What's a MERV Rating and Why Do You Need It for Picking an Air Filter?

If choosing the right air filters for your HVAC system is confusing, you're not alone! From the right size to understanding what the the best MERV rating air filters are, making sure you have the best air quality in your home or office can be a challenging process.

Asthma and allergy sufferers are particularly sensitive to the air quality around them. The wrong air filter can force you to breathe in dust or allergens that trigger asthmatic episodes. However, without the right knowledge about MERV ratings, your air filtration system could continue harming your health.

What is a MERV rating? How can it make a difference in breathing easier? Keep reading to learn all about MERV and why it's essential when choosing air filters.

What is Air Filtration?

The air you breathe contains particles of dust, dirt, allergens, and other microscopic contaminants that easily enter your lungs through the act of breathing. Depending on where you live and work, the outdoor air around you can be a nightmare of harmful particles that enter your lungs.

While we can't filter outdoor air, we *can* filter indoor air! Air filtration is the process of removing harmful particles from the air to create clean, less harmful air. If you struggle with allergies and asthma, it's critical to live and work in environments that provide excellent air filtration to help you breathe better throughout the day.

What is MERV?

MERV is an acronym for a filter's Minimum Efficiency Reporting Value. When choosing the best air filter for your HVAC system and health needs, MERV filter ratings tell you how much (or how few) particles that filter removes from the air. In general:

- Lower MERV ratings allow more particles into the air
- Higher MERV ratings can trap and filter our more particles

Particles trapped by MERV filters include carpet fibers, pet dander, pollen, dust mites, mold spores, bacteria, and tobacco smoke. Filters on the low end of the MERV scale allow larger particles into the air, while high MERV filters can trap smaller particles. This means choosing a filter on the upper end of the scale produces cleaner air as the filter traps a broader range of particles from large to small.

What Do the Ratings Mean?

In most cases, the MERV rating scale goes from 1 to 16. If you need more minute filtration, ratings from 17-20 are available. However, most residential or commercial buildings don't need filters above a MERV 16 rating.

The scale is based on the micrometer size of particles that the filter allows through your HVAC system. However, "micrometers" might not be the easiest way for the general public to understand precisely which particles your filter traps to keep out of your breathable air!

In laymen's terms, here's what the MERV scale means in terms of how much or how few contaminants stay trapped in a filter:

- MERV ratings of 1-4. These filters capture particles larger than ten micrometers. A filter with these ratings are "basic" filters that help keep your system clean, but will not significantly improve the air quality in your home or office. These filters can trap dust mites, bugs, and most household debris.
- MERV ratings of 5-8. These filters capture particles at three micrometers in size. With this range of filters, you begin to more significantly improve the quality of the air that filters through the HVAC system. In addition to larger particles, these filters also trap pet dander, mold, and aerosol sprays.
- MERV ratings of 9-12. These filters capture particles as small as one micrometer. In addition to everything captured by lower-rated filters, these filters also trap common pollutants and most dust particles. Superior residential air conditioners and most hospital laboratories choose filters within this range.

- MERV ratings of 13-16. These filters capture particles as small as 0.3 micrometers. When using filters with the highest ratings, your HVAC system can trap sneeze droplets, smoke, and most other sources of pollution. You'll find this level of filtration used in hospitals where patients stay or in surgery areas.

Asthma and allergy sufferer should consider MERV filters between 11-13. These filters provide the best air purification to help ease symptoms of lung conditions or allergy flare-ups.

What About MERV 17-20?

These filters can capture virtually all particles, but most homes or businesses don't require this level of purification. These filters can also be very expensive! You'll find this level of filtration in cleanrooms used for manufacturing electronics or scientific needs.

What About Pricing and Replacement?

As the MERV rating goes up, so does the pricing, in most cases. However, depending on how often you need to change your filter and where you buy your filters, choosing a higher-MERV filter can improve your air quality without costing more.

In most cases, you should replace low MERV filters every month. You might spend less on these filters, but you'll need to change them more often than higher-MERV-rated filters.

When choosing filters at the higher-end of the scale, you can generally replace them every 60-90 days. You might spend a little more on the purchase price of these filters, but you won't need to change them as often while experiencing cleaner air!

Keep a Filter-Changing Schedule

A dirty filter can restrict airflow to your HVAC system. Clogged filters also become ineffective when filtering particles and keep your air clean. Neglecting to change your filters on a schedule can cause expensive damage to your furnace system and cause health issues.

It’s important to keep an eye on your filters. If it’s dirty before 90 days, go ahead and replace it. Never leave your system without a filter or with a dirty filter.

Get Help Choosing Your Ideal MERV Rating

We know this is a lot of info, and it can be confusing to choose the best air filter for your home, office, and budget. We’re here to help guide you through the best MERV rating air filters for your needs!

Contact us for an air quality consultation. We’ll help you determine the best filters for your home or office, then connect you to a specialist to put your solutions in place.