

Spotlight

Discover the Best New Sustainable Products

A GUIDE TO BETTER ENERGY EFFICIENCY AND IAQ

Filtration Group shares how to save energy and boost IAQ with high MERV air filters.

By Julia Stone

Filtration Group's MERV 13 air filter products are fostering healthier, safer, and more productive environments. The global manufacturing company's diverse range of high-efficiency air filters optimize energy usage without sacrificing indoor air quality, whether your project is residential, commercial, or industrial.

"Anything below MERV 13 is basically just protecting your equipment, whereas MERV 13 and above filter smaller particulates in the 0.3-2.5 micron range that can get in your lungs and potentially your bloodstream," says **Michael Bruce**, director of product and channel marketing at Filtration Group. In addition to providing better air quality, MERV 13 filters qualify for LEED credits and can also contribute to energy efficiency when changed at regular intervals.

David Heritage, head of sales for national accounts at Filtration Group, points out three major sustainability factors for air filters: energy consumption, service life, and carbon footprint. Energy consumption is tied to filtration resistance—Filtration Group's MERV 13 air filters have very low initial resistance, meaning they consume less energy. In terms of service life, their long-lasting filters help reduce landfill waste. And by manufacturing their products regionally across the nation, Filtration Group eliminates mileage and reduces their supply chain's carbon footprint.

Filtration Group's MERV 13 filters reduce the supply air's particulate count to provide more fresh oxygen and reduce the buildup of CO₂ and VOCs. The filters also have a low resistance, which increases airflow while enhancing IAQ. "If you didn't have an air filter, then your indoor air quality would have a similar particulate count as the outdoors—it actually would get higher be-

cause you keep concentrating it as you supply more air," Heritage says. "The combination of particulate efficiency and low resistance in our MERV 13 products allows for improved IAQ."

Mike Perinovic, co-owner of **Filtration Concepts, Inc.** in Wisconsin, says his company has been able to improve indoor air quality with Filtration Group's high efficiency products. Over 30 years, his customers have implemented Filtration Group's MERV 13 air filters in food plants, hospitals, office buildings, biomedical facilities, school systems, and more.

Media Matters

In many cases, the Total Cost of Ownership (TCO) conflicts with indoor air quality because higher MERV ratings generally result in a higher resistance and higher costs. But Filtration Group's **Green Pleat**, **GeoPleat®**, and **FP-S** product lines are made from electret-charged synthetic media that allows them to achieve a MERV 13 and above rating at a lower resistance—and a TCO. Also, these three products have high dust-holding capacities, and when coupled with their low initial pressure drops, keeps their energy consumption low for their lives.

"The charged electrets allow you to achieve a much higher level of filtration and indoor air quality while keeping the pressure drop low," Bruce says. Even though the **Green Pleat**, **GeoPleat®**, and **FP-S** are all made from

Filtration Group's GeoPleat is a high efficiency filter in a compact frame.



AT A GLANCE

- ⇒ Filtration Group offers a diverse line of MERV 13 filters.
- ⇒ Optimize energy usage for your project—whether residential, commercial, or industrial.
- ⇒ Improve IAQ by increasing airflow and reducing the buildup of CO₂ and VOCs.

the same electret charged media, it is still important to pick the best air filter for your project's specific filtration needs. Coming in a range of sizes and MERV ratings, these three product lines cover the main types of applications where high efficiency air filters are needed.

• Green Pleat

The MERV 13 **Green Pleat** is Filtration Group's highest medium-efficiency air filter that can be implemented in residential and commercial applications. The company introduced the **Green Pleat** product as a response to customers that desired higher filtration efficiency and cleaner air.

"The **Green Pleat** raised the bar from the traditional pleated filter, which at that time was a MERV 7 or 8," Heritage says. Back then, it was difficult to achieve high efficiency with a traditional pleated air filter, so Filtration Group in-

vestigated different media to use. Eventually, by developing the **Green Pleat**, they achieved a MERV 13 rating in two, four, and one-inch pleated air filters. "In terms of application, the **Green Pleat** is by far the most versatile, since pleats are the most common product type sold in the broad commercial, industrial, and residential market," Bruce says.

The **Green Pleat** has allowed Perinovic and his team to install high efficiency air filters into HVAC systems for areas that require higher efficiency, like office spaces, commercial buildings, and hospitals. "The **Green Pleat** is a great compromise where you can put a MERV 13 filter with fairly low pressure drop in units that don't have room for a 12- or 13-inch deep air filter," Perinovic says.

• GeoPleat®

For commercial and industrial buildings with higher flow rates, you should consider the **GeoPleat®** or the **FP-S** air filter, Bruce says. Both of these products are in the high-efficiency category of air filters. The **GeoPleat®** tends to be used more in commercial and industrial applications than residential—in some cases, it may be used in multi-family residential applications.

"One thing we like about the **GeoPleat®** is

it's a high efficiency filter in a compact frame," Perinovic says. "Because we do filter service, it's very easy for us to move the **GeoPleat®** around from our service trucks up to air handlers on second or third floors."

The **GeoPleat®**'s smaller size increases installer productivity. Being able to put three 4-inch filters in a box instead of one 12-inch filter makes transporting the products much easier. "If you can carry three times as many up to the roof, you get huge productivity savings, and a big shipping savings too because you're shipping more filters in a single box,"

Bruce says. The 4-inch deep **GeoPleat®** also has a significantly lower initial pressure drop and a higher level of filtration than many six or 12-inch deep filters, making it a viable replacement filter with a lower TCO.

• FP-S

The **FP-S** and **GeoPleat®** also has a significantly lower initial pressure drop and a higher level of filtration than many six or 12-inch deep filters, making it a viable replacement filter with a lower TCO.

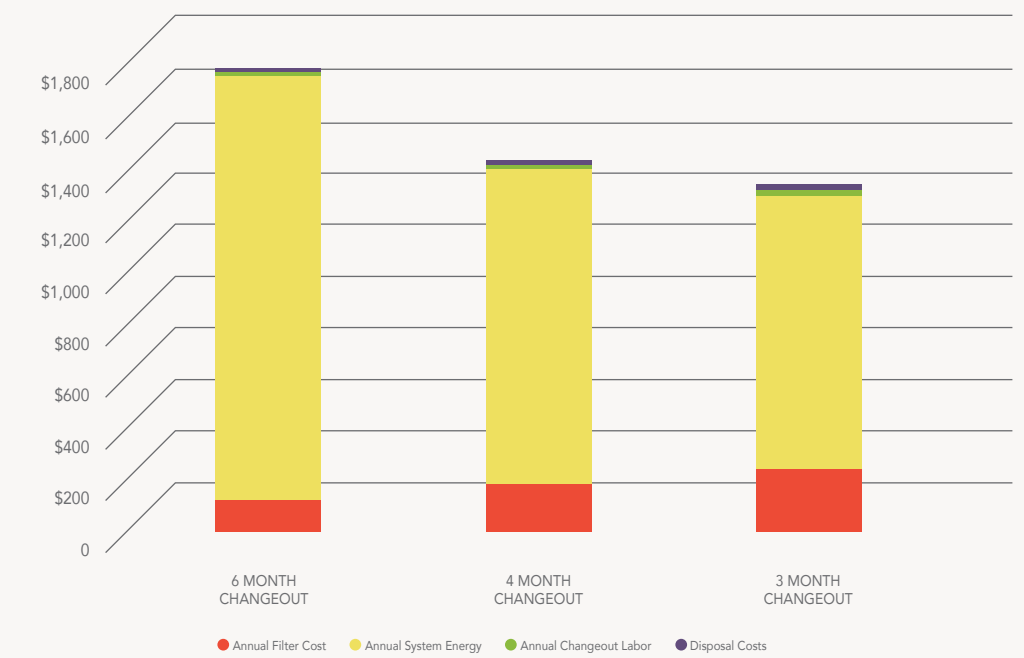
The **FP-S** and **GeoPleat®** can fit in the same kinds of applications, Heritage says. In comparison, the **FP-S** has significantly more media, longer service life, and as a result, a higher cost. "But the **FP-S**'s TCO is actually lower if you can take advantage of the lower resistance, longer service life, reduced disposal cost, and lower labor rates—and most applications can," Heritage says.

Perinovic says the **FP-S** is the number one high-efficiency filter his company sells because it lasts twice as long as many filters on the market and has an extremely low pressure drop. With the low pressure drop, the air handler can function

REPLACEMENT = SAVINGS

Investing in upgrades to the filter replacement cycle and changing filters more regularly is proven to reduce costs.

TOTAL COST OF OWNERSHIP-ANNUAL



with much less energy. "A unit that's at full capacity is starving for air, but once you put the **FP-S** in, all of the sudden you get air you didn't have before," Perinovic says. "Our clients love it. We have very few customers that don't use that filter."

Changing Your Filter

Whether you're using the **Green Pleat**, **GeoPleat®**, or **FP-S**, Filtration Group recommends changing your air filter regularly to keep lowering the pressure drop range. Filtration Group's TCO calculations show that changing out a filter well below the maximum differential pressure can save you 30% on energy consumption—in other words, the energy savings will more than offset the costs of change-out labor and the replacement filter.

Many facilities managers only look at the cost of the filters upfront, and not necessarily the savings you can get from energy efficiency. By deferring maintenance, you end up with higher operating costs due to a buildup of high resistance, driving higher fan speeds and higher energy usage.

"With any of these filters, you should change it more frequently because that gets you the lowest TCO," Bruce says. "The more you wait, the more the pressure drop goes up, which means the more energy you are consuming. Even if the filter can last a certain length of time doesn't mean it should."

Looking Ahead

After several acquisitions over the past decade, Filtration Group has evolved into a global organization. Heritage says they can now incorporate new technologies that were only available in other segments of filtration that may have been too niche in the past, like medical and process filtration. The company is also co-developing products and bringing best practices from other filtration disciplines into the HVAC space.

Filtration Group is still growing and continuing to break down barriers in the filtration industry. "It's very easy to think of air filters as a mass production commodity type of product, but we work very hard to look at things holistically and what our impact is on the world," Heritage says. ☺