

Outdoor pool, Bernsbach, Erzgebirge, Germany

Modern treatment technology with OSEC® electrolyzer and Defender® regenerative media filter

The Bernsbach outdoor pool has a large swimmer's pool (approx. 12 x 25 metres) and two small non-swimmer's pools. A sunbathing lawn, diving platform, sports and play facilities as well as a sauna area round off the recreational programme for young and old. The water is heated using solar energy in an environmentally friendly way. The technical facilities are regularly modernized to the latest state of the art.



“Committed owners, who are open to economical water technology, are setting the course for cost-effective operation for the future.”

Jürgen Vollbrecht, area manager Nord-East

The task

A chlorine granulate system and sand filter technology were used for water treatment. These were outdated and prone to failure, so the search was on for a modern, efficient technology. The operators also wanted to use non-hazardous table salt with electrolysis for disinfection. This was intended to improve workplace conditions. The sodium hypochlorite solution, which is produced on site during electrolysis, does not need to be stored and is produced fresh when required. Decomposition products such as chlorate play no role in modern electrolysis systems. The system is self-contained so that the operating personnel never come into contact with hazardous substances. The goal was also to avoid the risks associated with the supply of chlorine in future, as chlorine granulate mainly comes from China and is not always available in sufficient quantities. Common salt can be obtained from several European manufacturers.

Scope of supply

- Defender® filter SP49
- OSEC® B-Pak electrolyzer 65
- Wafer® WF-230 UV system
- DEPOLOX® Pool Compact analyzer & controller
- Hardening system for sodium bicarbonate

In addition, they were looking for a filter technology that generates low wastewater costs and can be installed in a space-saving manner. The Defender® regenerative media filter was selected for this purpose, as it combines both advantages. This saved a lot of space for the filters and the raw and flushing water storage tanks, so that no new structures had to be built. The entire measurement and control technology as well as the dosing systems were also to be replaced.

The solution

The Evoqua field service informed the operators that all of these problems can be solved using OSEC® B-Pak chlorine electrolysis systems and a Defender filter. This meant the following points could be improved:

- Space-saving filter process with low wastewater costs
- Sustainable and reliable disinfection process
- Avoidance of hazardous substances, as the operator only has to handle common salt

The electrolysis system is controlled by the measurement and control system DEPOLOX® Pool Compact, which has proven its suitability in many pools in Germany on a daily basis.

The premises hardly had to be adapted for the conversion, as both the electrolysis system and the Defender filter are very compact and clearly laid out. A compact, load-dependent adjustable UV system of the Wafer® type with a flange distance of only 16 cm was installed to minimize chloramines. A dosing station for sodium bicarbonate was also installed to ensure compliance with the acid capacity parameters.

The installation

The installation was realised as part of a tender by the company Aquaprojekt Plauen, which is very experienced in renovation and water treatment technology. Evoqua only accompanied the commissioning of the Defender filter. The conversion went smoothly and on schedule. The UV system provides the operator with maximum operational safety, as the combined chlorine values can be reliably maintained. In addition, the UV system is also a barrier for chlorine-resistant germs, which can be safely retained. The operator is extremely satisfied with the conversion. Above all, he is pleased with the noticeably better working conditions and the elimination of hazardous substances. As a result, the operator is very satisfied with his new, modern workplace.



Installed OSEC B-Pak system



View of the Defender filter (left)



Three analyzers & controllers DEPOLOX Pool Compact

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