# Infinity<sup>®</sup> Air Purifier Performance<sup>™</sup> Air Purifier





# Innovation and the Environment

Over 100 years ago, a humble but determined engineer solved one of mankind's most elusive challenges by controlling the indoor environment. A



leading engineer of his day, Dr. Willis Carrier would file more than 80 patents over the course of his career. His genius would enable incredible

advancements in health care, manufacturing processes, food preservation, art and historical conservation, indoor comfort and much more.

Carrier's foresight changed the world forever and paved the way for over a century of once-impossible innovations. Yet in addition to being an accomplished inventor, he was also an avid outdoorsman. Carrier recognized the power and beauty of the natural environment. This appreciation of our world and its resources continues to guide Carrier Corporation today. We will never rest on our accomplishments, but instead consistently look for ways to improve our products, our environment and our world.

Today, as most people spend 90 percent of their time indoors, breathing an estimated 2,300 gallons of air daily, Carrier offers premium solutions for enhanced indoor air quality – the Infinity® air purifier and the Performance™ air purifier. Both provide effective defense against indoor air pollution that can aggravate allergies, asthma and other respiratory ailments.



# How Clean is Your Indoor Air?

Pollen and mold spores enter through open doors and windows. Bacteria and viruses spread between family and friends. Fine dust particles get kicked up from floors and furniture. And, dander and hair fall from pets. These contaminants can make the air inside your home up to five times more polluted than outdoor air, spreading disease or triggering allergic and asthmatic reactions.

#### Healthier Air for the Entire Home

The patented Infinity air purifier and Performance air purifier are ideal for homeowners with allergy concerns, those susceptible to airborne germs, such as infants and the elderly, and those sensitive to the effects of molds, pollen, pets and more.

- Carrier® air purifiers offer extremely high air filtration efficiency and patented germicidal technology so effective they even capture and kill airborne pathogens such as bacteria, viruses and mold.
- These air purifiers use the same technology trusted to protect secure government facilities and hospital room patients.
- Unlike many portable air cleaners, Carrier air purifiers are silent and can treat the air throughout your entire home. In fact, they clean over 100 times more air than some of the popular portable units.
- Carrier air purifiers are as convenient as they are powerful because no cleaning is required. Simply remove and replace the media cartridge periodically to maintain peak performance.

### How Do They Work?

Carrier air purifiers treat 100% of the air flowing through your home comfort system using a unique three-step process:

- Step 1: Precision point ionization charges particles as they enter the purifier.
- Step 2: A specially designed, continuously charged media captures airborne particles.
- Step 3: Patented, state-of-the-art technology kills captured viruses, bacteria, and mold and can prevent further growth of bacteria and fungi on the filter.



### Infinity® Air Purifier

The Infinity air purifier is our premier air cleaning and purification solution with patented Captures & Kills™ technology. It provides the highest tested germicidal effectiveness with a 99% inactivation rate against selected viruses, bacteria and fungi. At MERV 15, it achieves the highest air cleaning efficiency of any Carrier model. The replaceable filter can provide several months of filtration. And, it's available in models compatible with your Carrier furnace or fan coil.

Independent lab testing on the Infinity air purifier technology has shown a 99% germicidal effectiveness (inactivation) within 24 hours for the following:

Viruses – Human influenza, common cold, avian influenza, wild type A influenza, measles, smallpox surrogate, and coronavirus (SARS)

Bacteria – Bacillus subtilis, Mycobacterium parafortuitum (tuberculosis surrogate), Staphylococcus aureus, Serratia marcescens, Pseudomonas aeruginosa, and Streptococcus (causes sore throat)

Fungi - Aspergillus versicolor



The Performance air purifier offers a competitively priced alternative with similar Captures & Kills purification capabilities. It provides a high rate of effectiveness against cold and flu viruses while filtering at an excellent MERV 13 efficiency. The replaceable filter provides several months of effectiveness. The Performance air purifier is also available for use with a Carrier furnace or fan coil

Independent lab testing on the Performance air purifier technology has shown a 96% germicidal effectiveness (inactivation) within 24 hours for the following:

Viruses - Human influenza and common cold

Bacteria – Streptococcus (causes sore throat)





## IAQ Factoids – Interesting Facts You Should (or Maybe Shouldn't) Know...

- The EPA has ranked indoor air pollution as a high priority public risk.
- According to the EPA, levels of indoor pollutants can be two to five times higher than outside.
- Most of us spend about 90% of our adult lives indoors
- 99% of airborne particles are smaller than one micron (one millionth of a meter). Due to their size, they remain airborne.
- Household dust is present even in clean homes, and can be composed of mold spores, bacteria, viruses, animal dander, human skin particles, fabric fibers, dust mites, parts of cockroaches, food particles and other debris.
- Inexpensive filters found at local hardware stores are only about 10% efficient for the largest particles.
- Seasonal allergic rhinitis (hay fever) affects more than 35 million people in the U.S.
- 50 million people in the U.S. suffer from allergies.
- Allergic disease is the fifth leading cause of chronic disease among all ages and the third common chronic disease among children under 18.
- 54% of U.S. citizens test positive for one or more allergies.
- There are approximately 20 million asthma sufferers in the U.S., and six million of them are children. It's the leading chronic illness in children.
- A sneeze can add 100,000 droplets of pathogen-containing moisture to the air.
- The average person inhales about 2,300 gallons of air per day.









# Uncompromising Quality

#### Infinity® Air Purifier

- Patented Captures & Kills™ technology
- MERV 15 efficiency
- 10-year limited warranty\*
- Protects the air you breathe
- Enhances equipment operation
- Easy to maintain
- Gas furnace and fan coil models available

#### Performance™ Air Purifier

- Patented *Captures & Kills™* technology
- MERV 13 efficiency
- 10-year limited warranty\*
- Protects the air you breathe
- Enhances equipment operation
- Easy to maintain
- Gas furnace and fan coil models
- Fits in narrow spaces





### Limited Warranty

\*To the original owner, the Carrier Infinity air purifier and Performance air purifier are covered by a 10-year parts limited warranty upon timely registration. The limited warranty period is five years if not registered within 90 days of installation. Jurisdictions where warranty benefits cannot be conditioned on registration will receive the registered limited warranty. See warranty certificate at carrier.com for complete details and restrictions. Be sure to ask your Carrier dealer about labor warranties.

## Frequently Asked Questions

#### Q: How does the technology work?

A: In step one, particles entering the air purifier are electrically charged by the precision point ionization array using 22,000 volts DC to create dense ion "clouds" that attach to the particles. In step two, a specially designed media cartridge is sandwiched between 12,000 volts DC and electrical ground. A strong electrical field is created across the filter, which causes the negative and positive charges within each filter fiber to separate and migrate to opposite sides of the fiber (polarization). Particles entering the filter are electrically attracted to the oppositely charged part of a fiber resulting in extremely high collection efficiency. In step three, cell walls of captured pathogens are weakened or ruptured due to the electrical and environmental conditions inside the purifier, resulting in cell inactivation or death.

#### Q: Why is germicidal capability important?

A: Just capturing particles on an ordinary filter (like typical systems) doesn't eliminate all the risks associated with poor air quality. Dust, dead skin cells, and other matter collected on the filter provide nutrients on which trapped organisms can grow. The resulting waste products are carried downstream into the living space. Certain bacteria can release endotoxins to which many people are highly allergic. They can irritate the skin, induce respiratory problems, fever, and even cause shock. In humid environments, mold can multiply and actually grow through a filter and live spores can be distributed throughout the home.

## Q: Are Carrier® air purifiers effective for the 2009 H1N1 Swine Flu virus?

A: Product health benefit claims with respect to H1N1
Swine Flu are subject to the jurisdiction of the Food and Drug Administration. The FDA requires a Class
II Medical Device certification for any air cleaning product publishing H1N1 Swine Flu claims. Carrier air purifiers are not certified as a Class II
Medical Device.

## Q: Do Carrier air purifiers make any sounds while operating?

A: No. Unlike traditional electronic air cleaners, the air purifiers are silent and create no zapping noise.

#### Q: How efficient are these units' filtration?

A: The Infinity® air purifier is MERV 15. The
Performance™ air purifier is MERV 13. The American
Society of Heating, Refrigerating and Air
Conditioning Engineers (ASHRAE) has established
the Minimum Efficiency Reporting Value (MERV) so
that various filters can be evaluated properly. MERV
ratings are designated with numbers from 1 to 16.
The higher the MERV rating, the better the filter's
performance (percent efficiency) for smaller
particles. A MERV rating of 15 requires 85-95%
efficiency for the smallest particles tested.

#### Q: How do I know when to change my filter?

A: If your purifier is used in conjunction with the Carrier Infinity control, the control will notify you when it is time to change the filter. Other thermostats may have a timer or reminder built in. Check with your Carrier dealer to find out if your particular thermostat has a filter change reminder. If not, ask the dealer about a semi-annual or annual maintenance service.

# Q: Are there any odor control benefits to the Carrier air purifiers?

A: Carrier air purifiers are capable of capturing very small particles, down to 0.1 micron. Only odors associated with the presence of particulates will be reduced. If odor control is a concern, Carrier recommends installing a ventilator to bring in fresh air.

# Q: What is the power consumption of Carrier air purifiers?

A: Approximately 18 watts.

## Carrier® Systems for Unmatched Performance in Every Season

Willis Carrier's meticulous attention to quality and detail led to a major culture shift in the way we live indoors. More than a century later, Carrier Corporation operates with a unique willingness to develop new technology, the confidence to revise proven designs and the ability to deliver results with every new installation.

Part of that equation is our nationwide network of experts you can turn to for all of your indoor comfort needs. Your local Carrier dealer is well equipped to evaluate your home – everything from size, window placement, ductwork, venting and other structural specifics – and create a customized system designed around your lifestyle. So when it's time to make a choice for your family's comfort, make the best decision you'll ever make – Carrier – and let the experts do the rest.



### The Total Indoor Comfort System

Infinity® Air Conditioner provides reliable, highefficiency cooling for long-lasting comfort and energy savings.

Infinity Gas Furnace provides reliable, highefficiency heating for long-lasting comfort and energy savings.

Evaporator Coil is matched with the proper outdoor unit to provide top cooling efficiency and years of reliable service.

Air Purifier improves air quality by capturing and killing airborne bacteria and viruses and other irritating airborne pollutants in your home.

Ventilator combines fresh outdoor air with conditioned indoor air for improved air quality and maximum efficiency – great for today's tightly constructed home.

**Humidifier** replenishes moisture to dry air.

Zoning sets different temperatures for up to eight different areas of your home for truly customized comfort and enhanced utility savings.

UV Lamp inhibits the growth of contaminants on the indoor coil, leaving your home with cleaner, fresher indoor air.

Infinity Control is more than just a thermostat. It's your interface to the Infinity System that allows you to control temperature, humidity, air quality, fan speed and ventilation.

Models GAPA, PGAPA © Carrier Corporation 6/2012

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www.carrier.com



Always look for these symbols. These are seals of certified performance, efficiency and capacity.





