



Electronic Pool Conditioning

Everyone in charge of a swimming pool is aware that to maintain the attractiveness of crystal clear water in a pool requires regular attention, considerable time and substantial expense. Even then they may not always be successful and a pool that should enhance a Hotel or Sport Centre and be inviting, turns out to be a liability or cosmetically unattractive to the users.

PoolVantage systems are a cost effective and trouble free way of overcoming many of the common problems experienced by those responsible for swimming pool management.

AquaVantage/Vaughan Industries Limited are known internationally for their water scale prevention systems used in domestic dwellings, commercial premises and industrial sites. The technology that they have developed is so safe that it is used on potable water, food products and beverages.

The purpose of the PoolVantage system described in this document is aimed at assisting the pool owner or manager to achieve a sparkling hygienic pool with the minimum of fuss at the lowest cost. The document outlines the advantages and features of the system product range and includes typical comments and reports from a spectrum of PoolVantage users.

Features & Advantages

Whether it is a domestic or Olympic size swimming pool, there is a PoolVantage system designed for this application. These products will greatly assist the pool owner or manager to secure the advantages listed below:

Features	Advantages
No noise	Helps maintain crystal clear water
No odours	Reduced pool cleaning & maintenance
No chemicals	Sparkling tiles & pool accessories
Free service & maintenance	Reduced scum and scum lines
Very low running costs	Reduced pH bounce
Fits any pool and easy to install	Reduced chemical needs
Waterproofed to IP65	Reduced chlorine levels and odour
	Greatly improved pool hygiene

Electronic Hygiene Systems

The PoolVantage system developed by the specialist water conditioning company AquaVantage/Vaughan Industries Limited, utilises the phenomena that, when subjected to specifically designed electro sonic fields, the physical properties of the water are changed. These changes are aimed at altering the condition of the pool water such as :

- pH (Potential hydrogen)
- Surface tension
- Thermal and Electrical conductivity, and
- TDS (total dissolved solids)

These changes in the physical properties of the pool water are very important to the pool owner / manager, because they result in the following beneficial results:

1. Customers often comment that the water feels softer due to the lowering of the surface tension, and silkier to touch. It feels more pleasant to swim in, and extensive evidence exists to show that it is kinder to the skin.
2. The minerals dissolved in the water, such as calcium carbonate (limescale) no longer precipitate out so easily. The result is that the pool walls and accessories suffer less scale deposits and therefore they stay clean and bright longer, and are much easier to clean when the need arises.
3. Limescale on the heating surfaces of the heat exchanger is reduced and the thermal efficiency of the boiler is improved thus saving pool heating costs.
4. Used in the presence of electro-sonic fields of the type generated by the PoolVantage system, chemicals become much more effective. Bacteria kill rates are increased many times over, and sterilisation times reduced from several hours to a few minutes.

This effect allows dramatic reductions in the chemicals needed to maintain a hygienic pool, with reductions of up to 50% being common. The water remains pure and hygienic, yet much nicer to swim in due to the reduction in the chemical dosing. Substantial cost savings are achieved as a result of the reductions in chemical requirements.

The PoolVantage system enhances the effectiveness of the pool management because:

- The overall results of the changes created by the technology in the pool water means that the water remains CLEAR and feels SOFTER, whilst the reduction in the scale precipitation reduces the frequency and time spent on pool MAINTENANCE.
- CLEANING is greatly assisted and mechanical scrubbing reduced. The tiles / liners and accessories remain CLEAN and SPARKLING. SCUM due to body yeasts, cosmetic traces and sun oil combining with suspended dirt particles, is greatly reduced if not eliminated, and the SCUM LINE should disappear.

☑ Additionally the PoolVantage treated water is more chemically stable resulting in much reduced pH bounce, and therefore ensuring that pool management is much easier without the need for shock dosing of chlorine when the water quality drops off. This is very important in situations where variable pool loading is experienced such as Hotels, Schools and Public pools.

☑ Pool HYGIENE is greatly improved due to the absence of bacteria breeding grounds caused by scum lines and scale deposits on the pool surfaces and deck, and the significantly enhanced chemical performance due to the unique effects of the PoolVantage signal. Water retains it's clarity and the PATHOGEN levels of the pool are diminished resulting in reduced risks to the swimmers.

Continuing Advantages

- Chemical requirements remain significantly reduced
- Heat exchanger efficiency is improved
- pH remains stabilised
- Backwashing needs reduced significantly
- Scum line disappears or is greatly reduced
- Pool cleaning is reduced and is easier to undertake

Action & Results Programme

Day	Action	Results
1	Install PoolVantage System	
2 to 15	PoolVantage action conditions pool water	
15 to 20		Water feels softer Cloudy water begins to clear
20 to 30		Scale begins to soften and disappear Water quality is higher pH stabilises Backwash frequency is reduced
30 to 40	Commence reduction of chemical dosing's	Reduced use of: <ul style="list-style-type: none"> • Chlorine, Sodium, Hyperchlorite & CO2 • Flocking agents Scum line greatly reduced Scale continues to diminish Pathogen levels reduced Heat exchanger efficiency improves
40 plus	Continue to reduce chemicals whilst monitoring water quality	Chemical level established which suits local conditions & maintains high water quality