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An Ideal IAQ Solution Say Contractors Contractors Coast-to-Coast Are Concerned About IAQ.

By John Vastyan
For *The NEWS*

Green building, energy efficiency, and IAQ. All are hot topics today, especially as the threat of global warming, a looming energy crisis, and new building techniques compete for our attention. But rarely do all of these issues come together under one topic as they do with IAQ.

"It's one of the most commonly asked-about problems that we respond to," said Jerry Unruh, president of San Francisco-based ABC Cooling & Heating, a 53-year-old enterprise with about 40 employees.

ABC now has three facilities spread out geographically to serve most of the San Francisco Bay area, including San Jose, and the Central Valley region, with Fresno at the heart of it.

Unruh explained that his customer base, as a whole, is concerned about IAQ. "It stems from their overall education, interest in matters like these, and in the environment which is a key concern for Californians," he added.

"With our population density, automobile pollution, and the occasional threat of thermal inversions, our air quality can get pretty ugly at times. But, surprisingly, it's not the pollution that home or business owners are most concerned about when it comes to the air inside ... it's the bugs and germs."

What many people don't know is that inside a home or business the air quality can be much worse than what is outside. According to the Environmental Protection Agency, Americans spend more than 90 percent of their time indoors where pollution levels can be two to five times — and occasionally more than 100 times — higher than outdoor levels. The air in even the cleanest homes can harbor dust, dirt, pollen, pet dander, mold, and other airborne contaminants.

"We're adept at explaining the advantages of variable-speed HVAC, and the comfort and cleanliness of the air these systems provide, particularly when coupled with an air purification system," continued Unruh. "A clean home is what we focus on, and we walk them through an understanding of what it takes to achieve clean air within the home."

"Then we arrive at the Infinity air purifier and, from that point, we talk about the full capabilities of the system," he said. "It's part of a complete HVAC system, the smart integration of all components,



Installation manager, Scott Lunday (left) and Ryan Hartsinck, installer, discuss installation procedures prior to filter replacement for a Carrier Infinity Air Purifier.

with a variable-speed furnace and air conditioning, intelligent thermostats, and zone control.

"We install the complete Infinity system in about 40 percent of the 1,500 installs we do each year," added Unruh. "When we educate the customer, we explain that the purifier not only captures all of the crud in the air, but kills all of the germs and mold spores ... anything alive that enters stops right there."

IN NORTH CAROLINA

Is it any surprise that 2,200 miles away in Charlotte, N.C., home and business owners get a similar explanation from Clay Phillips, president of Ross & Witmer, a full-service HVAC firm?

Phillips explained that his firm and their product offerings have grown with Charlotte, now recognized as the second largest banking city in the country. And that, although the economy is



Sal Gonzalez, service technician at ABC Cooling, installs a replacement filter bag for an Infinity Air Purifier.

diverse and has strengthened over the past decade, it's a transient population. Professionals move around a lot, and that can challenge an appeal to homeowners for upgraded air systems.

"But with the bigger city and more people comes a higher level of pollution," he said. "And with all of the new construction in this area, the amount of particulates in the air — though maybe not on a scale with areas of California — has increased dramatically here. It all adds up, so we promote the Infinity system as an air defense system for the home."

Phillips stated that his firm installs the Infinity system in every custom home where they're called in to install the HVAC. "At the custom home level — varying widely in the \$1 million to \$10 million range — we simply spec it in with little or no alteration or challenge."

The new air purifier from Carrier has a key role as part of the manufacturer's integrated Infinity system. The Infinity system was designed to facilitate constant movement of air, even if it's only a gradual air exchange.

"This ensures that airborne dust and germs are continuously cycled through the air purifier," said Kirby Overby, residential manager for Ross & Witmer. "We put three of the systems into the home of one of our builder customers, a home of about 6,000 square feet in size. When homeowners want to know how the air purifiers work, they've been very useful in demonstrating this."

Overby added that when a builder or homeowner asks about the technology they focus on the importance of all the system's parts, working together by design.

According to Kent Kuffner, IAQ product manager, Carrier Corp., this technology was developed in response to changes in building industry practices. Tighter, more efficient construction has one important downside. Air within the envelope — sometimes very bad air — is trapped inside. Proper ventilation and air circulation through a purifier can be key to cleaning the air.

The Infinity's core technology was initially developed by Lawrence Livermore National Labs to help protect the air in secure government facilities. The air purifier cleans the air in a three-step process. First, precision-point ionization charges particles entering the system.

The charged particles are then captured on a unique media cartridge. Finally, using ion bombardment and an electric current flow, the media kills captured pathogens such as airborne tuberculosis bacteria, mold and fungal spores, pneumonia bacteria, and even the virus that causes measles.

Air within the home or office space, passing through the furnace or air conditioner, is treated anywhere from three to eight times per hour when used as part of a complete Infinity system.

"The Infinity Air Purifier treats 100 percent of the conditioned air to capture airborne germs and allergens," said Kuffner. "Its patented technology then kills captured mold spores, pollen, bacteria and viruses."

A team of specialized air quality scientists developed the technology to capture and kill airborne allergens, bacteria, molds, and viruses. It combines filtration efficiency with pathogen-killing technology to deliver maximum air purification against airborne germs and allergens.

The easily replaced media cartridge is sandwiched between two contact points that together create a continuously charged electrostatic field that polarize the filter's fibers and the particles coming across it. The combination of these electrical elements, charged and polarized media, contributes to the air purifier's filtration efficiency and germ-killing effectiveness.

"We're very pleased that the Infinity air purifier doesn't require cleaning," added Overby. "Maintenance is limited to the periodic replacement of the media cartridge, typically once a year. Particles trapped and killed inside the media cartridge are easily removed when a technician replaces the cartridge. We've found that no additional cleaning or washing is required."

"We suggest to home or business owners that we remove the cartridge because it may contain infection-causing pathogens that could be inhaled, or enter a cut," said Phillips. "Simple precautions — wearing a mask, and using latex gloves — prevents this."

"We also recommend that we visit the system every six months for a quick check, at least during the first year of operation," added Overby. "After that, we most often find that an annual service call meets the need. It's at that time when we replace the media cartridge, a simple replacement."

The air purifier offers high efficiency and is compatible with any HVAC system.

"When used with the complete Carrier Infinity System, it provides its best performance and also features a maintenance reminder that's triggered when particulate matter in the filter approaches capacity.

"We're so confident in the system that we offer to remove and replace the equipment for two years; it's a full money-back deal," concluded Unruh. "We're focused on making happy customers. And with the Infinity air purifier, the air in the home will be healthier too." ■

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