

The ideas factory

Backtechnik S.I is much more than an insider tip-off when it comes to spare parts for specific installations. The team is busy designing and distributing production equipment and also planning entire production plants - across the globe

Backtechnik S.I's latest bread line installation has, according to the company, proved to be quite different from the usual lines seen on the market. Each installation is designed to suit the customer's requirements and was developed by engineers near Villingen-Schwenningen in Germany.

Located in Unterkirchnach in Germany, the company boasts marketing representatives in nearly a dozen countries and is not only considering potential markets for its innovative technology, but is also focused on rapidly expanding its concept of bakery operation plans. The company believes that in this area it can recommend operations, which offer a thorough concept and a complete design that spans from silage making to the ramp.

Bread processing technology

"Sometimes it is essential to very carefully observe bread production installations during operation," said the company's general manager, Gerd Maag.

"In our concept, we have altered some points to the effect



The CPL bread line features a Soft 3B dough divider, an Allround conical rounder, a Timer intermediate proofer and a Max long moulder

that a more gentle dough processing is performed, while the installation is being operated in a secure and fast manner and -most importantly- a change of product can be implemented by the push of a button."

The basis of every bread-making operation is the dough divider. Its piston chamber can be opened without a tool by merely turning the piston setting in an upward position. With an hourly performance of 1,500 pieces (one piston operation) the dough divider is adjusted to the following components and benefits from its productivity.

One of Backtechnik's most recent models, the Soft 3B, operates on an oil hydraulic system. The system is slow and adjustable, rather than exerting an abrupt pressure build-up.

The company has now launched a new bread divider, the Soft 3B 2P (two pistons). This divider has the same basic features of the Soft 3B, which has a 1,500 hourly rate. However the 3B 2P model is faster and can produce up to 3,000 pieces per hour.

As an option and without any need for further assembly, the piston may be exchanged with a double piston system.



The Soft 3B 2P dough divider can process 1,500 pieces per hour



A CPL bread line installation in Iran

The double piston operation is suitable for dough pieces of 50g, while dough pieces of up to 2,000g may still be weighed with the one piston system. The SOFT 3B 2P also works with an oil hydraulic system.

Due to an optimised, slightly rough rather than smooth, non-sticking coating, which is applied to the pin in a special procedure, the sticking of soft dough is not only prevented but also results in an optimised kneading – a decisive signifier of the oiling system.

A central control also steers the oiling system in a product-specific way. Maag highlighted the impact: "The result is visible in the oil collecting tubs, where after several thousand procedures a mere oil film may be detected."

Fermenting cabinet

The company also pointed out that fixed sizes of fermenting cabinets for bread processing installations are not mass produced. Instead, they are specially constructed for individual operations. The air humidity control uses aerosol technology to spray a mist of cold water.

"This procedure is more effective than hot water steam, it is faster and more simple to regulate - therefore eliminating the steam unit hardening issue as far as our installations are concerned," explained Maag. "In addition, the cold fogging functions through the finest micro jets is also independent of temperatures. Fermenting cabinets with a flap angle system are completely teflon coated. Also, whilst in operation, warm air is permanently blown in at the flaps, causing constant dryness. The hanging baskets are to be extracted individually."

The oiling pin is pneumatically adjusted and is also

adjustable for each nozzle by using central control, thus enabling a product-specific set-up.

In addition to the oiling system, a hot air compressor will facilitate a near dry surface for round kneading of the dough immediately after proportioning.

Pressure board

Backtechnik call the kneading installation at the end of the process a bread and baguette length roller. The feeding hopper features an automatic centring system for the

incoming dough pieces. This secures clean edges of the dough pieces after kneading and length extending processes. A big air drum, together, with three smaller individually adjustable cylinders, form a defined

opening, thus lengthening the round dough piece. After that, a pressure board, adjustable by servo motor, extends and the finished kneaded bread piece may be taken off. By simply folding up a trap, the dough piece may be kneaded longer as necessary when extending ropes or baguettes. For this purpose, the dough runs again through the same kneading path along the bottom side of the first kneading line. An additional contra-rotating working kneading line is now in operation, with fully extended ropes as the result. The covered kneading line is much longer than most stand-alone- variations of baguette rollers, consequently enabling operation with less pressure. The line also offers a centrally- controlled system as Maag explained: "Depending upon the bread types, we assume a deposit of 20 to 30 setting parameters, which may be set-up by program selection. This allows not only a rapid product change, but also a reproducible quality as well.■"

"Sometimes it seems essential to very carefully observe bread production installations during operation"