NuTone

Indoor Air Quality Products HUMIDIFIERS, AIR CLEANERS, ZONING & ULTRA VIOLET AIR PURIFIERS



INDOOR POLLUTION WORSE THAN OUTDOORS

According to studies by the U.S. Environmental Protection Agency (EPA), indoor levels of airborne pollutants may be 2-5 times, and occasionally 100 times, higher than outdoor levels. Moreover, we spend about 60% of our time inside our homes where poor air quality is attributed to the cause or aggravation of half of all illnesses.

Air contaminants consist of particles such as dust, pollen, and smoke, along with biological agents (e.g., bacteria, viruses, and mold), and gases or vapors traced to hundreds of Volatile Organic Compounds (VOCs) found in solvents, cleaners, adhesives and other common household chemicals, products and furnishings.

The highest degree of filtration.

As a measure of efficiency, filtration is usually referred to by the size of contaminants that can best be removed. A typical one-inch, disposable furnace filter removes just 10% to 15% of airborne contaminants. Made from fiberglass, these low-efficiency filters are basically intended to protect the heating and cooling system's coils from becoming clogged by larger particles. Lint, pollen, dust mites, and mold spores are the larger particles in the 10-to-100+ micron range (1 micron = 1/25,000th of an inch).

In high-efficiency filters, there is actually more surface area for filtration to take place. Thanks to denser, smaller trapping spaces, filtration is enhanced to effectively screen out the smallest contaminants. Atmospheric and household dust, animal dander, bacteria and other pathogens, if smaller than 2.5 microns, can be absorbed directly into the bloodstream.

With NuTone's High Efficiency Particulate Air (HEPA) Air Cleaners, filtration levels are so efficient that up 99.97% of contaminants are removed down to 0.3 micron size.

NuTone's High Efficiency Electronic Air Cleaner provides the highest degree of filtration. By comparison, an incredible 95% of contaminants are removed including viruses down to only 0.01 micron in diameter.

Together, or separately, these units can make your home cleaner and healthier providing total indoor air quality control.





NuTone's dual air-cleaning system.

Whole-House HEPA Air Cleaner with 3-Stage Filtration

- Activated carbon pre-filter removes lint and odors
- 6-inch deep HEPA filter captures 99.97% contaminants .3 micron and larger and lasts up to 5 years
- Carbon post-filter targets Volatile Organic Compounds (VOCs) to control odors and gases (standard)
- Carbon/potassium permanganate VOC postfilter removes heavy-duty odors and toxic vapors like formaldehyde (optional upgrade)

High Efficiency Electronic Air Cleaner—The Ultimate Clean Air Combination

- Lifetime filter electronically removes airborne contaminants as small as .01 micron
- Removes up to 95% of dust pollen, tobacco smoke, cooking smoke and grease, mold, bacteria, viruses and other biological agents contributing to allergies and illness
- Optional carbon post-filters available for removal of VOCs (gases, odors, vapors)

High Efficiency Media Air Cleaner—The Alternative Combination

- Removes airborne particles down to 0.3 microns
- Optional carbon post-filters available for removal of VOCs (gases, odors, vapors)
- Upgradable to an Electronic Air Cleaner
- Limited lifetime home warranty
- Minimum Efficiency Reporting Value (MERV) Rating 14—the higher the MERV Rating, the smaller the trapping spaces for enhanced filtration efficiency

1 Inch Electronic Air Cleaner

95% efficient

Dirty Air

HEPA

Air Cleaner

- Easy to maintain
- MERV 10 Rating
- 24 Volt operation
- Available in many standard sizes and may also be ordered in custom sizes

Clean Air

Furnace or Air Handler

1" Electronic, Electronic

or Media Alr Cleaner

Deflector



NUTONE ZONING SYSTEMS

Controlled comfort zone-by-zone where you need it.

Zoning is a relatively new concept but it's quite simple to explain. Instead of trying to heat or cool an entire house with one thermostat, living spaces are essentially divided into separate comfort zones. Either room-by-room, or by a group of rooms, each zone is monitored by its own thermostat to dictate the ideal temperature.

The system consist of a series of pneumaticallyoperated dampers independently opened and closed within existing duct work by a programmable control panel. With NuTone's Zoning System, you can customize comfort settings to handle up to 8 zones. Air flow can then be selectively channeled where it's needed depending on changing climate conditions, or activities during the course of a day.

An infant's room, for example, may continue to receive more cooled air in the summer upstairs when it's hotter, while unused bedrooms, or living spaces downstairs require less.

Then, in winter, when less heat is needed upstairs and lower living spaces are typically cooler, these areas can be similarly zoned to compensate for uncomfortable temperature variations.





Kitchen Thermostat







Heating and Cooling System



Living Room Zone

Bedroom Zone

Kitchen Zone

Living Room Thermostat

Floor Plan Challenges? No Problem.

Aside from the obvious benefits of controlling temperature swings between upstairs and downstairs, zoning can also remedy a host of other problematic scenarios. Vaulted ceilings, great rooms with connected kitchen and dining spaces, expanses of glass windows exposed to the sun from the south and/or winds from the north, sprawling ranches with hard-to-reach rooms and extended duct runs from centralized heating and cooling sources—all are challenges that no single thermostat can adequately meet.



Likewise, as needs change, floor plans are just as likely to be modified. New room additions, atriums, solariums, newly finished basements, attics and rooms over garages, bedrooms converted to studies or rooms for other purposes, the addition of fireplaces, skylights—each can change the dynamics of a home and its heating and cooling requirements.

Meeting these requirements more affordably and effectively is what makes NuTone's Zoning System unique. Unlike conventional zoning systems that utilize integrated sensors, reconfigured ductwork, wiring and motorized mechanical dampers, the simplicity of NuTone's unique airactuated damper design requires far fewer moving parts for longer, trouble-free service life. And, more importantly, simplicity means ease of installation. Particularly, in existing homes eliminating the need for extensive retrofit modifications.

Up to 12% more efficient.

Because each zone's dampers are controlled by a dedicated thermostat, the ideal system should use digital thermostats that are programmable. Settings can then be adjusted to coincide with activity levels at any time of day throughout the house. In fact, significant savings can be realized by only conditioning selected areas according to need. Once you retire to bed, when you are away to work or school, or on vacation, requirements for heating or cooling are minimized altogether.



NuTone makes your indoor air a safer, healthier place to live.

A WHOLE-HOUSE UV AIR PURIFIER - THE BEST DEFENSE?

Because it works inside your central air system a whole-house UV air purifier is able to intercept airborne pathogens and destroy them as they pass by. As air cycles through the system it passes by the UV light many times exposing and re-exposing airborne microbes to its sterilizing effect. This has proven to be a safe, economical, chemical free way to significantly reduce airborne contaminants indoors.

WHY UV LIGHT? Kill Germs With Light

For over a century scientists have known that certain frequencies of light have a devastating effect on microbial life. We now know that exposure to ultraviolet light in the range of 254 NM (UV-C band) disrupts the DNA of micro-organisms thus preventing them from reproducing, thereby effectively killing them.

UV LIGHT - A WELL ESTABLISHED DISINFECTION TECHNOLOGY

UV light disinfection is now widely used in hospitals and laboratories to sanitize instruments and work surfaces and to prevent the spread of potentially lethal airborne infectious diseases. The technology is used by the food industry to sterilize food before packaging and water treatment systems large and small now incorporate UV light as a chemicalfree means of purification.

A Cleaner Air System Installation of a germicidal UV light inside the air system inhibits the growth of mold which saves energy by allowing the system to operate more efficiently. A cleaner system also requires less maintenance.

Germ Killing UV Light

% Reduction of Common Indoor Air Contaminants Over 4 Hours.



Tests performed by certified laboratories prove the effectiveness of Ultra Violet Air Purifiers.









NuTone Duct Mount Ultra Violet Air Purifier.

The Duct Mount Ultra Violet Air Purifier cleans the air by combining UVC light and activated carbon; two technologies proven to be most effective at killing germs, and removing odors by reducing chemical vapors known as volatile organic compounds (VOCs). Some of them, like formaldehyde and toluene, are known to be toxic.

The Science of the NuTone Duct Mount Ultra Violet Air Purifier.

It detoxes the air with a process called photocatalytic oxidation (a technology similar to the catalytic converter on your car's exhaust). The UV light reacts with titanium dioxide infused into the carbon which effectively disintegrates the captured contaminants, leaving only harmless water vapor and CO_2 which are released back into the air. This process leaves the carbon cells clean so they never fill up or need to be replaced. The result is clean, odor-free air throughout the home.

NuTone Germ Killing UV Light Tube.

The simple and complete choice in UV light for all residential applications. Everything you need is in the tube! Just connect to a power source and install the UV light where needed. The Germ Killing UV Light Tube is one of the most popular Germicidal UV Light systems in the world because of its reliability, ease of installation, and many innovative features.

Germs in the Air You Breathe.

Most people don't realize that indoor air is often far more polluted than outdoor air. Contaminants can include viruses, bacteria, mold, mildew, and allergens. Some are only annoying, others can make you sick. Because air passes repeatedly through your HVAC system (in fact many microbes





Bacteria

Viruses

1

Mold

Allergens

like the cool dark damp interior of the system) this is the ideal place for germs to multiply and spread throughout the house.

The Solution for Indoor Air Pollution.

According to the EPA, indoor levels of pollutants may be 2 to 5 times – and occasionally more than 100 times – higher than outdoor pollutant levels. Indoor air pollutants have been ranked among the top five environmental risks to public health.

Respiratory Health. Air purification technology is designed to reduce the types of airborne contaminants known to contribute to indoor air related respiratory problems. Because air quality is a major factor in respiratory health, improvements to indoor air quality will enhance your quality of life.

Scientific studies show UV light can kill 90% of microbes within 10 minutes. After 24 hours 99.9% are killed.

WHOLE HOUSE HUMIDIFIERS

How Dry Are You?

When you think of dryness, do you picture the arid, wind whipped sands of the Sahara? Or the cracked, sun-baked earth of Death Valley? It might surprise you to know that there are places in this world that are twice as dry as those. One of the driest places on earth could be your home.

The relative humidity of the Sahara Desert is 25%; Death Valley is 23%. In the winter months, the average heated home can have a relative humidity as low as 13% to 16%.

Humidity for Comfort.

The recommended indoor relative humidity is three to four times the humidity in an average North American home in winter. If you're not reaching those levels in your home, you could be exposing yourself and your family to the physical aggravations of dryness. In fact, doctors often mention dry air as one of the causes for nose, throat, and skin discomfort.

Unhumidified heated air also dries out the wood in your home, shrinking the wood framing around doors and windows. Gaps then occur, allowing cold air in, making your home less energy efficient.

Dry air also causes wood floors and trim to separate, walls and ceilings to crack; it can harm expensive musical instruments and electronic equipment such as computers; dryness even weakens the joints of expensive furnishings.

Humidistat.

NuTone Humidifiers are equipped with a manual humidistat to control the humidifier's operation. With proper homeowner adjustment of the humidistat the NuTone Humidifier will provide comfort, preservation,

and many other benefits of increased indoor humidification.



Features and Benefits

- Designed to work with your heating & cooling system to make your home more comfortable by eliminating parched, dry air throughout the entire home.
- Delivers comforting humidity to eliminate dry nose & throat, itchy, dry skin - your skin feels smoother, while reducing static electricity.



Power Model

- Generates moisture to protect and preserve your home & home furnishings against the damaging shrinkage due to dryness.
- You'll feel warmer in the winter resulting in lower energy-saving indoor temperatures.
- Includes full system 10-year warranty when installed and registered with a NuTone furnace or indoor air handler.

NUTONE COMFORT SYSTEM



- Air conditioner or heat pump
- 4 HEPA air cleaner
- **3** Gas furnace or air handler
- Electronic air cleaner
- Evaporator coil
- **6** UV air purifier
- Humidifier

- One control panel
- Programmable thermostat



Mold facts.

Allergic reactions to mold are common. They can be immediate or delayed, adversely affecting human health through three processes: 1) Allergy, 2) Infection and 3) Toxicity.

Molds produce allergens, releasing potentially toxic substances into the air called mycotoxins. Most molds, fungi and yeasts produce microscopic spores that spread easily throughout the air, wafting continually.

Many people are very sensitive to molds with exposure resulting in nasal stuffiness, eye irritation, wheezing, skin irritation, shortness of breath, fever and even infection. More than 50 percent of people are sensitive to one of 10 common allergens. Some research suggests that up to 90 percent of all colds and viruses are caught indoors. Biological pollutants including molds, bacteria and virus promote poor indoor air quality.



(Information taken from Centers For Disease Control, American Lung Association, American Industrial Hygiene Association, Environmental Protection Agency, Minnesota Department of Health * EPA).



NuTone 10-Year Limited Warranty

Air Cleaner Products

Because NuTone equipment is built for the long run, our air cleaner accessory products are backed by a limited 10-year warranty when installed and registered with a matched NuTone system. When installed separately, parts and labor are covered for up to 5 full years.

Air Purifier Products

NuTone units offer an incredible customer promise that protects your investment. Every Air Purifier features one of the best warranties in the industry – 10 years on all parts when installed and registered with a NuTone heating and cooling system. NuTone Ultra Violet Air Purifiers come with a 5-year, satisfaction-guaranteed warranty.

Zoning System Products

At NuTone, we offer a 10-year warranty on all parts if a zoning system or humidifier is installed and registered with a NuTone matched system.

Commercial Applications

Equipment utilized in commercial applications carries a 1-Year parts warranty, 5-Year compressor warranty and a 10-Year heat exchanger warranty.

Warranty Registration

To assure you take advantage of these longer warranties, register your system within 60 days of installation (or within 60 days of occupancy of a new residentially constructed home with these products) at www.nutonehvac.com. See warranty details for more information.

Extended Warranty Protection

While your NuTone warranty covers parts, it does not cover the cost of labor charged by your contractor for service and repair. However, extended labor protection plans are available to cover labor costs associated with repairs. Your contractor may offer various coverage plans; we recommend you look for the Contractors' Preferred Protection Plan brand approved for NuTone.





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