Don't Replace. Refurbish.

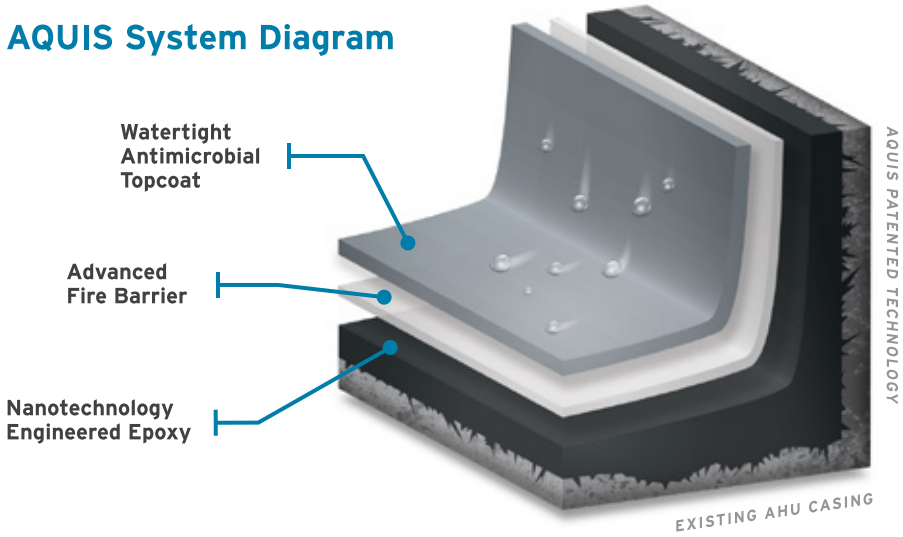
Extend the Life of Your Air Handlers

AQUIS specializes in the comprehensive refurbishment of mechanical air handling units. With our patented composite coating systems, we extend the life of air handlers without the disruption and high costs associated with replacement. AQUIS offers the **only** fully compliant solution that meets the requirements of NFPA, ASHRAE and the EPA. Having completed thousands of installations nationwide in healthcare, higher education, government, manufacturing and commercial real estate, AQUIS installation teams are the foremost experts at addressing your air handler refurbishment needs.

AQUIS System Benefits

- Extends air handler service life
- Stops damaging water leaks
- Restores structural integrity
- NFPA 90A fire code compliant
- Slopes pans per ASHRAE 62.1
- Eliminates standing water
- Improves indoor air quality
- No detectable odors or VOCs
- Minimal equipment downtime

AQUIS System Diagram



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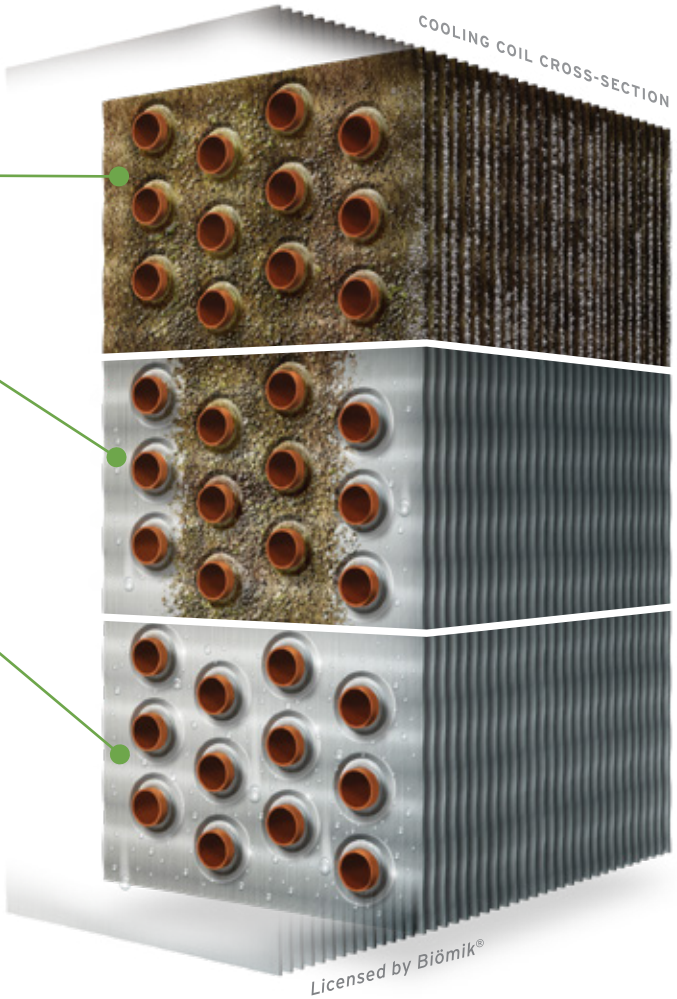
Breathe New Life Into Your Coils

Drive Increased Performance with AQUIS Coil Restoration

AQUIS, the nationwide leader in AHU renewal, offers a patented process that restores the performance of your aging coils. AQUIS Coil Restoration combines a high-performance sanitization process with a cutting-edge probiotic technology to detach and eliminate biofilms from deep within coils. The result is coils that are cleaned at a microscopic level, driving increased operational efficiency, extending coil service life and improving indoor air quality.

What Are Biofilms? Biofilms are complex communities of microbes, including pathogens and viruses, that form on coil fin surfaces and serve as the foundation for buildup. Over time, biofilm buildup blocks heat transfer and impedes airflow, causing coils to operate well below design specifications.



Conventional Coil Cleaning

- Utilizes pressure washers and steam cleaners that fail to penetrateand clean biofilms deep within coils.
- Uses toxic, corrosive, VOC-containing cleaning agents.
- Provides only marginal improvement in coil performance.

AQUIS Coil Restoration

- Uses an eco-friendly and non-corrosive probiotic technology to breakdown biofilms.
- Uses superheated water to penetrate deep within coils to eliminate biofilm buildup.
- Renews heat transfer and airflow driving increased operating coil capacity.

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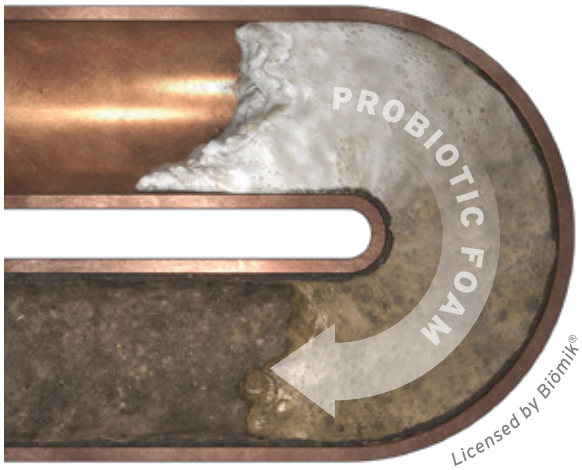
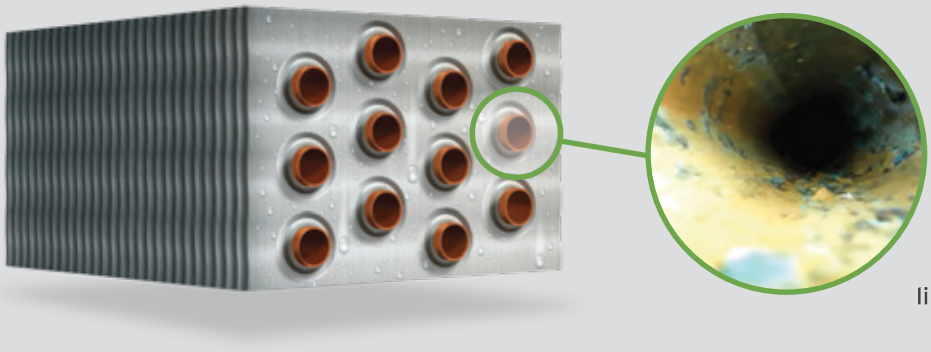
Drive Performance From the Inside Out

Increase Coil Efficiency With AQUIS Tube Restoration

AQUIS, the nationwide leaders in AHU renewal, offers an innovative process for the restoration of the interior of coil tubes. This patented technology uses a cutting-edge probiotic to remove biofilm, scale, and debris from the tube interior. The result is improved water flow and heat transfer driving increased coil capacity above Coil Restoration alone.

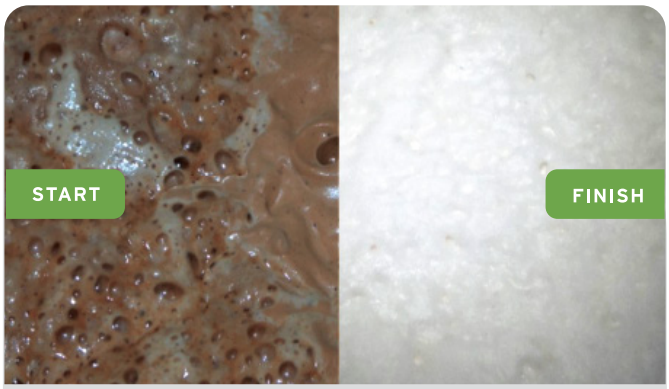




The Problem: Biofilm, scale, and debris inside poorly maintained tubes compromise coil performance by blocking heat transfer and reducing water flow. Microbial induced corrosion (MIC) caused by biofilm within tubes limits the service life of coils.

The Tube Restoration Process

- Cooling coil is isolated, drained and connected to a probiotic foaming unit.
- Probiotic foam is injected into the coil at low pressure.
- Dense foam is pushed through the coil, removing biofilm, scale and debris, until the foam emerges white.
- Foam is left in the coil for a period of time to further breakdown biofilm.
- Coil is flushed with water and returned to service.



Probiotic foam from coil at the start (left) and finish (right) of the Tube Restoration Process.

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SMARTCOIL®
BY SENSIBLE

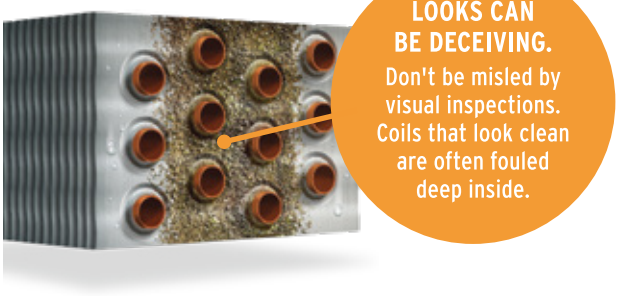
The First Real-Time Monitoring System For AHU Coils

Why Monitor Coils?

The true performance of AHU coils is currently a blind spot in your operation. This puts critical air handlers at risk of not meeting demand. Coil monitoring offers real-time data to improve visibility into coil performance, enabling you to act before problems arise. Ultimately, coil monitoring allows you to improve equipment reliability and reduce operating costs.

What is SmartCoil?

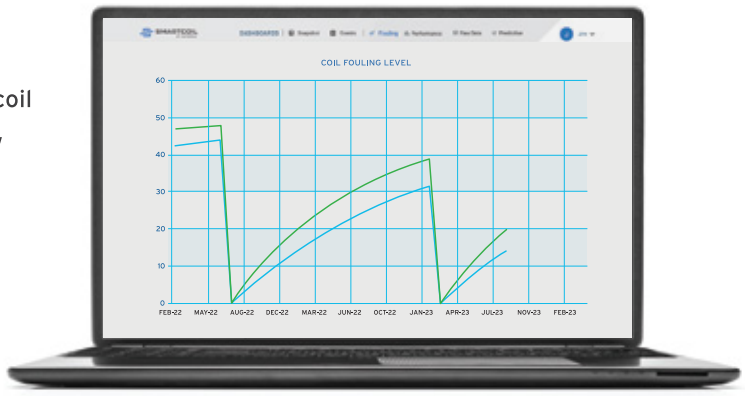
SmartCoil by Sensible is a real-time monitoring system for AHU coils. The SmartCoil gateway collects data from an array of SmartCoil sensors. Using a cloud-based AI machine learning algorithm, SmartCoil translates the raw coil data into insightful analytics which include fouling metrics, performance trending and predictive maintenance.
The SmartCoil dashboard is accessible online or through compatible BMS systems.



LOOKS CAN BE DECEIVING.
Don't be misled by visual inspections. Coils that look clean are often fouled deep inside.

Cost-Saving Insight Into Your Coil

By determining your coils' fouling rate, the SmartCoil algorithm provides the ideal service schedule for your coils to minimize overall energy and maintenance costs. SmartCoil determines the effectiveness of coil cleaning, tracks cost savings, and can even predict service failures before they occur.



The SmartCoil dashboard provides valuable insight into coil fouling level, coil capacity, energy consumption and more.

Get smart with SmartCoil! Contact us today.

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Barnes-Jewish Hospital Engages AQUIS to Refurbish Critical ICU Air Handler

CHALLENGE

Barnes Jewish Hospital is a not-for-profit 1,300+ bed facility located in St. Louis, Missouri, and has earned a consecutive 25+ year run as one of the Best Hospitals in the U.S., according to U.S. News & World Report.

An older air handler serving two ICUs had become increasingly problematic. The unit was leaking water, and the chamber floor was rusted and corroded. Replacement wasn't an option due to the unit's location, and a solution was needed to restore its operational and structural integrity. Since the AHU served two ICUs, downtime for repairs was a concern, as was ensuring full compliance with Health & Safety, Infection Control, and TJC.

"I was familiar with AQUIS and needed to completely retrofit a critical AHU. After installing new cooling coils, controls and dampers, I hired AQUIS to refurbish the entire shell of the unit. The installation was very professional, and the overall quality was excellent. Upon completing the project, I invited personnel from Health & Safety and Infection Control to inspect the unit, and they were equally impressed. We look forward to working with AQUIS again."

– Tom Knight, Plant Engineer

SOLUTION

AQUIS refurbished this critical AHU as follows:

- Chamber floors were sealed with AQUIS' patented CPR-SL composite coating system, which halts corrosion, restores structure and stops leaks.
- Chamber walls, ceilings, and fan housings were sealed with a special antimicrobial coating that repels odorcausing mold and bacteria.
- The AHUs environmental integrity was restored in full compliance with ASHRAE, NFPA and TJC requirements, enhancing indoor air quality.
- Installation was done efficiently, with minimal downtime, and without VOC's nor odors.

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The Smithsonian Institution Protects National Treasures with AQUIS

CHALLENGE

The National Museum of American History, located in Washington DC, was opened in 1964 and serves as home to over 3 million of our national treasures. The museum had 6 mechanical air handling units that were plagued by corrosion and standing water due to a lack of pitch in their condensate pans. They were highly concerned about the threat of water leaks and their potential impact on the museum's many artifacts. The museum was seeking a solution that would address these concerns while also extending the service life of their air handlers.

"Our highest priority was to find a solution that would prevent leaks and protect the many treasures that the museum houses. I was very pleased with the results of the AQUIS system. I was also impressed with the competent and professional installation technicians at AQUIS."

– Michael Sofield, Director, Facilities Planning & Operations

SOLUTION

AQUIS refurbished all 6 air handlers with its unique composite coating system.

- Chamber floors and pans were completely sealed to eliminate potential water leaks, halt corrosion and restore structure.
- Condensate pans were pitched to eliminate standing water per ASHRAE 62.1.
- Smooth antimicrobial surfaces facilitate easy cleaning and resist the biological growth.
- The AHUs are fully compliant with NFPA 90A and the fire code (ASTM E84 25/50).
- The installation was completed with minimal downtime and no VOC's or detectable odors.

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