ADVANOX™
powered by VAN REMMEN UV Technology

Reference case

Removal of chlorinated organics and micropollutants from swimming

The background

Swimming pools are always aspiring to have as good water quality as possible for their visitors. Continuous disinfection is a well-known necessity, but part of keeping good quality is also to avoid the build-up of contaminants due to savings in water supplementation, such as bound chlorine, halogenated organics and micropollutants. Excessive build-up of contaminants can lead to difficulty in bath maintenance and loss of comfort for visitors and staff.

The case

Dryden Aqua's AFM® filter material easily removes inorganic chloramines from swimming pools, but strongly--bound chlorinated organics might build up due to the absence of biology in the AFM® filter. Because of this Dryden Aqua wanted to combine their technology with advanced oxidation to remove extra strongly-bound chlorinated organics and any other micropollutants from the water such as pharmaceutical and cosmetics.

The solution

For the application of Advanox™ in swimming pools Van Remmen UV Technology developed new Advanox™ reactors to fit swimming pools of 80-500 m3. The AFM® was set-up to treat the whole bath once every 2-3 hours, and the Advanox™ every couple of days to a week in a side-stream.

Results

The system was demonstrated successfully November 2019 through February 2020 at Bad Hesselingen in Meppel (the Nederlands), and then again in September through November 2020 at an instruction pool in Breitenbach (Switzerland).

Facts

Contractor
Dryden Aqua

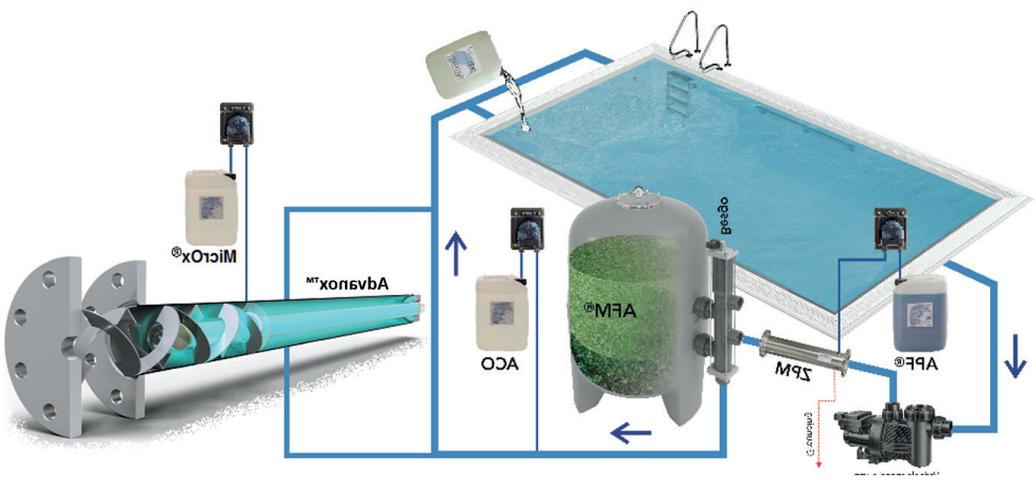
Location
The Netherlands, Meppel
Switzerland, Breitenbach

Purpose
Chlorinated organics and micropollutant removal from swimming pools

Solution
Advanox™ Focus series combined with AFM®

During the first test the combined chlorine was reduced by half compared to the same period the previous year. During the second trials the process was optimized and the combined chlorine could easily be kept constantly at <0,15 mg/l.

The micropollutants found were mostly cosmetics, and each pass through the Advanox™ reactor removed on average >80% of the micropollutants. Micropollutants were naturally and continuously added to the swimming pool through visitors, but over the course of a month the swimming pool saw a 40% reduction of micropollutants. In this case a lower removal is ideal because the 40% removal per month adds up to almost complete removal over timeframes longer than 3 months of continuous use. This results in a treatment that removes exactly what is needed without wasting energy and expenses.



Customer quote:

Matthew Dryden, (Dryden Aqua: *"Van Remmen is a valued partner. They provided quick and flexible cooperation resulting in a successful demonstration and high quality end-product"*

Roy Peeters, Pomaz BV: *"The power of this great water treatment solution has been achieved by combining forces and knowledge from experts in both filtration and disinfection"*