

# Blue Lagoon Xpert-Series AOP Compact Ozone & UV-C 2.0



The lamp has a double function, producing ozone and UV-C light at the same time. The ozone in the water will be completely broken down by the UV-C light. 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 light will also disinfect the water at the same time.

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.

## Advantages of the Blue Lagoon AOP Compact Ozone & UV-C 2.0

- This unit provides triple disinfection: ozone, OH radicals and UV-C
- A stand-alone electronic ballast to guarantee an efficient and stable power supply in addition to maximum installation flexibility
- Up to 35% more UV-C yield as a result of reflection by the stainless steel reactor
- **DUPLEX** stainless steel housing, suitable for use in chlorine and salt electrolysis baths
- The ozone UV-C lamp produces ozone and UV-C for 9.000 hours
- The device will indicate when the lamp needs replacing
- Easy installation and maintenance
- Made in the Netherlands

## Operation

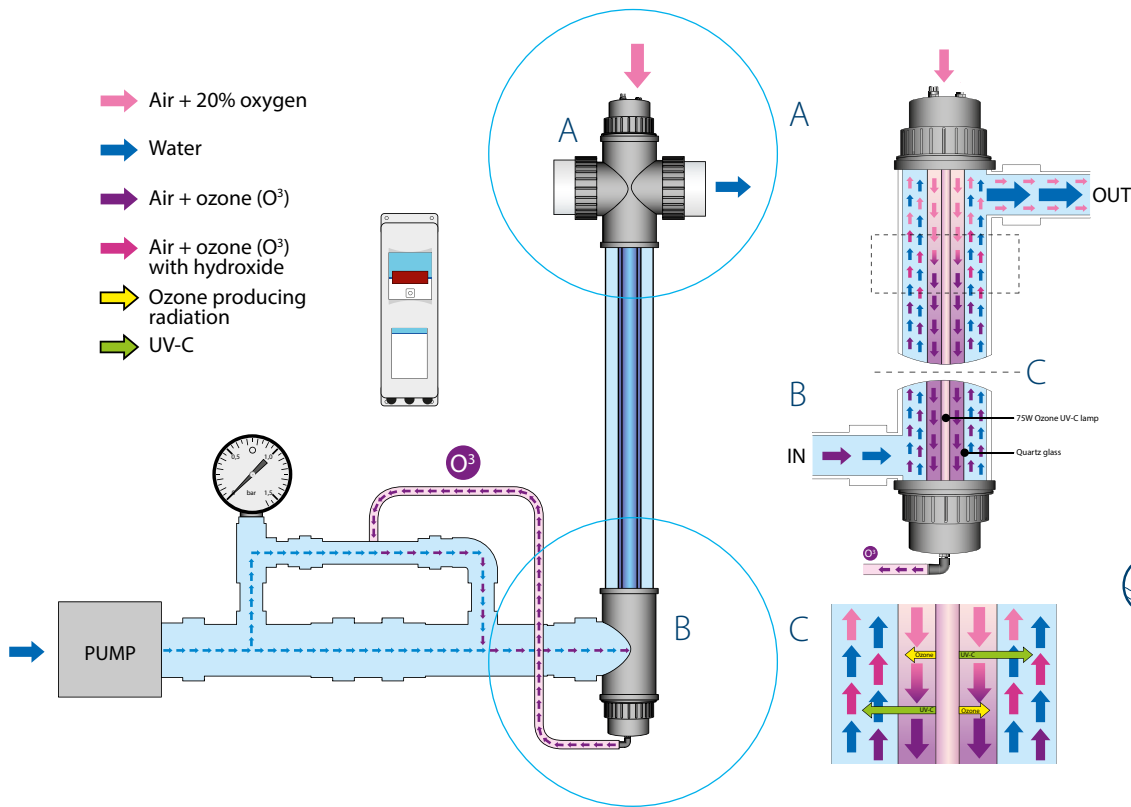
The combination of ozone and UV-C makes it possible to have a pool with minimal chlorine usage. Through the supplied venturi, air is sucked in from the outside into the space between the UV-C lamp and the quartz sleeve. The special UV-C lamp generates radiation of both 254nm and 185nm. The 185nm radiation 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 254nm UV-C radiation into OH radicals (the so called Advanced Oxidation Process) that have an even stronger oxidising power than ozone.



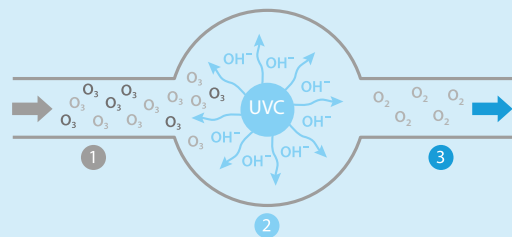
## Technical specifications

	<b>AOP COMPACT OZONE &amp; UV-C 75 W 2.0</b>		<b>AOP COMPACT OZONE &amp; UV-C 75 W 2.0</b>
Item code	BH12752	Electronic ballast	230 V AC 50 Hz
Type	75.000 / 75 W	Lamp power	75 W
EAN	8714404040617	Lamp	VGE T5 75 W Ozone
Rec. flow for 30 mJ/cm <sup>2</sup>	18 m <sup>3</sup> /h	Lifespan lamp	9.000 hours ozone - 9.000 hours UV-C
Max. pressure	2,5 bar	Ozone	0,6 gr/h
Max. flow	23 m <sup>3</sup> /h	Timer	✓
Diameter unit Ø	70 mm	Replace lamp alert	✓
Length unit	100 cm	Weight	6,0 Kg
Diameter in-outlet Ø	63mm / 50mm / 1 1/2"	Quantity full pallet	24 pcs
Housing material	DUPLEX		



## 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 deozoneation 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.



## 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.

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  $\text{OH}^-$  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