to modular construction
- Reliable spare parts availability and global service organisation