

Questions & Answers about Ozone Disinfection for Swimming Pools

Q. Are there any disadvantages to using only standard pool chemicals in my pool?

A. For many years, chlorine or bromine based chemicals have been the standard for swimming pool water treatment and have produced reasonably good results both in private and commercial applications.

However, research and studies have shown that these chemicals can have associated health consequences due to the formation of reaction byproducts.

Also, there are bacteria and parasites which are resistant to these chemicals at the concentration levels normally adopted for pool use.

Municipal pool operators have been aware of these issues for years and have adopted ozone treatment as a supplement to chemical dosing to drastically reduce these associated problems.

However, the private pool user has not normally been made aware of the drawbacks associated with pool chemicals or the alternatives that are available.

Q. What is ozone gas?

A. Ozone is formed by splitting oxygen (O_2), after which some of the molecules reform into ozone (O_3).

Ozone is an unstable gas and will naturally reform into oxygen in approximately 20 minutes. As a result of this, it is not possible to store the gas therefore must be generated close to the point of use.

Q. How do you generate ozone?

A. There are two basic methods of generating ozone gas, either subjecting the oxygen molecules to a high voltage electrical discharge (Corona discharge) or subjecting them to ultraviolet irradiation (UV).

The corona discharge method is utilised for small to large ozone production normally used

on commercial pools of all sizes, however the technology required tends to be more complicated than UV exposure and therefore more expensive.

For private pool applications, the UV exposure method is the simplest method resulting in ozone generation at an acceptable cost to the average private pool owner.

Q. Why will ozone give me a better pool?

A. The contamination of swimming pools is caused primarily by the bathers themselves who introduce pollution in the form of urea, sweat, body oils and a whole range of cosmetic products including sun tan preparations.

When these soluble pollutants react with the pool chemicals, substances called “chloramines” are produced and it is these, and not the chemical itself, that are responsible for eye and nose irritation, skin problems and the typical “swimming pool smell”.

When ozone gas is introduced into the water, it reacts immediately with the contaminants faster than the chemicals can react thereby reducing the amount of chemicals used.

It also has the ability to destroy some of the chloramines formed by the reduced levels of chemicals that are still used.

Ozone also acts as a flocculant on solid particles and therefore increases the efficiency of the pool filtration system.

Q. How does it affect the pH of my pool water?

A. Ozone has no effect on the pH of the water but as it allows the reduction in chlorine usage, the pH of the water is more stable and requires far less adjustment.

Q. Will I actually see a visual difference in the pool water?

A. When ozone treatment is adopted, it is normal to see a marked increase in the water clarity as

well as a colour change to a more natural blue. This is combined with a cosmetic sparkle which overall makes the pool more inviting.

Q. Can I use ozone only or will I still require some chemicals?

A. Many private family pools use the Triogen ozone system as the only source of water purification, but this depends on the amount of sunlight to which the pool is exposed.

As there is no residual ozone in the actual pool basin, algae can form depending on the amount of sunlight present but this can be controlled by the use of a copper based algicide that is ozone compatible rather than a chlorine based chemical.

Q. How is the ozone gas introduced into the water?

A. The ozone system requires a water booster pump and a venturi injector which draws atmospheric air through the ozone generator and then into the main pool circulating system. Using this method ensures that no ozone gas can leak from the system as it only produces ozone under vacuum conditions created by the venturi.

Q. What is the contact degassing system and why is it an advantage?

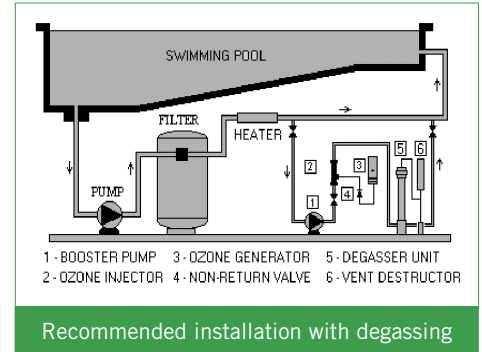
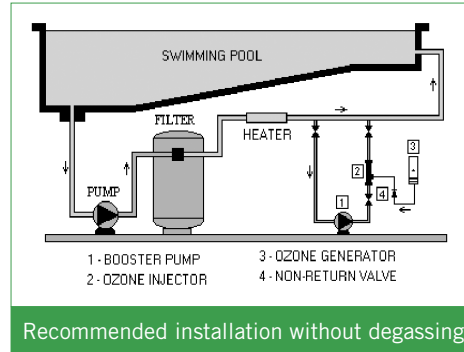
A. The contact and degassing system increases the time that the ozone is in contact with the water thereby increasing the overall effectiveness of the system.

The degassing parts of the system allows the air and ozone mixture within the contact tank to be vented and any unused ozone to be destroyed. This prevents air bubbles from entering the pool, especially important where a pool cover is used as this would trap the vented air.

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Details of Ozone Equipment



Product Benefits

- Effective against chlorine resistant micro-organisms
- Dramatically reduces chemical consumption
- Instantly kills bacteria, germs and parasites
- Eliminates health hazards associated with chemical by-products
- Reduced eye and skin irritation
- Improved water clarity

Product Features

- Easily utilized on existing pools
- Easy to operate and maintain
- Two models available for pool volumes of 70m³ & 140m³
- Very easy lamp replacement and cleaning
- Suitable for continuous operation and cost effective
- CE Certified and full Triogen guarantee

UV250/500

