



# BAC water treatment equipment



## Cooling systems need proper water treatment



Installation of properly designed water treatment equipment will allow the implementation of an effective cooling water treatment programme.

1st step:

Automatic bleed control; this accurately controls the concentration of dissolved solids in the cooling water to optimize water consumption through continuous monitoring and adjustment.

2nd step:

Enable for proper dosage of anti-scale and anti-corrosive product, along with biocide, in the circulating water.



## Benefits for you, your equipment and the environment



### 1. Increase safety

- ✓ Maximum hygiene by maintaining bacteriological and Legionella control in accordance with national regulation
- ✓ Reduce the risk of human injury when handling and dosing chemicals
- ✓ Reduce environmental impact with BAC Easy Treat solid chemical feed system



### 2. Simplify operation

- ✓ Efficient: designed for best water treatment practice
- ✓ Flexible: suitable for all open, closed or hybrid cooling systems
- ✓ Compatible: handles a variety of water treatment programs; liquid or solid
- ✓ Simple: all components are pre-designed, pre-mounted and user-friendly



### 3. Save money

- ✓ Reduce water usage with optimum bleed
- ✓ Reduce chemical consumption with optimum dosage control
- ✓ Reduce energy consumption with clean heat transfer surfaces
- ✓ Increase equipment life with corrosion control

# BAC Water Treatment Solutions

## 1. Automatic, conductivity based bleed control

An automatic bleed system in an evaporative cooling system controls the dissolved solids in the recirculating water. The implementation of this monitoring system is a key element for efficient control of the water quality and bacteriological growth, including Legionella pneumophila. Conductivity based, automatic bleed-off of the recirculating water using a motorised bleed valve is the most reliable and accurate control method available.



## 2. Chemical dosage

BAC offers 2 options for chemical dosage. In both cases anti-scale and anti-corrosion products are dosed proportionally to the water usage or system load. A biocide is dosed to the cooling water, on a continuous or periodic basis. State of the art controller technology guarantees that minimum product dosage is achieved for optimum treatment efficiency.

Liquid chemicals  
with BCP 2 C



Solid chemicals  
with Easy Treat  
+ BCP 0 C



### Clever design

The BAC Water Treatment Solutions incorporate all the features that are needed for cooling water applications in compact package format, which are easily selected and connected.

They can also be programmed to suit any type of treatment program.



### Automatic Bleed Control: BCP 0 C

The BAC automatic bleed control BCP 0 C is a compact package for precise control of the total dissolved solids level of the recirculating water in evaporative cooling equipment.



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



Typical BCP 0 C Installation



### Automatic Dosing and Bleed - Control Package: BCP 2 C

The BAC BCP 2 C Control Package offers accurate, high quality, liquid chemical based water treatment equipment for evaporative cooling systems. The BCP 2 C incorporates state of the art electronic control equipment in a user friendly, easy to commission and maintain format.

The BCP 2 C Control Package provides for **water meter** controlled proportional dosing of a scale and corrosion inhibitor, automatic conductivity based control of dissolved solids level in the recirculating water through blow-down as well as automatic time based dosing of biocide(s). The chemicals are

automatically and accurately dosed into the water recirculation loop of BAC cooling towers and evaporative condensers systems via the manifold.

Together with the implementation of a monitoring program this provides effective and safe control of the water quality and bacteriological growth, including Legionella pneumophila.



Typical BCP 2 C Installation



### BAC Easy Treat Water Treatment System

The BAC Easy Treat series of water treatment accessories make it easy for you to use solid water treatment chemical products. Solid product technology offers a variety of environmental, safety and simplicity benefits. This system consists of special feeders designed to provide an effective and reliable dosage of solid inhibitors and biocides.

The BAC Easy Treat series feeders are designed to pair with a BCP 0 C bleed control system for a complete package.



Typical Installation



Easy Treat Skid

### BCP 0 C FEATURES AND BENEFITS

- ✓ **Consistent good water quality** with dependable control of the cycles of concentration, regardless of the variances in thermal load profile
- ✓ **Maximum reliability** using a motorized bleed that eliminates failures
- ✓ **Easy connection** to BAC cooling towers and evaporative condensers
- ✓ Built-in sample point for **easy water analysis**
- ✓ After sales follow-up by the manufacturer of the unit to ensure **successful startup**
- ✓ Significant water and chemical **savings**
- ✓ **Traceability** of the water quality

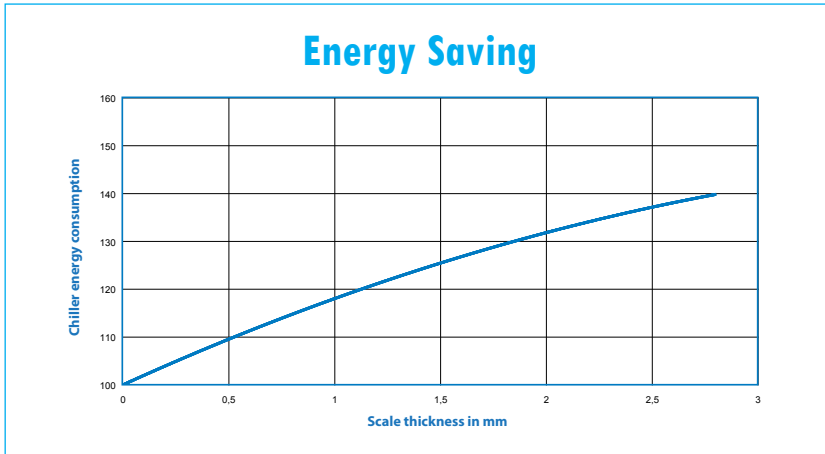
### BCP 2 C FEATURES AND BENEFITS

- ✓ **Simplicity:**
  - one controller for all the functionalities and information readings
  - pre-designed, pre-mounted and pre-wired, easy to connect
- ✓ **Easy to maintain:**
  - isolation and sampling valves allow for easy inspection, cleaning and analysis
  - integrated chemical injection point directly in the circulating water through piping manifold
- ✓ **Performance:** bleed lock out function allows enough contact time for biocide action
- ✓ **Reliability:** motorised bleed valve eliminates failures
- ✓ **Savings:** flow controller guarantees chemicals are only injected when the water circulates, preventing chemical overfeeds
- ✓ **Flexibility:** suitable for all cooling systems
- ✓ **Compatibility:** works with a variety of chemical products and water treatment strategy

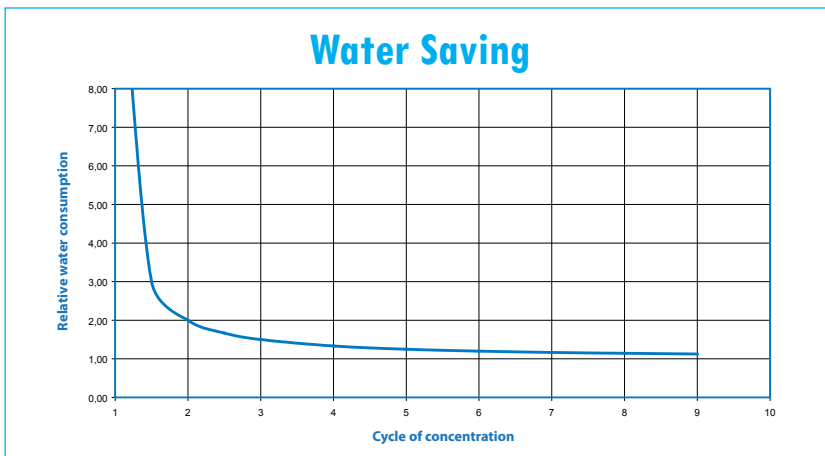
### EASY TREAT FEATURES AND BENEFITS

- ✓ Designed for use of solid water treatment products that **reduce carbon footprint** substantially over traditional liquid chemicals
- ✓ Many solid products offer over **75 % reduction in shipping weight** to reduce associated CO<sub>2</sub> emissions versus liquids.
- ✓ Works with a variety of solid product formulations to offer you **flexibility**
- ✓ No chemical pumps, so electrical usage is **reduced** and chemical leaks **eliminated**
- ✓ No moving parts, so maintenance costs are **minimized** and reliability is **increased**
- ✓ **Small area footprint** for locations with difficult access or limitations on floor space
- ✓ The Easy Treat series feed system can be located inside to **simplify product refilling** and **minimize heat tracing requirements** in cold climates

# >>> The importance of proper water treatment



The effect of evaporative unit scaling on chiller energy consumption.



The effect of cycle of concentration on water consumption.

# >>> Optional equipment

The BAC Water Treatment Equipment can be customised with options to meet your cooling system's unique needs or compliance with regional legislation requirements.

Sidestream filtration and sump sweeper piping are beneficial components in maintaining the cleanliness and clarity of the circulating water.

PF64 sidestream separator



Efficiently removes sediment

Chemical drums and bunds



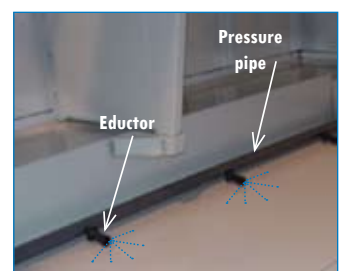
Correctly sized chemical drums and bunds

Building Management System



Remote Data Output or Monitoring - Communication with BMS systems

Sump sweeper piping



Prevents sediment from settling in the sump

