

Sustainable & Sensible

The Sustainable & Environmentally Friendly Water Treatment Solution

COMMERCIAL • INSTITUTIONAL • LIGHT INDUSTRIAL

www.vrtxtech.com





SUSTAINABLE & SENSIBLE

In today's business climate buzzwords like "Sustainability" and "Going Green" are frequently being used. Technologies and building principles have already been developed to assist architects, engineers, and facility managers in the movement to reduce carbon footprints of buildings and structures and conserve resources whenever and wherever possible.

VRTX and its chemical free cooling water treatment provide the building industry a viable alternative to traditional chemical treatment, while also moving toward building sustainability by increasing water conservation and improving energy efficiency in evaporative cooling applications.

The distinct VRTX treatment method utilizing Controlled Hydrodynamic Cavitation (CHC) provides proven and reliable water treatment to control scale, corrosion, and bacteria while also improving employee safety and reducing environmental impact.

VRTX ELIMINATES CHEMICALS

Water treatment programs are designed to minimize or eliminate the issues associated with impurities found in cooling water. These impurities include dissolved solids, solid particles, dissolved gases, and microbiological organisms. Traditional chemical water treatment programs include film-forming corrosion inhibitors, dispersants to prevent calcite or hard scale from forming on heat transfer surfaces, and biocides used to eradicate microbiological organisms. The VRTX technology provides water treatment to control corrosion, scale, and bacteria without the need for harmful chemicals.

Additional benefits include:

- Improved worker safety by eliminating chemical handling, spills, or splashing
- Eliminate shipping, drum, and drum management costs

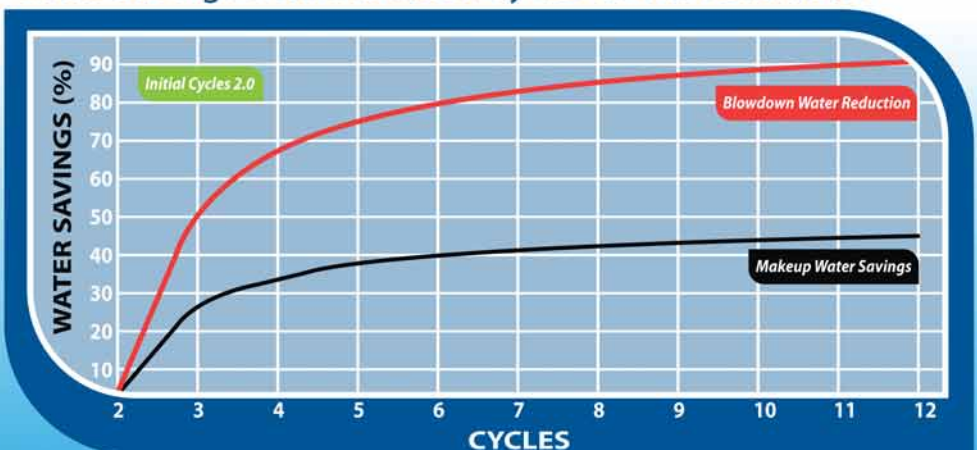
CONSERVATION AND WATER REUSE

VRTX systems are designed to precipitate mineral colloids and then filter these solids from the re-circulating cooling water. The results allow VRTX to increase cycles of concentration in the evaporative cooling equipment. Cycles of concentration is simply a measurement of the dissolved mineral concentration compared to the level in the makeup water source. By precipitating and filtering solids VRTX can achieve higher (but not limitless) cycles of concentration in a variety of makeup water qualities.

Reducing potable water usage is one of the primary initiatives in the Sustainable and Green Building movement. Achieving higher cycles of concentration in evaporative cooling requires less makeup (incoming) and effluent (bleed) volumes of potable water resources, while also providing economic savings for business and industry.

A sustainable water treatment program means there are no chemicals in cooling water effluent. Opportunities for additional source reduction include capturing this effluent for non-potable water source uses like commercial landscape irrigation, equipment washing, lavatory flushing, concrete batching, dust suppression and irrigation of non-food crops. Depending on local and state regulation of effluent, some customers may be permitted to discharge directly into storm drains or other bodies of water and bypass the sanitary sewer altogether.

Water Savings with Increased Cycles of Concentration



IMPROVED ENERGY EFFICIENCY

Proper water treatment can significantly impact the overall energy efficiency of evaporative cooling systems. Impurities that can coat heat transfer surfaces drive up electricity consumption and can lower the life expectancy of equipment. VRTX eliminates the need for chemical addition while also treating for corrosion, scale and bacteria that can cause fouling in cooling towers, evaporative condensers and fluid coolers. VRTX systems are engineered and designed to include standard filtration with every system installation. The combination of treatment with filtration keeps basins and sump areas clean, while also removing dirt, debris, and other foreign matter scrubbed from the air by evaporative cooling equipment. VRTX treatment combined with filtration helps keep heat transfer surfaces clean and operating efficiently.

LEED CERTIFICATION

The U.S. Green Building Council has established a voluntary, consensus-based certification program for developing sustainable buildings. The LEED® (Leadership in Energy and Environmental Design) Green Building Rating System is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED addresses new construction projects as well as existing buildings, and emphasizes sustainable building practices and strategies in all building types.

VRTX has the potential to provide LEED points in various categories for new construction or existing buildings. Consult VRTX Technologies or your LEED Accredited Professional for more information on how to earn points using VRTX.

Implementing chemical-free cooling water treatment from VRTX Technologies can assist facilities to achieve established resource reduction goals from corporations and government regulatory agencies. VRTX can also qualify for certain state and local government incentive and rebate programs.





VRTX™ Technologies specializes in environmentally-friendly chemical free treatment of water used in cooling towers and evaporative condensers.

The VRTX system relies on kinetic energy, controlled hydrodynamic cavitation, and chemical equilibrium to control scale, corrosion, and bio-fouling without the hazards of chemical treatment. VRTX also minimizes corrosion and microbiological growth, reduces system operating costs, and conserves water and energy.



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