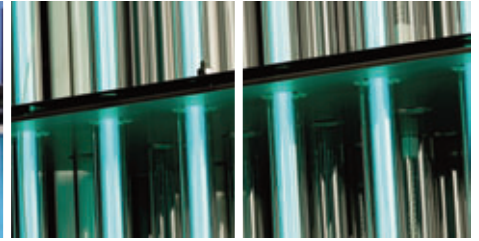
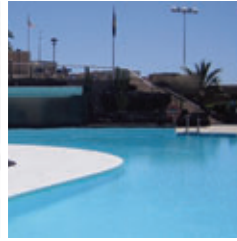
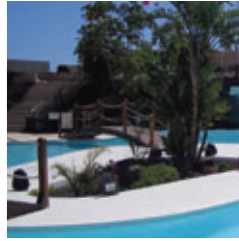


HEADWORKS
BIOLOGY
SEPARATION
MEMBRANE
DISINFECTION
BIOSOLIDS
SYSTEMS



Questions & Answers about Ultraviolet Disinfection

Q. I have a private spa at home using chemical treatment only, is it safe?

A. New research has found that the chemicals used to sanitise pools and spas are not effective in killing many of the serious bacteria and parasites normally associated with pool and spa water.

There are two bacteria that are known to be highly chlorine resistant, both of which can be present in spas or swimming pools.

One is *Cryptosporidium*, which can survive for up to a week in chlorinated water, and the other is *E. coli* (*Escherichia coli*).

Both of these can cause serious health problems.

Q. Would an ozone system give me added protection?

A. For several years now, many spa manufacturers have been aware of the problems related to chemicals and have been offering small ozone generators as a solution to this problem but there are doubts about the suitability of ozone for this application.

Ozone is used very successfully in swimming pools where there is a relatively large water volume and normally a plant-room which can contain the ozone equipment and a correctly sized contacting vessel to ensure sufficient re-action time.

If you apply this technology to a spa with a very small water volume, only several cubic meters, combined with a very fast turnover rate with no space for a contacting vessel then the system will not function correctly.

Ozone would escape into the atmosphere above the spa water due to the fast turnover rate and dangerous levels of airborne ozone could occur rapidly.

To overcome this problem, spa suppliers are fitting very low output ozone generators but

this brings into question the efficiency of this treatment as there is insufficient ozone present and very little contact time with the water.

Q. Is there another alternative?

A. UV systems are now starting to gain a foothold in swimming pool & spa water treatment as more and more users are requesting the use of chemicals be kept to a minimum and that there is also a system to ensure adequate protection against chlorine resistant micro-organisms.

Ultraviolet lamps emit a germicidal ray which alters or disrupts the DNA or RNA of targeted organisms such as viruses, bacteria and parasites.

By installing an Ultraviolet system, the targeted organisms can be instantly eradicated effectively without any harmful residuals.

Due to this, the chemical levels in the spa can be reduced to a minimum.

The other main benefit of UV is that the units are now very much smaller in size due to the use of high powered lamps and they can be easily fitted into the spa pipework system even in the tight confines of a domestic spa.

They also benefit from having very low power consumption and therefore can be left to operate continuously if required.

The maintenance is also limited to a 9,000 hour lamp change and cleaning the outer glass protection thimble, both of which can be done simply by the spa owner.

Q. Is the same technology now being used on private pools?

A. Private pool owners now have the choice of economically priced ozone or UV systems which give the added protection from the same hazards as effect spas.

Once again, if there is limited space available for the equipment, UV is more easily accommodated, and, with the Triogen units, can actually be installed outdoors should this be required.

Q. OK, it's UV for spas, but how do you choose between ozone or UV systems for private pools?

A. Both systems are excellent in giving added protection and reducing the use of chemicals which is the basic requirement for both pools and spas.

UV is the simpler system to install and takes up very little room if there are space restrictions.

Ozone is an oxidant and therefore it completely removes contamination which vastly improves water clarity.

It also acts as a flocculent for solid particles and therefore it improves the efficiency of the filtration again improving the water clarity.

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Details of Ultraviolet Equipment

Product Benefits

- The first complete line of UV Sanitisers designed for Pools and Spas
- Indoor or outdoor applications
- Instantly kills bacteria, germs and parasites
- Eliminates health hazards associated with chemical by-products
- Enables a reduction in chemicals and treats the water to drinking water quality standards.

Product Features

- Durable stainless steel and PVC reaction chamber
- Models for many sizes of pools and spas.
- Flowrates of 10, 18 & 25 m³/h
- CE Certified
- UL Listed
- Once per year lamp replacement
- Easy installation and low maintenance
- Fully guaranteed

