Air Purifier Buying Guide

Terms to Know:

CFM – CFM or Cubic Feet per Minute is the unit of measure used to determine how much air the unit is capable of moving in the space.

VOC's – VOC's are chemical compounds found in the air that can be harmful to people. These account for most smells you are trying to remove from the air you breathe such as smoke, household cleaner and even paint fumes.

HEPA – HEPA is the type of filter used to remove particulate from the air. HEPA is defined as being able to remove particles 0.3microns in size at 99%.

Gas, Odor & Chemical removal.

Most people are looking for a wide range of overall chemical removal and filters with carbon only, will miss many chemicals.

For example, carbon does not filter out Formaldehydes, sulfur dioxides, hydrogen sulfides etc.

Some units add Chemisorption (impregnated alumina) to their filters because it will filter out what the carbon misses.

The mix of the 2 is very important: Activated High Grade Carbon + Impregnated Alumina (chemisorption)

HEPASilentTM technology

Combines the best features of electrostatic (Airborne particles pass through an ion chamber and are electrically charged. This causes them to adhere effortlessly to a polypropylene filter) and mechanical filter technology to enable the delivery of more clean air at a faster rate with less noise.

PreFilter – This filter acts as a precursor to remove large particulate from the airstream in order to prevent the Carbon and HEPA filters from degrading more quickly.

HOW TO SIZE AN AIR PURIFIER FOR YOUR HOME

The way we size air purifiers is by determining the number of air changes it provides to a space. This is calculated by taking the airflow and multiplying it by 60 and then dividing by the cubic footage (1 x w x h) of the space. You are aiming for about 4 or 5 air changes per hour. What that means is every 60 minutes the air in the room is running through the air purifier 4 or 5 times. See the calculation example on the next page.

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Air purifier has 250 cfm airflow

Room size is 20 x 20 x 8=3200 cu.ft

 250×60 (min in an hour) / 3200 = 4.6875

The result of the above equation is 4.6875 air changes per hour.

This is exactly the amount of air you want moving in the case of allergies and asthma.

Please note: When choosing a fan speed (CFM) of a unit, remember that many units offer either variable or 1-6 different fan speeds. Some manufacturers only list their air changes per hour based upon the highest fan speed of a unit. The highest fan speed will always be the LOUDEST fan speed. Keep this in mind if you think that the fan noise might bother you, especially while sleeping. If this is the case, remember you can always run a unit on the lowest fan speed. Also please remember that the higher the fan speed the more the unit will clean the air so you are sacrificing cleaning power by running the fan on low speed.

Gas, Odor & Chemical removal vs. HEPA Filtration

The difference between Gas, Odor & Chemical removal vs. Carbon media and HEPA filters is what they remove from the air. Carbon filters remove what are called VOC's (volatile organic compounds) such as smells or fumes from paint, plastic, chemicals, etc. HEPA filters remove particulate from the air such as dust, mold even bacteria and viruses. Which one you choose all depends on what you are trying to get rid of.

BEST OF BOTH WORLDS

There are some units out there that actually provide both carbon and HEPA filtration combined into one unit. Air Marketing Group carries different brand units like this that are great for allergy sufferers, people with asthma and units even that get rid of smoke and odors.

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THINGS TO CONSIDER BEFORE PURCHASING AN AIR PURIFIER.

Filter Replacements – Something you want to think about is not only the initial purchase of the air filtration unit but also the replacement filters you will need to purchase in the future. Most units come with a pre-filter and a carbon or HEPA. The average life for all three types of filters is anywhere from 1 to 2 years depending on the environment and hours of use per day.

Noise Level – No one likes to be in a room with a noisy piece of equipment all day so something you need to pay attention to is how noisy the air filtration unit will be. Most of the units we sell have a range of speeds, **the lower the speed the less noisy the unit will be.**

Manufacturers time in business and reputation – The amount of time (this should be measured in years) a manufacturer has been producing the piece of equipment you are considering purchasing should be at least 5-10 years. This indicates that they stand behind their product with quality and service

Warranty – Warranty is something you should look into because they range from manufacturer to manufacturer. Sometimes the longer the warranty can mean a more expensive unit but you will save money in the long run if anything goes wrong. Warranties will only cove the unit itself and not the filters or filter media.

CFM – A lot of manufacturers rate their units without filters and therefore give an inaccurate number when it comes to the CFM of the unit. Make sure you are getting the CFM while the unit is running with the filters installed.

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