



Project Type	Location	Building Size	Equipment	Service Approach
Existing Multifamily Residential Building	Washington, DC	118,000 sq. ft. 53 units	Cool Automation CoolMaster EDGE	Havtech Proactive Service

Proactive HVAC Service Identifies VRV Issue Before Tenant Disruption

Havtech's proactive service approach identified abnormal VRV operation between scheduled maintenance visits, allowing the issue to be investigated and corrected before the cooperative experienced downtime.

Overview

Built in 1926, 1661 Crescent Place is a six-story, 118,000-square-foot cooperative residential building with 53 apartments in Washington, DC. When the building replaced its old steam heating system with a new HVAC system, the lack of existing chases made the design and installation especially challenging.

The cooperative has worked with Havtech for several years for quarterly inspections and maintenance. The building does not have an on-site building engineer, so the Board relies on Havtech when HVAC questions or concerns come up. To provide greater insight into equipment performance between scheduled maintenance visits, Havtech incorporated Cool Automation technology into its proactive service approach. The technology supplements regular maintenance and helps Havtech identify developing equipment problems earlier.

Cool Automation was initially installed on to three VRV systems with six outdoor units, covering approximately one-quarter of the building's HVAC systems. During the trial, the platform generated alerts that led Havtech to investigate an abnormal operating condition before residents reported a comfort problem or the equipment went down.

Challenge

Quarterly preventive maintenance assesses equipment conditions, but technicians can only see what the system is doing while they are onsite.

Intermittent problems may develop between scheduled visits and disappear before the next inspection. Without historical operating data, a technician may have no record of how the system was operating when the condition occurred.

In the past, the cooperative had experienced compressor failures that were costly to its limited budget and inconvenient for residents who lost heating or cooling while equipment was replaced. The Board's goal is to supplement regular maintenance with better visibility into system operation and potentially identify developing issues before they become failures.

The Approach

A CoolMaster EDGE controller was installed as the on-site hardware supporting Havtech's proactive service approach. Havtech developed more than 12 custom anomaly detection rules that flag operating conditions outside expected parameters and generate alerts for further review.

Detecting an issue before a comfort complaint

Havtech's anomaly detection generated multiple alerts indicating an unusually high compressor suction temperature condition. The customer had not reported a comfort problem and was unaware that anything was wrong.

After receiving the alerts, Havtech reviewed the equipment data and determined that an on-site investigation was needed. A service technician was dispatched within twenty-four hours.

Turning system data into a targeted service response

On-site, the technician traced the condition to an electronic expansion valve (EEV) in a branch selector box that was not closing completely. The technician power-cycled the branch selector box, restoring proper operation without replacing the component.

From initial alert through system review and field investigation, the response occurred within roughly one to two days. The cooperative experienced no downtime before Havtech intervened.

If the condition had continued, it could have contributed to premature compressor wear or eventual compressor failure. Havtech estimated that replacing a compressor in this application could cost approximately \$10,000 - \$20,000 plus labor.



Extending service beyond the scheduled visit

Havtech's proactive service approach also provides another way to respond when the cooperative has a question about equipment operation. Technicians can review current conditions and historical trends before deciding whether a site visit is necessary.

The customer can view system information from a computer or phone, while Havtech technicians can review the same operating data to help answer questions and determine next steps.

That visibility can sometimes avoid an unnecessary truck roll and associated service expense. When an on-site visit is required, technicians can arrive with more information about what the system has been doing before they reach the property.

For a building without an on-site engineer, proactive service provides another layer of technical support between scheduled maintenance visits.

Outcome

During the trial, historical operating data and Havtech's anomaly detection provided the information to investigate a developing condition between quarterly maintenance visits. The condition was corrected before the cooperative experienced equipment downtime.

Following the initial deployment, the Board included Cool Automation for the building's remaining HVAC systems as part of a five-year maintenance agreement, expanding the proactive service approach throughout the building. The goal is to supplement regular maintenance with greater visibility into equipment performance and identify developing issues earlier.

"The first rule in any organization is 'no surprises.' Cool Automation gives Havtech better visibility into our HVAC systems so they can help identify potential problems and support us more proactively between maintenance visits. That is exactly what we were hoping to add to our service program."

— John Reynolds
Board President, 1661 Crescent Place

Results



ISSUE IDENTIFIED BEFORE DISRUPTION

Havtech's anomaly detection identified abnormal HVAC operation before residents reported a comfort problem. The condition was corrected without equipment downtime.



POTENTIAL COMPRESSOR RISK ADDRESSED EARLY

The branch selector issue could have contributed to premature compressor wear or eventual failure if the condition continued. An estimated compressor replacement for the application could cost approximately \$10,000 to \$20,000, including labor.



PROACTIVE SERVICE EXPANDED

After the initial deployment, the Board elected to extend Cool Automation to the building's remaining HVAC systems as part of a five-year maintenance agreement, expanding Havtech's proactive service approach throughout the building.

Looking for a More Proactive Approach to HVAC Service?

Havtech Proactive Service combines system data with technician expertise to help identify developing equipment issues earlier and support better-informed service decisions.

Talk to a Havtech Service Specialist: (301) 206-9225



Ready to Get Started?
Scan to Contact Us.

Cool automation has allowed me to assist John remotely. Whether it's from my laptop or iPhone I've been able to help and diagnose concerns and issues without having to step foot on site. Being able to view a systems status in real time removes the guessing factor of a service call which leads to better efficiency for technicians like myself and our customers.

— Ariel Mercado
Field Service Engineer