





# HVAC Restoration

## BECOMES THE NEW FOCUS

by Alan Wozniak

The experiences of the ongoing pandemic demonstrate the importance of indoor air quality to the health of college students, staff, and faculty across the United States. However, more than health is impacted by indoor air quality, or IAQ. Properly maintained ventilation also improves the cognitive functioning of students, translating to better academic performance and fewer missed days. Institutions of higher education nationwide understand the importance of IAQ, and this value is driving them to invest in school HVAC restoration.





Companies such as Pure Air Control Services examine the air quality and ventilation systems in many buildings, including schools. They work closely with administrators to help improve ventilation systems through strategies like upgrades, restoration, cleaning, and disinfecting. These companies test system performance to diagnose issues. Afterward, they monitor the indoor conditions to keep buildings safe.

### **Funding School HVAC Restoration**

School HVAC restoration requires funding. Fortunately, schools can access funds allocated by the Education Stabilization Fund (ESF), which exceeds \$200 billion. This money was allotted through the CARES and ARP Acts and is intended for emergency use. Therefore, schools can safeguard classrooms during the COVID-19 pandemic by using this resource to improve the ventilation in their school buildings.

### **Choosing Bids**

To meet the goal of better IAQ, schools must enlist the services of trusted IAQ partners. Of course, many contractors will bid for the opportunity to perform school HVAC restoration. In many cases, school districts choose

the lowest bid to save money. Decision-makers, however, have considerations beyond money—such as safety—so they should choose partners who are qualified in all aspects of HVAC cleaning, restoration, and testing for initial diagnosis and monitoring to maintain optimal conditions.

### **Complete School HVAC Restoration**

School administrators should consider what the HVAC contractor offers when considering a bid. For example, a contractor who offers performance testing can isolate issues for priority attention. The upfront cost of cleaning and disinfecting a system is offset by lower long-term energy costs. Restoring and retrofitting existing HVAC units can pay for themselves through the reduction of maintenance and repair costs and by extending the lifetime of the equipment. Additionally, using funds provided by the CARES Act makes school HVAC restoration more attainable.

### **Well-Maintained Systems Save Money**

While spending money in order to save money can perhaps seem counterintuitive, systems that are operating at their best cost less to run and repair. Therefore, institutions

of higher education that hire contractors providing a full suite of services to clean and disinfect systems will save money over the lifetime of the system. For example, a clean HVAC system is crucial to optimal building health, but these clean systems contribute to energy efficiency, as well. In fact, many customers have seen a return on investment in a little over a year using HVAC steam cleaning energy savings.

### **Cleaning and Restoration**

The HVAC steam cleaning method uses high-temperature steam to disinfect the coils, destroy bacteria and pathogens, eliminate odors, and optimize system performance, thereby lowering operating costs. Restoration is another way to lower costs by improving IAQ and system efficiency. Restoration offers tremendous cost savings over buying new equipment—up to 20-40% savings over new. This avenue also results in less facility disruption, quicker turnaround, and better sustainability.

Restoration includes methods to restore equipment to near factory specifications. After steam cleaning, a HVAC certified high performance coating method sands and blasts the unit prior to the application of specialized paint that prevents rust, corrosion, and

microbial growth. Next, a zero-porosity, fiber-glass-free insulation is installed to repel moisture and slow microbial growth. The last step is refinishing the drain pan with an HVAC certified high performance liner which repels moisture and slows oxidation.

While this complete restoration process makes sense, it is only part of the entire procedure of school HVAC restoration. Planners need to renovate the entire system to avoid spending money on the restoration process only to have the system fouled again or airflow restricted by dirty ducts. A hygienic duct cleaning process should follow the HVAC restoration, meeting NADCA (National Air Duct Cleaners Association) guidance. Maintenance personnel should make sure the duct cleaning contractor uses the correct processes, including containment, to prevent cross-contamination; contractors should also clean in-line HVAC equipment like reheat coils.

HVAC Restoration, including hygienic duct cleaning, improves IAQ, is sustainable, and

also creates a more efficient system that lowers energy costs.

### Focus Spending on School HVAC Restoration

Companies such as Pure Air Controls help school administrators establish optimal indoor air quality in their buildings. These companies work closely with building engineers to inspect and test HVAC systems before cleaning, disinfecting, and restoring begins. For continual upkeep, some companies offer system monitors to check conditions in real-time so that IAQ problems can get dealt with as they occur.



**ABOUT THE AUTHOR:** Alan Wozniak, CIEC, CIAQP, has been an industry leader/expert in indoor air quality (IAQ) for over 36 years with Pure Air Control Services. They help their clients by identifying and solving IAQ problems while improving IAQ/building health, saving energy and improving occupant well-being.

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