

Backaldrin gets the mixture right:

BEHIND ONE OF EUROPE'S MOST SUCCESSFUL BRAND-NAME PASTRIES STANDS DAXNER MIXING TECHNOLOGY

The story of Backaldrin, one of Europe's leading baking ingredient manufacturers, shows that high tech is now essential — especially when it comes to good taste. The ingredients for such tasty products as Kornspitz bread — one of Europe's most successful brand-name bakery product — are all made on the latest manufacturing systems. Most impressive is the innovative systems technology from Austria: The company Daxner has designed, delivered and installed a multi-purpose system with three separate mixing lines. Operating successfully for two years, it is an excellent example of leading-edge bulk solids technology for its industry.



View of the multi-purpose plant:
daily demand silos - batch mixing system - bag-filling station

SOLUTIONS | BAKERY AND PASTRY INGREDIENTS

A look at the Backaldrin facility in Asten reveals that the company sets new standards for both products and production. The new Daxner multi-purpose system impresses experts with its first-class appearance, excellent workmanship and clean, precise assembly. In order to make a top-quality product, Backaldrin uses just top-quality production systems.

Kornspitz bread, well-known in Europe

Considering the high demand for the company's leading product, Kornspitz bread, these efforts are comprehensible. Every day, bakers from 70 countries make more than 4 million Kornspitz rolls from the original recipe. Developed in 1984, in Asten, Austria, the dark, spicy roll is now one of the most successful brand-name bakery item in Europe.

Quality demands the latest technology

Backaldrin is best known among bakery companies by its motto "Quality is the best recipe". "Our customers value the high quality of our products. To keep a firm hold on our quality leadership, we use only the latest technology. This starts with unparalleled dosing and mixing technology," says Peter Augendopler, who owns Backaldrin and developed Kornspitz. Under his leadership, the company has gained significance all over Europe.

New production systems are an investment in the future

Two years ago, as an investment in the company's future, the innovative baking ingredient manufacturer set its eye on expanding its existing capacity and ensuring its technological advantage: The goal was to increase output with a new, state-of-the-art production system.

Daxner: Innovation and sustainability

The company chose Daxner Bulk Solids Technology in Wels, Austria, as their technology partner. Daxner convinced



Bag intake system with control screens.

OUR KNOW-HOW. YOUR STEP AHEAD



SOLUTIONS | BAKERY AND PASTRY INGREDIENTS

with an innovative, sustainable solution: A multi-purpose system with three separate mixing lines. For two years now, it has proven itself to the customer's complete satisfaction.

Trust based on years of partnership

When the project was awarded, positive experience in collaboration over many years made Daxner the right choice. Backaldrin chose a proven, reliable partner, which meant an important safety factor in such a large investment.

A convincing design

For the new production system and its associated requirements, Daxner presented a convincing, well-thought-out overall design. In the project planning phase, it won the unanimous approval of the Backaldrin project team headed by Dr. Gero Nitsche, CEO, and including the heads of quality assurance, technology and production. This made Daxner number one, ahead of several leading

European providers invited to submit proposals.

The latest mixing technology: Daxner multi-purpose system

With the multi-purpose system, Daxner - as a specialist in bulk solids technology - developed a complete solution that ensures top-quality products along with great production flexibility and economy. Based on a CAD system design, about 2,000 hours of planning resulted in a system that automates the entire production process, including storage and discharging, dosing and weighing, feeding and mixing, all the way to packaging. This was done by Daxner project engineers under the very experienced leadership of Ernst Mair and in close collaboration with the Backaldrin team. Due to the comprehensiveness of the task, and the dimensions of the project, the development process involved specialists from other fields. These included controls and electrical technology, steel

construction, mixing and bag filling technology.

Meeting the highest demands

There is no question that the Daxner multi-purpose system also meets standards such as the HACCP criteria and regulations according to ATEX. It incorporates not only product safety, but also traceability of raw materials and batches — plus, it is very easy to clean. Equally important to its performance are gentle material and product handling with pneumatic transfer systems, conditioned transfer air, and the technology used for the mixing process. The mixing process combines high-precision mixing and simultaneously gentle product handling.

One system, a multitude of products

The multi-purpose system consists of three mixing lines that allow a single production system to produce a wide range of products such as

SOLUTIONS | BAKERY AND PASTRY INGREDIENTS

convenience mixes (such as Kornspitz mix), fine baked goods and fillings.

A special challenge is the wide diversity of raw materials used: From very sticky to shooting, heavily fluidizing bulk materials, there is a wide range of varied characteristics that complicate handling. It's a problem that Daxner Bulk Solids Technology have well in hand.

From raw materials to finished baking ingredients

The raw materials for the final products are stored in external silos. (These and the building itself already existed when the project began. They have been included in the development of the solution.) Pneumatic conveying takes a wide array of components into the day silos, including wheat meal, spelt flour, rye meal and granulated sugar. All silos and all bins have a weighing equipment that continuously monitors the filling level. The 32 silos have capacities up to 12 m³ and can also be manually loaded with bags by a total of three bag dump stations with control screens. Vibro bin dischargers handle the discharge of the products. Dosing screw conveyors move the product to the weighing bins. For both high-volume and very precise dosing, separate coarse and fine dosing screw conveyors are used.

The weighing of raw materials takes place in the weighing bins, from where the product is brought to the respective preliminary mixing bin of the three separate 2,500-litre batch mixers. In front of each batch mixer there is a bag dump station with weighing equipment to feed minor bagged ingredients. After successful mixing, the finished products reach the post mixing bins. For fatty baking ingredients, rotary bin dischargers are used. The finished products are stored in an automated pallet storage and retrieval system.

Sophisticated quality assurance

The Daxner multi-purpose system is impressive not only as an overall solution, but in its innovative details. An example is the sophisticated system of inspection mechanisms that ensures seamless quality assurance. All raw materials pass a control screen and are also checked for metallic impurities. The finished products even undergo double inspection: Metal detectors find and remove all foreign metal objects. Moreover, the system uses an X-ray



Weighing bins with vibro bin dischargers.

SOLUTIONS | BAKERY AND PASTRY INGREDIENTS

device that is an innovation in the food industry: Before the baking ingredients leave production, they are X-rayed — much as in an airport luggage inspection — so that all foreign objects can be reliably seen and removed.

Cleanliness through a central dust extraction system

Another intelligent detail is the central dust extraction system that has proven itself with distinction. A pipe system provides a connection to each production station. Product residues are extracted by a cyclone filter. The dust extraction system is designed for simultaneous operation of six extraction points with 2-level vacuum pumps.

Two years of best practice

Just one year after the order was placed, the system could be set to work. In continuous operation, it has shown that it matches the performance promised. And it is still an excellent example of leading-edge bulk solids technology for the baking ingredients industry. “We are very proud to have contributed to Backaldrin’s success with our multi-purpose sys-

tem,” Johann Daxner says of the completed project. It has convinced not only Backaldrin, but also other customers of Daxner’s technical expertise and capabilities.



Central dust extraction system
Explosion-proof design with Q-pipe,
central aspiration with jet filter.

Page 5