

Less Room, More Production

Praxair's new tunnel freezer helps Great Kitchens chill out.

It's going to be at least a year until frozen pizza manufacturer Great Kitchens can spread out into a new 45,000-square foot addition currently on the drawing board. In the meantime, business is strong, and the company has to squeeze as much production volume out of its existing facility as possible.



Great Kitchens' new tunnel freezer incorporates a finely tuned fan network so circulating air does not disturb the pizzas' delicate meat toppings. (Photo courtesy Praxair.)

The problem is that freezing lines typically take up a lot of real estate, and space in Great Kitchens' plant in Addison, Ill., is at a premium. So the manufacturer was very responsive when its long-time freezer vendor Praxair proposed installing the new-generation ColdFront ultra-performance tunnel freezer, using the plant as a beta test site. Not only would the new machine require significantly less room, but as the first tunnel freezer to be designed to USDA's new sanitary specifications, it would be easier and less time-consuming to clean, due to enhanced access to its internal components.

"We're a growing manufacturer in the value-added arena, co-developing a lot of items with major customers in retail,

wholesale, and foodservice," says Jim LaRocco Great Kitchens' vice president of operations "Our core business is pizzas of all sizes and appetizers from tomato crostini and potato skins with bacon to stuffed Florentine mushrooms and bruschetta. All our products are shipped frozen from the plant to the customer, either to the wholesale distributor, retail grocer, club store, or foodservice."

In most regions, the retail frozen pizza market is hotly contested territory, with multiple contenders vying for shoppers' attention, but Great Kitchens has formulated a winning strategy to keep its products from becoming just another item in the freezer case. "Our real channel is in the deli, not the frozen section where there are so many more SKU's" LaRocco explains.

Packaged under a variety of brand names, Great Kitchens' finished products are loaded in freezer trucks and delivered to customer premises. Once at the retailer, the pizzas are stored in the deli department freezer (not in the general freezer case), to be defrosted before being set out at the refrigerated deli counter. Sometimes they're stocked in special stand-alone units designed to merchandise a specific grocer's brand. Shoppers typically purchase the pizzas thawed and then take them home to bake.

In addition to less competition, Great Kitchens finds the deli slot more appropriate because the type of pizza it produces features a thicker, raw dough crust and toppings that are more upscale than what's usually offered in the frozen-food category.

The in-plant freezing process is an important part of the company's mission to ensure that the pizzas retain their

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high-end characteristics when they reach their ultimate destination, the consumer’s dinner table. With several of Praxair’s standard model U-4 freezers already humming along on existing processing lines, Great Kitchens was primed to try out the new ColdFront ultra-performance design.

“This new design is really a step change in cryogenic freezers,” says Frank Martin, Praxair’s national marketing manager. “Results show at least 30-percent more production in the same real estate. That means you get the output of a 27-foot tunnel in one that is only 18 feet long. This is a big advantage, because so many processors don’t have the space for a long freezer.”

“Praxair was able to maximize our production capabilities per square foot,” LaRocco confirms.

In addition to yielding higher productivity, the ultra-performance design reflects Praxair’s commitment to sanitary operation by making all areas of the machine accessible for cleaning. “It takes some sophisticated engineering to incorporate

the capability.” observes Martin noting that the tunnel sailed through agency review “for sanitary design, fabrication, and cleanability features,” and now appears on the latest (May 2005) USDA/Agriculture Marketing Service” Accepted Meat and Poultry Equipment List.”

Great Kitchens is experiencing another benefit from the freezer: lower operating costs. The tunnel’s advanced vapor flow system lowers nitrogen consumption, thus delivering more efficient performance.

“Praxair has done analysis supporting the fact that on this line we are using a lower amount of gas,” LaRocco says.

At the same time, the air circulation scheme incorporates fine-tuning so the fan network does not disturb the delicate meat toppings, especially the light-weight pepperoni, as the pizzas pass through the freezer tunnel.

“This was the tricky part,” says LaRocco. Traditionally, the industry uses a light water mist or a second dose of cheese after the pepperoni pieces have been deposited to help hold the dough.

Explaining how Praxair met the challenge, Martin comments: “We can control the impingement air flow to make sure the toppings do not come off. That’s something you do not want to happen. Processors don’t like to lose product they are paying for, and with the improved air flow controls on the ultra-performance tunnel, this is not an issue.”

Adds LaRocco: “We have to meet our customers’ expectations. It would be a tedious process to replace whatever portion of the topping that gets blown off. This equipment is very good for us in preventing product loss.”

In fact, the ColdFront freezer performs so well that Great Kitchens makes several other products on this line. “There are no applications where we can’t use it,” LaRocco confides. “We run everything from our 16-inch and 18-inch pizzas down to small pieces of bruschetta. From my vantage point as a manufacturer, the design configuration is fantastic,” the processor concludes. **MP**



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