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## Putting the cart before the hoarse voices of change

*Airtronics, San Jose, Calif., patiently works with customer and government officials to deliver one hot tamale cart*

It's a great story when someone can see his dreams fulfilled. It makes for a greater story when a metal fabricator makes it happen.

In early 2008 a gentleman approached Airtronics Metal Products Inc., San Jose, Calif., about fabricating a new kind of hot dog cart. Santa Clara County was about to enact new health code regulations that made old push-style carts obsolete. He thought if he could develop a new cart style he might be able to sell some and eventually start his own business selling food to hungry and hurried pedestrians. He was a plumber, but his wife had experience as a sidewalk vendor of food. In short, he had a dream that a fairy godmother with no CAD access might have trouble delivering.

Airtronics, a 49-year-old precision fabricator with its own in-house paint and powder coating capabilities, wouldn't have trouble relating to the would-be wheeler-dealer of wheeled-dealies.

"It's not unusual for someone to come in with a project. They may have an idea in mind or sketch. Then that's when they come to us," said Airtronics President and CEO Jeff Burke.

And that's when the work begins. After meeting with the entrepreneur, the Airtronics team met with local government officials to get feedback about what Santa Clara County officials needed to see so that the food trailers would be considered kosher for public use.

"What we found interesting is because it's not really a well-defined area in code, you build with a lot of 'I'd like to see this' and 'I'd like to see that,'" Burke said.

The government officials were pretty strict when it came to sinks. If the cart were to be a simple steamer cart, it needed one sink with hot and cold water, which was mainly for washing hands (see **Figure 1**). However, if the cart were to incorporate a griddle, it had to have a total of four sinks: one sink for washing utensils, one for washing dishes, one for rinsing utensils and dishes, and one for washing hands.

The officials also found the idea of open food unappealing. For a steamer cart, they didn't like the idea of the operator constantly lifting container lids, serving from the trays, and replacing the lids. They wanted to see either a dome lid that

opens one-third of the way to partially expose the food or a complete dome cover for the entire serving area. Airtronics followed the latter idea and built a stainless steel cover that keeps the serving area covered while also allowing the operator to access the food. When food is not served, the dome closes completely.

The entrepreneur also had a major change to incorporate.



▲**FIGURE 2** This first-generation food preparation cart is 62 in. wide and 75 in. long, and the tongue, which connects to the tow vehicle, accounts for an additional 3 feet of length. The cart is designed to be towed to a destination, unhooked from the tow vehicle, and pushed onto a sidewalk for three-minute meals.

"When he approached us, it was supposed to be a hot dog cart. Halfway through it, it changed to a tamale cart because we are in San Jose. Now it's capable of doing just about anything," said Jim Ellis, vice president of engineering.

Airtronics staff handled all of the manufacturing themselves. For the first-generation model, they purchased a trailer on the open market and constructed the frame.

"Our goal was to build our own frame, the whole cart, that we could just bolt down to anyone's trailer," Ellis said.

Unlike other food trailers on the market that comprise a lot of tube construction, the Airtronics model relies on sheet steel. The skins are 18-gauge cold-rolled steel, and the stainless steel sheet is used for the work area that sits above the sink. Quarter-inch steel is used for some of the mounting points, but light gauge worked for the most part.

Using sheet metal helped the overall design in two ways. First, everything can be tacked up easily before the final weld and before the assembly is sent to the 3-D laser cutting machine to have holes put in. "So when it tilts up, it goes pretty quick," Ellis said of the final assembly process. Second, the sheet helps to minimize the overall weight of the unit.

The company also has a powder coating line, so it can apply the white finish on a majority of the body parts. If a customer wants its logo on the cart, Airtronics can screen it on there as well.

Airtronics does purchase the refrigerator and water heater from companies that work in the RV industry. But for the most part, the cart is an Airtronics creation, and that's why you'll find the company's name on all of the carts it produces (see **Figure 2**).

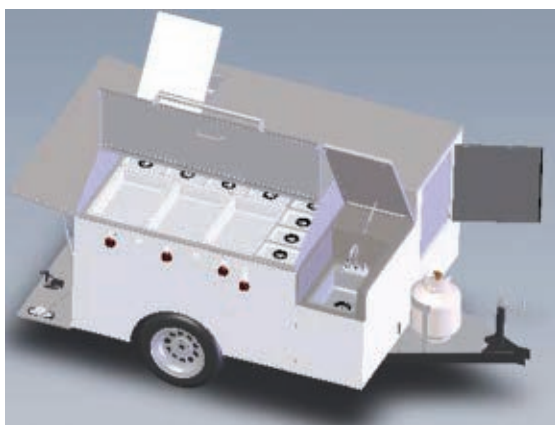
Burke said everyone is excited enough about the final design that they are taking the carts—literally towing them—to the Catersource Conference & Tradeshow in March in Las Vegas. They plan to build a model that has a grill and only one sink, which will meet municipal food preparation regulations outside of San Jose, and they already have commitments to purchase these types of units.

Airtronics has put its name on other products, such as a controller box and a standard rack, but this cart is much more representative of its design talents: taking ill-defined suggestions and turning out a topnotch product.

"This is unique and won't go offshore," Burke said.

That's a job that is a perfect recipe for success for today's metal fabricator. ■

*Dan Davis*



▲**FIGURE 1** This engineering drawing shows the steam trays underneath the hood and the sink underneath the work surface.