



## Upgrading Your Air Conditioner Filter Is One Of The Least Expensive Things You Can Do To Improve Indoor Air Quality

The average person breathes in over 32,000 pints (18,185 liters) of air per day. Those 32,000 pints contain about 1,120,000,000 particles of dust. Most of these particles are 3 microns or smaller in size. According to the U.S. Environmental Protection Agency indoor air is two to five times more polluted than outdoor air and this can be a big problem if you are an allergy sufferer. There are a number of things that effect indoor air quality and efficient furnace filters and air conditioner filters are your primary defense against indoor air quality problems.

Clean air is something we all need for a healthy home environment. In order to reduce indoor air pollution and provide a healthier home environment for your family you need a quality air filter and several key factors should be considered.

### Filter Performance

If you have evaluated filters recently, you have most likely noticed the MERV rating. Basically, a MERV rating is the effectiveness of the filter in removing particles from the air. Most air filters are primarily used to protect your AC unit. Any filter with a MERV rating of 6-8 performs this function sufficiently; the higher the MERV rating, the better the filtration.

If air purification is needed, then you need to investigate a much higher MERV rating (13 or above) or consider a HEPA Filter. HEPA filters are used primarily in clean rooms and hospitals with environmentally controlled conditions. Most homes are not environmentally controlled and the use of high end filters is generally not practical. The constant opening and closing of doors and windows introduces dust particles from outside and defeats any attempts at air purification.

Most homeowners will be completely satisfied with the level of filtration provided by a MERV 6-8 filter. Most disposable filters have a MERV 2-8. Air Care Permanent Filters have a MERV rating of 8.

### How an Air Filter Works

Typical disposable filters function by impingement of dirt particles. As dirt particles enter an air filter they collide with the filter media and remain there until the filter is thrown away.

Electrostatic filters trap large particles through impingement but also introduce a static electrical charge that attracts smaller dust particles and binds them to the filter material until cleaned off. This passive static charge is developed from the friction of air moving across the filter material. The electrostatic charge is self perpetuating; when you clean the filter, the media's charge is renewed by the removal of the oppositely charged contaminants. No electricity is necessary to have this extra particle attracting charge work for you to keep your coils cleaner and operating at their highest efficiency. Bottom line, electrostatic filters are more effective in filtering smaller dust particles than disposable filters that only rely on impingement.

## **Filter Cost**

Many people only evaluate the initial cost of an air filter when making a purchase. If you consider the periodic purchase of disposable filters, you will soon realize that you are literally throwing your money away. If you replace a disposable filter 4-6 times per year, even though the disposable filter costs only \$3 each, you are spending \$12-\$18 each year for that filter slot. Over a 5-10 year period you will be spending \$60-\$180 for each filter slot. This doesn't take into consideration the time and other associated costs to purchase this "inexpensive" filter.

An Air Care Permanent Filter costs between \$33-\$47 (custom sizes slightly more) and are guaranteed for life! This is the last filter you will ever purchase for your home AC unit!

## **Convenience**

Some people think it's more work to remove and clean a permanent filter than to simply pull out a dirty disposable filter and slide in a new one, but have they considered the extra time it takes to drive to the store, pick from the many disposable filters available and then dispose of the old filter? Maybe you buy the filters in bulk to save on trips? What about storing these filters? You need to make sure the new filters are protected from moisture, bugs and small animals that would enjoy making a home in this stored box of filters.

Cleaning an Air Care Permanent Filter is simple! Remove the filter from the unit, wash off with a stream of water from a garden hose. If the filter has any staining, apply some Simple Green or 409 and let soak for a minute or two then rinse off. Let the filter drain and the return to the unit. The whole process should only take 15 minutes every 4-6 months!

The purchase of an Air Care Filter eliminates the trip to the local store on a periodic basis, it eliminates storage issues, and it eliminates the disposal problem. Yes, this is a problem!

## **Environmental Concerns**

Did you ever wonder what happens to that dirty disposable filter? Most likely it winds up in the local landfill along with thousands of other throw-away filters. The material in these filters doesn't break down over time. The spun fiberglass material lasts for years and the problem gets worse year after year as more and more filters are thrown away. Switching to a permanent filter eliminates this wasteful habit.

## **Energy**

Energy use is determined by the amount of pressure drop across a filter. To increase a disposable filter's efficiency from a MERV 5 to a MERV 8 requires more filter material to increase the amount of impingements to capture dirt which increase the pressure drop and requires more energy. Since an Air Care Permanent Filter functions by two methods, impingement and static attraction, the pressure drop across the Air Care filter is less to achieve the same level of filtration thus saving energy.

## **Conclusion**

When you examine all the facts, choosing an Air Care Permanent Filter over a throw away filter is the obvious choice. As an added incentive to help our environment, the Permanent Filter Company offers a 15% discount by simply entering the coupon code "GREEN" when ordering.

Please feel free to contact us at [sales@PermanentFilter.com](mailto:sales@PermanentFilter.com) if you have any questions or comments.