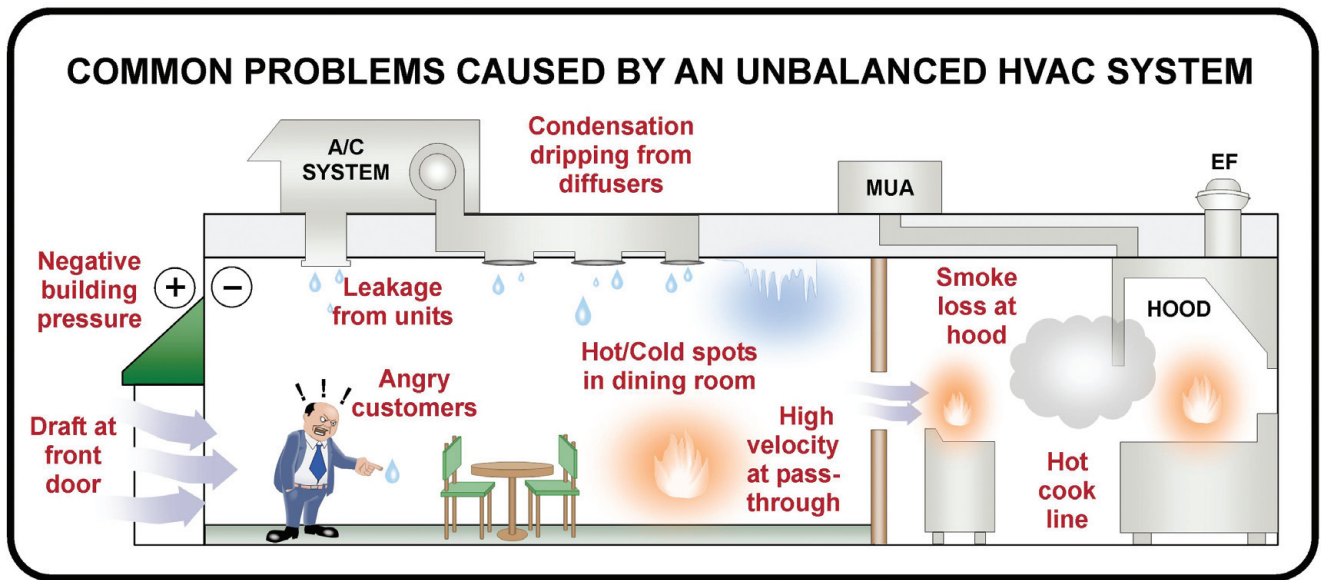




Keep Your Balance

The importance of air balancing older restaurants.

By Steve Melink
President,
Melink Corp.



While some of these problems may seem subtle, they can be more damaging to the customer experience than peeling wallpaper or dirty windows. Comfort ranks only behind food quality and customer service in many people's minds.

As a facility manager, you have a wide range of responsibilities to handle every day. Most of them are very straightforward, such as hiring a plumber to repair a water leak or ordering a new fryer to replace the broken one at a particular restaurant. Getting potholes filled in the parking lot and stained ceiling tiles replaced in the dining room are other examples. You can see the problems and it is clear what needs to be done.

But some of the issues that plague your restaurants may be off your radar screen simply because you cannot see them. One prominent example is a negative building pressure. Since air is invisible it often takes heightened senses to notice there is a cold draft at the front door, or that customers are wearing their coats while eating. It takes a keen facility manager to notice hot/cold spots, clumps in the salt shakers, restroom odors and hard-to-open doors.

While some of these symptoms may seem subtle, they can be more damaging to the customer experience than peeling wallpaper or dirty windows. In fact, comfort ranks only behind food quality and customer service in many people's minds. Why would customers give repeat business to a restaurant if they think they are going to suffer from comfort-related indignities? It is too easy to go across the street to a competing establishment that is properly air balanced.

Fortunately, there are some simple things you can check to see if your restaurants are properly air balanced. First, crack open the front door to see if outside air rushes into the store. If it does, you have a negative building pressure. Ideally, you want a positive building pressure to ensure hot or cold outside air cannot wreak havoc on store comfort. In addition, a positive pressure ensures optimal hood and hot water heater performance, and keeps

insects and dirt out of the store.

Second, verify the thermostats are set to fan ON during occupied hours. This is because your stores need a constant input of outside air to replace the constant output of exhaust air. Third, verify the rooftop unit fresh air dampers are open and all filters are clean. The purpose is to make sure the pathway for outside air is clear and unobstructed. Oftentimes, store managers and service technicians tamper with this hardware and unintentionally do more harm than good.

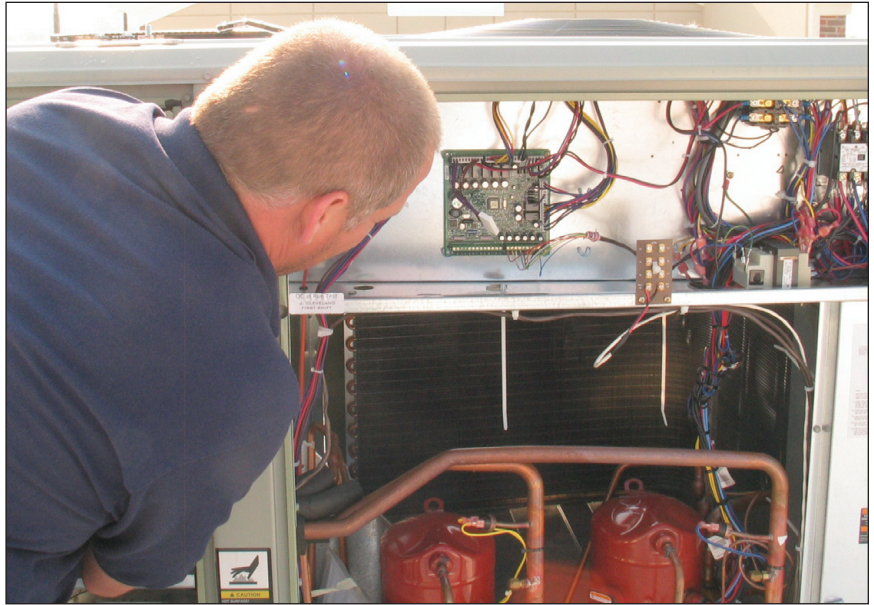
Of course, if the problem is more complicated than that, you can hire a professional air balancing firm. They will measure the total supply, return, outside and exhaust airflows and tell you which fans are moving too much or too little. Better yet, they will adjust the fan speeds and dampers as necessary to achieve optimal HVAC system performance. And if there is anything wrong with the equipment, they will



Testing and balancing in action.

make recommendations so that you know exactly what needs to be fixed. For example, there may be a missing damper, burned out motor, broken thermostat, or low Freon in a rooftop unit.

All restaurants are prone, eventually, to falling into a negative building pressure. This is because grease filters in the kitchen hoods tend to get damaged over time, which causes higher than design exhaust airflows; and outside air filters and evaporator coils in the rooftop units tend to get plugged over time, which causes lower than design outside airflows. Also, the equipment belts typically need to be replaced every 6 to 12 months, and inevitably the wrong belt will get installed at some point in time — and maybe even



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the wrong pulley. And let's not forget that many HVAC contractors will tend to close outside air dampers when they get complaints that a store is warm. Good intentions but disastrous results!


Though comfort complaints are what typically cause a facility manager to order a rebalance, another reason to consider such a service is high utility bills. Did you know that a fan running 10% faster than necessary is consuming almost 30% more energy than needed? Imagine the energy waste of several fans running faster than necessary at any given store. The savings would more than pay for the rebalance and you would get happier employees and customers to boot.

Therefore, rebalancing your existing stores can be one of your best decisions. Whether the work is scheduled on an as-needed basis or on a more proactive basis such as every 5 years, you will be ensuring that comfort is not sacrificed in the name of short term profits. Customer loyalty and long term viability are obviously more important.

Another prime opportunity for rebalancing existing stores is when you replace old rooftop units. For the same reason that air balancing made sense when the store was originally constructed, it also makes sense when the

old equipment is replaced with new. With a low-bid mechanical contractor doing the work, there is the same high probability that installation mistakes will be made. It is better to correct things like fan rotation and outside air damper settings sooner rather than later.

And while we're at it, let's not forget remodels. If the cooking equipment is being moved, new kitchen hoods are being added, or the dining room is being expanded, the store will not automatically rebalance itself. The smart facility managers will plan and budget for this scope of work and not just hope that the hoods will capture well and the building will maintain a positive pressure.

In conclusion, if facility management is your professional calling, consider problem areas beyond the obvious repair and maintenance issues. Learning to appreciate the subtle but very important benefits of store comfort and energy efficiency can mean the difference between just a building and a successful restaurant! 

Steve Melink, PE is president of Cincinnati-based Melink Corporation.