

Arby's Stops Car Fumes & Boosts Worker Comfort with Drive-Thru Air Curtain

Struthers, Ohio—Anyone questioning whether air curtains can prevent vehicle emissions and cold winter air infiltration at restaurant drive-thru window stations needs only to talk to Arby's store #5775 employee, Jessica Varga.

If the 21-year-old Struthers, Ohio-based store's new drive-thru window air curtain isn't switched on in the morning, carbon monoxide (CO) and other airborne vehicle emission contaminants can be noticed in many areas of the restaurant. The U.S. Labor Department's Occupational Safety & Health Administration (OSHA) has listed all quick serve restaurant (QSR) drive-thru windows as a potential indoor air quality (IAQ) health hazard. IAQ and indoor temperature conditions are legitimate issues in light of rising drive-thru window transactions nationwide that now command a 50 to 80 percent of total QSR business, according to the National Restaurant Association (NRA). Providing a comfortable work environment can help reduce the restaurant industry's high turnover rate, which the NRA listed at 145-percent for hourly employees in 2006.

Cold weather was once difficult for the 30-year-old Varga, who used to wear a cumbersome heavy coat and gloves while working the drive-thru window. Now, winter days find her wearing a comfortable, year-round Arby's uniform because the newly-installed air curtain separates indoor/outdoor environments. On sub-freezing days, the air curtain's optional built-in electric heater is activated to supplement interior store heating.

"Before the air curtain, Jessica was dressed for North Pole just to stay warm, and the in-store counter cashiers were also chilled on cold days," quipped Vicki Vitullo, store #5775 general manger, who welcomed air curtain manufacturer, Berner International's offer of beta site testing its newly introduced Drive-Thru Unit (DTU) last year. "Eliminating vehicle emissions from coming into the restaurant has to be good for the employees as well as business," she added.

With drive-thru transactions representing 65-percent of the location's total business and hundreds of customers daily, the beta test site gave the DTU a true test of performance as well as endurance. The 18-inch long DTU is the industry's smallest and has a 6 (h) x 7-1/2 (d)-inch profile, which is 75 percent smaller than all other air curtain models that leave little headroom in the drive-thru station. Nearly a year later, the beta test air curtain is now a permanent drive-thru window fixture at the leading sales location for franchisee, Niles Restaurant Business, Youngstown. Niles is currently considering DTU's for its other eight Arby's locations.

Similar in technology to larger back-end service door air curtains commonly used at restaurants and other foodservice operations, the DTU also eliminates flying insect infiltrations. "Flies could easily buzz through the open drive-thru window before, but now the air curtain has solved the fly problem too and helps us maintain our high kitchen sanitation standards," said Vitullo.

Besides insects and employee comfort, drive-thru air curtains also conserve energy. Vitullo compared several same month utility bills in 2008 and 2009 and discovered heating costs were less after the air curtain was installed.

Energy savings is the result of separating indoor from outdoor environments. Berner International, which originally introduced air curtains to the U.S. market in 1956, strategically engineered the DTU for the air velocity, volume and uniformity specifications that are critical to any air curtain performance. This results in a proper air discharge from top to bottom of the drive-thru window opening and a maintained "split" of indoor/outdoor environments a few inches outside the threshold.

While the air discharge is strong enough to stop the infiltration of outdoor air as well as vehicle emission fumes and insects, it's also strategically designed to not blow paper money out of hands penetrating the airstream.

Air curtains have been used for decades in worldwide industrial applications to separate dissimilar environments at doorways. More recently however, retailers such as Whole Foods, Urban Outfitters and Kum & Go have embraced air curtain technology at their front doors to conserve energy, supplement their green missions, and maintain employee comfort at point-of-purchase stations.

The DTU installation took merely 15 minutes and caused little disruption to store operations during the retrofit, according to Vitullo. The DTU's universal bracket, which adapts to all building materials, was screwed into the sheet metal header of the drive-through window's metal framework. Powering it required only plugging it into a nearby 120-V/20-amp electrical outlet.

Now when temperatures dip in Ohio, it's not Varga's hands and arms that are freezing, it's only the Arby's frosty Jamocha Swirl Shake as it passes from a cozy environment, through the air curtain's airstream, and into the great outdoors.

