AIR PURIFIERS 101: How They Work, Benefits & Types

An air purifier is a device that removes harmful airborne particles from the air in your home. The contaminants include dust, bacteria, dirt, and pollen. They are manufactured as small stand-alone units or larger units affixed to an Air Handler Unit (AHU) or to a Commercial HVAC unit. They can also help remove CO2 from the air before processing in industries.

Do you want the air in your home purified? We can help. Our Company, Galmiche & Sons, is an HVAC Company in St. Louis, Missouri. We've been operating for 60-years, serving residents and the surrounding towns. Call us at 314-993-1110 or Contact us, and we will take care of your air purifying needs.

How Air Purifiers Work

Your house can be a source of air impurities, and the air inside the home is generally dirtier than the air outside. Mold can also develop from the accumulation of moisture. Dust particles and bacteria are being circulated in the house through heating and cooling of the air, smoking also pumps toxins into the air, pets shed fur thereby giving off dander.

All these causes contaminants to concentrate on the house and reducing these contaminants helps eliminate problems. In order to remove these pollutants, air purifiers should be used. Air purifiers use a series of fans to drag the air in your home through high-efficiency particulate arresting filters and trap the particles mechanically. The purified air is then circulated back into the room, thereby keeping the environment safe and healthy.

Benefits of Air Purifier

There are several benefits of having an air purifier in the home.

- Air purifiers help remove air pollutants – They have filters that cleans and purifies the circulated air by trapping particles present in the air.

- They remove up to 99.9% of dust particles – The HEPA filters in the purifiers help remove about 99.9% of impurities and dust particles from the air including mold spores, pollen, pet dander, and dust mites. This is achieved by cycling the air in the room continuously.

- It helps neutralize smoke – Air purifiers help trap smoke in our home before it gets attached to the upholstery. Scientists have proven that second-hand smoking can cause lung cancer in non-smokers. It is important to have a good cleaning system to eliminate any lingering smoke.

- Air purifier stops the spread of sickness, germs, and diseases – Several bacteria or viruses can be transferred from one person to another through sneezing and coughing. Bacteria survive in warm, humid areas and can cause serious illness to the young and old. HEPA air purifiers with electrostatic purification can help neutralize a greater percentage of all airborne germs and bacteria.

- They trap allergens released by pets – Pets bring about odors, dander, and urine stains which can cause respiratory inconvenience or disease. Air purifiers help tackle these allergens and traps them before they settle in your home.

Types of Air Purifier

1. Filters

- True HEPA/UV-C Air Purifiers - This air purifier can trap 99% of airborne germs and odor-causing bacteria and 99.97% of airborne allergens using its replaceable HEPA air filters with ultraviolet germicidal light. It can be used in high allergen areas to eliminate odors, dust mites, smoke, pollen, dust, lint, germs, pet dander, and mold.

- True HEPA Air Purifiers - This air purifier help eliminate dust mites, pollen, and mold spores, using replaceable HEPA-rated filters. They help keep the home smelling fresh by removing the main causes of seasonal allergies and 99.97% of the airborne particles.

- HEPA-Type Air Purifiers – This purifier is more economical and less-effective than True HEPA Air Purifiers. They are used in fewer allergen areas and have replaceable filters to trap 99% of small airborne particles that include pet dander, smoke, and dust to help maintain clean air.

- Permanent HEPA-Type Air Purifiers – Permanent HEPA-Type Air Purifiers help eliminate 99% of airborne particles including smoke, odors, lint, dust, pet dander, with its reusable filters which are not replaceable but only require occasional cleaning.

2. Adsorbents

These purifiers use an adsorbent material to eliminate odors, chemicals, and smoke from the air. They use an adsorbent method, which is the process of trapping a substance on the surface of another substance, and the common adsorbent used in this case is activated charcoal.

3. Ultra-Violet Purifiers

Certain microorganisms, viruses, and bacteria are rendered harmless by ultra-violet radiation. Some air purifiers use UV germinal light, which eliminates airborne bacteria, germs, and viruses.

4. Ionizing Purifiers

The corona discharge method is used in this air purifier to send streams of negative ions into the air, which will be attracted to anything with the opposite charge. The particles in the air get clump together and become heavier, then settle out of the air.

Contact Galmiche & Sons for Your HVAC Needs

After going through the benefits that come with having an air purifier in your home, if you've decided to get one, Contact Galmiche & Sons, St. Louis. Whether it is for purchase, installation or HVAC maintenance, we got you covered. Call on us today at 314-993-1110.