

Colchester District  
*Business Awards*  
2008



**aligator**®

Commercial System Water Purification

**Bacteriological Control Units**

**Hotels • Health Clubs • Aqua Parks • Nursing Homes • Leisure Centres**

# aligator® Commercial Swimming Pools

The aligator® team are among world leaders in the ionic treatment of water. Our use of modern computer technology in combination with the unique composition and density of our specially formulated electrodes has resulted in a superior system, enabling the absolute control of energized ionisation.

Extensive research and development into the water purification process and ionic treatment has culminated in an efficient product, which enables the end user to reduce chemical usage by up to 75%.

This system reduces:

- **The need for toxic chemicals and salt**
- **The risks of health hazards from both the above**
- **Offensive chemical odours**
- **Damage to the environment**
- **Damage to pool equipment**



Hence our Ionised Water Purification System is advantageous to dealers, end users and the environment alike.



**Chateaux Jonquieres**



**Kilonan Castle**

## **Whites of Wexford Ireland**

Water purification for main swimming pool and vitality pool



With the aligator® Commercial Swimming Pool Water Purification System, the benefits are crystal clear. By reducing chemical usage by 75% it is:

- **Perfect for Children and Allergy Sufferers**
- **Far more Environmentally Friendly than Standard Methods**
- **The Automated System reduces maintenance time**
- **Measurable Cost Savings**
- **Reduces flocculent & algacide-free cleaning**
- **The intelligent system tells you when the water needs attention**
- **Unlike other systems the backwash water can be used for irrigation**
- **Gives considerable cost savings over conventional chemical only sanitation**
- **Helps to remove both magnetic and non-magnetic solids from suspension in water**
- **Indicates when electrodes need replacing and when water conductivity is wrong**
- **Allows the maintenance of pool water to healthier standards**

# How **aligator®** works

Water distribution systems are primary reservoirs for Legionnaire's disease. Prevention of legionnaire's disease has been accomplished by disinfecting water distribution systems, especially the hot water recirculation pipes.

Once Legionella has been diagnosed, it is essential to take appropriate and effective measures. In the past several disinfection systems have been used, either singly or in combination, with variable results.

## **Introduction to Copper-Silver Ionisation**

The principles behind Copper-Silver ionisation have been known for over 200 years, ever since the ancient Greeks stored water in Silver containers to keep it fresh. NASA in the Space Programme has used Copper-Silver ionisation since the 1950's. This technology has gained wide acceptance across America, Australia and mainland Europe. Copper-Silver ionisation is widely used in hospitals across the US to prevent Legionella. Furthermore, Copper-Silver ionisation has been used to treat Olympic swimming pools since the Barcelona games in 1992.

Our aligator® Water Purification Unit is one of the most advanced Ionisation systems available today. The basic principle is relatively simple and well known – dissolution of



Copper, Silver and zinc into the water, by electrolysis (passing a low DC current through sacrificial anodes). However, this has been combined with modern technology.

The dosages of Copper ,Silver and zinc are sufficient to control bacteria and “biofilm” or “bacterial lawn”. Silver is an effective bactericide and Copper is an effective fungicide. The +ve charged ions from the electrodes are attracted to the –ve charged cell walls of other molecules such as bacteria and algae. The Copper ions form electrostatic bonds on the cell walls, which serve to distort and weaken the cell membrane. This enables the smaller Silver ions to penetrate the cell and to damage the life support systems, (i.e. DNA, RDA, cellular and respiratory systems) . .

## Hot Water Systems – Cold Water Systems – Water Features

aligator® industrial units are designed and used in just about every situation where water needs to be purified. The units fit directly into the water systems and produce a continuous residual non-chemical disinfectant, eliminating the need for high temperatures and chemicals. In Hot Water Systems the need to heat water to 60°C (superheat & flush) is eliminated and this gives genuine measurable cost savings in energy consumption from the outset.



**St Georges Retreat Surrey**

Water purification of hot water system for nursing home

Key Features	Key Benefits
Fully automatic system. Sends current to probes to release ions into the water.	System is self regulating and probes are self cleaning. After initial installation no on-site operation is needed to change settings. Alarm systems can also be remotely monitored.
Crystal clear, allergy-free water .	Reduces the need for Flocculants, water clarifiers and algaecides. Lower chemical level and lower costs.
No Chemicals Used.	No risk to operators/users as there is no exposure to chemicals. Reduced cost for insurance.
Low Capital cost.	Significantly less expensive than all other water treatments (chlorine, UV, Ozone etc).
All parts of the system long lasting (Five Year Guarantee).	Low maintenance costs.
Ionisation is the most recent development in the field of water treatment.	Represents latest environmentally friendly technology in water treatment. Lowers usage of/completely eliminates chemicals in water treatment.
Hot water at 48°C	Cost saving per degree up to 12°C. Effective cost savings and power.

## Weymouth Sea Life Centre – Seal Pool

The seals at Merlin Entertainment Sea Life Park in Weymouth Dorset are happier now that Biwater Leisure has completed the new filtration plant on their 350m pool and aligator® Systems have reduced the growth of Algae in the pool tank.

Until recently the seals had been swimming in opaque water, largely due to suspended algae and others solids, resulting in less than one metre of viewable water.

Biwater Leisure was asked to look for a solution that did not involve chemical treatment, as chlorine damages the seals' eyes and respiratory system. The new installation comprises mechanical filtration with a two hour turnover of pool water combined with two aligator bacteriological systems.



### Weymouth Sea Life Centre

Ionic injection system installed into seal pool to remove the growth of algae.

The aligator® Ionisation Purification System was installed to reduce the growth of algae on the sides of the tank. The units inject low levels of copper and silver ions into the water, which inhibits algae and bacterial growth.

At long last the seals have crystal clear water and the public can now watch the seals throughout the tank.

The combined resources of Biwater Leisure, and aligator® Systems working together with Merlin Entertainment Ltd. overcame this challenge associated with sea life centres. The end result is a clear safe pool for the seals, without the use of chemicals, much better for the seals and the environment.

**A US Government report, which compares the effectiveness of five separate methods of treating Legionella, including superheating, Copper/Silver ionisation, ultraviolet radiation, instantaneous heating systems and hypo-chlorination, concludes:**

*“For long term prevention of Legionella from water distribution systems, systematic disinfection methods are the most reliable. Preliminary assessments suggest that Copper-Silver ionisation is the most efficacious and cost effective method today....”*

**Academic research into the effectiveness of Copper-Silver ionisation was carried out in the UK by Nigel Pavey on behalf of BSRIA (The Building Services Research and Information Association). The Pavey report states in its recommendations:**

*“The results of ionisation water treatment have shown that it can be an effective strategy in hot and cold water installations provided that the application is properly assessed and designed as part of an overall water treatment regime by reputable and experienced companies.”*



**Ramada Hotel County Carlow**  
Water purification for swimming pool

**Kenmare Park Hotel**  
Water purification for swimming pool



**The following is an extract from leaflet BS22, issued by ENFO (The Department of the Environment and Local Governments Information Service), in relation to the usage of Copper-Silver ionisation in potable water applications:**

*“Copper/Silver anodes can also be used (as a reliable source of disinfection). Both these metals have strong bactericidal effects, and leave residual water. The anodes have to be replaced on a regular basis”.*

# What **aligator**® will do for you



- Destroys known water borne bacteria/pathogens
- Removes Biofilm thereby eliminating the safe harbour for microbes
- Produces a continuous residual non toxic disinfectant through the whole system being treated, eliminating the periodic need for chemical treatment and the costly close down of the systems
- It is not affected by heat enabling hot water temperatures to be reduced thus eliminating the possibility of scalding and thereby reducing operating costs
- Usable in just about any water system whether it be free flowing or closed circuit
- The intelligent system tells you when the water needs attention
- Compatible with Building Management Systems (BMS)
- Economical to operate using single phase electricity supply 5amp and low cost aligator® electrodes
- Comparative low cost capital purchase price and installation costs normally recoverable in the first two years of operation
- Five year guarantee on all electronic components with the exception of the electrodes



Environmentally  
Friendly: Creates no harmful  
green house gases



Made in the UK  
Guaranteed  
technical back up



16 years of  
excellent service

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