Balticare Dolphin
Water Treatment System

BALTICARE PRODUCT DATA

The chemical-free solution to control scale, corrosion and bacteria

The Balticare Dolphin System is an innovative water treatment programme for BAC cooling towers and evaporative condensers that controls scaling, corrosion, fouling and microbiological growth. It eliminates in most cases usage of traditional water treatment chemicals and the need for water softening. The System fully satisfies the UK Approved Code of Practice and Guidance L8 'Legionnaires disease– The control of legionella bacteria in water systems'.

Benefits for you and the environment

1 Increase safety

- Eliminate the risk of human injury when handling, storing and dosing chemicals.
- Maintain bacteriological and legionella control in accordance with national regulations.
- Eliminate the risk of pollution caused by hazardous chemicals being released into the environment.

2 Simplify operations

- Reduce service and operations costs by eliminating the risks of chemical pump failure.
- Greatly reduce the need for water softening in hard water areas.
- Reduce maintenance and cleaning costs with optional sidestream filtration that keeps water clean and clear.

3 Save money

- Reduce water usage through increased cycles of concentration.
- Eliminate any chemical contamination in water going to drain, allowing you multiple water reuse options.
- Assured life cycle cost savings by eliminating the ever increasing yearly cost of chemicals.

Balticare
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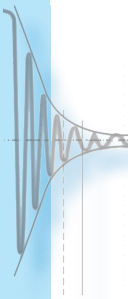
How the Balticare Dolphin Water Treatment System works

1 The main component of the Balticare Dolphin Water Treatment System is the **Dolphin Series 3000G System™**.

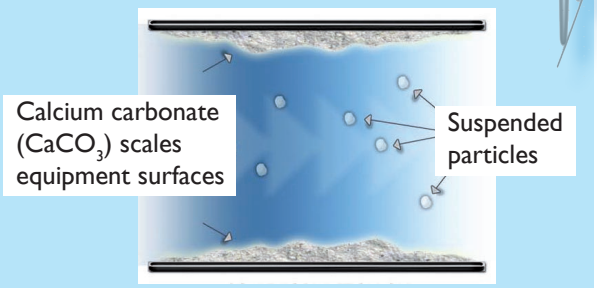
This proprietary and patented technology of the Dolphin was developed by an engineering team dedicated to a chemical-free solution to treating process water.

Control scale

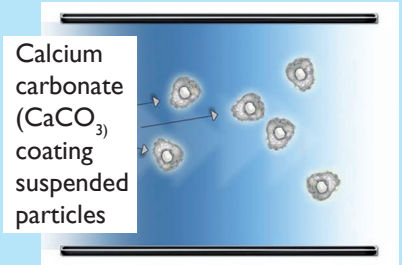
The Dolphin Series 3000G System™ is composed of a series of patented, precision wound coils, which generate a complex, time-varying, electromagnetic field around the flowing water to be treated.



Without treatment, minerals that are dissolved in the water concentrate during the evaporation process. When the concentration is so great the water can hold no more minerals, they are forced to find a surface to precipitate as a solid and scale the equipment.



When passing through the Dolphin, suspended particles are activated by an electric field which strips them of their natural static charge.
The particles, flowing with the water, become the preferred surface for minerals to precipitate. A fluffy, harmless powder forms instead of equipment damaging scale.



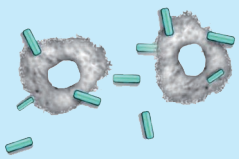
Dolphin = harmless powder instead of scale

Control bacteria

The Dolphin controls biological growth by two methods:

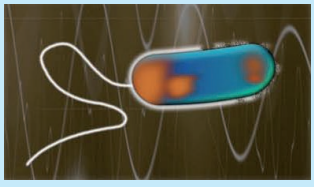
Encapsulation
Microbial life is drawn into the nucleation of the suspended particles. The encapsulation into the forming powder prevents the microbes from reproducing.

Minerals coat bacteria



Electroporation
Any microbes not captured in the forming powder are "zapped" by the secondary pulse, forcing them to spend their life span repairing cell wall damage rather than reproduce.

Pulse damages bacteria membranes



Control corrosion

Corrosion is controlled by maintaining the water chemistry at or close to the saturation point of calcium carbonate. At this level the **water is naturally non-corrosive**.

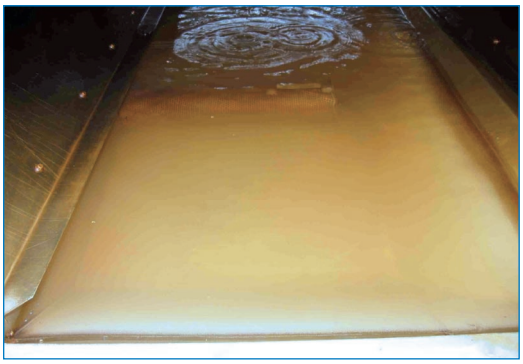
Since there are **no aggressive oxidising biocides** in the cooling water, chemically induced corrosive attack in cooling towers and evaporative condensers is eliminated.

The elimination of fouling and biofilm **prevents the development of costly underdeposit corrosion**.

Results you can see !

Compare:

With chemical water treatment



= turbid, dirty water
containing hazardous chemicals

With Balticare Dolphin Water Treatment System

= clear, clean water
free of chemicals

2 The second standard component of the Balticare Dolphin Water Treatment System is the **Balticare BCP 0 E automatic bleed control package**.

This package accurately and reliably **controls the required bleed-off and cycles of concentration**.

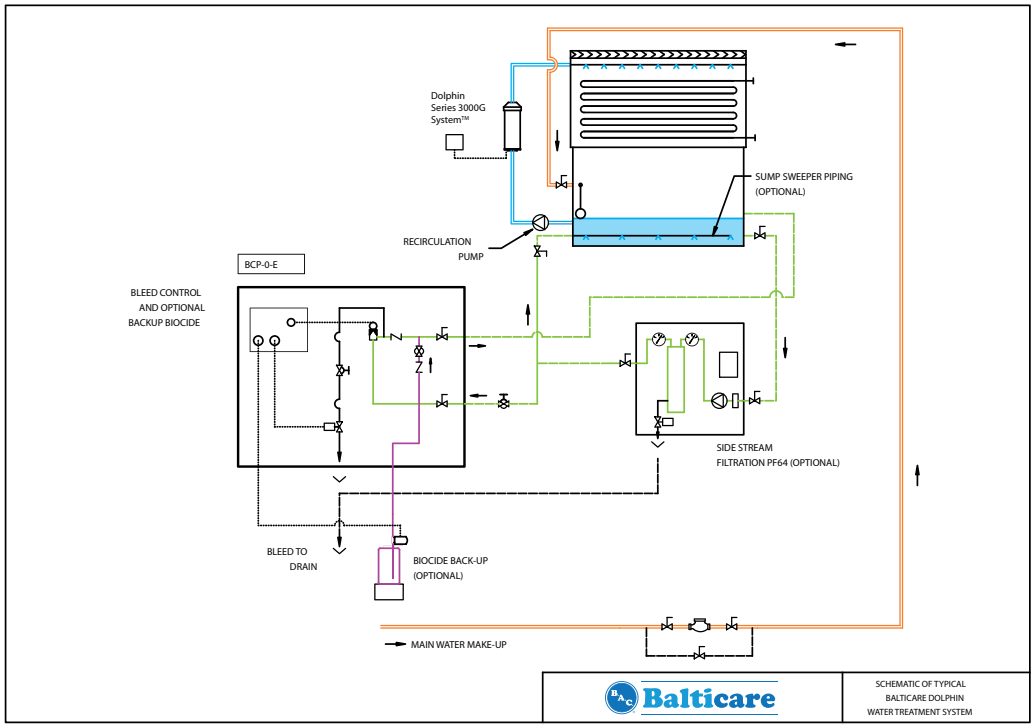
Bleed-off is automatically controlled by a toroidal type conductivity probe, controller and motorised ball valve.

The BCP 0 E incorporates a state of the art electronic control equipment in a user friendly format which is easy to install, operate and maintain.

This arrangement provides the most reliable control of cycles of concentration to maximise water savings.

Simple and efficient installation

- The Dolphin is a full flow unit that fits directly into the recirculating pipework, simplifying the installation.
- It requires no additional pumping power making it ideal for both new and retrofit installations.
- There are no moving parts in the Dolphin, making it very reliable.
- It consumes very little electricity and is totally silent.



Cooling water

Make-up water

Side stream loop for filtration & sampling

Biocide dosing

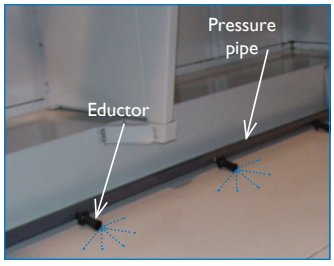
Optional equipment

The Balticare Dolphin Water Treatment System can be **customised to meet your cooling system's unique needs** or, if needed, to **comply with regional legislation requirements**. Sidestream filtration, sump sweeper piping and the addition of a secondary biocide are optional yet beneficial components in maintaining the cleanliness and clarity of the recirculating water.

PF64 sidestream separator

Efficiently removes sediment and Dolphin powder

Sump sweeper piping



Prevents sediment and Dolphin powder from settling in the sump

Secondary biocide

The Balticare BCP 1 E control system provides backup dosing of a chemical non-oxidising biocide.

For more information

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