

Recycling unit for backflush water from pool filters according DIN 19645

- **Fully automatic at all stages of the procedure**
- **Compact design**
- **Energy optimized**

BREMAG treatment plants have a compact design. All procedural stages according to DIN 19645 are optimally matched. As a result, the reservoir between the membrane levels can be omitted. This saves space and provides a high hygienic safety.

The permeate of reverse osmosis is hardened and subjected to chlorination. For reasons of occupational safety, the internal disinfection of the plant is done with the disinfectant used in the pool water circuits as well. For this purpose, the dosing equipment is directly connected to an on-site liquid chlorinator or chlorine gas network. This minimizes the handling of chlorine-based products.

The distribution of the process water in the balance tanks of the bathing water circuits is done directly from the plant. A process water storage with own chlorination is not required.

The facilities operate with a total yield of at least 75%. The remaining 25% are obtained as a concentrate from the reverse osmosis unit.

All stages of the procedure are controlled by a central control panel

Type: BREMAG CF for feed capacity > 20 m³/day

The standard systems are modular and run automatically at all stages of the procedure.

Depending on the required system capacity additional modules of ultra-filtration and reverse osmosis can be paralleled to increase the total capacity by 3 m³/h per module.



Chemical enhanced cleanings with the addition of alkaline and acidic surfactant-containing membrane cleaners take place automatically with the integrated CIP module.

It is operated on a touch panel. The plants are remotely monitored via a modem. Because of the full automation, the equipment can also be operated via remote dial.

Type: BREMAG DE Compact unit with a capacity up to 20 m³/d

As well as the standard systems, the compact units run automatically in the filtration operation.

For chemical enhanced cleanings with the addition of specific membrane cleaners, manual intervention is required.



The installed ultrafiltration module is designed for a low flux, so that intervals between chemical cleanings of about 3-6 months can be achieved.

Periphery

To minimize the entry of dirt into the membrane system, a surface suction is used to take the backflush water out of the storage tank after a period of sedimentation. An automatically backwashing activated carbon pre-filter separates undissolved coarse materials before the water passes the ultrafiltration.

With the reverse osmosis over 90% of the salts are removed from the water, but also its hardness. According to DIN 19645 operating water should have an acid capacity of at least 0.7 mmol/l. So sodium bicarbonate is used to harden the permeate of reverse osmosis.

To comply with the AOX limit of Annex 31 of the German Waste Water Ordinance, the continuously arising concentrate gets treated by activated carbon. The quality of the concentrate allows a direct discharge into a storm water channel or reuse as process water type 3.



Flow sheet

