

Study Shows Flu Virus Removal From Home's Filtered Air

by Barb Checket-Hanks

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Trane just announced that it has a study in hand that shows its CleanEffects™ IAQ product can remove up to 99 percent of the Influenza A virus. This is helping to expand contractor opportunities still more at a time when consumer interest in protecting their indoor environments is higher than ever.

According to Randy Scott, VP of product systems management, Trane, the new information “opens up a number of sales opportunities” for HVAC contractors.

In new system sales, for instance, “Research shows that if a dealer will include CleanEffects with literature in his proposal, they have a closing rate of 39 percent. With the influenza data, that number could go higher.”

Contractors can give their customers a flu study information kit, a folder with information on the flu, the study, and the product. “We’re trying to help contractors tell the story to the consumer,” Scott said. The kit is available through contractors’ Trane distributors or a company-owned sales office.

Most contractors would like to make sure that the IAQ products they are installing would not decrease the efficiency their customers may have recently paid to improve. According to Steve Arnholt, systems leader for controls and IAQ, Trane, its product has a relatively low pressure drop, “especially considering its extremely high particle-removal rate. The installing dealer would need to check airflow pressure drop charts to ensure there is adequate pressure drop.”

“We physically match the units to the dimensions of our systems,” he said. “We know what ours are rated at as far as airflow.”

THE INFLUENZA STUDY

“CleanEffects was launched in 2006,” said Scott. “We’re really targeting those households where someone has respiratory problems.” The information about the influenza study “really brings that to life in a new way. It’s clearer to relate to the influenza/flu virus.”

Influenza and cold viruses spread from person to person via airborne droplets, such as when one person sneezes. When those airborne droplets are floating in the air in a home with a standard 1-inch filter, “those droplets may circulate through the air seven times before they fall out of the air. CleanEffects takes out more than 99 percent on the first pass,” Scott said, citing the Harvard School of Public Health study, performed in collaboration with scientists at Environmental Health and Engineering Inc. (EH&E).

“The other powerful thing that consumers can relate to is that all of the testing that we do is done with third parties,” Scott said. “These are all claims that are supported by these third-party organizations. Not only can CleanEffects remove more than 99 percent of flu viruses, Harvard found that it can remove Influenza B, C, and the avian flu.”



CleanEffects by Trane.

Because of the similarities among types of influenza viruses, the researchers concluded that the product will remove more than 99 percent of other forms of the virus, including influenza B, influenza C, and avian influenza (also a strain of influenza A virus) from the filtered air. The company also received Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) registration from the Environmental Protection Agency (EPA).

The tests involved releasing the common flu virus into the air inside a test heating, ventilation, and air conditioning duct. The removal efficiency was calculated from the amount of the common flu virus measured in air samples collected before and after passing through the Trane CleanEffects system.

“By removing the vast majority of the common flu virus from a home’s recirculated air, the average airborne concentration of the virus in the home is reduced, thereby lowering airborne exposure to the virus for household occupants,” said Dr. David MacIntosh, instructor at the Harvard Extension School and principal scientist at EH&E.

“People with allergies and asthma are potentially at a greater risk of catching the airborne flu virus. Additionally, patients with asthma may have a more severe case of the flu because of their underlying airway damage. For this reason, we recommend that anyone with asthma take all measures to prevent acquiring the flu,” said Dr. Paula Busse, M.D., allergy and immunology specialist, Mount Sinai Medical Center. The test results all show that installing a whole-house air cleaner “can add another layer of protection against the flu for patients with allergies and asthma.”

Trane CleanEffects is said to eliminate allergens and particles as small as 0.1 microns (1/1,000th the diameter of a human hair). A single influenza virus is around 0.1 micron in diameter.

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