

HEPA Air Filters: A Productivity Lifesaver

Ah... achoo ! That's the sound of thousands of Americans battling the effects of less than stellar air quality in the workplace each day. In fact, according to the EPA, we spend about 90% of our time indoors, with roughly half of that time in the workplace. Poor indoor air quality isn't just something to sneeze at either: the EPA lists poor indoor air quality as the fourth largest environmental threat to our country.

Poor indoor air quality can also lead to physical symptoms that may reduce worker productivity. The United States Department of Labor states that " poor indoor air quality (IAQ) has been tied to symptoms like headaches, fatigue, trouble concentrating, and irritation of the eyes, nose, throat and lungs." Although there are other factors that can contribute to these symptoms including temperature, lighting and individual health, poor indoor air quality is still one of the leading causes of loss of productivity in the workplace.

What Is Indoor Air Quality Anyway?

OSHA describes indoor air quality as the way "inside air can affect a person's health, comfort, and ability to work. It can include temperature, humidity, lack of outside air (poor ventilation), mold from water damage, or exposure to other chemicals." There are 9 sources of indoor air pollutants that you should be aware of:

- **Building Site Location** – proximity to highways or busy streets can introduce exhaust fumes and other particulates into the environment.
- **Building Design** – openings in the building envelope due to a design flaw or aging can allow water and pollutants to enter the building, causing mold.
- **Building Systems Design and Maintenance** – HVAC systems that are not properly maintained, such as not changing air filters often enough or using the wrong types of air filters, can be the cause of a variety of indoor air pollutants.
- **Renovation Activities** – renovation activities can introduce dust into the atmosphere; fumes from paints and cleaning products can release gases such as VOCs.
- **Local Exhaust Ventilation** – Specialized areas or businesses such as nail salons, kitchens, copy rooms and parking garages need additional exhaust ventilation. Lack of ventilation or ventilation that carries fumes from one area of a building to another is another means for indoor air pollutants to make their way into the air you breathe.
- **Building Materials** – Building materials that have sustained water damage can grow mold and begin to rot, introducing a variety of irritants into the air.
- **Building Furnishings** – Much of the furniture we use is constructed of pressed wood. The glue used in the wood gives off VOCs, which have been known to cause cancer. Other materials that can give off VOCs include carpeting, wallpaper and some fabrics.
- **Building Maintenance** – Building maintenance personnel come in contact with a variety of indoor air pollutants on a daily basis from cleaning products to pesticides.
- **Occupant Activities** – This could include pollutants such as wearing perfumes or colognes, smoking or doing exercise.

Although completely eliminating many of these contaminants may not be possible, they can be minimized. Making sure that your building's HVAC unit is working properly and outfitting it regularly with the right air filter is a good start.

HEPA Air Filters Help Improve Productivity

One solution to improving IAQ and worker productivity is to increase the amount of outdoor air being pumped into the building, but even outdoor air can introduce pollutants such as mold, pollen or exhaust fumes into the environment. However, as an employer or building owner, there is something else you can do: install high quality HEPA air filters.

According to an article entitled: "National Benefit of Improved Particle Filtration," compiled by the EPA from Lawrence Berkeley National Laboratory, particle filtration in buildings can substantially reduce people's exposures to particles from both outdoor air and indoor sources."

How much so? Here are few facts from the Lawrence Berkeley National Laboratory website:

- Workers saw a 4 to 16% increase in the speed and accuracy of selected office work tasks, when indoor pollutant sources were removed.
- Better perceived indoor air quality is correlated with improvements in office work tasks, with approximately a 1% increase in task performance per each 10% decrease in the percentage of occupants dissatisfied with indoor air quality.
- Studies have found that occupants of office buildings with above-average ventilation rates (up to 40 cfm per person) have 10% to 80% fewer sick building syndromes at work.

These statistics suggest that developing and implementing an indoor air quality management plan can help you improve productivity, health and the general well being of a building's occupants. Having the right ventilation system in place is the first step to fixing poor indoor air quality, but using the right HEPA air filters and replacing them often is the key to maintaining a healthy indoor air environment.

Why Should You Consider a HEPA Air Filter?

Most people associate HEPA filters with residential applications, but they are also used in industries such as healthcare, nuclear power, technology and more. According to the U.S. National Library of Medicine "A HEPA (High-Efficiency Particle Arresting) filter can remove the majority of harmful particles, including mold spores, dust, dust mites, pet dander and other irritating allergens from the air."

HEPA filters are designed to remove 99.7% of particles that have a size of 0.3 μm or larger from air that passes through the filter. They utilize a unique construction that actually causes the particles passing through to stick to the fibers in the filter, which is why it is also important to change your filter at the recommended times for your application.

The benefits are clear: HEPA air filters can help improve indoor air quality, increasing worker productivity and cutting down on sick days due to the effects of pollutants and particulates. An increasing number of employers and building owners are cashing in on this increase in worker productivity and the cost savings that HEPA air filters can provide. Are you one of them?