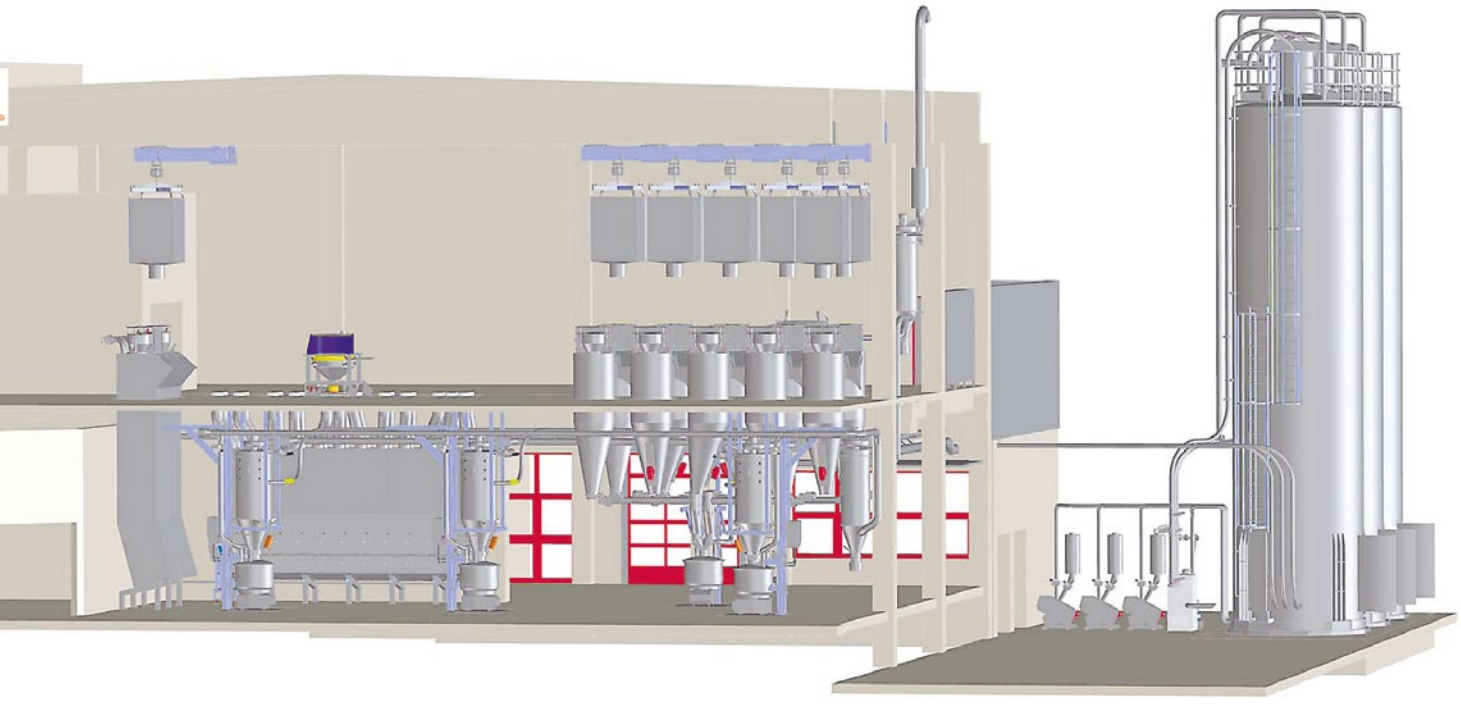
„Productivity and quality“

The Austrian leading bakery company Fischer Brot relies on an ingredient feeding system from Daxner Bulk Solids Technology

“Productivity and quality” were the recipe for success of Fischer Brot founder Wilhelm Fischer, who is recognized as the sector’s pioneer in industrial production. But what today’s system technology can do would even surprise him: The new Fischer Brot facility, north of Vienna, turns out about 15,000 crisp, fresh and tasty rolls an hour. One of the forces behind this performance is high tech from Daxner. The Austrian specialist in bulk solids technology has developed and delivered an innovative system solution. With the highest quality and efficiency, it feeds the production process with all ingredients, from wheat flour to liquid yeast.



3D CAD plant design

PRESS RELEASE | PROJECT INDUSTRIAL BAKERS

Under the leadership of Wilhelm Fischer, Fischer Brot made the leap from a small to large-scale bakery in the 1960s, by using the latest bakery machines and upper Austria's first fully automated roll bakery system. As the only supplier in the region, his company could produce the large quantities demanded by department stores and supermarkets. Still family-owned and run by the second generation, Fischer Brot is one of Austria's leading bakery companies which delivers quality bread and pastries to all major trade groups. It is headquartered in Linz and employs more than 300 people.

A strategic investment

Today Fischer Brot is on everybody's lips. Constant expansion has gone along with growing demand: In 2003, its top management decided to complement its main plant in Linz with a new production facility nearby Pichling. The next strategically decisive step was taken in 2007: After only six months of construction, a new production facility for rolls and pastries started up in the town of Markgrafneusiedl, northeast of Vienna. It provides the eastern part of the country with oven-fresh pastries. This allowed Fischer Brot to expand its existing production floor space by 7,200 additional square metres — almost half.

Besides the mere dimensions, the new plant's technical equipment is also impressive: It incorporates sophisticated bulk solids management technology, for which Fischer Brot relied completely on the specialists of Daxner.

Good experiences create bonds

The two companies have worked together for many years in a relationship that proved itself in the Pichling plant. "Good experiences have increased our trust and led to an excellent, proven partnership. The strategic importance of the new facility in Markgrafneusiedl therefore made it clear that we should trust Daxner with the bulk solids technology," says Roland Fischer, who manages the company along with his brothers Hubert, Alfred and Stefan Huemer.

An innovative ingredient feeding system

The large project allowed the Daxner team to show their company's core expertise once again: They developed an ingredient feeding system with many innovative details. It succeeds in the balancing act between technical craftmanship and cost-efficiency.

Intake station for ingredients in bags and big bags

Handling of small, medium and large components

The Daxner system solution feeds all dough ingredients into the production process. They all have different bulk characteristics: The ingredients used come in powder, grain or liquid form and include wheat and rye flour, bread spices, salt and pumpkin seeds, as well as liquid yeast, oil and water. Furthermore the system developers were challenged with the varying quantity requirements, in order to find an efficient, cost-effective solution. Characteristic for the plant is a feeding system divided into four sub-areas tailored to large, medium and small components, as well as liquids. It feeds them into their corresponding batch-dough shell and transports the weighed and dosed ingredients to the kneader.

Fully automated feeding of large and medium components

The main dough ingredients, wheat and rye flour, are stored in three 65-cubic-metre aluminium outdoor silos. A silo head space dehumidifier prevents the formation of condensation. Pneumatic pressure conveys the flour to one of the four weighing bins with integrated filters, where the right quantities for each batch are weighed and dosed into the dough shell. In order to feed the three pneumatic conveyor lines to the weighing bins simultaneously (normally only possible as an option), the cone of each outdoor silo is equipped with its own fluidizing bin discharger. Besides increasing capacity, this technical detail increases system availability quite significantly.

The medium components, which are stored in big-bags, are fed through five Big Bag filling stations. They are stored in intermediate bins and dosed fully automated into the weighing bin or corresponding dough shell.

A manual dosing system for micro components

For small and micro components, Daxner has developed a very practical solution that is also efficient and cost-effective. A mobile bag dump station fills a total of 24 micro component cells, while three other cells are fed with big bags. Using position sensors, the trolley is moved precisely over the small component cell to be loaded and is docked there pneumatically. Filling is performed completely dust free by using an aspiration system.

Dosing is done manually, but completely operator-controlled, guaranteeing a 100 percent traceability. An easy-to-read info terminal guides the operator to each manual component necessary for the batch and stipulates the exact dosage. If the wrong container lid is opened during removal, for example, the process is stopped immediately. The manual components are dosed into an intermediate bin which is positioned for precise weight determination on a mobile, high-resolution platform scale. With all of the precisely dosed and weighed small components, this is transported in sequence to the dough shell. "This solution looks very simple, but it is optimal in terms of performance, cost, traceability and hygiene," says CEO Christian Daxner, who leads the company with his father, Johann Daxner.

Proven in practice

The Daxner system solution was not only popular on the drawing board or monitor. Fischer Brot has been using it for about a year to its complete satisfaction. At first, the question was how we would feed all of the ingredients cost-effective and efficiently into the production process. With Daxner we have completely succeeded at it," says Stefan Huemer, reconfirming the quality of the two companies' collaboration. Moreover, the system is made completely of stainless steel. It meets not only the highest quality demands, but also the HACCP criteria and IFS standards.

Automatic feeding and dosing of components into the dough shell

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