



Air Curtain Helps Casino's Nightclub Add 5,000 s.f. of Space for Less Than \$5,000

Lava Dance Club at Turning Stone Resort & Casino adds aesthetic waterfalls & reflecting ponds of outdoor courtyard nine months/year.

Berner International Corp.

Lava Dance Club

Verona, N.Y.—The new Lava Dance Club virtually added 5,000 square feet of space for less than \$5,000 by installing air curtains and creating a year-round, unobstructed passage-way into an aesthetic outdoor courtyard at the Turning Stone Resort & Casino.

Previously, the picturesque courtyard that borders the 22,000-square-foot, two-story nightclub was uninvitingly obstructed by a 10 (h) x 20 (w)-foot automatic overhead door that was closed 90 percent of the year due to wind, cold or hot temperatures, energy losses, and flying insects such as moths and mosquitoes. Now air curtains disperse a uniform curtain of air that's easily walked through by patrons, but resistant to outdoor environmental forces.

Installing air curtains were the brainchild of the Verona, N.Y.-based Turning Stone's architectural department, which also oversaw the design and construction of five golf courses, casino, conference center, 5,000-seat auditorium, sports complex, four hotels, and other amenities of the 1,200-acre facility which participates in the Audubon Cooperative Sanctuary Program and is an enterprise of the Oneida Indian Nation.

Now the ability to walk unobstructed between the club and courtyard more than nine months out of the year is the Lava Dance Club patrons' second favorite feature next to the huge 2,000-square-foot wood dance floor and incomparable sound system, according to Jerry Marrello, operations manager. The walled courtyard's two ponds, a waterfall, six fabric cabanas and a meandering stone path through garden-like grounds offer a woodsy, stary contrast to the plush hot red interiors and furniture, faux lava flow floor coverings, mood-lit sconces, and dance floor light show. "The courtyard is visually beautiful especially with the lit waterfall and it's just like having another 5,000-square-foot room added to the club," said Marrello. "The doorway is unnoticeable when open and I get comments all the time that people walk toward what they think is another room and suddenly they're outside."

The two custom air curtains, manufactured by Berner International, New Castle, Pa., work in tandem as one unit simply controlled by a single control panel and a door-activated switch requested by manufacturer's representative, Liberty Electric Sales, Inc., East Syracuse, N.Y. The customization also includes a variable frequency drive (VFD) that allows a multitude of fan speeds from the six ½-hp. motors. "It gives us flexibility to tune the air velocity so it's effective, but also not disturbing to the patrons," said Mike Vaccaro, director of facilities.

The air curtains also employ two 12 x 144-inch hot water coils supplied by the building's natural gas-fired, domestic hot water and hot water heating boiler manufactured by Cleaver-Brooks, Milwaukee, Wis. The air curtains provide thermostatically-controlled supplementary heat regardless of whether the door is open or closed.

Air curtain technology draws interior air from the facility and discharges it through field-adjustable (+/-20 degree) linear nozzles to produce a non-turbulent air stream that meets the floor approximately at the threshold of the door opening. Temperature differences and prevailing wind conditions that cause the majority of air exchange are neutralized, therefore resulting in minimal energy loss across the opening. An air curtain can contain approximately 70 to 80 percent of that air and return it to the space. Lava Dance Club's air curtains offer a green benefit of saving approximately \$8,000 annually in heating/cooling costs. Because the air curtain discharges at velocities generally in the range from 3,000 to 6,500 ft/min., the strong airstream shield prevents outside air and even flying insect infiltration. The air curtains also prevent outdoor cigarette smoke from infiltrating the no-smoking club's interiors.

According to Vaccaro, who has witnessed air curtains for years in their more conventional usage of industrial shipping bays as flying insect deterrents, today's trend toward advanced controls resulting in better energy conservation makes air curtains candidates for new applications such as restaurant doorways, retail stores and other commercial applications. "Because they are excellent at saving energy, I wouldn't be surprised to see them going into the residential market some day," said Vaccaro.

At a price of less than \$5,000 for the air curtains, the Lava Nightclub essentially added 5,000-square-feet of space by opening its courtyard to patrons nearly year-round for less than \$1 per square foot.



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