

Innovative twists

BÄCKERBUB GMBH HAS INVESTED ABOUT 10M EURO IN ITS PLANT IN REUTLINGEN, WHICH NOW PRODUCES 240,000 PRETZELS EVERY DAY



++ figure 1

++ figure 1
With the soft pretzel plant by Frisch, 5 employees can produce 12,000 soft pretzels per shift

++ figure 2
The multi-level proofer/cooler by WP can be completely washed

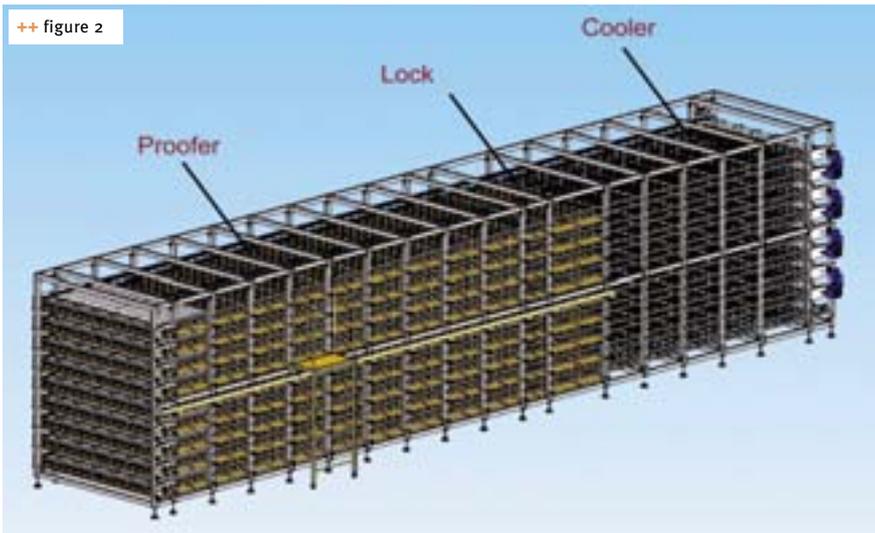
+ Plant manager, Heribert Götz enjoys exploring new ways so that the company is one step ahead of its competitors. In 1978, the production was moved from the center of Reutlingen, Germany, to out-of-town premises. Ten years later, the first Winkler thermo-oil tunnel oven was installed. This oven is still in operation today. For the installation of the new pretzel line, the plant manager opted for equipment which was tailor-made for Bäckerbub.

At the end of 2005, the first line for the production of soft pretzel products began operation. The reason for the 10m Euro investment was fairly simple: The demand for soft pretzel products had continuously increased over the past few years, resulting in the production unit not being able to cope with the demand. Therefore, the Bäckerbub Group, with its managing director Wolfgang Valentini opted for more automation. With the new installation, the Reutlingen location took on a special function within the Group, as the staff at the Reutlingen plant produces frozen soft pretzel products for the entire Group. Alongside the pretzel production, the 200 employees also deliver the full range of baked goods to about 180 sales outlets within a radius of 100 km.

Continuous expansion

Following several reconstruction and expansion phases, the bakery now has a production area of 10,000 sqm. The baking area takes up 600 sqm. The fully automatic soft pretzel production utilizes a total of 1,600 sqm. The special features of the pretzel production begin with the selection of ingredients. Plant manager, Heribert Götz (61) and production manager, Jochen Rehm are reliant on regional raw materials in order to attract their customers and to avoid unnecessary transport routes. Flour, for example, is purchased from the Black Forest region. Five, 3,000 kg fermentation tanks including CIP provided by Reimelt GmbH, Rödermark, Germany, are available for the production. Two tanks are reserved for rye sourdough, one for wheat sourdough. Two other tanks hold the sponge dough for the production of soft pretzels. The sponge dough and other solid and liquid ingredients are pumped into the continuous Codos Reimelt mixer, located at the beginning of the pretzel line, via a fully automatic dosing station. The plant manager considers it important that the mixing is done in two stages. Firstly, the raw materials are pre-mixed and following the

++ figure 2



continuous mixing, the dough is placed on a transport belt where it has time for gelatinization. After that the dough is kneaded. The speed of the dough belts can be infinitely adjusted. This allows for dough resting times of up to 30 minutes. The dough is moved to the pre-portioning unit supplied by Emil Kemper GmbH, Rietberg, Germany, by

another transport belt from where the dough strands are fed into one of two Kemper dough dividers. After the dough division and subsequent intermediate proofing, the dough pieces are transported to one of the six Multi-Twist pretzel looping lines by Fritsch GmbH, Markt Einersheim, Germany. Firstly, a dough cord is produced which

is thicker in the centre and thinner towards the ends. The dough cord is automatically looped and twisted. Two arms of the automatic pretzel maker grab the ends of the dough cord, turn it and then press it into the shape of a typical Swabian pretzel. The six lines produce 12,000 pretzels each hour. This amounts to a daily quantity of 240,000 soft pretzels. The flour consumption is about 14 tons each day. The plant operates around the clock, six days a week in order to meet the pretzel demand for the entire Group. Five employees are required for operating the plant in each shift. Several cameras monitor the fully automatic production. Production manager, Jochen Rehm is satisfied with the plant. "The plant is operating well. Key factors for its proper functioning are uniform dough characteristics and that only a little flour adheres to the dough piece." As well as looped pretzels, the plant can also be used to produce plaited products, knots, sticks and rolls, all made from the same dough. ▶



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++ figure 3

More special features

Plant manager, Heribert Götz also welcomes innovations when it comes to the proofing equipment for soft pretzel products. For example, the proofer in Reutlingen, can be completely washed. The proofer/cooler including lock was built by Werner & Pfleiderer Lebensmitteltechnik GmbH, Dinkelsbühl. The multi-level proofing tunnel is equipped with nine levels of modular plastic belts. The belts by Habasit, Rossi GmbH, Eppertshausen, Germany, are resistant to moisture, scratches and cuts. Mould and dirt cannot adhere to their smooth surface. The transport belts consist of 1.4 x 1.4 m sections that can be removed. The plastic belt pieces weigh 6 kg and can be hosed down with a pressure hose. Defective parts can be easily exchanged. The modular plastic belts ensure proper flow of the conditioned air. The entire chamber is made from plastic and stainless steel (except for the motors). It can be completely with water and cleaning agent. The multi-level proofer has a usable surface of 362 sqm.



++ figure 5



++ figure 4

Lined up in formation

In the proofing and cooling chamber the pretzel dough pieces are cooled down from 23 °C to 1°C within 25 minutes. After that a special water-lye solution is applied and the dough is slashed. A camera recognizes the individual pretzels. A computer controls each of the 16 ultrasonic blades. After the slashing process, the dough pieces are transported into the 55m tunnel freezer by W&P. The freezer consists of five modules with different temperature zones. The dough pieces are slowly cooled down and then suddenly frozen. After that, they are moved 'in formation' into the refrigerated packaging room. The pretzels are separated and packed. After the cartons have passed the metal detector, robots stack them onto pallets. The freezer has room for 144 pallets. It serves as daily storage for the cardboard boxes. The logistics part for the bakery operation is handled by Hiestand & Suhr Handels- und Logistik GmbH, Vogtsburg-Achkarren, Germany. The driver checks in and receives the pallets fully automatically.

Heribert Götz opts for automation in the production of frozen goods. However, manual work is paramount for the production of specialty products for the 180 sales outlets. Regional specialties such as Betzinger Farmer's Bread or Reutlinger Kimmicher (a large roll made with caraway) are made-up by hand.

According to managing director Wolfgang Valentini, the Group with its 3,500 employees has realized a sales volume of more than 200m Euro. +++

++ figures 3+4

Soft pretzels are produced fully automatically. For regional specialties, manual labor is still required

++ figure 5

Plant manager Heribert Götz (right) and production manager Jochen Rehm opt for innovations in the production