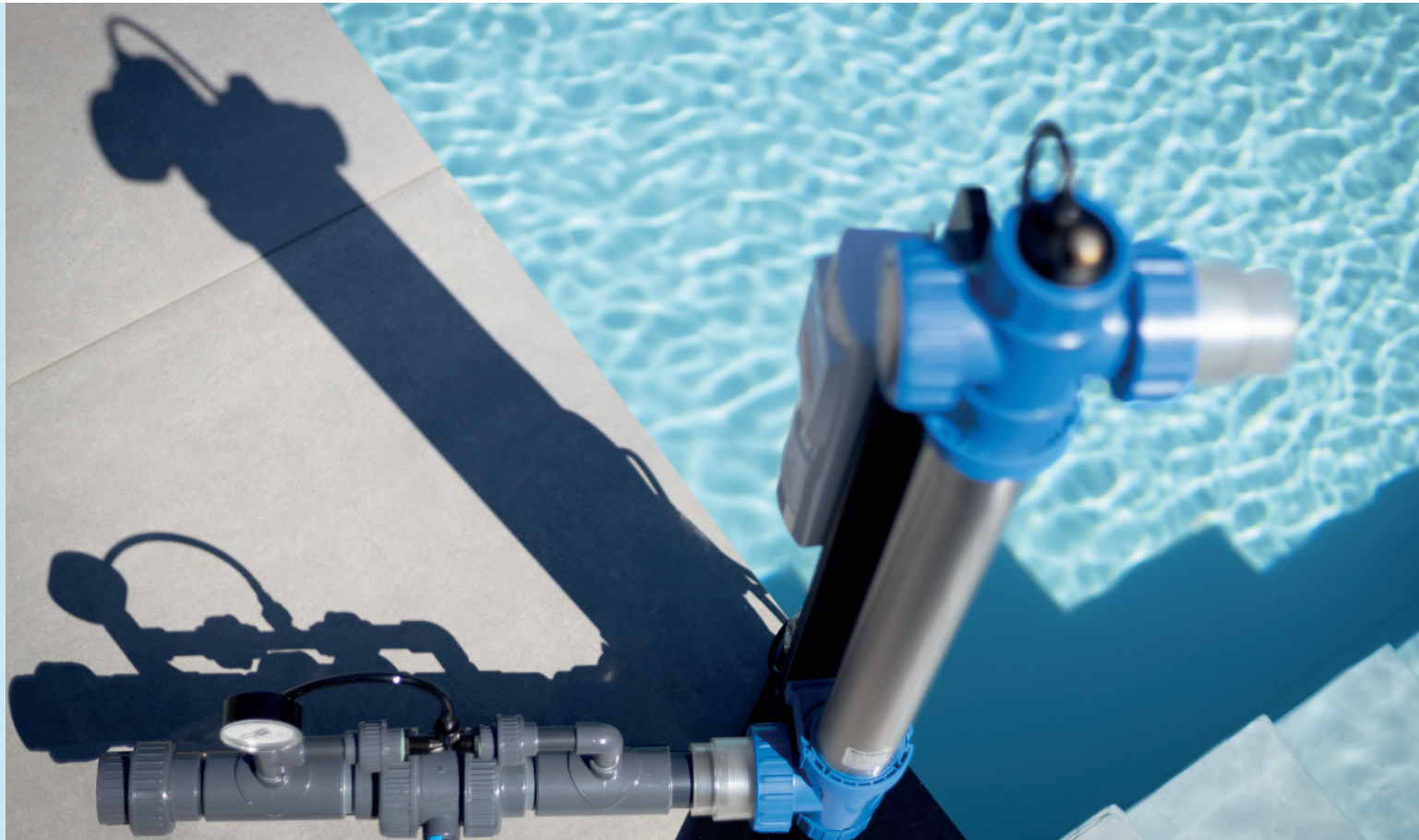
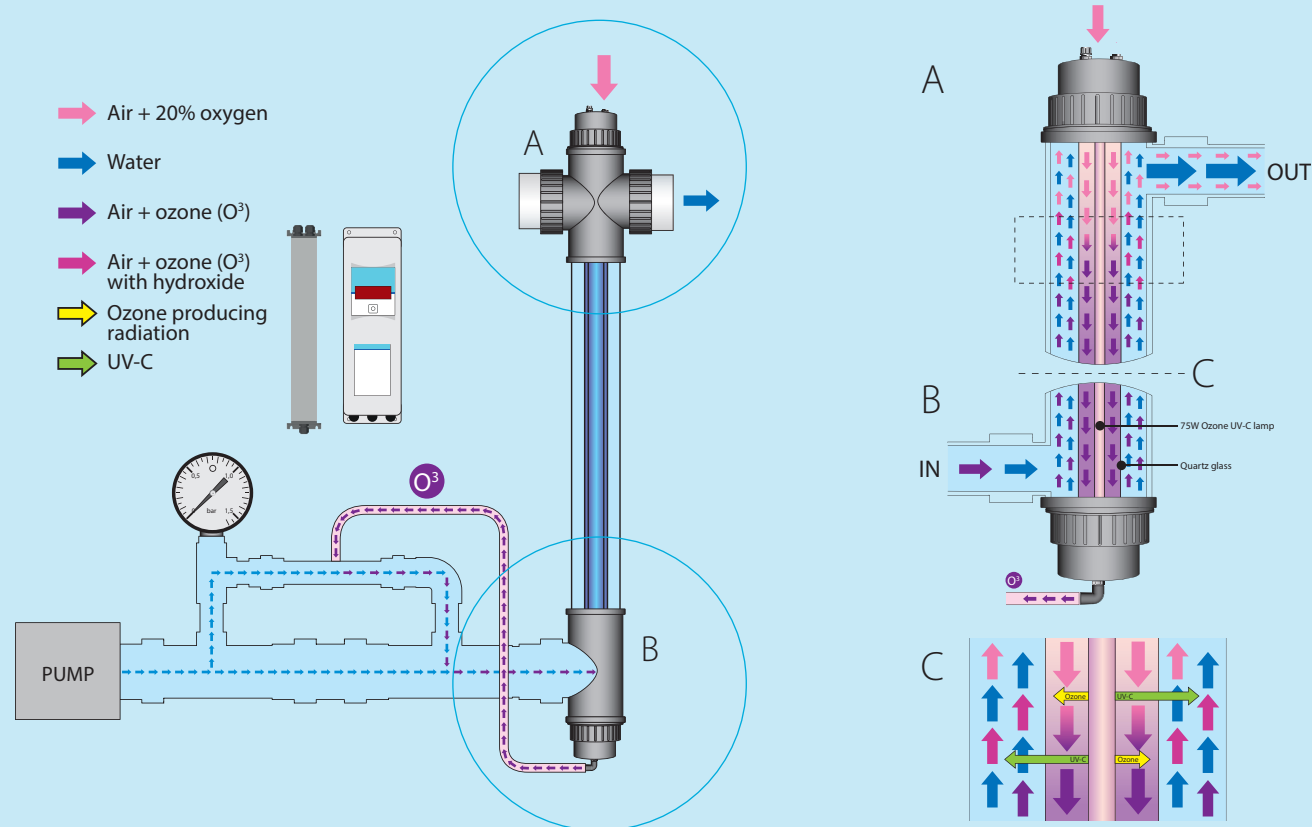


Compact AOP UV

Blue Lagoon Xpert-Series



Blue Lagoon Xpert-Series

Triple disinfection for maximum protection

Say goodbye to smelly, chlorine-filled pool water with the Blue Lagoon Xpert Compact AOP UV-C. This innovative disinfection system is the ultimate solution to keep your pool water fresh and healthy with minimal chlorine usage. It provides triple disinfection, combining ozone, OH-radicals, and UV-C to ensure maximum protection against harmful bacteria and viruses.

Operation

The combination of ozone and UV-C makes it possible to have a pool with minimal chlorine usage. Through the supplied venturi, air is sucked in from the outside into the space between the UV-C lamp and the quartz sleeve. The special UV-C lamp generates radiation of both 254 nm and 185 nm. The 185 nm radiation converts the available oxygen into ozone. The produced ozone (max. 0,6 g/h) is mixed with water through the venturi to perform its disinfection and oxidising job. Inside the UV-C housing, any residual ozone will be converted by the 254 nm UV-C radiation into OH radicals (the so called Advanced Oxidation Process) that have an even stronger oxidising power than ozone.

Revolutionary Operation for Maximum Results

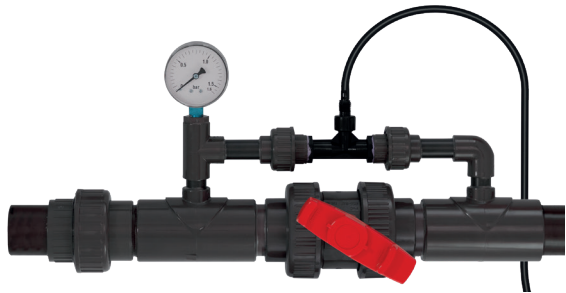
Blue Lagoon Xpert Compact AOP UV-C's revolutionary combination of ozone and UV-C produces OH radicals that have an even stronger oxidizing power than ozone, resulting in the oxidation of organic pollutants in the water. This system's

double-function lamp produces both ozone and UV-C, ensuring that the water is disinfected and purified at the same time.

Long-Lasting Performance and Easy Maintenance

The device's ozone UV-C lamp produces ozone and UV-C for up to 9 000 hours, and the unit will indicate when the lamp needs replacing. Additionally, the Blue Lagoon Xpert Compact AOP UV-C is easy to install and maintain, making it a hassle-free solution for clean pool water.

The combination of ozone and UV-C, integrated in this cleverly designed disinfection system, ensures fresh and healthy pool water with the possibility of providing a minimum use of chlorine.



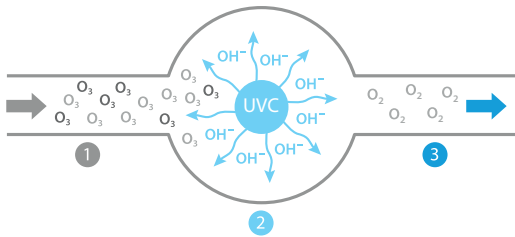
What is AOP?

The VGE Advanced Oxidation Process (AOP) combines the benefits of ozone and UV-C into one device. When ozone is

used in combination with UV-C light in water, hydroxyl radicals ($\cdot\text{OH}$) are created. These radicals are very effective in oxidizing micropollutants in the water and therefore reducing the organic and inorganic pollution in the water. Chlorine disinfection by-products such as THM and chloramines are being reduced. The UV-C light not only disinfects the water very effectively, also chlorine resistant organisms like Cryptosporidium and Giardia are successfully being inactivated. Lastly it directly reduces the chloramines in the water. The UV-C system is designed in a way that all the ozone in the water is being used for the AOP process, therefore no deozonation device is needed if the advised flowrates are met. AOP is a very effective and efficient way of sanitizing and disinfecting your pool. As a result the amount of chlorine in a pool can be kept to a minimum.

More about AOP

The Advanced Oxidation Process (AOP) is the best available water treatment technology at this moment. AOP uses $\cdot\text{OH}$ radicals which have the highest oxidation potential of oxidants that can be used in water treatment systems. When dissolved ozone (1) is irradiated by UV-C radiation in a UV treatment chamber (2), then $\cdot\text{OH}$ -radicals are created. The lifetime of OH-radicals is extremely short, because of that the entire treatment process takes place within the UV treatment chamber. Treated water (3) is without $\cdot\text{OH}$ -radicals



The lamp has a double function, producing ozone and UV-C radiation at the same time. The ozone in the water will be completely broken down by the UV-C radiation. Because of this, so called OH-radicals are being produced which have a high oxidation potential. This results in oxidation of the organic pollution in the water and the UV-C radiation will also disinfect the water at the same time.

Benefits AOP:

- Strong combination of ozone (oxidation) and UV-C (disinfection);
- Improves the disinfection efficiency;
- Makes a pool with a minimal amount of chlorine possible;
- Effective against chlorine-resistant microorganisms;
- Prevents skin and eye irritation;
- Can be quickly added to existing filtration systems.