

# AIRISTAR: CLEARING THE AIR ON CASINO AIR QUALITY ISSUES

By Taaren Haak

As you look around a casino floor, there are many elements in place that draw your attention. Lights, sounds, people and much more. But one of the biggest and most important elements is something that you would never think to notice, let alone see. The air in a property, and its degree of cleanliness, can significantly impact the health, happiness and well-being of the casino's patrons and employees alike.

And while one common casino attribute customarily gets most of the blame for bad air, smoking is not the only culprit. There is a host of contaminants present in any indoor environment, especially one as varied and dynamic as a casino.

"I would say that the most unique problem for casinos is the fact that you have people working in close proximity to one another and to a variety of particulates every day," said Sean Burke, vice president of Airstar Technologies. "Your guests and workforce are not only facing traditional indoor air quality concerns; they are also being exposed to smoke, as well as people sneezing and coughing."

As many would expect in this environment, there is smoke and its resulting nicotine and tobacco particulates, but there are also those airborne particles from sneezes and coughs, strong perfumes, dust, carpet fibers, even money dust and microfibers produced by people's clothes rubbing together as they move throughout the casino.

"There's actually a lot of contaminants in the air that we breathe every day, but it is critical to go after the ones that can do more

harm," Burke explained. "For example, carpet fibers produce a lung-damaging dust that, if not captured, can actually do more harm in some cases than smoking does."

And lucky for everyone that plans on entering a casino anytime soon, there is a way to capture those harmful impurities. In fact, with Airstar Technologies, there are four ways. The company offers four different air purification units for a variety of commercial

environments, including two that are certified Class II medical devices and two that were designed specifically for use in gaming.

Airstar began, and is still based, in Waukegan, Ill., a city just north of Chicago on the shore of Lake Michigan. It was founded in 2003 by Paul Burke, father to both Sean Burke and Allison Burke, the company's director of marketing. Airstar's parent company, Telefonix, is a design and manufacturing company that specializes in cable management, electronics and other contract manufacturing regulated industries like medical and aerospace. One project they are currently involved with is a custom equipment design for an aircraft. Airstar was born from that

deeply rooted involvement in technology.

"Paul's real passion is finding technology for niche markets that corrects an unmet need for the industry or for the consumer," Allison Burke said of her father. "When he was introduced to the basic technology behind our air purification systems, he was really, really attracted to the technology. Paul wanted to expand upon it, improve it and commercialize it."

Originally, the company was providing systems for bars and



Two of Airstar's portable air purification units: the A-1000 (left) and A-500

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restaurants, but that became secondary when the state's smoking ban progressed (Smoke Free Illinois Act, Jan. 2008). Smoking was still permitted in tribal casinos, so Airistar's focus shifted to that market.

### The Products

There are four stars in the Airistar lineup, and one is sure to fit almost any environment. Read on to see which one would best fit your air purification needs.

#### A-500

The smallest of the units, the A-500 puts out, on high, 500 cubic feet of air per minute. It is portable, and great for offices, homes, doctors' offices, casino break rooms, cashier cages, count rooms, or anywhere there is an air purification problem. It is also a Class II medical device.

#### A-1000

A larger, portable unit, the A-1000 puts out 1,000 cubic feet of air per minute. It has the same purification process as the A-500, but is designed for larger areas. It is great for more industrial areas, casino applications and larger offices. In a facility with 10-foot ceilings, the unit could cover roughly 6,000 square feet. It, too, is a Class II medical device.

■ Employee satisfaction can be a big factor, as evidenced in the more recent visibility of employee dissatisfaction through dealer lawsuits and a featured MGM Grand table games complaint in the television show *Undercover Boss*. ■

#### A-1050

The A-1050 end-cap unit also puts out 1,000 cubic feet of air per minute. Its unique design hides the unit from sight while also directing the airflow. This product was designed specifically for the gaming industry. "It allows you to re-use space," Allison Burke said. "It's not easy to convince someone to give up space on a casino floor for something that does not directly generate revenue. But if you can create a dual usage for that space by also allowing them to do signage, a marquee or a counter, it's really attractive to casinos, where space is always at a premium."

#### A-100GT

The second of the gaming-specific units, the A-100GT comes in the form of a gaming table, bringing the clean air close to the action. "Not only does it clean the air in the area, but it also creates a curtain of fresh air that protects the dealer," Allison Burke explained. "It takes the particulates up and away from the table, so that players and dealers have less smoke from the person next to or across from them."

Airistar's patent-pending process, HEXAFLOW™, is completely filter based and features six stages of air purification. The first stage is a pre-filter, similar to what you'd find in a furnace. Stages two and three are represented in a dual-stage filter, with an anti-microbial filter on one side and a pleated electrostatic filter on the other side. Stage four is a high airflow particulate air filter, or HAPA filter, that's

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similar to a HEPA, with the same efficiency but allowing for greater air flow. Stage five is a carbon filter for odors and gasses. "The last stage is a UV light, which is used to clean the back of the charcoal filter and sterilize the last chamber. This helps us ensure that we're not introducing anything new to the air," Sean Burke said. "The blower and the electronics work in a completely clean environment."

It is apparent that a lot of thought has gone into creating the best possible in-unit progression for air purification. And it's easy to see why Airistar believes that is important, when considering the effectiveness, and even possible harmfulness, of other options. For example, another common method of air cleaning involves electrostatic precipitators, either using negative ions to draw the particles to an in-unit plate where they will "stick," or emitting those ions into the environment to charge the particles and cause them to drop out of the air.

"There are a lot of potential downfalls to this type of purification," Sean Burke explained. "One is that it can create ozone. And while ozone is a great sanitizer, ozone is actually a chemical that can also do harm to lung tissue." To be clear, the ozone near the Earth's surface has a very different effect from the ozone high in the atmosphere. Upper-atmospheric ozone protects the Earth from electromagnetic radiation, but lower ozone in high levels can cause the EPA to recommend limiting outdoor exposure for that particular day.

"Occasionally, generators in the indoor environment can bring the ozone level two to three times higher than what the EPA sets as the guideline for issuing an ozone action day," Allison Burke said.

Other systems use UV bulbs to clean the air that passes by it. According to Sean Burke, they can work, to a degree, if they're placed properly, but may not have a long enough exposure to the air contaminants to fully clean the air. "It takes anywhere from 12 seconds to 2 minutes for UV light to kill particulates. The downside is that if it's just long enough, but not long enough to kill it, UV light can have an altering effect on the particulate itself without eliminating it."

There are many different levels of air solutions available in the marketplace, from tiny fans to sophisticated HVAC systems. And there are also products out there that are masquerading as air purifiers, but are really more air circulators. "Just because you move the air, doesn't mean that you are creating a cleaner environment," Allison Burke noted.

### The Properties

Of course, each facility will have to determine its goals, evaluate the technologies that are available and make a decision based on identified needs and budgets. And based on those goals, each facility will also have its own measure of success.

Some casino operators may want to physically see results, like a manager who was convinced of the system's worth when the sales representatives showed him filters that had turned black after only two weeks of use. Others might not even notice how big of a difference the air purification made until the property's demo period is over and the air quality steadily decreases. Others may base

success on the response of employees. One property had a demo of the A-100GT on two of their tables in the pit, and found that dealers would fight over who got to work at those tables. "Every facility is going to have its own metric of success," Allison Burke said. "We have seen metrics driven by operational cost or by employee satisfaction and comfort. There are also ways to actually measure air quality that can be utilized."

Employee satisfaction can be a big factor, though, as evidenced in the more recent visibility of employee dissatisfaction through dealer lawsuits and a featured MGM Grand table games complaint in the television show *Undercover Boss*. "That's really escalated the thought process related to really addressing the smoking issue within the gaming environment," Allison Burke said.

Something else that brings the issue of air quality home is smoking bans. Some affect casinos, some don't, but either way it can become a hot-button issue. In Illinois, Airistar's home state, the smoking ban includes casinos. Since the ban went into effect, some establishments have indicated that they have lost revenue to competing casinos across state lines. These claims have led some to call for future repeals of the smoking ban.

And while the only way to completely get rid of smoke is to ban it, some jurisdictions may have to find a balance between the two options in order to come out ahead.

"You have to realize that we're not getting the smoke at the source,"

Sean Burke pointed out. "We're not going to be taking the smoke directly off the tip of the cigarette. That would be wonderful, but we have to be realistic, and that's just not a possibility." Airistar's products are ideal for those who are looking to make their best efforts to reduce smoke and other contaminants in the gaming environment, making it as comfortable as possible for both smoking and non-smoking guests and employees.

Overall, the recent visibility of the issue of air quality, smoking-related or not, is a positive. And cleaning up our indoor environments is a worthwhile cause. "I think it's a really important topic, not just for Airistar, but for the industry," Allison Burke said. "There's a lot going on in terms of regulations and discussions. I think it's an exciting time to be doing what we're doing. Hopefully, other people continue to agree."



A dealer works at a game with the A100GT installed.



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