

Good Ventilation

Jack McNertney

Ventilation plays an important role in the overall health of a restaurant's environment

In a restaurant, there is surprisingly little understanding of the importance ventilation plays in indoor comfort.

The majority of restaurants produce odors due to baking, grilling, steaming, frying, poaching, microwaving, broiling and other types of cooking equipment. Odors also come from carpets, water trapped under walls and floors, restrooms, trash cans and outside environments.

Ventilation, by definition, is a means to provide fresh air. Some rudimentary means include:

- Propping open the front door
- Propping open the rear door
- Opening a drive-through window
- Opening windows

A better means is to truly understand HVAC. Exhaust fans act as a type of ventilator by removing cooking fumes, products of combustion and other odors. Adversely, they also pull stale or stagnant odors from the dining room, pass-through kitchen doors, galley windows, open kitchen designs, front and rear doors, drive-through windows, and every crack and cranny throughout the building envelope.

A helpful motto for exhaust fans is "If you exhaust it, you must replace it." This is where HVAC helps ventilate. Did you know the fan only moves air when it is in "auto" mode? Thermostat fan switches should be in the "on" position during open hours to continually bring in outside air to ventilate the space. If you don't continually bring in outside air, the exhaust fan will do its job and continue removing up to 200 cfm/foot, unless you've installed variable-speed hoods. This results in negative building pressure and pulls conditioned air out of the space, driving up utility costs.

Fresh Air Circulation

There are many types of thermostats on the market. Programmable thermostats can be locked so that the fan remains in the "on" position during open hours and reverts to "auto" in the night setback mode. If you have an energy management system, this function becomes even more automated.

With the fan switch on, you are introducing a preset percent of outside air via open HVAC dampers/economizers. Typically, strive for 15 to 20 percent outside air; however, every restaurant is different. Once the air is balanced by a professional air balance company, leave the settings in those positions.

This outside air mixes with inside air and is pulled back through the return air vents and redistributes it back into the space. This is how the term “ventilating” was established. When the interior space calls for cooling or heating, the HVAC kicks in and does its job of providing cooled or heated air. In addition, if it is the spring or fall and you need cooling, oftentimes this outside air becomes “free air conditioning,” saving in utility costs.

Ventilation plays an important role in the overall health of the building environment, helps reduce odors, moves air and enables the space to become more comfortable. Moving air always feels cooler.

Rooftop Checks

Climb on the roofs during every restaurant visit to see how your HVACs, exhaust fans and makeup-air units are functioning. Check for tight belts, clean coils, open dampers, clean blower wheels and filters, and open gas valves and restroom exhaust fans. If you contract with vendors for preventive maintenance, ask for snapshots to ensure you are getting your money's worth and they are doing a great job.

I've been on hundreds of roofs in my career, and I find an issue on 30 to 40 percent of them. If you inspect what you expect, your building envelope improvements will follow. Your operations team will appreciate your engagement as you strive to provide world-class facilities support.

Jack McNertney, CRFP, spent 17 years in operations within the QSR industry before moving to facilities. He has spent the last 25 years in facilities with Long John Silver's/A&W and Yum Brands and eight years in casual dining with Darden and most recently Red Lobster. He is the former Chairman of RFMA and spent five years on the group's Board of Directors. He co-chaired RFMA Gives for three years, and he currently serves on the RFMA Advisory Council.