

FAQs



Turn to the experts

General FAQs

What is “indoor air quality”?

Indoor air quality refers to how inside air can affect a person’s health and comfort. It can include temperature, humidity, lack of outside air (poor ventilation) as well as pollutants that enter the home.

What are the most common causes of IAQ problems?

Common causes of IAQ problems in homes are:

- Not enough ventilation, lack of fresh outdoor air or contaminated air being brought into the home
- Poor upkeep of ventilation, heating and air-conditioning systems
- Moisture damage due to leaks, flooding or high humidity
- Activities, such as construction or remodeling
- Indoor and outdoor contaminated air

How can I tell if there is an IAQ problem in my home?

Homeowners with poor IAQ may notice unpleasant or musty odors or may feel that the home is hot and stuffy. They may experience symptoms such as irritation of the eyes, nose, throat and skin, headaches, fatigue, shortness of breath, hypersensitivity and allergies, coughing and sneezing as well as dizziness.

Is there a test that can find an IAQ problem?

Although indoor air quality isn’t always something you can see, the AirAdvice for Homes™ air analyzer can help detect IAQ issues in the home. Using the indoor air analyzer, you can provide an IAQ test result in about 30 minutes, then get right to work addressing the home’s air quality issues by recommending and installing an indoor air quality product designed to solve the problem.

Infinity® Air Purifier

What is the Infinity air purifier technology?

The Infinity air purifier is a hybrid between an electronic air cleaner and media filter that offers the benefits of a high-voltage electrostatic precipitator and the ease of maintenance of a media filter.

How does the Infinity air purifier technology work?

The Captures & Kill® technology that the Infinity air purifier uses is a three-step process that inactivates 99% of select germs and viruses:¹

Charge

The purifier creates a “cloud” of electrically charged ions that attach themselves to airborne dust, pollen, viruses, germs and other particles as they pass through.

Capture

The ionized particles are pulled toward an oppositely charged, pleated filter and captured at an extremely high rate, similar to how a magnet attracts metal shavings.

Kill

Captured airborne microbes remain on the pleated filter instead of recirculating back into the home and are subjected to an intense electric field.

How efficient is this unit’s filtration?

The Infinity air purifier meets Minimum Efficiency Reporting Value (MERV) 15. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has established a rating standard designated as 52.2, which created the MERV so that various filters can be evaluated consistently. 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 down to 0.3 microns.

How long will the filter last?

Filter life varies from home to home and is based on several factors. Most homeowners find that the filter lasts for six to nine months.

Can I use another brand of filter in the Infinity air purifier?

No. The filter used in the Infinity air purifier is patented and uses a design that carries an electrical charge through the filter where select captured organisms are killed. Other filters do not have this technology and will not work in this unit.

How do I know when to change my filter?

If your Infinity air purifier is used in conjunction with the Carrier Infinity® system control, the control will notify you when it is time to change the filter. Other thermostats may have a timer or reminder built in.

Does the Infinity air purifier make any sounds while operating?

No. Unlike traditional electronic air cleaners, the purifier creates no zapping noises.

Is there a benefit to using ultraviolet (UV) lamps in conjunction with the purifier?

Yes. Carrier UV lamps installed at the coil and drain pan helps prevent the build-up of contaminants on your air coil.

How does the Infinity air purifier compare to a HEPA filter?

True HEPA (High-Efficiency Particulate Air) filters are slightly more efficient at capturing the tiniest particles. However, HEPA filters do not have the Captures & Kills® technology of the Infinity air purifier. In addition, HEPA filters have a very high resistance for airflow (pressure drop), and therefore, generally incorporate an additional fan.

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Can you install the Infinity air purifier with non-Infinity gas models?

Yes, the Infinity air purifier can be installed with any Carrier gas furnace or fan coil.

OptiClean™ Air Scrubber

What is the OptiClean air scrubber?

The OptiClean air scrubber is a portable room unit that plugs into a standard electrical outlet to quickly help improve indoor air quality in the room. It uses a 99.97% efficient HEPA filter to remove particles as small as 0.3 microns, then discharges cleaner air back into the room.

How often should the pre-installed filters be replaced?

The Carrier OptiClean air scrubber ships with two filters pre-installed for your convenience: a minimum MERV 7 pre-filter and a HEPA filter. The minimum MERV 7 pre-filter recommended replacement is 60-90 days and is available through Totaline.

In what size room will the OptiClean air scrubber work?

Great for helping to improve IAQ in various rooms in your home, the OptiClean air scrubber is available in two sizes. A 600-CFM unit for moderate-sized rooms (600 square feet) and a 1500-CFM unit for larger-sized rooms (1,500 square feet). Units can be combined for even larger open spaces, so no matter what sized room in the home, Carrier has a solution for you.

Media Filters/Cabinets

Is it okay to install the filter cabinet near a humidifier?

If you own a Carrier humidifier the answer is a very simple, yes. The humidifier will not have an adverse effect on the media filter since the humidity being created is vapor. If you do not own a Carrier humidifier, we recommend that you contact the manufacturer of your humidifier for specific application information.

Will a Carrier media filter cabinet help enhance the life of my heating and cooling equipment?

Yes. By removing dust that would normally accumulate in the blower compartment or on the air conditioning coil, the Carrier media filter cabinet will reduce the amount of wear and tear on your equipment, extending its life span.

How often do I need to replace the filter in the Carrier media filter cabinet?

The answer depends on how dirty the air is. Periodic inspection of the filter is recommended. Typical replacement is about every six months.

Ultraviolet Lamps

What is Ultraviolet?

Ultraviolet (UV) light is one form of electromagnetic energy produced naturally by the sun. UV is a spectrum of light just below the visible light and it is split into four distinct spectral areas – Vacuum UV or UVV (100 to 200 nm), UVC (200 to 280 nm), UVB (280 to 315 nm) and UVA (315 to 400 nm).

What is Ultraviolet C (UVC)?

The entire UV spectrum can kill or inactivate many microorganism species, preventing them from replicating. UVC energy at 253.7 nanometers provides the most germicidal effect. The application of UVC energy to inactivate microorganisms is also known as Germicidal Irradiation or UVGI. UVC exposure inactivates microbial organisms by altering the structure and the molecular bonds of their DNA (Deoxyribonucleic acid). DNA is a “blueprint” these organisms use to develop, function and reproduce. By destroying the organism’s ability to reproduce, it becomes harmless since it cannot colonize. After UVC exposure, the organism dies off leaving no offspring, and the population of the microorganism diminishes rapidly. Ultraviolet germicidal lamps provide a much more powerful and concentrated effect of ultraviolet energy than can be found naturally.

Do the Carrier Germicidal UV lamps produce ozone?

The longer (253.7 nanometers) wavelength of UVC light used in the Carrier germicidal UV lamp prohibits mold and bacteria growth on the surface of the indoor coil and drain pan while only producing a trace amount (0.001 PPM) of ozone.

What is HVAC bio-film?

Some people call it dirt others call it mud, slime or sludge. This gluey matrix growing on heating, ventilating and air conditioning (HVAC) evaporator coils and drain pans is, in fact, bio-film. Bio-film is an active, complex microbial mix that adheres to the fins of the coil and protects the organisms from biocides. The bio-films themselves give off products of metabolism known as volatile organic compounds (VOCs) which may range in effects from eye, nose and throat irritation to headaches and nausea.

How does HVAC bio-film impact HVAC energy use?

Biological fouling of evaporator fin and tube heat exchangers is a key contributor to decreased HVAC capacity. The biological fouling acts as an insulator, increasing air flow resistance and decreasing heat transfer. The fans run longer to maintain the home or building at the desired temperature, increasing kW draw with reduced cooling tonnage capacity.

How often should I replace the UV bulbs?

Change out should be performed after about 9,000 hours or 12 months.

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Humidifiers

How do I know when my Carrier humidifier is operating?

If the humidity in your home is 45% or higher your Carrier humidifier will not run. This is because it's the highest humidity level our humidifiers will attempt to attain. If you turn your humidistat from 15% to 45% and the humidifier does not run this is verification the humidity in your home is above 45%. Once the humidity level drops below 45% your Carrier humidifier should operate anytime the furnace is producing heat and the indoor relative humidity is less than the humidification set point on your humidistat.

Why does Carrier offer an automatic and a manual humidifier control for Carrier humidifiers?

Carrier feels it is important to offer a humidifier control option for all applications. The automatic digital humidifier control is highly advanced technology. An outdoor temperature sensor continuously reports changes in the outdoor temperature to the automatic digital humidifier control located on the cold air return duct. The automatic digital humidifier control uses this information to determine if the home requires additional humidity to balance humidification levels. However, we realize there are some applications where it is impractical or impossible to run an outdoor temperature sensor to the outside. This is the reason we provide a high-quality manual humidifier control for such applications. The automatic digital humidifier control also includes the option of operating in manual mode. Manual operation requires the homeowner to manually adjust the humidity level on the humidifier control as the outdoor temperature changes. Having these options allows flexibility to meet various customer's humidification needs.

Should my Carrier bypass humidifier be installed on the supply plenum or the return air duct?

Carrier bypass humidifiers get their air movement through the water panel by the differential pressure between the supply (hot air) plenum and the return (cold air) duct. The supply plenum is under positive pressure and the return duct is under negative pressure. One of the advantages of a bypass humidifier is that it can be installed either on the supply plenum or on the return duct. No matter which duct the humidifier is mounted on, the air flows from the supply to the return through the humidifier. A bypass humidifier is designed to have no adverse effect on any component in the furnace, air cleaner or filter. Carrier humidifiers put "water vapor" into the air, not raw water. This is nature's way of getting relative humidity into the air.

Do I replace or clean the water panel in my Carrier humidifier?

The water panels are designed to be used for the humidifier season and replaced. The Water Saver Bypass model (HUMCRWBP2417) requires replacing the water panel every three months during the humidifier season. The Large Bypass

(HUMCRLBP2417), Small Bypass (HUMCRSBP2412), Fan-Powered Bypass (HUMCRLF1518) models require replacement every humidifier season. In some applications the water panels may require additional replacement. Reduced humidification levels can occur if the water panel is not replaced as described above. This is because some of the minerals left behind from the evaporation process are permanently trapped in the water panel. The water panel will eventually become clogged with these minerals so less evaporation takes place. The result is less humidification.

Will a UV lamp affect my Carrier humidifier?

A UV lamp may dry out the material used in the components of our Carrier humidifiers. The base of the humidifier along with the scale control insert (the three-sided component which the evaporative water panel slides into) can become powdery resulting in their requiring replacement. Carrier recommends locating the humidifier on the opposite side of the HVAC system from where the UV lamps are located or out of the direct line of the UV lamps to prevent this from occurring. Components requiring replacement due to UV affects are not covered under the Carrier warranty.

What capacity (11.5, 20.5 or 23.3 gallons per day) should my Carrier steam humidifier be set up?

The Carrier steam humidifier can operate with 110-volt power (11.5 gallon per day capacity), 208-volt power (20.5 gallon per day capacity) or 240-volt power (23.3 gallon per day capacity). While 240-volt power is preferred to allow for the most capacity, the humidification requirement for a home is determined by the HVAC installer and will dictate which power supply to utilize.

Dehumidifiers

What is the desired level of humidity to set the Carrier dehumidifiers for?

Your comfort is the best measure of where to set the humidity level. Maintaining humidity levels below 60% can help prohibit mold growth.* When first installed, a Carrier dehumidifier is designed to remove all the moisture in your home's air. Your home acts like a sponge so the moisture in the materials of your home is at the same level as the air. After drying the air, the materials of the home will release moisture back into the air until they are again at the same level. As a result, it is not uncommon for the dehumidifier to operate for an extended time when first installed.

What is the MERV rating of the air filter in Carrier dehumidifiers?

The air filter is a MERV 8.

How loud are Carrier dehumidifiers?

Carrier dehumidifiers are extremely quiet and average less than 50 dB (when ducted).

* <https://www.cdc.gov/niosh/topics/indoorenv/temperature.html>

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What are the electrical needs of the dehumidifier?

All Carrier dehumidifiers are 110–120 VAC. The DEHCRADB1070 draws 6.3 amps, the DEHCRADB1095 draws 8 amps.

Do dehumidifiers dehumidify in the winter?

Carrier dehumidifiers are designed to control airborne moisture in areas where the ambient indoor temperatures are 65° F – 80° F. If the ambient air temperatures are lower than 65° F, there is less moisture in the air because colder air doesn't hold as much moisture as warmer air. As a result, our dehumidifier's will remove less moisture at lower temperatures.

Dehumidifiers, including Carrier dehumidifiers are not designed to pull moisture off a surface. This includes windows, walls and floors. For a dehumidifier to attempt to remove moisture, the moisture needs to be in the air.

During the summertime, our Carrier dehumidifiers are designed to maintain an indoor relative humidity of 45% at an indoor ambient temperature of 75° F (52° F dew point). Typical wintertime conditions in a home are 70° F indoor ambient temperature with a relative humidity of 35% (41° F dew point). The lowest dew point Carrier dehumidifiers will attempt to achieve is 40° F dew point. As a result, our Carrier dehumidifiers usually will not operate in the wintertime.

Moisture will form on windows anytime the surface temperature of the window is lower than the dew point temperature of the ambient air. For example, indoor ambient conditions of 70° F and, 40% Relative Humidity have a dew point temperature of 44° F. When the outside temperature is 0° F and the surface temperature of the glass at 43° F, condensation will form on the windows because the glass surface temperature is below dew point temperature. In comparison, indoor ambient conditions of 70° F and 30% Relative Humidity has a dew point temperature of 37° F. When the outside temperature is 0° F and the glass surface temperature is 43° F no condensation will form on the windows because glass surface temperature is above the dew point temperature.

To remove moisture from windows during the wintertime, a ventilation product is recommended.

Ventilators

What is the difference between a Heat Recovery Ventilator (HRV) and an Energy Recovery Ventilator (ERV)?

HRVs will transfer temperature from the high temperature air stream to the low temperature air stream. ERVs transfer both temperature and moisture. Since transferring temperature and moisture has benefits in the winter and summer, ERVs are recommended in climates with high humidity.

What types of heating and cooling systems can an ERV or HRV be installed with?

An ERV or HRV can be interfaced with any forced air HVAC

system. It can also be used as an independent ventilation system in homes without a forced air HVAC system. The HVAC installer will know the preferred method of installation for each application.

What is the main benefit of an ERV or HRV?

An ERV or HRV continually dilutes odors and/or indoor pollutants, by introducing fresh outside air to provide a healthier indoor environment.

Can I use an ERV or HRV all year?

Yes. You can keep your windows closed and operate the ERV or HRV throughout the year while efficiently producing a fresher indoor environment.

How does an ERV or HRV function?

Fresh air is continually brought into the home by the system and a like amount of stale indoor air is exhausted at the same time; in other words, the same amount of air is being exchanged. However, the hot or cold energy (depending on the season) is extracted from the indoor air before it's exhausted and transferred to the incoming air, so that there is little energy lost.

Carbon Monoxide Alarms

What is Carbon Monoxide (CO)?

CO is a colorless, odorless and tasteless poison gas that can be fatal when inhaled. It is sometimes called the "silent killer." CO inhibits the blood's capacity to carry oxygen. CO can be produced when burning fuels such as gasoline, propane, natural gas, oil or wood. CO is the product of incomplete combustion. If you have fire, you have CO.

Where does CO originate?

CO originates from any fuel-burning appliance that is malfunctioning or improperly installed. Appliances can include furnaces, gas range/stove, gas clothes dryer, water heater, portable fuel-burning space heaters, fireplaces, generators and wood burning stoves. In addition, CO can originate from vehicles, generators and other combustion engines running in an attached garage. Lastly, CO can also originate from a blocked chimney or flue, a cracked or loose furnace exchanger, back drafting and changes in air pressure, and operating a grill in an enclosed space.

What are CO poisoning symptoms?*

Initial symptoms can present similarly to the flu without a fever and can include dizziness, severe headaches, nausea, sleepiness, fatigue/weakness and disorientation/confusion.

What are the effects of CO exposure?*

Common Mild Exposure – Slight headache, nausea, vomiting, fatigue, flu-like symptoms.

Common Medium Exposure – Throbbing headache, drowsiness, confusion, fast heart rate.

* <https://www.epa.gov/indoor-air-quality-iaq/carbon-monoxides-impact-indoor-air-quality>

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Common Extreme Exposure – Convulsions, unconsciousness, brain damage, heart and lung failure followed by death.

If you experience even mild CO poisoning symptoms, immediately call for medical attention!

Do I need a CO Alarm?

Every home with at least one fuel-burning appliance/heater, attached garage or fireplace should have a carbon monoxide alarm. If the home has only one carbon monoxide alarm, it should be installed in the main bedroom or in the hallway outside of the sleeping area. An alarm should be installed on every level of the home and in sleeping areas. Place the alarm at least 15 feet away from fuel-burning appliances. Make sure nothing is covering or obstructing the unit. Do not place the unit in dead air spaces or next to a window or door. Test the carbon monoxide alarm once a week by pressing the test/reset button. Every month unplug the unit and vacuum with a soft-brush attachment or wipe with a clean, dry cloth to remove accumulated dust.

Should my CO Alarm have a digital display?

A digital display allows you to see if CO is present and respond before it becomes a dangerous situation. Peak Level Memory stores the highest recorded reading prior to being reset. This feature enables you to know if there was a reading while you were away from home and can help emergency responders determine the best treatment.

What steps should I take to prevent CO poisoning?

Properly equip your home with carbon monoxide alarms on every level and in sleeping areas. The only safe way to detect CO in your home is with a CO alarm. Every year have the heating system, vents, chimney and flue inspected by a qualified technician. Regularly examine vents and chimneys for improper connections, visible rust and stains. Install and operate appliances according to the manufacturer's instructions. Only purchase appliances that have been approved by a nationally recognized testing laboratory. Never use a gas range/stove to heat the home. Never leave your car idling in a closed garage or use fuel-powered appliances or tools in enclosed, attached areas such as garages or porches. Carbon monoxide can seep into your home through vents and doors.

What should I do if my CO alarm sounds?

If anyone is experiencing symptoms, you need to get everyone into fresh air and call 911. If no one is experiencing symptoms, you should call the fire department or a qualified technician to have the problem inspected. If you are unable to leave the home, open the doors and windows, and turn off all possible sources while you are waiting for assistance to arrive. Under no circumstance should an alarm be ignored!

