Flow-Tech Systems has created the most technologically advanced chemical free water treatment system in the market place.

FLOW-TECH HVAC
WATER TREATMENT SYSTEMS

fits 36" + pipes - simple installation - rapid ROI - no plumbing required

Limited Natural Resources

\+ Environmental Responsibility

Human Sustainability

Keep drinking water clean

- Eliminates harmful chemical use in system
- Blowdown is chemical-free

Conserve Water

- Reusing clean blowdown displaces potable water consumption and eliminates sewer discharge
- Increased cycles of concentration reduces total water consumed by system

Conserve energy

- Preventing scale and biofilm from forming maintains system efficiency

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TREATING ALL OF YOUR WATER

FLOW-TECH HVAC

WATER TREATMENT SYSTEMS

Using technology derived from years of research and development by a team of petrochemical engineers and scientists, Flow-Tech HVAC has created the most technologically advanced chemical free water treatment system available on the market today. It couples time tested proven science with an innovative proprietary signal introduction method that replaces chemical treatment programs and water softeners.

98% reduction in the concentration of sessile bacteria (biofilm) on surfaces.

Water + Energy = Money

Increasing Cycles of Concentration reduces blowdown

- Saves Water
- Reduces sewer discharge fees

Reusing chemical-free blowdown (for irrigation or other greywater)

- Displaces potable usage and costs
- Eliminates sewer discharge fees

Leadership in Energy & Environmental Design (LEED) credit through USGBC

Higher productivity

- Reduces equipment failures
- Reduces labor hours spent on maintenance
- Maintains system efficiency by controlling scale and biological growth

Eliminates expensive chemicals

Reduces liability

- Eliminates storing, moving, and handling of toxic chemicals
- Eliminates risks of chemical spills and personal injury

How it works

The system generates a low frequency signal that is pulsed several thousand times per second and propagated throughout your entire plumbing system. Flow-Tech is the only system on the market that maintains measurable signal strength and treatment throughout your entire plumbing system, regardless of flow.

Scale

The Flow-Tech system generates a radio frequency signal in the 140kHz range that is introduced into the water of the entire cooling system and creates a diminishing sine wave that randomly switches on and off up to 40,000 times per second. The system produces hundreds of billions of nucleation events per second throughout the plumbing system that remove the surface charge of suspended particles such as dirt. These suspended solids become the preferred sites for precipitation from CaCO3 and other contaminants in the water and grow until they fall out of suspension as a harmless powder that is removed from the system by filtration or routine tower maintenance.

Biological

In 2009 the University of Pittsburgh conducted ASHRAE Project Number 1361-RP where they found that Pulsed-Power and all of the other tested chemical free devices were unable to control sessile or planktonic microbial growth rates. In 2012 the University of Pittsburgh repeated this test and concluded that the Flow-Tech system successfully achieved a 98% reduction is biofilm growth.

The Flow-Tech system creates a pure water layer along the surfaces of the tower, chiller, and pipes of the cooling system that prevents biofilm formation and removes existing biofilm accumulation. Bacteria are encapsulated in the same powder that prevents scale formation. The bacteria that are not encapsulated are damaged by the Flow-Tech signal and are unable to reproduce.

Corrosion

The Flow-Tech system reduces corrosion by the aforementioned pure water layer and also by operating the cooling system in an alkaline environment beyond the normal concentration of calcium carbonate. This allows the calcium carbonate to act as a natural cathodic corrosion inhibitor. By controlling bacteria, preventing scale and biofilm, and eliminating corrosive chemicals, microbial induced corrosion, under-deposit corrosion, and chemical induced corrosion are also prevented.

Common Applications

- *cooling towers*
- *chillers*
- *heat exchangers*
- *evaporative condensers*
- *fluid coolers*
- *hot water systems*
- *indirect/direct evaporative cooling*
- *nearly any system that uses water and requires scale or bacteria control*

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