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Change La

Demystifying HVACs

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The three most important HVAC technologies today's restaurateurs need to know

In today's business climate, rising energy costs have significantly challenged the U.S. restaurant industry, which uses five times more other commercial buildings. But, where there's a challenge, there's also an opportunity—and today's facility manager has new resourc reduce his or her restaurant's energy consumption.

Since a restaurant's heating and cooling system takes up nearly 30 percent of its energy bill, according to the U.S. Environmental Pro who find realistic ways to implement efficient HVAC solutions see a positive impact on their bottom line. And, with an emergence restaurant facility managers have more options than ever before to implement systems that can provide measurable results.

Let's look at three commercial HVAC innovations that restaurant owners and franchisors need to know about right now—thanks to t savings while improving comfort: heat recovery technology, variable-speed drive technology and dehumidification solutions.

Heat Recovery Technology

A typical air conditioning unit removes hot air from a building and uses cold refrigerant to absorb the heat from the air. The coolec ductwork, but the wasted hot air gets rejected into the atmosphere.

Heat recovery technology uses the wasted heat in a productive way. The most relevant heat recovery application in the restaurant indus water. The EPA reports that nearly 20 percent of a restaurant's energy bill goes toward heating water, so using heat recovery techn water can provide tremendous savings.

Franchisors Gary Stovall and Wyatt Kaundart know first-hand that heat recovery technology can pay off. Their 9,500-square-foot Wes Avenue in Fort Smith, Ark., is more than 30 years old, and it uses approximately 2,100 gallons of hot water on an average day.

In May 2011, the franchisors implemented a new 10-ton air conditioning rooftop unit embedded with heat recovery technology. The heat to preheat Western Sizzlin's cold water supply from as low as 55 degrees to as much as 125 degrees Fahrenheit—thereby substantia costs. In fact, in the first year after using this system, Western Sizzlin saved nearly $5,670 on its water heating expenses.

One misconception that restaurant owners have about incorporating heat recovery technology into existing commercial spaces is that t However, nothing could be further from the truth. From an installation perspective, the HVAC system is sized according to standard lo the water heater is specified like any standard tank or tankless selection procedure. The only deviation is the required potable water pip system.

Variable-Speed Technology

All commercial establishments require fresh air and ventilation when buildings are occupied—but this is especially crucial for restaurant food. Until recently, restaurants had to run their air conditioning systems at full blast during operating hours in order to achieve this const outside temperature permitted running the A/C system in fan-only mode, then this could suffice. Today, an innovation called vari restaurants the ability to run the A/C system at a lower-speed, first-stage operation.

Variable-speed technology reduces airflow by 50 percent during first-stage cooling and for fan-only operation. It gives restaurant owners to create a cool, well-ventilated environment. This function saves energy and translates to lower utility bills.

Title 24 of California's Energy Efficiency Standards for Residential and Nonresidential Buildings, as well as the HVAC industry standard pave the way for national acceptance of variable-speed technology. While Title 24 is state-specific and ASHRAE 90.1-2010 is not e commercial HVAC manufacturers have been focusing research and development on new products that meet these efficiency requirer across the United States easily adopt energy-efficient innovations like variable-speed technology.

Dehumidification Solutions

Humidity can wreak havoc on a restaurant. In a kitchen, too much humidity can spawn an increase in bacteria, mold and other bio humidity can also add to pest control problems. Restaurants with a damp or musty feeling in the air can also be a turnoff for patrons.

Today's commercial HVAC systems can employ technology that keeps humidity levels constant—even when there's little or no demand temperature is desirable but humidity levels are high, the rooftop unit initiates a dehumidification cycle that delivers dry, neutral air. Th can also operate when the rooftop unit is performing its first-stage cooling.

Dehumidification technology gives facility managers independent control of temperature and humidity. Depending on the exact techn manufacturer, these solutions can deliver about 65 percent moisture removal in the dehumidification mode and approximately 50 percer first stage of cooling.

The Impact of HVAC Efficiencies

It's worth noting that today's commercial HVAC equipment operates 30 percent more efficiently than comparable models did 15 years ag the field. So, restaurants that install new, standard rooftop units will benefit from increased efficiency. However, innovative features recovery technology, variable-speed technology and dehumidification solutions—can bolster the effectiveness of the most efficient uni more than 970,000 restaurant locations in the United States, according to the National Restaurant Association, if even a fracti

implementing these greener HVAC technologies, the cumulative impact of decreased energy consumption, lower utility bills, less hu footprint would be an incredible boon for the entire industry.