

Commercial Buildings

Extensive Studies Show:

- 34% of American workers feel that **poor IAQ had caused them to miss work**
- For every 1,000 workers, **poor IAQ** results in 600 sick days per year
- 56% of commercial maintenance teams actually admit that their **IAQ maintenance is not carried out per IAQ guidelines**
- 88% of facility managers say that **deferred maintenance is an issue**



Indoor Air Quality (IAQ) is of Primary Concern

In commercial office buildings, Indoor Air Quality (IAQ) is a primary concern. IAQ refers to the indoor air breathed in by a building's occupants. The pollution levels in this indoor air can be up to five times higher than outdoor levels, and poor IAQ ranks as one of the top five environmental risks to public health.

The Air Inside These Buildings Can Contain:

- Molds, spores, pollens
- Carbon monoxide, radon, volatile organic compounds (VOCs)
- Bacteria, viruses, and byproducts
- Vehicle engine exhaust, exhaust from industrial plants
- Asbestos, clays, elemental particles, and man-made fibers

Critical Importance of IAQ

In commercial facilities, controlling airborne pollutants is necessary to maintain a comfortable, healthy, and odor-free environment. In many commercial buildings. While the majority of commercial facilities use common particulate filters, these filters cannot resolve all problems related to poor air quality. In addition, gas-phase filtration must be used to control the harmful effects of gaseous contaminants.

Gaseous contaminants originate from a variety of sources, such as automotive exhaust and chemical offgassing of new furnishings. Commercial facilities face a unique challenge in combating gases from various occupant activities, building operating equipment, and maintenance areas, as well as airborne particulate from renovations and construction. The hustle and bustle in gymnasiums, science classes, and cafeterias pose some of the biggest challenges for educational facilities.

Jet fuel emissions pose a threat to protecting patrons and workers in airport terminals, control towers, and transportation areas. Museums and historic storage areas are susceptible to chemicals in the air, especially gases of an acidic nature that can damage precious works of art and historic significance. Clean air is vital to healthcare facility operations, in order to protect patients, staff, and visitors from potential airborne diseases and infections, and to protect occupants from chemical odors resulting from laboratories, morgues, and other areas within the facility.

Sources: The real cost of poor IAQ; The effects of indoor air quality on performance and productivity, D.P. Wyon, 2004; The causes and costs of absenteeism in the workplace, Forbes, 2013; Perceptions in the U.S. building industry of the benefits and costs of improving indoor air quality, M. Hamilton et al, 2015

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Optimize Your Environment

Air filtration systems in commercial facilities must handle relatively large volumes of air. Approximately 50% of a building's energy consumption goes to the heating, cooling, and moving of air. In considering the Total Cost of Ownership (TCO), it is important to keep in mind that in order to have a cost-effective building, planning maintenance is an important step in maintaining energy efficiency, minimizing costly repairs, and extending the lifespan of your equipment.

LEED® Accreditation

AAF Flanders can assist you in the processes required to earn Leadership in Energy and Environmental Design (LEED) credits. The LEED Green Building Rating System,™ administered by the U.S. Green Building Council, is the nationally accepted benchmark for designing and sustaining green buildings.



Proper Air Filtration Strategies Contribute to Four of the Six LEED Credit Categories:

- Energy and Atmosphere (Efficiency)
- Indoor Environmental Quality
- Materials and Resources
- Innovation in Design/Operations

Comprehensive Purchase Perspective

Selecting the proper filtration for your HVAC system can help your commercial facility to reduce spend, decrease risk, and save time. Commercial facilities need the support of a trusted advisor who can perform Air Filtration Audits and Diagnostics to ensure that the most optimal effective solution is selected and installed in their air filtration systems.

Filtration Solutions

Pleated Filters

The AAF Flanders pleated filters line provides the industry's broadest selection of high performance, high capacity filters, including specialty and standard capacity options. Pleated filters can be used as prefilters to protect and extend the life of higher efficiency, more expensive final filters. In many applications, they are the only filter used in an HVAC system.



MEGApleat® M8
(see page 118)

Box Filters

These rigid, extended surface filters are ideal for use in all high efficiency applications. The supported pleat filters provide strength and integrity in high flow, turbulent, and variable airflow conditions. These filters are designed to remove airborne biological contaminants in critical areas.



VariCel® VXL
(see page 132)

Bag Filters

Non-supported pocket filters are the most economical, high-efficiency filters available, and an excellent choice for healthcare facilities, automotive paint booths, commercial buildings, and various industrial applications. Designed for high performance in demanding operating conditions, AAF Flanders extended surface pocket filters are perfect as both prefilters and final filters for particulate removal where clean air is required.

Sensor360® Real-Time Air Filtration Optimization

As maintenance budgets and staffing levels decrease, organizations struggle to plan and perform routine maintenance on their HVAC systems. Our Sensor360 intelligent data tool puts facility personnel in position to streamline the management of their equipment and systems. With real-time air filtration performance information, including pressure drop and airborne particle removal, facility personnel can perform maintenance proactively and minimize reactive tasks. Even better, changing filters at or near the optimal time leads to less strain on HVAC systems and lower energy spending.



Additionally, Sensor360 air filtration technology allows AAF Flanders to offer outsourced air filtration optimization and maintenance services, so that facility personnel may focus on other pressing tasks. For more information, see page 64.