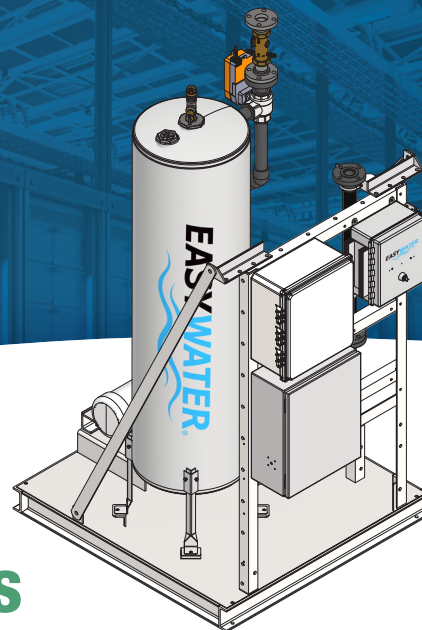


Series C

Closed Loop Water Treatment for Mission-Critical Data Centers



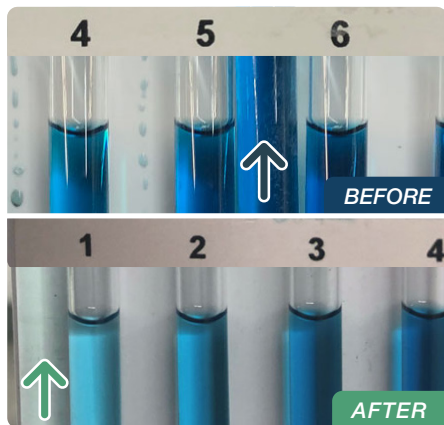
Chemical-free protection for closed-loop HVAC systems that removes dissolved oxygen, filters sub-micron metals, and prevents insulating deposits.

The 3 Major Closed-Loop Problems in Data Centers

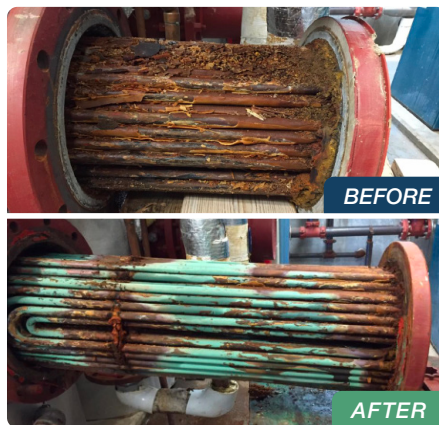
- 1) Corrosion caused by dissolved oxygen
- 2) Sediment and sub-micron metal particles in the water
- 3) Insulating high iron content, limescale and biofilm deposits

Observed Results from Mission-Critical Closed Loop Applications

- ▶ **ROI:** .5 to 3 years payback from combined energy, water, and chemical savings
- ▶ **Energy Savings:** Up to 27% reduction in chiller/boiler energy through improved heat transfer
- ▶ **Maintenance Savings:** Up to 50%+ reduction in manual labor
- ▶ **Cost Certainty:** Fixed equipment cost vs. volatile chemical pricing
- ▶ **Asset Life:** Extension of major HVAC equipment life
- ▶ **Risk & ESG:** Eliminates chemicals, supporting community safety and ESG goals



Dissolved oxygen levels went from 5-6ppm to <1ppm after treatment



90% clean descaling results after only 100 days of treatment

High Iron Content Deposit Thickness vs Increased Electricity Cost		
Deposit Thickness (In)	Fouling Factor	% Efficiency Loss
0	0.000	0
0.012	0.001	6.4
0.024	0.002	14.4
0.036	0.003	27.2

Series C reduces deposit thickness and fouling factor resulting in energy savings of up to 27%

"I'm very impressed with the very low iron and copper levels. This indicates great corrosion control in the system." — Chem-Aqua Consultant

How the Series C System Works

A continuous side-stream treatment approach designed for closed-loop HVAC systems.



Dissolved Oxygen Removal Media

Continuously removes dissolved oxygen from the closed loop system, reducing corrosion of steel, iron and copper components and supporting long-term system reliability.



Sub-Micron Filtration

Filters suspended sediment and ferrous metals to sub-micron levels, reducing circulating magnetite and helping protect pumps, valves, and heat exchangers.



No-Salt Conditioning

Prevents and removes iron oxide, scale, and biofilm without chemical addition, helping maintain clean heat-transfer surfaces and stable system efficiency.



OPERATIONAL IMPACT

- ✓ Reduced dissolved oxygen supports long-term corrosion control
- ✓ Lower chemical dependency simplifies closed-loop treatment
- ✓ Reduced magnetite circulation helps limit maintenance interruptions
- ✓ Supports reliable performance in mission-critical HVAC systems

ENERGY IMPACT

- ✓ Insulating iron oxide and scale reduce heat-transfer efficiency across heat exchangers
- ✓ Fouling increases pump and chiller energy demand
- ✓ Cleaner systems operate closer to original design efficiency
- ✓ Improved heat transfer reduces energy consumption by up to 27%, lowering treatment overhead and system variability.



Example of domestic heat exchanger after 6 mo of scale removal & prevention treatment

Engineered for mission-critical closed-loop performance.

