

Ultra - Violet Sterilizer for Swimming Pools



Ultraviolet (UV) can reduce chloramine effects

Researchers in Europe have found that the increasing exposure of children to chlorination products might be an important cause of incidence of childhood asthma and allergic diseases. In some cases the damage was equivalent to that found in heavy smokers. Even people working at the sides of pools such as lifeguards and instructors were found to be at risk. The study claims that regular attendance at chlorinated pools by young children is associated with an exposure-dependent increase in lung epithelium permeability and an increase in the risk of asthma development, particularly when associated with other risk factors. Symptoms are caused by chloramines, particularly trichloramines which are formed when chlorine reacts with sweat or urine in the pool water. Trichloramines evaporate easily into the air and like mono and dichloramines, are powerful irritants that are responsible for the unpleasant smells and eye irritation often felt at indoor pools. The amount of chloramines present in the air depends on factors such as swimmers' personal hygiene and how often the water is changed.

It is recommended that pool operators should try to reduce the levels of chloramines-laden air from pool surroundings. Methods include better ventilation, improved hygiene practices by bathers themselves such as showering before swimming and the regular renewal of pool water. Alternatives to chlorine- based disinfection should also be considered.

Ultraviolet (UV) water treatment can provide an effective way of reducing those chloramines from pool water. UV systems can destroy these compounds, resulting in improved air around the pool.

UV dechloramination inactivates microorganisms, particularly chlorine-resistant ones, present in pool water. This means that the amount of chlorine necessary for general disinfection also can be significantly reduced.

The primary action of UV is to kill bacteria, viruses, moulds and their spores, thus reducing the risk of transmission of stomach, skin and respiratory tract infections to bathers. UV has an important secondary action: it initiates photochemical and photo-oxidation reactions which destroy chloramines: a range of compounds responsible for unpleasant smells in pools. This is particularly important for indoor pools where features such as water slides, jets and fountains give a greater surface area for the release of chloramines into the air.

The overall result is cleaner, healthier environment with none of the unpleasant side effects commonly associated with chlorination. A reduction in chlorine usage also can mean some financial savings for pool operators.

What is UV and how does it work?

Ultraviolet light is found in the electromagnetic spectrum between visible light and x-ray. Water passes through the chamber of the device where it is exposed to the UV-C band (short wave, 100-320nm) which is the germicidal range. UV radiation is very powerful and, causes the skin to tan. The 253.7 nanometer light penetrates the cell walls of bacteria, viruses and other microorganisms, altering the DNA or the RNA. The process inactivates cells so they are no longer able to replicate - they are dead. No chemicals are added to the water. The functioning of the UV system does not depend on water temperature and pH.

Systems sized to suit your pool:



Spa & Pool UV-C 35.000	
Lamp TUV 4P-SE T5	40 Watt
UV-C (W)	15
UV-C (%) after 9000 hours	85%
Bath content (L)	35.000 L
Max. flow through	15.000 l/h
Max. pressure	3 bar
E 800050	



Spa & Pool UV-C 70.000	
Lamp TUV 4P-SE T5	75 Watt
UV-C (W)	25
UV-C (%) after 9000 hours	80%
Bath content (L)	70.000 L
Max. flow through	20.000 l/h
Max. pressure	3 bar
E 800150	



Spa & Pool UV-C 150.000 Amalgam	
Lamp TUV 4P-SE T5	130 Watt
UV-C (W)	50
UV-C (%) after 9000 hours	80%
Bath content (L)	150.000 L
Max. flow through	40.000 l/h
Max. pressure	3 bar
E 800500	



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