



# FilterTalk

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Air pollution is estimated to cost the province of Ontario more than \$1 billion per year due to hospital admissions, emergency room visits and absenteeism.

- Ontario Medical Association

An estimated 5,900 deaths per year in Quebec City, Montreal, Ottawa, Toronto, Hamilton, Windsor, Calgary and Vancouver can be attributed to air pollution.

- Health Canada

One in five Canadians suffer from some type of lung disease (asthma, emphysema, lung cancer) and many more Canadians are affected by allergies.

- Canada Mortgage and Housing Corporation



## DEPLOYING AIR FILTERS TO THE FRONTLINE OF THE FLU BATTLE

A few times each century the genetic makeup of influenza A virus mutates, leading to a new strain that can't be treated with the annual flu shot. A new flu virus is certainly cause for alarm, as we've seen world health officials mobilize against the H5N1, or avian bird flu, because past outbreaks have set a deadly precedent. The most devastating in recent history is the emergence of the "Spanish Flu" in 1918, which killed more than 70 million people worldwide.



Before the bird flu began making headlines, Canada Health reported in 2003 that if a new strain of flu emerged its models predicted 9,000 to 51,000 deaths if a new vaccine was not available. Today the government has committed millions to fund research for a bird flu vaccine and fortunately, cases of the new flu have not been reported in Canada.

In addition to getting vaccinated and maintaining good hygiene, there is another line of defense.

"Air filters are not commonly considered as a factor in controlling disease, but can provide solid protection against the spread of airborne contaminants," said Adrian Hanley, general manager of Toronto-based Daeco Filtration Group.

These filters are ideal for protecting people in offices, schools and daycare centers. Children are highly susceptible because they're in close contact with classmates, but the air filters can help remove the viruses that are being spread through the air and prevent those same germs from being circulated into other areas. The filters effectively contain and quarantine the virus.

To combat the spread of flu germs HEPA filters are the most effective. They are among the most versatile and effective HVAC filters available, utilized in hospitals, laboratories and other environmentally-sensitive areas, but are just as valuable in the fight against the flu in places the general public visits everyday. These filters are tested and rated to catch particles between 0.01 and 0.2 microns at greater than 99 percent efficiency. Flu viruses typically range in size from 0.01 to 0.1 microns, but are usually carried through the air by attaching to larger particles.

"HEPA filters cost more than standard HVAC filters but high-quality brands have a low pressure drop, leading to a lower operating cost and saving money on the energy bill," said Hanley. "The lifespan of a good HEPA is longer as well, and its high particle capacity means fewer changeouts and service, so you're getting the benefits throughout its lifecycle while you're helping people breathe cleaner air."

The story of the avian bird flu is still being written. It has received much media attention because airline travel carries diseases around the world much faster today. The World Health Organization has only reported 133 cases of bird flu thus far, so this is not the time for the public to be alarmed. Yet, public health officials are very concerned about this new flu's potential impact to birds and people. Even if it doesn't reach Canada there is still the annual flu season to endure and steps to take in order to stay healthy.

## MCHALE TO HEAD UP HIGH PURITY OPERATIONS

In early October Filtration Group hired Jim McHale as plant manager for the company's high purity products (HPP) division in Aurora, Illinois.

McHale has followed a diverse career path to Filtration Group. Most recently, McHale worked for W.L. Gore & Associates in Maryland - makers of GORE-TEX® fabric - serving as Industrial Products Operations Leader. Prior to that, he was the director of operations for Bimba

Manufacturing and spent 10 years in the defense industry with Talley Defense Systems and Honeywell.

"Jim's strong background in manufacturing makes him an ideal candidate to head up our HPP division," said Larry Ost, CEO for Filtration Group. "His proven leadership and keen attention to detail will help the company improve our operations."



McHale is a strong believer in lean manufacturing and Six Sigma practices. He will spend much of his time helping the Aurora plant achieve its high quality-control standards. "I see a great culture and a lot of opportunity at Filtration Group," said McHale.

First things first, McHale wants to cut lead times and inventory. "I hope to make a positive impact by putting more lean manufacturing principles into practice," McHale explained. "With a little reorganization, continuous improvements to the plant will enhance the overall growth of the company."

While many lean manufacturing principles are common sense, it takes strong leadership, such as McHale, to make sure everything is working in sync and at the highest standards.

"Once we fill some minor gaps, we can reduce our lead times to where they are the best in the industry," McHale added.



**Dafco  
Filtration Group  
Edition**

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## GOT A QUESTION FOR US?

**Q:** Is an UL flammability listing on an air filter the same in Canada as in the United States?

**A:** Although the major performance requirements are very similar, they are not the same. The UL classifications per US and Canadian standards may indicate the same or like filter flammability performance but one can not be replaced by the other.

The requirements on produced flame, sparks, and smoke during tests are essentially the same for Class 1 filters and comparable for Class 2 filters in these two standards. However, filters are tested for flammability at either 880 or 612 cfm based on filter size per US UL 900, whereas tested at their rated air flow per Canadian ULC-S111. US UL test does not include a surgical gauze that is laid flat at the end of test duct for indications of produced flame and sparks per Canadian ULC Class 2 test. The number of filters required for Class 1 Spot-flame test and the test setup are different per each standard as well. In terms of UL marks applied to air filter, there will be a "C" next to typical US UL symbol indicating a Canadian UL classification.

- The Filtration Group Engineering Team

## PRODUCT SPOTLIGHT: THE FLEXIBLE OPTION

Plastic filters are finding a bigger market as their durability and dependability are proven in the field.

Filtair's FMV filter is extremely durable and tested to withstand rough handling and harsh conditions. The all plastic frame makes the filter lightweight and impervious to moisture and dust. The frame also has an integrated handle for easy transport and installation.



The absence of metal components in this product dismisses the possibility of corrosion and enables the filter to be completely disposable through incineration.

The engineered media is a composite of a resilient and uniform wet laid scrim laminated to a proprietary gradient density melt blown matrix of synthetic fibers. This results in an extremely durable media pack that resists damage from debris, hostile environments, and abusive delivery and installation. Adding to the list of benefits, the FMV has an exceptionally low resistance to air flow, generating significant dollars in energy savings.

This state-of-the-art unit is well suited for HVAC applications requiring the highest levels of filtration. The non-metal model is recommended for automotive, turbine, industrial, and hospital installations. The construction materials of the FMV also make it ideal for off-shore and coastal applications that come into contact with high concentrations of sea mist, fog, or humidity.

## NEW FILTERS KEEP SURGICAL ROOM OPERATIONAL

The Southlake Regional Healthcare Center, based in Newmarket, Ontario, is a full service hospital that sees its fair share of patients each year. Thanks to a recent expansion and renovation project, the hospital now accommodates 300 patient beds and 16,500 inpatient admissions a year. The staff also handles approximately 60,000 emergency visits annually.

### PROBLEM

Southlake engineer Fred Koltz - a long-time customer of Dafco Filtration Products which merged with Filtration Group Canada earlier this year - approached Dafco Filtration Group to rectify a problem that arose during the renovation. The air filters that protect patients in the operating rooms by providing clean were not compatible with the air supply fans.

The supply fan is a 100 percent fresh air unit with 2-inch high capacity pleated filters in front of a heat recovery wheel. There are also secondary filters behind the wheel. These filters are 4-inch, high-capacity pleats.

But Southlake's pleated filters were set at a bad angle. Their position allowed the air to hit the face and push over the tips of the pleats. This also caused the pleats to collapse and fail prematurely.

The static pressure was increased so drastically that the frame would buckle under the pressure causing air bypass, which then required a maintenance technician to check the fan daily to make sure the filters wouldn't fall down into the system and damage the supply fan.

### SOLUTION

Dafco Filtration Group carefully examined Southlake's problem to find a product of its own that could prevent the hospital's filters from damaging supply fans. While addressing one problem, Dafco kept the facility's entire

filtration needs in mind...hoping to solve other potential problems before they occurred.

When the evaluation was complete, the Titan FP was prepped for the operating room. The versatile mini-pleated filter was chosen because it's designed to handle nearly all types of airflow conditions, such as turbulent airflow, repeated fan shutdowns and intermittent exposure to water. It has a separator design, which includes a V-style configuration, and the state-of-the-art rigid frame stops the pleats from collapsing.



The Titan draws the air into the V and pushes it through the filter pack. Using this model, the air never hits the tips, as is very common with a standard 4-inch pleated filter.

It's constructed with the highest quality components - necessary for a surgical environment.

### RESULT

To prove the power of the Titan, Dafco installed the filters on a trial basis with outstanding results. The Titans reduced the static pressure from .56 to the current readings of .3, and after three months the filters have only increased to .35.

Now, when filtration-related issues arise at the Southlake hospital, they have a new but familiar partner to turn to.



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