

the NEWS

IAQ Solutions Create Healthy Homes, Happy Customers

Trending residential air movement and ventilation products



THE SCORES ARE IN: The Foobot compiles data collected from its four sensors and then assembles an overall score that reflects the air quality index of the home on a scale from 0 to 100.

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Samantha Sine

The residential high-efficiency air movement and ventilation market has garnered a lot of attention recently as concerns over maintaining healthy indoor environments have increased and the technologies to make this happen have improved.

“IAQ has reached the residential market in a big way now with cleaning and sealing of the ductwork in order to get all of the energy to the right places, combined with high-efficiency, whole-house filtration systems,” said Mike White, vice president, National Air Duct Cleaners Association (NADCA).

HEALTHY IS HAPPY

Take a moment to consider the amount of time people spend inside their homes on any given day. It’s a lot. According to the U.S. Environmental Protection Agency (EPA), indoor air can be two to five times, and sometimes greater than 100 times, more polluted than outdoor air. So homeowners are looking for product options, like smart IAQ monitors, that allow them to monitor and clean their air.

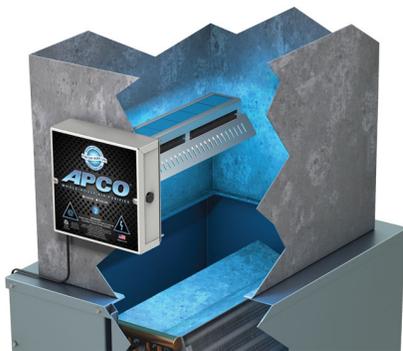
The Foobot smart IAQ monitor from Airboxlab tracks volatile organic compounds (VOCs), particulate matter, temperature, and humidity. Because it integrates with connected smart thermostats and the data can be accessed via a web dashboard, it makes monitoring IAQ simple.

“Smart IAQ monitors, like Foobot, which integrates well with connected thermostats, can take over the ventilation rate and adjust air renewal depending on pollution levels using a Wi-Fi connection. The trend with IAQ is to integrate all of these components, from the sensors to the air cleaning technologies to the HVAC system, and offer the homeowner a product that guarantees clean indoor air,” said Adrien LaFond, chief marketing officer, Airboxlab.

The Foobot compiles data collected from its four sensors and then assembles an overall score that reflects the air quality index of the home on a scale from 0 to 100. If there’s a spike in pollution, the Foobot will send the homeowner an alert identifying the type of pollutant and the concentration level.



ATTENTION, PLEASE: The Foobot smart IAQ monitor from Airboxlab makes monitoring IAQ simple. If there’s a spike in pollution, it will alert the homeowner, identifying the type of pollutant and the concentration level.



SCRUB IT CLEAN: Fresh-Aire UV created the Advanced Photocatalytic Oxidation (APCO) system: a whole-house air purifier that is installed in the ductwork of the central air system, so it can scrub the air as it passes by.

disinfect the evaporator coil and air handling unit, destroying and preventing mold and biofilm, especially on the coil.”

Airflow restriction from fouled filters and biofilm buildup on evaporator coils further reduces airflow-affecting system performance, causing an HVAC system to work harder, losing efficiency and costing more to run. By destroying the efficiency-robbing biofilm, the air can continue to run through the system with less restriction.

“Manufacturers are looking to provide contractors with solutions that address many of these issues designed to maintain optimal efficiency and comfort,” said Engel.

Fresh-Aire UV, a division of Triatomic Environmental Inc., created the Fresh-Aire UV Advanced Photocatalytic Oxidation (APCO) system: a whole-house air purifier that is installed in the ductwork of the central air system, so it can scrub the air as it passes by.

“Maintaining peak ventilation system performance and efficiency is especially important, as many variables that influence occupants’ well-being rely on effective air movement,” said Aaron Engel, vice president of business development, Fresh-Aire UV. “Stagnant air, odors, CO² levels, particulates, and airborne microbial and VOC levels can all contribute to reduced airflow performance. The Fresh-Aire UV APCO system is designed to

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ENERGY SAVINGS AND EFFICIENCY

Though customers ultimately want to improve their comfort and overall health, they want to achieve these results in the most energy-efficient way possible.

“As architects, contractors, and homeowners seek to improve IAQ energy-efficiently, cost-effectively, and sustainably, we’re seeing more and more people turn to energy recovery ventilators (ERVs),” said Nick Agopian, vice president, sales and marketing, RenewAire LLC.

ERVs provide increased and balanced ventilation, and they reuse otherwise wasted energy and humidity from the exhaust airstream to condition fresh and filtered incoming, outdoor air.



RECOVER: RenewAire offers a variety of energy recovery ventilators (ERVs), such as the EV90 pictured here, that can be applied in all types of homes, geographic locations, climates, and applications.

RenewAire offers a variety of ERVs, such as the EV90, that can be applied in all types of homes, geographic locations, climates, and applications, according to Agopian.

Electronically commutated (EC) fans and blowers are specially designed air movement products that have built-in electronics that electronically commutate the air conditioning input power to direct current (DC) for better speed control, which translates to energy savings and cost reductions.

Standard and customized EC fan and blower designs are available for a range of industries and applications, including in-row cooling, air handling units, chillers, and evaporative condensers.

According to Rita Carbone-Lawson, national sales manager, Delta Electronics Inc., the company's variety of EC axial fans and centrifugal blowers offer three main advantages.

"Our EC fans and blowers are programmed to match the specific application requirement, including cfm airflow and static pressure, versus running at full speed all of the time, thus saving energy and increasing product life," she said. "Second, they produce the same amount of airflow as traditional air conditioning products but with lower power consumption. And they perform with lower noise and operating costs since there are no fan belts that can wear out and require replacement and no debris or dust contaminants that accumulate, such as with belt-driven systems."

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