

In Italy, East Balt designed its newest bakery to serve the market for the foreseeable future.

by Dan Malovany

In Rome, time takes on a new dimension. It goes way beyond the minutes, hours, days and weeks that are the focus of bustling everyday life in the heart of Italy's ancient capital. Maybe it's because of the region's rich history, food and culture. Italians feel intrinsically connected to the past. People there can't help but look at surroundings in years — hundreds, even thousands — of them.

That feeling of longevity is shared at East Balt Bakeries' newest production facility, which opened around two years ago in the city of Monterotondo located just north of the nation's capital, according to Tommaso De Marco, general manager of the company's Italian operations.

As he began his tour of the state-of-the-art plant, Mr. De Marco pointed out that the steps and the floor in the entrance are made from travertino rock that's native to the area along with stones incorporated from an old Roman road.

In many ways, he suggested, it's designed to remind visitors of how the past melds with the future. "We put it in here because we think this is a symbol that means the building will last for centuries," he said.

History in the making

They say, when in Rome, do as the Romans do. And when it comes to eating, they consume a lot of bread -

all types of it — even hamburger and hot dog buns.

In all, East Balt Roma produces about 30 varieties of baked goods. On its highest-speed line, it cranks out 12 buns a second, or one million of them daily. The bakery also produces 250,000 tortillas daily. And yes, they bake a cornucopia of ciabatta, foccacia and other specialty breads on a sheeting makeup system that's put into operation when the bakery isn't producing hamburger and hot dog buns.

The fresh and frozen products are distributed to quick-service restaurants and other foodservice chains. They're also sold to retailers under supermarket private label store brands and the bakery's marketleading Roberto label throughout the southern half of Italy.

From an operational perspective, Mr. De Marco explained, the Monterotondo bakery is similar in scope to its high-speed East Balt Italia facility in Bomporto, located about 20 miles from Bologna and serves the northern part of the country.

Built in 1999, the Bomporto operation reached capacity in 2012, prompting East Balt to import baked goods from bakeries in France, Austria, Germany and Poland to meet the surging demand in its growing Italian market.

East Balt Roma serves southern Italy with dozens of types of buns, tortillas and specialty baked goods.



Fortunately, East Balt had the foresight in 2000 to purchase land in Monterotondo adjacent to one of its major foodservice distributors. In late 2014, the Chicago-based company began construction on the €30 million (\$35.5 million) greenfield project and began selling products less than a year later in 2015. Rome wasn't built in one day, and neither was the bakery.

"The project developed quite fast thanks to the organization and the choice of building partners and the team that installed the lines," recalled Mr. De Marco, a 20-year veteran with the Italian baking division.

Specifically, he added that the building's design also sped up construction and ramped up production. Placing all utilities and other key components - electrical, water, boilers, motors, compressed air, glycol chillers, blastfreezing units— in an enclosed portion of the roof shaved up to three months off the project's timetable. "While they were installing equipment below, we were able work to put in the utilities above," Mr. De Marco recalled.

Starting at the top

The reinforced structure - built to withstand earthquakes that occur in the region — also houses back-up generators to keep the bakery running at all times. An energy-saving heat exchanger that recirculates hot air from the oven below produces hot water used in the facility and provides steam to the proofer.

The design also reduces noise throughout the bakery. It also enhances food safety and sanitation by minimizing horizontal piping that can gather flour dust and by eliminating nooks and crannies that harbor contamination, according to Mr. De Marco.

In fact, electrical panels are positioned at the point of use directly above the mixers, divider and other processing equipment, allowing cables and copper wires to stream vertically to systems below. In case of an electrical malfunction or a similar breakdown, maintenance can make repairs without stepping onto the production floor. "We don't want any dirty boots in the bakery," Mr. De Marco said.

Because many of East Balt's baked goods have an extended shelf life - from 90 to 120 days for tortillas in nitrogen gas-flushed packaging, for instance - the temperature-controlled production and packaging departments rely on filtered air to create a mold-free environment. "We have positive pressure and a filtration rate of 99.98%, so we have no contamination in the air," he said. Moreover, a reverse osmosis system provides purified water for the clean-label products with no artificial ingredients, preservatives or other additives.

East Balt Roma relies on a 2,500-lb dough mixer to feed its line that produces around 1 million buns a day.

EAST BALT ROMA

The operation is BRC-certified and audited by AIB International as well as the company's major customers. "We've made a significant investment in product quality and food safety," Mr. De Marco noted.

Building a skilled workforce

To facilitate a smooth start-up, East Balt Roma also spent time on training. Mr. De Marco noted the plant supervisor worked in the Bomporto bakery for a full year and the production manager for six months prior to shipping the first products out of the Monterotondo plant. Even the entire first shift — 17 people in all — spent three months learning the nuances of production prior to the opening in Monterotondo.

Overall, the bakery dedicates 8,200 sq m (88,000 sq ft) to processing and packaging, 2,000 sq m (22,000 sq ft) for warehousing and 600 sq m (6,500 sq ft) for offices and other departments. Mr. De Marco's management team includes Roberto Ambrosino, plant manager; Lucio Milesi, chief engineer; and Rossana Bascio, head of quality assurance and sanitation.

Currently, 45 employees work at the facility on two 12hour shifts, four days a week. The plant is so highly automated that it takes just four operators to run the front end of bun production. Seven to 10 others work in packaging and shipping, depending on whether the bakery is making bulk or retail packaged products. Typically, the streamlined bun line makes three to four changeovers per day.

Bulk flour and sugar are stored in four CEPI silos, with oil held in three tanks. The bakery also relies on an automated batching system for the blending and dispersing of micro ingredients. Like other support systems, it's located

Keeping an eye on energy

In Italy, the cost of electricity is one of the highest in the world and double what many other European countries pay because of high taxes and much of its energy coming from neighboring nations.

To ramp up its conservation efforts, East Balt Roma installed a fully integrated system to control all utilities. "Every machine has an IP address, and that allows us to monitor all equipment and utilities remotely," noted Tommaso De Marco, general manager of the company's Italian division. "We can also track energy consumption to monitor its usage."

In fact, the bakery charts consumption on a daily, monthly and even annual basis.

It can even track energy natural gas usage based on the type of product and the kilos of dough that are produced. "It's a very complex system, and because we have full control of everything, we can put together a report to improve our operations," he said.

To lower its electrical bills, the company installed solar panels on its roof. The initiative seems to be paying off. Mr. De Marco said the bakery saved 16% on electricity in 2016 and is expected to save another 10% this year.

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on the roof, directly above the mixing department. Most minor ingredients such as olive oil and liquid yeast are dispensed from various 1,000-lb totes on the ground floor.

The first level also houses the main bun and bread production line with make-up done in a temperaturecontrolled room. The bakery uses a conventional bunmaking process with an Oshikiri 1,600-lb sponge mixer and an Oshikiri 2,500-lb dough mixer. Both are outfitted with safety cages that allow operators into the area only after the dough kicks out into the trough. Sponges receive up to 4 hours of fermentation in a first-in, first-out trough system.

Adjacent to the mixers, the bakery installed what's best described as a "command center" that receives a stream of live video from a battery of cameras throughout the bakery. This setup at the front of the line allows operators to monitor production and adjust to the process in real time.

The makeup department houses a bun system located adjacent to a Canol sheeting line for specialty breads. Operators simply attached conveyors to feed products from either line to the proofer and oven.

"Part of the reason we have both makeup lines is that we anticipated we will have more market segmentation that will require us to produce a greater number of products in the future," Mr. De Marco noted. "We also left more space in packaging and have more versatility to apply a greater

The bakery's six-pocket divider makes 120 to 150 cuts a minute to crank out tens of thousands of buns an hour.



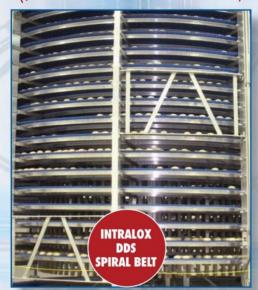


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variety of toppings. We even left more space between the proofer and oven to accommodate future expansion."

During Baking & Snack's visit, the bakery produced sesame seed-topped 5-in. Maxi buns for retail customers. Production runs in a relatively straight line. "We have a bakery that is easy to maintain and easy to understand," Mr. De Marco added.

After chunking, the dough travels up a conveyor to the AMF Bakery Systems' six-pocket divider, which makes 120 to 150 cuts a minute to crank out more than 3,600 doz buns an hour ranging from 36 g to 140 g after passing through two sets of rounder bars and about a 4-minute intermediate proof before panning.

An automatic Costi storage-and-retrieval system continuously feeds pans to the line. The pneumatic system with robotic grippers can handle 19 pans at a time to quickly adjust to changes in production. An inline pan cleaning and cooling system maintains a steady flow to the operation. In all, the bakery uses 12 pan varieties.

After traveling through a Stewart Systems conveyorized proofer for 55 to 60 minutes, the buns enter a Burford water splitter, glazing and Smart Seeder system. To control allergens, sesame seeds are transferred pneumatically from a 1,000-lb tote in a room just off the production floor, according to Mr. De Marco.

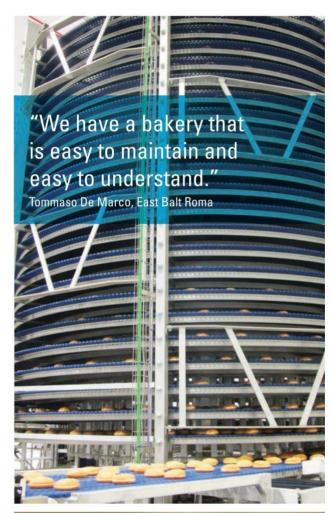
The pans then enter the new Stewart Systems Titan conveyorized oven. Its dual-zone, high-speed and volumeforced convection system comes with extra-large flutes that provide 2.8 times the airflow over previous designs.

Mr. De Marco noted the oven comes with zone controls that ensure enhanced heat and humidity distribution throughout the 8- to 10-minute baking process. "What we want is a consistent bun, time and time again," he said. "The oven can also do up to a 15-minute bake for producing some of our products that we may want to make in the future."

After baking, the buns exit the oven into a separate room where they travel through a Stewart depanner that's enclosed to contain the spreading of crumbs and seeds. The Maxi buns split into two clusters of four and travel along two IJ White spiral coolers with an Intralox DirectDrive belt that maintains product orientation during the process.

An EyePro vision system then inspects the buns for height, shape, diameter, color, amount of sesame seed coverage on the top and even the bottom for burn marks and consistency. The system takes a photo of any rejected bun for troubleshooting, future analysis and the bakery's records.

Top: Hamburger buns travel along spiral coolers prior to vision inspection and retail packaging. Bottom: Buns travel through a vision system that monitors them for consistency and quality control.





East Balt begins a new chapter

East Balt Roma, Monterotondo, Italy, represents one of the latest additions to the Chicago-based company's long history and commitment to the global baking industry. In fact, it currently operates 21 bakeries in 11 countries.

East Balt's roots date to 1939, when Louis Kuchuris acquired a bankrupt bakery that produced a line of bread, rolls, buns and pastries in Chicago. In 1955, the direction of the business changed forever when Mr. Kuchuris agreed by shaking hands with founder Ray Kroc to begin supplying buns to Chicago-area McDonald's restaurants.

In 2012, the family bakery was acquired by One Equity Partners, the private investment arm of JPMorgan Chase & Co. Under the leadership of Mark Bendix, CEO of East Balt, the company continued to expand, purchasing The Wendy's Co.'s Zanesville, OH-based bakery business, known as The New Bakery Co., to bolster its position as one of the leading suppliers of buns and baked goods to the quick-service restaurant and foodservice industry.

East Balt recently signed an agreement to be acquired by Grupo Bimbo. the world's largest baking company based in Mexico City. Mr. Bendix noted there is very little overlap where the two companies currently operate.

"The combination between East Balt and Grupo Bimbo provides exceptional new business opportunities, including broad product capabilities, custom sandwich carriers in the food service channel and expanded global reach," he said.

The two companies also share a common bond. Founders of both businesses have been inducted into the American Society of Baking's Hall of

In 2007, Grupo Bimbo's Lorenzo and Roberto Servitje became part of the Hall of Fame while Mr. Kuchuris was inducted in 2009.







Top: A system accurately places the exact amount of sesame seeds atop 5-in. buns on the high-speed line. Middle: Dough pieces travel through rounder bars. Bottom: Panned dough pieces head to the bun line's proofer.

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East Balt Roma turns out 250,000 tortillas a day, many of which end up in gasflushed packaging to extend shelf life up to 120 days.

Following Thermo Scientific metal detection, the buns are diverted for either foodservice or retail packaging. Foodservice buns enter one of two LeMatic slicer and bulk pack systems that can produce pillow packs of 30, 4-in. buns or 20, 5-in. ones. Heat sealing down the middle of the pillowpack allows foodservice operators to better maintain product freshness because they can open a pack of 10 or 15 buns at a time instead of the whole package. Two Tecno Pack flowwrappers each create 55 packs a minute for the retail market.

The packages then move along a conveyor to a separate warehouse area where they are manually casepacked and palletized or automatically placed on plastic trays that are stacked and stretch-wrapped into groups of three. Most products either are delivered that day or stored in a 1,200sq-m (13,000-sq-ft) freezer.

No growing pains

On the second floor, East Balt Roma produces 10-in. tortillas that are slightly thicker than consumers find in the US. "That's because Italians like more bread," Mr. De Marco quipped.



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"When we built this bakery, we decided to buy the best equipment for each part of the process."

Tommaso De Marco, East Balt Roma



Overseeing smooth production at the Monterotondo bakery are (from left) Giuseppe De Martino, assistant production manager; Roberto Ambrosino, production manager; Rossana Bascio, head of quality assurance and sanitation; Tommaso De Marco, general manager; and Lucio Milesi, maintenance manager.

After horizontal mixing in a sponge-and-dough process, the dough passes through a chunker to a four-pocket divider and two sets of rounding bars before receiving intermediate proofing. Here, the dough balls travel to two identical Lawrence hot presses and three-pass ovens that turn out slightly more than 10,000 pieces an hour.

After a short time in the zig-zag cooler, the tortillas enter another EyePro vision system for inspection and quality control. Following aligning and stacking, the tortillas enter a nitrogen gas-flushed packaging system before metal detection and casepacking.

Unlike the Bomporto facility, the Monterotondo plant was designed with additional capacity in mind, according to Mr. De Marco. Already, the bakery has plans to upgrade its tortilla line to a five-pocket divider and longer oven that will boost throughput to 12,500 tortillas an hour.

Likewise, as consumer demand warrants, the operation can boost its bun throughput with a larger and faster eight-pocket divider. When that happens, Mr. De Marco said, the Stewart Systems conveyorized proofer and oven would be expanded to handle the additional capacity. Toward the back of the facility, the bakery reserved ample land to extend the packaging area as well. In fact, at capacity, the size of the total facility could reach 19,000 sq m (200,000 sq ft).

"When we built this bakery, we decided to buy the best equipment for each part of the process," Mr. De Marco said. "We wanted to build a bakery that will meet not only our needs today but also the needs of the market for the future."

Like so many other buildings around the region, East Balt Roma plans to leave a lasting impression.

