



**Qdos pump technology cuts maintenance time from 1.5 hours to just 5 minutes at effluent treatment plant**

- **Maintenance time cut from 1.5 hours to 5 minutes**
- **Highly accurate and clean metering solution**
- **Longer maintenance intervals compared with diaphragm pumps**

Qdos peristaltic pump is delivering a significant reduction in maintenance time - from 1.5 hours to just 5 minutes - at the effluent plant in Selters (Westerwald), Germany.

**Phosphate elimination**

“Wastewater is purified and discharged into a nearby stream – the Saynbach,” explains plant manager Achim Linder. “An important stage in the purification process is the elimination of phosphates, most of which come from domestic washing and cleaning products.”

While the phosphate content of the water inflow is usually around 5-6 mg/l, the concentration after purification must not exceed 1.6 mg/l. To avoid this, a measured amount of precipitant is added (before the water enters the aeration tank) as soon as the concentration of phosphates in the wastewater reaches a concentration of 1.0 mg/l.

“We add Ferric Chloride to eliminate the phosphate,” says wastewater manager, Bernd Schenkelberg.





## Diaphragm pumps not robust

The addition of the precipitant converts the phosphate solution into insoluble phosphate compounds, which can then be isolated. Depending on the phosphate content of the inflow water, delivery is between 60 and 250ml of ferric chloride per minute. Until fairly recently, diaphragm metering pumps were used, but these proved insufficiently robust.

“The ferric chloride attacked the pump diaphragm, meaning it had to be changed every three to four months,” explains Mr Schenkelberg. “This took one of our technicians at least an hour every time and, because of the subsequent leakage of ferric chloride, almost as long again to clean the metering station.”

“In view of the susceptibility of diaphragm pumps we had to consider an alternative functioning principle, which brought us quickly to peristaltic pumps and the market leader Watson-Marlow, who recommended their Qdos pump,” says Benjamin Bullert, project Manager at Jonas Schaltanlagenbau.

## Effective functioning with minimum maintenance

The decision was made to test the Watson-Marlow Qdos chemical metering pump in the precipitant metering station. “The simple but effective functioning principle did not take long to convince us of its suitability,” says Mr Schenkelberg. “Qdos is also intuitive to use and easy to operate.”

“Previously, we always had to factor in a time slot of 1.5 hours for changing a pump diaphragm,” states Mr Schenkelberg. “In contrast to this, the pumphead on the Qdos can be changed as a complete component in just a few simple steps. It takes five minutes at most.”

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