



THE AIRTEK DESIGN GROUP DIFFERENCE

Airtek Design Group takes a multidisciplinary approach to address building automation system deficiencies. Cooling tower chemistry is a subset in automation systems that lack proper design, installation, operation, and maintenance. Airtek can design the difference.

Cooling Towers require special care to inhibit corrosion and biological growth, both which diminish performance and equipment life. Typically, this requires a chemical treatment technician to regularly monitor, test, and adjust water chemistry. However, the chemical dosing process can be eased through automation and following preset guidelines, resulting in fewer onsite visits from technician.

In addition, implementing a solid chemical delivery system (upper left) provides advantages over conventional dosing methods which utilize large drums (upper right) to store unconcentrated chemicals. A solid chemical delivery system consists of:

- **DISSOLVING BOARDS**, where concentrated solids are loaded, which have small, wall-mounted footprints.
- **SOLID CHEMICALS** which can be efficiently shipped, handled, stored, and refilled without technical assistance.
- **EDUCTOR SYSTEMS** that use venturies and electronic solenoids in lieu of feed pumps which lowers upfront costs and reduces energy consumption.

chemEz



consulting
sales
design & build
install
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chemEz

BY AIRTEK DESIGN GROUP

A Configurable Native BACnet Controls System

For Treating Cooling Towers

With Solid Chemicals

with the chemEz, ease chemical treatment

The **chemEz** is a water chemical treatment control system package for cooling towers designed to maintain water levels, manage dissolved solids, and automate chemical dosing. The package enables the user to easily configure the BACnet MS/TP controller, setup peripheral devices, and select program sequences. Inherently modularized controls allow expansion for function as needed. With the **chemEz**, reduce guess-work, minimize human intervention, and diminish the reliance of trained chemical treatment technicians.

HARWARE FEATURES

Built-in User Interface

- ❖ Use the menu-driven display for quick controller configuration and view system data locally without additional hardware or software.

Complete Network Configuration

- ❖ Manipulate all parameters through a connected BACnet network.

BACnet MS/TP Network Terminals

- ❖ A MS/TP network integration terminal is available to integrate into any BACnet system.

Hand-Off-Auto (HOA) Switches

- ❖ Locally override control outputs with HOAs.

Expansion I/O

- ❖ Add modules to expand onboard inputs/outputs for customization beyond the factory control sequences.

NETWORK FEATURES

Stand-alone control

Implement system without a network or additional networking infrastructure (i.e. IP routers, MS/TP wiring, etc.).

Native BACnet MS/TP Capabilities

Integrate controller into any BACnet environment through MS/TP.

BACnet/IP Integration

Access all available BACnet objects and properties on any IP network via BACnet integration.

MODBUS Sensors Available

With the addition of a MODBUS module, I/O devices may be swapped out with network-enable sensors to reduce point-to-point termination.

REMOTE MONITORING DASHBOARD



View system data through any web-browser to instantly know system parameters. Integrate into any IT structure or router to enable web-access.

ALARMS AND DATA COLLECTION



Closely monitor your system with automatically generated alerts and data visualization. Send alarms through text messages and emails. View the data history through trend charts.

SELECTABLE CONTROL SEQUENCES



- ✓ Inhibitor Chemical
- ✓ Biocide Chemical
- ✓ Dispersant Chemical (no monitoring)
- ✓ pH (monitoring only)
- ✓ Conductivity
- ✓ Water Level
- ✓ Water Metering (monitoring only)
- ✓ Power Metering (monitoring only)
- ✓ Freeze Protection



WE DEVELOP SPECIALIZED AUTOMATION SOLUTIONS. HOW CAN WE HELP YOU?

With cross-disciplinary expertise in HVAC&R systems, Chemical Systems, Equipment Maintenance, DDC, BACnet, user-friendly GUIs, and Energy Management, Airtek Design Group is equipped to design a solution specific to your needs.

