



Kitchen Ventilation Objective

The Van Acre project aimed to provide a total kitchen ventilation system solution featuring efficient, durable, and versatile products designed to endure the rigors of diverse cooking applications and day-long food preparation. Throughout, the primary focus remained on ensuring the safety and comfort of both staff and guests. Careful product selection facilitated the seamless integration and connectivity of each piece of ventilation equipment while complementing the design aesthetics of Van Acre's cutting-edge exposed kitchen concept.

Solution

Multiple UL 710 listed Accurex wall canopy kitchen exhaust hoods, model XXEW, were selected for the project, given their energy-efficiency capabilities and exceptional performance in grease removal over large capture areas. Within the exposed kitchen space, exhaust hoods configured with high-efficiency stainless steel centrifugal filters were placed over two wood-burning natural charcoal char-broilers and a wood fueled pizza oven for extra-heavy cooking requirements. "Accurex was mindful of the design aesthetics we were trying to achieve and created a custom hood shroud that seamlessly integrated the wood burning grills and pizza oven for one cohesive look," explained Chris Ghidorzi. The additional hoods were then installed back-of-house for medium cooking applications, including fryers, grills, and ovens.

Two separate Accurex exhaust fans were chosen to help keep the kitchen comfortable and balanced. The direct-drive upblast model XRUD offered durability, efficiency, reduced noise and vibration, and with the selected Greenheck® Vari-Green® motor, simplified system balancing and installation. The XUEF belt drive utility set fan, equipped with a VFD-ready motor, enhanced grease removal capabilities while providing benefits for supply, exhaust, and return air. For added fire protection, security,

and lower installation costs, prefabricated single wall and double wall grease duct were implemented within the kitchen ventilation system.

The integration of the variable volume Accurex controls provided automatic, quick-response controls with temperature sensors mounted within the canopy of the exhaust hoods. This demand-controlled system efficiently modulates airflow by sensing heat output from cooking operations, achieving exceptional turndown of up to 50% when maximum exhaust flow is unnecessary and responding five times faster than duct-mounted temperature sensors.

To further enhance energy savings and optimize comfort levels, a highly configurable Accurex direct gas heated makeup air unit, model XDGX, with direct expansion (DX) cooling capabilities was implemented. The patented barometric bypass damper within provided advantages by ensuring proper airflow velocity over the burner plate during variable volume applications, allowing for 50% airflow reduction during periods of low operational loads.

The successful collaboration between Ghidorzi Companies, Streich Equipment, and Accurex culminated in the seamless execution and opening of Van Acre.

What We Achieved

By effectively integrating the Accurex complete kitchen ventilation solution, Van Acre was able to accommodate and manage varying cooking applications with fluctuating cooking levels throughout the day. This integration resulted in increased energy efficiency and cost savings. The attention to detail delivered added flexibility, efficiency, and enhanced safety for staff, all while maintaining the aesthetic appeal of the kitchen and ensuring a positive guest experience. "Our most significant hurdle involved operating within a four-story hotel and addressing the necessity of venting wood smoke to the highest roof level to ensure a smoke-free dining and hotel experience. Accurex provided a solution to overcome our greatest ventilation complexities," Ghidorzi added.



