



Kitchen Ventilation Objective

The objective for The Velveteen Plum was to provide efficient and effective kitchen ventilation equipment that not only accommodated multiple dining spaces, fluctuating traffic volume, and varying cooking types and loads but also created a comfortable environment for staff and guests. The location required a flexible and complete integrated ventilation system that would adjust to the operation's specific needs while offering energy and cost savings.

Solution

During the kitchen design phase, The Velveteen Plum's architect reached out to Accurex for guidance and assistance in product selection to ensure that all kitchen ventilation needs were met based on the environment and restaurant requirements. "When designing the system, we trusted the Accurex team to recommend the right equipment lineup without adding any unnecessary extras," explained Phil Kraft. Energy efficient. UL 710 listed Accurex® wall canopy hoods, model XXEW, were selected to properly handle the kitchen's cooking applications and daypart needs which covered lunch, dinner, and weekend brunch dining occasions. High-performance Grease-X-Tractor™ (GX) filters were incorporated in each hood for high grease extraction, helping remove grease particles from the airstream, saving costs and maintenance.

Balancing airflow and replacement or make-up air are critical components of any commercial kitchen ventilation system. Several Accurex products were selected, and together, each brought additional efficiencies and comfort to The Velveteen Plum environment. Two Accurex exhaust fan, model XCUE, featuring Greenheck® Vari-Green® Motors with built-in speed control capabilities were chosen for their reduced noise levels, leak-proof design, and ability to proficiently pull the exhausted air out through the hoods and duct system. Model XDG with packaged DX make-up air unit was configured into the design to balance air pressure and regulate the return of fresh air back into the kitchen space, featuring a proprietary barometric pressure damper system for up to 50% turndown in airflow and increased

energy efficiency. Additionally, external air curtain supply plenums (ASPs), positioned around the perimeter of the exhaust hoods, offered a cost-effective way for bringing the make-up air back inside. ASP's perforated panels evenly distributed air at lower discharge velocities that benefited hood capture and containment.

Accurex variable volume controls were chosen as the single, integrated solution for connecting all of the kitchen ventilation equipment. The intuitive, full-color touchscreen was simple for staff to understand and operate. This demand control kitchen ventilation system had the benefit of automatically matching exhaust airflow rate based on cooking load – increasing during peak times and then reducing fan speeds by up to 50% when maximum exhaust flow wasn't needed. "Efficiency was extremely important when it came to our ventilation system. When we went through busy periods or lulls, we needed to make sure the system adjusted accordingly so that our costs were maintained and we didn't have to continue to go back and constantly adjust things," said Jesse Bartnik, Director of Operations, The Velveteen Plum.

For economical and effective fire protection, pre-piped Ansul® R-102 fire suppression systems and prefabricated Jeremias® double wall grease duct were installed. When activated, the automatic fire suppression system is designed to seamlessly discharge a wet chemical onto cooking appliances to assist in mitigating fire hazards in the kitchen and throughout the duct system. The UL 1978 listed, round grease duct design simplified installation, reducing installation time and costs.

What We Achieved

Accurex brought a complete, integrated kitchen ventilation system solution to The Velveteen Plum along with increased efficiencies, cost savings, and a more comfortable environment. Staff were able to control the entire kitchen ventilation system with ease – from fans, make-up air, and all components of the variable volume controls. "The kitchen ventilation system is extremely important, and over time it needs to be something that shouldn't be top of mind. We needed to ensure that our staff was comfortable and that the back-of-house environment allowed us to continue operations to the best of our ability," concluded Jess Bartnik.



