

Commercial Building Indoor Air Quality: Maintenance Is a Must after Construction and Move-in

No matter the age of your commercial building, indoor air quality can be a significant issue that requires consistent, professional attention. Commercial building IAQ can be affected by factors beyond your tenants' control and can lead to problems such as triggering of asthma, allergies or respiratory conditions; stuffy, unpleasant indoor environments; bad odors; and health-threatening growth of mold and microorganisms. Whether your building is new or old, you and your facilities managers owe it to your tenants to pay attention to your commercial building IAQ.

Sources of Reduced Commercial Building IAQ

In a newly constructed commercial building, indoor air quality could be affected by fumes and odors from construction materials, paints, solvents, carpets, flooring or other items. A new building could be so energy efficient with such a tight seal that ventilation bringing in fresh air and removing stale air could be reduced.

Older buildings, especially ones that have been renovated or upgraded for energy efficiency, could have similar problems with ventilation. In an older structure, there's a much greater possibility that dust, dirt, mold, pollen and other particulates and irritants have accumulated. Older buildings by their nature, age and usage may have unpleasant odors, and if there have been moisture issues, an older structure could have problems with mold, mildew and mold spores.

Tenants could also be contributing to reduced commercial building indoor air quality, possibly without even realizing they're doing it. Manufacturing or industrial processes could be giving off odors and fumes or creating particulates. Tenants could be bringing in or throwing away items that cause IAQ reductions. The simple act of occupying a building can dislodge particulates, create dust and stir up odor-causing material.

Resolving Problems with Commercial Building IAQ

Whatever the cause or extent of the indoor air quality problems in your commercial building, steps can be taken to relieve the troubles and boost the freshness and cleanliness of the structure's indoor air.

- **Maintain HVAC system air filters:** The purpose of HVAC filters is to remove particulates and material that could reduce commercial building IAQ, so keeping them clean and fresh is vital to IAQ. Filter efficiency is often rated on the [MERV \(minimum efficiency reporting value\)](#) scale, which indicates how well the filter can remove particulates from the air. Standard MERV values range from 1 to 16, with higher-MERV filters being more efficient. Filters should be checked at least once a month or more often if your building's indoor air quality tends to be low. Clean or replace filters, as appropriate, when they get dirty.

- Perform preventive maintenance on your HVAC systems: Preventive maintenance not only keeps your heating and cooling equipment running better and longer, it also improves indoor air quality. Make sure your maintenance technician gives particular attention to HVAC system coils and drain pans to ensure they are clean and working properly. Dirty coils cause your HVAC equipment to work poorly, while clogged drain pans could lead to leaks that cause the growth of mold and mildew.
- Check the design and installation of ductwork, air intakes and exhaust systems to make sure they are working properly. There should be plenty of conditioned air exiting from vents and exhausted air being returned to the HVAC unit for recycling. Revise or renovate ductwork systems if needed. Proper airflow allows your system to maintain efficiency; restricted airflow can cause damage to equipment or cause your HVAC system to break down.
- Install and use air-cleaning equipment, such as air purifiers, [ultraviolet \(UV\) light systems](#) or independent air cleaners. These devices provide additional air filtration and cleaning beyond that provided by your HVAC equipment.
- Increase fresh-air flow in new buildings or renovated buildings that have received new paint, carpets, furniture or other potentially odor-causing materials.

Our goal is to help educate our customers about Plumbing, HVACR, Fire Protection and Alarm Systems in Mechanical, Commercial and Residential settings. For more information on commercial building IAQ and why it's important, or to view projects we've worked on, [visit our website!](#)

Reference:

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