



FilterTalk

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Since Earth Day originated in 1970 aggregate emissions of the six "criteria" pollutants regulated under the Clean Air Act have fallen by 64 percent

- The National Center for Public Policy Research

Participants in the U.S. Government's Energy Star program, which promotes technology with high energy efficiency, saved enough energy last year to power 20 million homes and avoided greenhouse gases equivalent to the emissions of 18 million cars

- U.S. Department of Energy

Between 1991 and 2000, Americans used 17 percent more energy than the previous decade, while during the same period, domestic energy production only rose 2.3 percent

- U.S. Department of Energy



SAVING A WORLD OF ENERGY

Earth Day is a celebration of our planet and an annual wake-up call for environmental stewardship. People all around the globe use this day to recognize what we can do to protect it and conserve our resources for future generations.

Earth Day is only once a year, but how can we help out everyday? Basic energy conservation.

It starts when you walk into work. Conservation measures in the office can be as effortless as turning off the lights at the end of the day or even when you leave your office for lunch – it's that simple. Everyone can conveniently take part in saving energy.

But there are other conservation methods in your building that turn energy savings from the hundreds to the thousands of dollars or more each year.

Electricity accounts for two-thirds of all energy consumed in an average office building. Lights, office equipment, computer systems and HVAC systems account for almost 90 percent of this expenditure. HVAC systems and other filtration devices, while only the third largest electricity user, have a greater potential to swing an energy bill up or down. Why? Because these systems are often poorly serviced and their energy saving potential is often under appreciated or not fully understood.

A building's HVAC system is designed to maintain appropriate indoor air quality levels. But it should never waste valuable energy through over consumption.

Older building designs often failed to pay enough attention to these issues, resulting in air intake that does not satisfy many ventilation standards. You can save energy, avoid health problems, and make the building more comfortable by strategic improvements to an HVAC or air filtration system. Renovations to older HVAC systems can increase their efficiency and yield savings by up to 30 percent.

Believe it or not, individual filters play a significant role in the energy consumed by operating systems. Filters that have a lower pressure drop consume less energy because the HVAC system motors need to overcome less resistance to deliver the required airflow. A high-quality air filter with a low pressure drop design can actually lower HVAC operating costs much more than the cost of the filter. Further, high-efficiency filters provide clean air and protect building occupants, equipment, systems and décor.

"There are plenty of maintenance solutions, like monthly filter change-outs and routine coil cleanings, that can be very effective," said Brandon Ost, Filtration Group's director of high purity products. "But in some cases you need to upgrade the entire system to achieve maximum savings. A highly efficient HVAC unit can reduce energy consumption by more than 10 percent over a standard commercial unit."

The less energy we consume today, the more we'll have to celebrate in the future.

FILTRATION GROUP EXECUTIVE HEADS NAFA TECHNICAL SEMINAR

Filtration technology has reached a period of rapid expansion. Manufacturers are flooding the market with new products at the urging of distributors, who are relaying the frontline feedback from the filter's end-user. Making this important inter-industry education possible is NAFA, the National Air Filtration Association.

The trade organization holds its annual Technical Seminar each spring, bringing the top manufacturers and distributors under the same roof for a lively discussion of the next big filter technologies and consumer demands, which should ultimately run parallel.

Eugene Beck, Filtration Group's director of sales and marketing, is organizing and hosting this year's seminar as part of his role as the president of NAFA's Associate Council.

"Even though our organization members have different roles in the filter industry, we all have the end-users' best interests in mind," said Beck. "We're helping to overcome each other's challenges and in the end, helping the customer by creating better products."

Conceptual speakers with broad-stroke assessments about the future of filtration need not apply. NAFA's men and women want to talk nuts-and-bolts about what is really important to the industry right now.

"I would like NAFA to become a more technical organization, heavily attended by engineers and research professionals," Beck explained. "NAFA is taking filtration in a new direction by establishing guidelines for specific market segments. We must continue to come together to confront industry-wide issues for the greater good of our customers."

With the help of NAFA's full-time staff, Beck has been busy securing speakers and defining the curriculum. As host of the three day event, his opening presentation will set the tone for the discussions to follow. Included on the list of presenters is Filtration Group's own product engineer Kent Mertz, who will be leading a seminar entitled, *Role of Air Filtration in Gas Turbine Applications*.



The National Air Filtration Association's 2005 Technical Seminar will be held April 20-22 at the Embassy Suites Outdoor World in Dallas. For more information call (757) 313-7400 or visit the NAFA Web site at www.nafahq.org.



GOT A QUESTION FOR US?

Q: What are the technical differences between HEPA, ULPA, and SULPA rated filters?

A: These are defined in the current IEST RP001, which is the Recommended Practice used as part of industry standards for HEPA and ULPA filters in the United States. HEPAs are defined as filters with a minimum efficiency of 99.97% for 0.3 micron particles. ULPAs have a minimum efficiency of 99.999% for particles in the size range of 0.1-0.2 micron. SULPAs have a minimum efficiency of 99.9999% at the Most Penetrating Particle Size (MPPS). Generally speaking, the HEPA filter has the lowest efficiency and the lowest pressure drop of the three, while a SULPA filter has the highest efficiency and highest pressure drop within this group. But it's different in Europe. European standard EN1822 classifies HEPA and ULPA filters based on their removal efficiencies at MPPS, not at specific particle sizes. IEST, however, has started to reconcile this discrepancy and has already made some changes in related recommended practices (RPs) - attempting to bridge the gaps caused by different test standards and systems. The newly approved version of RP001, complete with revised definitions and requirements for HEPA, ULPA, and SULPA filters, will be available for the public soon.

- The Filtration Group Engineering Team

PRODUCT SPOTLIGHT: AIR FILTRATION'S NEXT BIG THING

As part of the company's joint venture with Florida-based Econofilter, Filtration Group is introducing the GeoPleat - one of the most significant product advancements in air filtration since World War II.



Before the GeoPleat, customers that needed maximum efficiency from their filters had to settle for higher operating costs and frequent replacements because of the filter's high pressure

drop. But the GeoPleat combines high-efficiency with a low pressure drop.

It uses *LPD* Technology to create a perfect v-geometry that delivers optimum air flow throughout the filter media, which keeps dust-loading even across the surface. Wider pleat openings and wider air exits reduce the pressure drop to the lowest possible level. The GeoPleat is truly revolutionary in its ability to minimize air resistance across the filter.

Filter purchases and maintenance are a substantial part of any company's operating costs. It's estimated that if all commercial buildings in the U.S. reduced the air flow restriction that is caused by low-quality air filters by just four percent, they would save 12 billion kilowatt hours of electricity and collectively reduce their energy bills by almost \$1 billion. The GeoPleat is an ideal product for customers who value the long-term energy savings of high-quality filters.

AN EARTHLIY REMINDER OF ENERGY-SAVINGS TIPS

Almost one-third of the electricity in the U.S. is used to run commercial buildings, according to the environmental clearinghouse Ecomall. About 40 percent of that is just for the HVAC system, which underscores the importance of an updated system utilizing high-performance filters. Energy consumption in the office is expected to rise as more technology enters the office, even though many products are becoming more energy-efficient.

We can't simply rely on new products to be the solution. Companies should encourage their employees to be conscientious when it comes to energy usage and building facility managers should be up-to-speed on the newest strategies to keep electricity costs down.

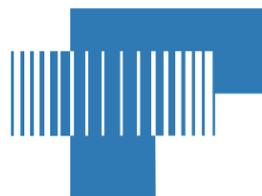
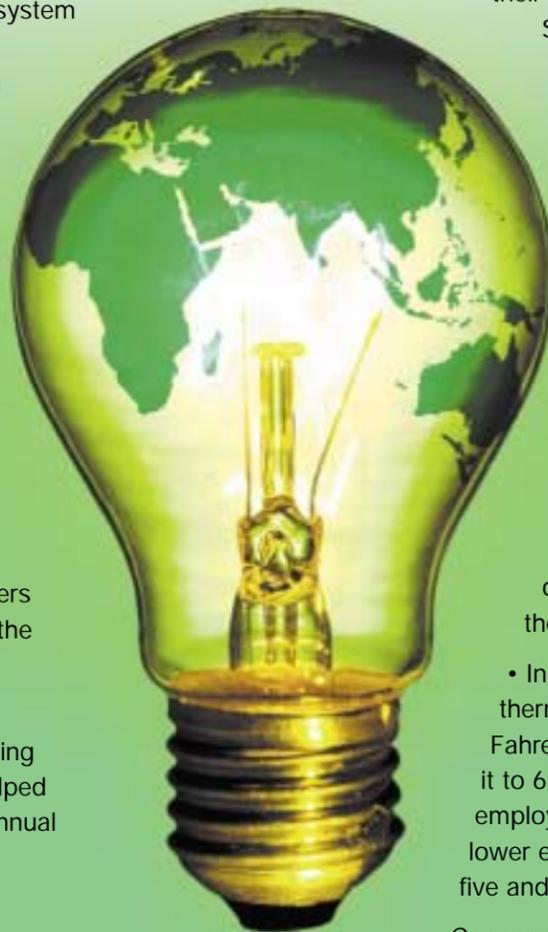
Filtration Group knows a thing or two about this. It has helped individual companies cut annual energy bills by hundreds of thousands of dollars.

Its experts have compiled a broad list of tips that go beyond air filtration, just in time for Earth Day.

- Turn off office equipment on nights and weekends. Leaving them on during off-hours can account for 30 to 40 percent of their usage.
- Look for the EPA's "Energy Star" label on new products. Even a small office can save

hundreds of dollars a year by using more energy-efficient equipment.

- Considering a computer upgrade? Laptops consume 90 percent less energy than their desktop counterparts. Same goes for inkjet versus laser printers.
- Clean condenser coils in the HVAC system on a regular basis. Dust build-up reduces their efficiency.
- Close off vents in unoccupied areas.
- Install motion detectors for lights in rarely occupied areas.
- Consider programmable thermostats that turn off the HVAC system when the building is unoccupied.
- In the summer, set the thermostat to 78 degrees Fahrenheit. In the winter, set it to 68 degrees. This will keep employees comfortable and lower energy costs between five and 20 percent.
- Compact florescent light bulbs last 10 times longer than standard light bulbs.
- Choose quality air filters that have a low pressure drop. The HVAC fans won't have to work as hard to deliver clean air and the filters will last longer. A single low pressure drop filter saves more than \$30 annually and large offices may use thousands of these - you can see how the savings add up quickly.



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