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ALL GROWN



UP

Fireking levels up with a new bakery but keeps the commitment to a high-quality diverse product line.

by Charlotte Atchley

Fireking Baking Co. has expanded far beyond founder Greg Acerra's pet project. When the Braintree, Mass.-based bakery was bursting at the seams of its 40,000-square-foot facility, Mr. Acerra realized this business had become bigger than himself.

"Suddenly the business had grown to a point where it's not just me with a crazy idea of making bread for my restaurants," he said. "There are people who have committed their careers to my company. Now it's about how do you sustain the company and brand. Now it's about what's best for the company and not necessarily what's best for me anymore."

When Fireking moved into its previous facility, Mr. Acerra said that was it, the last move he would ever have to make. But seeing the commitment some of his employees made to the business, Mr. Acerra reciprocated. In 2019, he renovated and moved into a 200,000-square-foot facility only 500 yards from the old building.

"If you're not growing and creating more opportunities for your bakers and keeping them inspired, they're not going to hang around," Mr. Acerra said. "They want to grow professionally, and if I don't provide that opportunity, I would understand completely why they would leave."

Growth by staying true

While Fireking may have plenty of new space and more brand-new equipment than it's ever had, its product line and processes have largely remained the same. The company is still committed to premium artisan breads and rolls, mostly produced for foodservice with some retail business. Food distributors pick up orders five days a week. Much of the new business has come from word-of-mouth.

"I've never had a salesperson," Mr. Acerra said proudly. "Over the past couple of years, I had to slow it down because I couldn't produce for the new business. I made a mistake a few years ago by growing 40% in one year. Sometimes you get overly ambitious and think you can do this, but you can't do it very well because it's too much at one time."

Fireking Baking Co. remains committed to a diverse portfolio of artisan-style breads.
Photography by Wayne Dion

“I DON’T WANT TO MAKE THE SAME HOT DOG BUN, SUB ROLL OR HAMBURGER ROLL EVERY DAY.”

Greg Acerra, Fireking Baking Co.



I learned that you have to measure your growth because you never want to impact current customers by taking on too much at one time.”

One change to the business is where it’s growing. Fireking products are reaching farther across the country as the company’s frozen retail business expands. Today, foodservice remains the bulk of the business, but retail makes up 30%, Mr. Acerra estimated. Previously, Fireking only had two freezers, one onsite and one across the street. In the new facility, Mr. Acerra anticipated — and accommodated — the new growth with two onsite custom-built freezers with room for a third. He still has the offsite freezer as well.

The new test kitchen onsite at 185 Campanelli Drive supports Fireking’s ability to get creative for its customers, something Mr. Acerra and his team are passionate about.

“I don’t want to make the same hot dog bun, sub roll or hamburger roll every day,” he said. “My background is in restaurants, so I’m always into the creative side of the food industry, and I’m attracted to those products. Sometimes they aren’t even as profitable. They’re more difficult to make and more labor, but when you can show your customer something new, you excite your customer base.”

The 1,500-square-foot test kitchen replicates in miniature the processes out on the plant floor. An electric deck oven emulates the Miwe thermal oil deck ovens on the floor, and Mr. Acerra installed one of the new Roto Passat rack ovens from Koenig Bakery Systems in the test kitchen instead of the bakery. The kitchen also has a mini proofer, retarder, cooler and freezer. The mixer is the first one Mr. Acerra owned.

“The mixer I have in there was the first mixer from my first bakery that was in a gas station,” he said. “We stripped it down and rebuilt it. That’s kind of sentimental.”

Making a move

Fireking’s new home had been a warehouse for a liquor distributor. The building needed a complete excavation and renovation. Mr. Acerra only kept the exterior four walls. Even the roof is new. Construction took about nine months, and the project was completed on time, except for the gas supply to the building, which delayed move-in by five weeks.

The new facility needed 65 million BTUs at 5 PSI to run. A new line delivers that gas to the building, and the utility company had to replace 4,100 feet of pipe in a nearby town to provide the pressure. Fireking was to re-

Top: Ten twin twist mixers handle the wide variety of doughs that make up Fireking’s product portfolio.

Bottom: Dough balls are divided to the proper size and moulded to the desired shape. Fireking’s makeup equipment has the flexibility to do a wide range of different sizes and shapes, as well as stamping and seeding.



After makeup, dough retards in a custom-built cooler. Humidity prevents the dough from drying out and cracking on the surface.

ceive the necessary gas in two phases, first in June 2019 and then in September. But as May rolled around, with an open date of June 23, 2019, no action had been taken. When asked, the utility company backtracked and offered Mr. Acerra 3 PSI. After tapping contacts at the mayor's office, chamber of commerce and Governor Charlie Baker, the gas company finally delivered on its promise, and Fireking had the gas it needed in the new plant.

The move itself only took 30 hours. Because the smaller facility was at capacity, Fireking couldn't make the extra product to afford a two- to three-week shut-down, so the company made it happen over one week-end by employing lessons Mr. Acerra learned on the previous move. He purchased extra equipment to set up in the new space to bridge the production gaps. The Monday and Tuesday before moving day, non-essential equipment started getting shut down, cleaned and taken apart so that by Thursday and Friday, the old plant was running a bare-bones production. By Sunday, production was up and running in the new facility.

Manufacturer representatives from Rheon USA, Koenig Bakery Systems and Miwe were all onsite to handle the installation of the newest equipment so Fireking could focus on moving mixers and packaging equipment down the street.

A little elbow room

While the previous bakery had most production in one large space, the new one gives each step of the process plenty of room to breathe. Production loops throughout the building. Twenty-two loading docks line the building: half receiving ingredients and the rest loading distributors' trucks. Ingredients are stored in either an ambient storage room or refrigerated cooler when necessary.

All ingredients are currently hand-scaled, but plans

are in place for an automated system later this year. Two silos purchased from another bakery sit outside waiting for certification for automated flour scaling and delivery. Acuscale rebuilt the control panels on the silos and will be providing automated minor ingredient scaling not only for accuracy and consistency but also traceability and lot tracking. Until the silos are certified, however, Fireking is using bagged flour and manual scaling.

In the corner of the ingredient scaling room sit two kettles prepping honey for the honey wheat breads. Fireking has always cooked its own honey, but the previous space only had room for one smaller kettle.

After scaling, ingredients are moved to the mixing room where 10 twin twist mixers from Koenig bring together the doughs that will become Fireking's artisan buns, rolls and breads. Each mixer can handle 240 kg or 529 lbs of dough. Bowls are labeled to transport each type of dough to the appropriate makeup line.

The makeup room houses seven production lines, set up neatly side by side in the large bright room. There are two Koenig industrial roll lines, one Koenig industrial roll line with stamping capabilities, one Koenig Menes stress-free line, one Koenig Rex Futura roll line with proofing and stamping, one Rheon stress-free line purchased for the move and one smaller Rheon stress-free line brought over from the old facility. Bowl lifts raise and dump the dough into the hoppers at the beginning of these production lines, which enable Fireking to make a wide range of hearth breads, pan breads, and rolls of all sizes and shapes.

On the roll lines, dough is divided and moulded to the appropriate size. It's then placed on racks to be sent into the retarder. Among the industrial roll lines, Mr. Acerra has diversified the capabilities. The two Rex roll lines turn out up to 24,000 pieces an hour of hamburger or hot dog



Fireking has two proofers and two retarders designed by the bakery's engineers to provide capacity during busy season and redundancy in case of downtime.

buns, lobster rolls, or pull-apart buns in a range of sizes.

The newest line, the Industry Rex Compact AW divider/rounder with Combiline EC roll line, was shown at last year's International Baking Industry Expo and can create Kaiser rolls with a "soccer ball" shape or braided appearance. It also has seeding capabilities. This gives Fireking the flexibility to be creative, something Mr. Acerra holds as a critical part of his business.

He's gone so far as to maintain a small stress-free production line from Rheon that he has had for years to handle small batches of product for foodservice customers. The smaller capacity of this equipment, as well as its ability to handle delicate ingredients such as real cheese and fresh onions, outweighs the fact that it requires more labor to run. Being able to say yes to customers' special requests is worth it to Mr. Acerra's business.

"It really stimulates your imagination and your staff because they aren't making four-by-four ciabatta every day," he said. "Sometimes you pound your head against the wall and think, 'Why did I do this?' But at the end of

the day, you look back, and it's satisfying. It satisfies your need for new and different things."

Two stress-free lines run high-hydration doughs such as ciabatta, focaccia and baguettes. On the Menes industrial sheeting line, a Twin Sat double satellite head imparts minimal stress on the dough as it's reduced to the desired thickness. After sheeting, dough is rolled into the appropriate shape, a seeding unit tops it if necessary, and then the pieces are panned.

After makeup, pans are placed on racks manually and then moved into the retarder, which, like the freezers and proofers, were custom-built by Fireking's team of engineers. The retarder's Goedhart cooler introduces mist into the air to prevent the doughs from drying out and cracking. A flap system was designed to catch 90% of the moisture and prevent it from dripping onto the product.

After product retards from one hour to a full 24 hours, it moves into the proofer. When designing the new bakery, redundancy was built in. Fireking's team of engineers built two retarders and proof boxes so the bakery can

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meet production demands when the busy production season hits in the summer. And in the unfortunate circumstance that a proofer or retarder breaks down, the bakery can still function.

Once dough is proofed to up to two hours, employees prep it for baking. That could mean an egg wash for buns, lye bath for pretzel buns or simple scoring. Then it's into the oven room, which is separate from the rest of the bakery's processes.

The oven room holds lots of opportunity for expansion. The adjacent boiler room houses two boilers — again, redundancy — for the two Miwe thermal deck ovens with room for one more. The boilers heat the oil and pump it to the ovens to heat the nine decks in each before oil is recirculated to the boiler to be heated again. Fireking can add two more thermal deck ovens before needing to add a third boiler. During construction on the building, a 10-inch structure slab had to be installed into the floor to handle the ovens' weight. Mr. Acerra poured a big enough slab to handle four more oven installations for the future.

The deck ovens bake off Fireking's crusty breads: ciabatta; focaccia; oval breads like rye, country and sourdough; deck sub rolls; and hearth breads.

The rest of the room is populated with Koenig's new Roto Passat rack ovens, 29 of them. The 30th lives in the new test kitchen. There is room for 70 rack ovens in total.

"The issue with rack ovens is space," Mr. Acerra explained. "These are only 55 inches wide, and the burners are on the top. They are well-built and don't need to be constructed onsite. They provide a great, consistent bake. A wider rack oven might have been able to only

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get 20 ovens in here. It's a very efficient use of space."

All this space, however, has a downside with operations only filling 20% of the building's potential. There's a lot of walking. Operators push racks significant distances to get from makeup to proofer to oven. But it's a challenge Mr. Acerra was willing to take on for the space to grow.

"These are the costs now, but the benefit is I can grow 500% in this facility," he said. "It's so expensive to build these facilities and move, so I built the biggest place I could afford."

Jumping up to this level of production, one might expect Fireking to have invested in a tunnel oven, but Mr. Acerra said that isn't what Fireking needs right now. With 250 products needing different temperatures and settings, flexibility and quality is his priority.

"Rack ovens have the flexibility to serve our customers," he said. "We're adapting the oven to our product instead of the other way around."

Baked product is cooled in a separate room, a depar-

Left: Dough is baked in 29 rack ovens and two thermal deck ovens, which both provide the flexibility Fireking needs for its product line.

Right: The oven room has room for four more thermal deck ovens and a total of 70 racks ovens.





ture from the previous plant where baked product filled the space between ovens and packaging, heating up the entire bakery. Cool air is pumped and circulated throughout the room, creating a current to pull heat out of products. Eventually, Mr. Acerra hopes to install two spiral coolers with a conveyor feeding them product from above.

After finally cooling for 20 minutes to two hours, product enters the packaging department, which is as big as the previous bakery altogether.

“Packaging takes a lot of space,” Mr. Acerra said.

It also takes a lot of labor, and the majority of employees work in this department. Here, Mr. Acerra has ensured comfort in natural lighting from skylights and air conditioning for more ideal working conditions. Employees run seven packaging lines from UBE, Lematic, Bettendorf-Stanford, Ilapak and Formost Fuji, mostly baggers for rolls, buns and bread loaves. Crusty rolls are bulk packaged by an OK bulk packer. Three Robopac robot pallet wrappers cover pallets for distribution.

For the frozen business, the packaging room ends at two freezers, also custom-built by the engineering staff. The freezers can hold up to 1,100 pallets total. Another offsite freezer handles overflow. Product is frozen, packaged and then stored in the freezer before shipping out. There’s room for one more freezer in the future.

It’s also in this area of the new facility where the engineering room is, a large office space and shop that houses all the tools Fireking’s engineers and mechanics could need. As the business has grown, Mr. Acerra has also expanded his staff of engineers and mechanics and not just because the amount of equipment has proliferated.

“With smaller buildings, you just need mechanics for the equipment, but with a bigger building you need mechanics for the equipment and engineers for the building,” he explained.



Top: Fireking’s new facility is only operating at 20% capacity, which leaves a lot of space for dough to travel between processes.

Middle: Dough is prepped for the oven manually after proofing. Bottom: After cooling, finished product is bagged on one of seven packaging lines. Frozen product is stored in one of two freezers, while the rest is staged for distribution pickup.

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After product is bagged, cartoned or palleted, it's staged for pickup by distributors. Fireking will soon install a Dock Magic system to track and display shipment information. Here production starts all over again at ingredient receiving.

Between product staging and the makeup room is the pan wash room, where operators manage two pan washers from Douglas Machines Corp. Pans are scraped and washed after every bake and then returned to makeup. The pans that need to be oiled are sprayed in the adjacent room.

Fireking has maintained many of the same processes it had in place at the previous facility, just on a larger scale. Because its products contain allergens, each line is cleaned every night by a sanitation team that also makes notes of any maintenance that needs to be tended to and leaves a report for the mechanics in the morning. This process ensures that equipment is always running optimally and heads off any major break downs.

Stepping up

With this new facility, Fireking jumps onto the next tier of wholesale baking, and that requires an investment not just in square footage and equipment. It also means more employees and more investment in food safety and quality assurance.

In the previous building, Fireking employed about 140 people. The new space

is currently staffed by 210 people at a time when labor is difficult to find. The bakery hires many through its current employees' connections, but for entry-level positions, Fireking has relied on temp agencies. This comes with upsides and downsides. While it can take a lot of time and resources to train a temporary employee, for those positions that don't require many skills but a good work ethic, temp agencies provide Mr. Acerra a built-in trial period before he can offer the person a full-time job. During this six- to eight-week period, he can judge whether a temp worker would be a good fit for the job.

"It's the simple things," he said. "If there's a roll on the ground, do they pick it up and put it in the bin? If the machine is down for bag replacement, one person might lean on the machine for a break. Another person will get a broom and sweep up or bring more trays over to the machine."

New employees and new equipment mean more training as well. Fireking has always been committed to a robust training curriculum. Employees are trained on equipment, GMPs, OSHA and even where to park during heavy snow. And Mr. Acerra has supported those employees for whom English is a second language with not only training materials in

The makeup room acts as an operating showroom with seven production lines turning out breads, buns and rolls.



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their native languages but also with Rosetta Stone subscriptions on tablets to assist their language skills. The new facility’s training room can hold 75 people and features a projector and a TV monitor. This has been a game-changer for Fireking, allowing the bakery to train more people at once and hold larger department meetings.

Food safety and quality assurance has also gotten more complex. In the past few years, Mr. Acerra hired his first quality assurance manager and has doubled that staff. At the smaller facility, a manager was on the bakery floor at all times, and that was sufficient to make sure food safety was under control. But with 200,000 square feet to cover, that system no longer works. Now, in addition to a head baker and plant manager, each production process has a floor lead and line lead. This layers the food safety and holds everyone accountable. Additionally, metal detectors check finished product before it is stored or staged for pick-up.

Flexibility for quality

Reaching such a level of commercial baking, it may be surprising to some that Mr. Acerra insists on using rack ovens and continues to make such a diverse array of products. But this has long been the foundation of Fireking and a principle Mr. Acerra won’t be abandoning any time soon.

“You always want to be as efficient as you can, right?” he said. “But sometimes I believe flexibility trumps efficiency. Because I think efficiency restricts you. I believe there’s value to the customer in flexibility and being able to say yes.”

And Mr. Acerra chooses his equipment based on its flexibility and its capability to serve his customers’ products, first and foremost. Forcing a dough to run a machine that isn’t intended for it because it can do it faster but not better, or changing a roll’s size or inclusions to avoid buying new equipment is just not how Fireking does business. New products are matched to the machine that preserves their quality first.

“You have to identify which products run on which machines more efficiently and steer products in that direction without compromising the product,” he explained. “And if it doesn’t work, then I have to find a machine that will make it. I’ll buy my team whatever they need because this equipment has to serve the product, which in turn serves my customer. It’s about how do you make it the best, and then find a machine that will do it the most efficiently. Let quality dictate efficiency, not efficiency dictate quality.” ●