

### Is the replacement media expensive?

Not really. It costs about \$7 a month to insure clean, fresh, safe, healthy air in your home. And when compared to the time and expense of the other high efficiency alternatives, it is very economical. Other electronic air cleaners must be cleaned monthly. While the manufacturer may tell you to wash it in the dishwasher, the manufacturer of the dishwasher will tell you not to. This means you must take the cells to a car wash or have a service company clean them. Cells should also be chemically stripped each year, which can be costly. If the unit is equipped with a carbon panel for odor control, these can cost \$100 to \$160 per year to replace. High efficiency passive filters, such as HEPA's, cost hundreds of dollars to replace and may also have carbon inserts that further add to the cost.

### How do I know what size air cleaner I need?

Pull your current air filter out of your air handler; the size should be written on the side. If your filter is media only and does not indicate the size, measure the media.

### How long has the Dynamic Air Cleaner been around?

The first electrically enhanced air filters date back to 1930 and combine elements of both passive and electronic filtration. As with most high-efficiency filtration products, polarized media had roots in industrial applications. Although there have been a number of different configurations since then, all are based on charging or polarizing fibers in a filter and particles in the air in order to generate an electric force between the fibers and particles. While the principle has been around for many decades, it's only been in recent years that the technology has been fully understood to maximize effectiveness and to provide consistent, reliable performance.

### How should we operate the Dynamic Air Cleaner?

Any air cleaner can only be effective if air is moving through it. Therefore in most areas, for maximum effectiveness, we recommend that your thermostat be turned to the "fan on" position rather than on "auto" position. This will give continuous air cleaning. This takes only a small amount of electricity, but makes a significant difference in the air quality in your home. Otherwise, your Dynamic Air Cleaner will only be working when your furnace or air conditioner is running.

### Dynamic Air Quality Solutions

Since 1982, Dynamic Air Quality Solutions has been providing clients with innovative solutions to a wide range of indoor air quality problems. Other Dynamic products include:

#### Engineered Commercial & Industrial Systems

1" and 2" panels and V-Bank systems for commercial and industrial applications such as tobacco smoke removal in casinos and micro-contaminant control in clean-room manufacturing.

#### Overhead Ceiling-Mount Units

Overhead units for ceiling installations such as smoking area in restaurants and cafeterias. Designed for easy installation in drop ceiling grids.

#### Germicidal Systems

Germicidal systems for removal of airborne pathogens in homes, hospitals, food processing facilities, and other applications where the cleanest air possible is desired.

#### Condensate Drain Pan Treatments

Time-release, water-activated protection for air conditioner and refrigeration drain pans to prevent the formation of slime, odors, and drain clogs.

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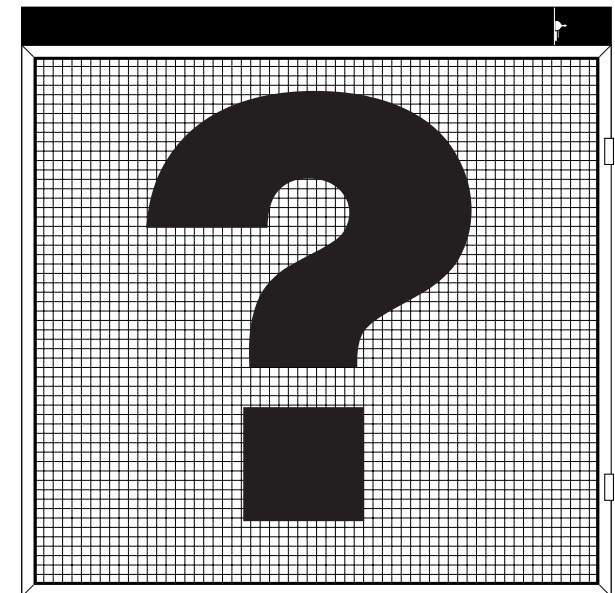
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IMPROVING THE AIR YOU BREATHE



# Frequently Asked Questions About Dynamic Air Cleaners



DYN-222 (03/07)

## Frequently asked questions

### **If I don't have allergies, why do I need an air cleaner?**

The EPA says that indoor air is on average 7-10 times worse than outdoor air, even if you live in a city. Air has a direct pathway into our bodies and a direct effect on our health and well-being. Besides allergies, poor air quality is linked to a number of problems: fatigue, asthma, respiratory ailments, the spread of flu and other diseases, and even cancer.

### **What's wrong with the furnace filters that I buy at the hardware store?**

A furnace filter is just that: a filter to help your furnace equipment stay clean. In fact, most filters are in most heating and cooling systems to protect the equipment, not the people. They do almost nothing to improve the air quality from a health standpoint.

### **What about a room air cleaner?**

Most supplemental room air cleaners can help clean the air in a room or two. However, by installing an air cleaner in your home's central forced air system, you will clean the entire house. Further, many room air cleaners use high-efficiency passive filters, which require powerful – and therefore loud – fans to move the air. This can be an annoyance.

### **Why not buy one of those filters advertised on the radio by Paul Harvey or Rush Limbaugh?**

These are called passive electrostatic filters. Their fibers have a slight static charge. As airborne particles move through them, they can be attracted to the fibers, the way rubbing a balloon on a sweater will make it stick. They are a lot better than the \$2 throwaway 1" filters, but they can cause some problems in residential systems. As a passive electrostatic filter loads up with contaminants, its fibers become coated with particles and the "balloon effect" stops. This can happen quickly and then the filter is only effective against the larger particles in the air, over 5.0 microns. Further, in order for a passive electrostatic filter to work, it must be dense and therefore restrictive to airflow. In many homes this can cause poor heating and cooling in the upper level of the home or in the rooms farthest from the air handling equipment. As the filter loads up, it becomes even more restrictive. This not only makes the air conditioning equipment work inefficiently, but also can actually damage it. In fact, some electric utili-

ties tell their customers not to use passive electrostatic filters. Because Dynamic Air Cleaners use a high voltage to create an active electrostatic field inside the air cleaner, they are able to use a very sparse media that is not restrictive to airflow. Dynamic Air Cleaners also improve in efficiency as they operate, while capturing the very smallest particles in the air such as bacteria, smoke, mold spores, pollen, and many more. In a recirculating air system, like the one in your house, a Dynamic Air Cleaner collects over 97% of the particles that are 0.3 microns and larger.

### **What is Micron and why should I care about small particles?**

A micron is 1/25,000<sup>th</sup> of an inch. A human hair is about 150 microns; the smallest thing that can be seen with the naked eye is about 10 microns. It is the largest particles, above 5.0 microns, that cause equipment problems and are what most filters are able to catch. However, 98% of the particles in the air are smaller than 1.0 micron. These "sub-micron" particles are not caught by most filters and can get through our bodies' natural defenses when inhaled. Further, they can stay suspended in the air for days until they are breathed in. An increasing number of studies have found these sub-micron particles to be a significant health hazard. As an allergy sufferer can tell you, what you can't see can hurt you. To effectively clean the air, the sub-micron particles must be removed. Dynamic Air Cleaners will remove up to 98% of these particles on a multiple pass basis. For example, when tested in a test house, after 10 hours of operation, a Dynamic Air Cleaner was able to remove 97% of the particles in the 0.3-0.5 micron range and 99% of the particles larger than 0.5 microns. And our efficiency actually increases as the filter loads with pollutants.

### **Does the Dynamic Air Cleaner create a snapping sound or produce Ozone?**

No, Dynamic Air Cleaners are non-ionizing and do not "arc" or make Ozone. Rather than ionizing, Dynamic Air Cleaners "polarize" the air cleaner fibers and particles that collect on the fibers. This gives each a negative pole and a positive pole, essentially turning them into magnets. The particles are then attracted to other particles (making them easier to catch) and to the media fibers. Just as paper clips on a magnet attract other paper clips, the dirt captured becomes part of the collecting surface, giving the air cleaner increasing efficiency as it loads.

### **I have had an electronic air cleaner before and noticed a thin coat of dust on a lot of surfaces, especially on my TV screen. Will this air cleaner do the same thing?**

No, Dynamic Air Cleaners do not create charged particles that will cling to grounded surfaces in the home. Electronic air cleaners to date have worked by ionizing (positively charging) the particles in the air. They then try to capture them on negatively charged or grounded collection plates. This works fairly well at first, but as the plates load up with positive particles, they lose their attraction and the air cleaner loses its efficiency. The positively charged particles then will stick to any grounded (walls and ductwork) or charged (a TV screen) surface.

### **Is the Dynamic Air Cleaner hard to install?**

No. In most homes, the Dynamic Air Cleaner installs into the existing filter tracks, which means no costly ductwork modifications. The air cleaner is powered using 24 volts either from the furnace control board, or using an optional 110-volt transformer.

### **I currently have an electronic air cleaner; does that cabinet need to be removed?**

No. A Dynamic "Retrofit" Air Cleaner is available that slides into the existing cabinet after power to the original unit is disconnected. There are six sizes of retrofit models available.

### **What is involved in the maintenance of the Dynamic Air Cleaner and how often must it be done?**

This will vary a little from house to house. Generally, we recommend that the media be changed 3 times per year. The media pad is disposable and changing it takes only a couple of minutes. When changing the media, you should also check for face-loaded dust on the air cleaner's outer screens. If this has built up, it can be brushed or vacuumed off.

### **Can I use any media?**

No. Your Dynamic Air Cleaner will not operate effectively with plain fiberglass media from the local hardware store. While the Dynamic replacement media pad may look like a plain piece of media, if you look closely you will see that there is an activated carbon center screen bonded into it. This patented configuration not only absorbs odors, but also conducts the electrical charge that creates the polarizing field. Standard media cannot do this.