

New horizons

BAKKERSLAND IS THE LARGEST DUTCH PRODUCER OF MODIFIED ATMOSPHERE PACKED SPECIALITIES. THEY ARE NOW ALSO ENTERING THE PLAIN BAGUETTES AND PETIT PAIN BUSINESS. FOR THIS PURPOSE THE GROUP HAS PUT A GBT LINE INTO OPERATION IN TILBURG



++ figure 1
21 varieties of baguette and petit pain products are stamped out of the respective dough sheets on the production line

++ figure 2
Two depositor make for a smooth production operation, as do the large 100 x 110 cm trays on which the bread is deposited



+ The Bakkersland Group operates a total of 17 production plants plus logistics subsidiaries in the Netherlands. While the fresh-bakery plants work for the local market, the four plants producing MAP products supply supermarket chains in many different countries. The Dutch have made a name for themselves first and foremost in Mediterranean specialities, which in MAP packaging have a minimum shelf-life of three months. Rudy Wuyts, Marketing Director Division Bake-off, says: "Our philosophy is to supply goods under a clean label and comparable in quality with what is sold at the trade's baking stations."

In future this is intended also to apply to plain ciabatta, baguettes and petit pain, which are produced on the new GBT line in various sizes from

mini to the 450 g baguette, 2.7 t/h in a fully automated process except for the metered addition of some dry ingredients. Dough preparation is performed by a Sancassiano carousel kneader and dough processing by a Fritsch 3000 laminator, which spreads the dough into narrow strips and

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ensures the correct length or weight for the particular product with a cutting stamp. Everything else comes from GBT, starting with the entire conveyor system from tray supply to the depanner and discharge to the packing unit.



At full capacity, there are altogether about 550 100 x 110 cm teflon-coated trays in the system, 390 of them spending an hour in the final proofer. Both flat and baguette trays are available, depending on the product.

++ figure 3
Now filled, the trays are conveyed to the final proofer. In the background the dough residues left by the stamp can be seen: these are taken to the dough-sheet unit's hopper and there added back to the dough in metered quantities

++ figures 4+5
Two parallel storage units on the line provide any additional trough baguette and flat trays needed on the line as required. Anything coming straight out of the circulating flow is either passed on to be refilled or pushed into the short-term store. So that this can operate with two different types of tray the intakes to and outtakes from the store are on two different levels. What is not to proceed is immediately dropped and then put into store

++ figure 6
The trays holding proved goods leave the final proofer on both levels. Cutting stations on both levels make the surface cuts, in which process a laser sensor measures the height of the product and so controls the depth of cut





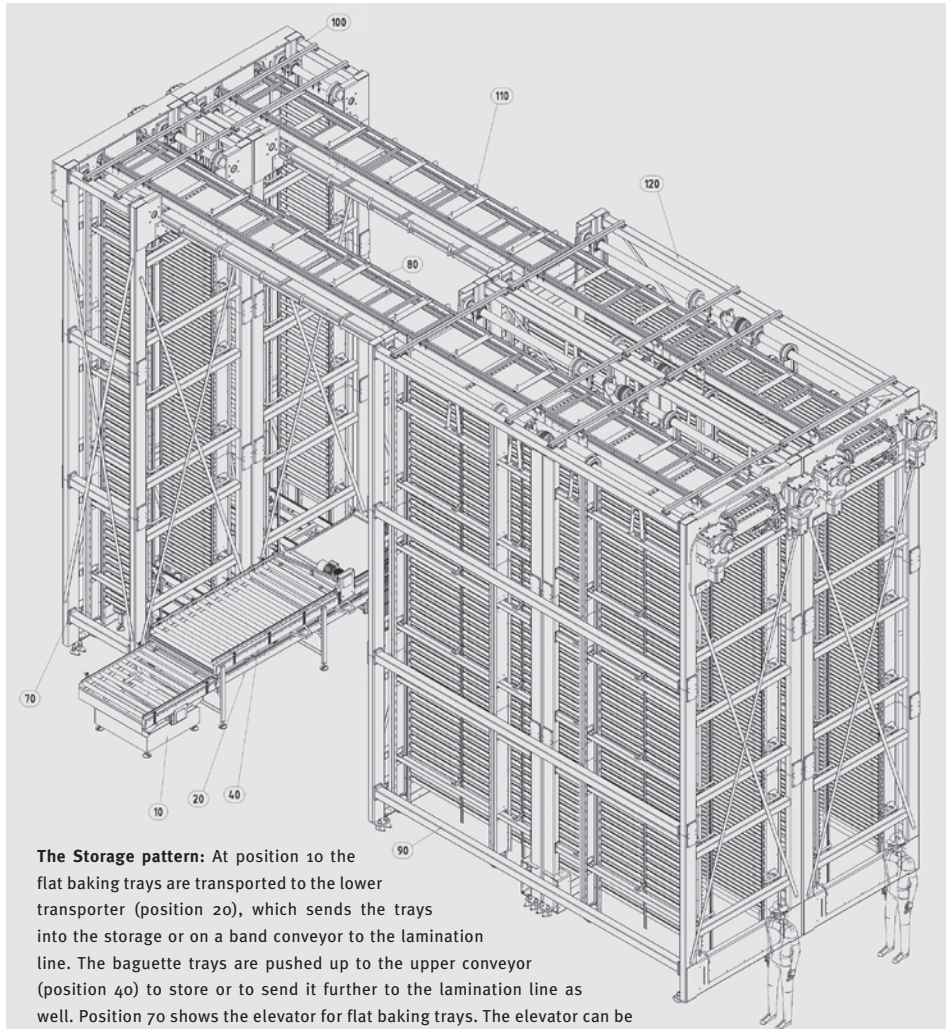
++ figure 7

© GBT



++ figure 8

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The Storage pattern: At position 10 the flat baking trays are transported to the lower transporter (position 20), which sends the trays into the storage or on a band conveyor to the lamination line. The baguette trays are pushed up to the upper conveyor (position 40) to store or to send it further to the lamination line as well. Position 70 shows the elevator for flat baking trays. The elevator can be used as storage as well or transports the trays to position 80, where the trays are pushed into the main storage (position 90). The elevator for baguette trays shows position 100 and the pusher position 110. Both elevators are able to push the trays into the store or to remove trays back into the line

© GBT

In addition to the tray store there is a buffer for both types of tray immediately next to the line just before the depositor, to prevent gaps ahead of the depositor. What comes out of the system comes this way and is either passed on to be refilled or pushed into the buffer. If there are too few of one type for filling, the buffer supplies additional ones. Delay during this interaction is avoided by the fact that the intake to and offtake from the buffer are on two levels. When a tray is not needed it is taken out of the circuit. The conveying system in front of the buffer has two levels, one for each type of tray, thus guaranteeing a smooth operation. Through a small elevator the trays are transported to one depositing unit. Belt conveyors take the trays to the final proofer, where they are placed three at a time on a conveyor bucket on which they move through the warm, moist atmosphere for about 60 minutes.



++ figure 9

mesh belt oven with two burner towers is 19 m long and 3 m wide. The first supplies the heat for the first three zones on both decks, the second that for the back three. After baking the products pass into a double spiral-tower cooling system and thence on to the packing unit.

GBT has grouped the control system together into four control circuits, which communicate both with one another and with the

++ figure 7
The twin-deck oven needs an overall length of only 19 m

++ figure 8
Three trays fit into the twin-deck oven alongside one another

++ figure 9
Pushing the bread from the trays by needles

++ figure 10
The 80%-baked loaves are conveyed to the packing unit via two spiral coolers

++ figure 11
A 450 g baguette for the US market

++ figure 12
Packing unit with assorted bread rolls

Twin-track from the final proofer onwards

Because space in the production shop at Tilburg was very limited, the dough pieces leave the final proofer on two levels one above the other, pass through two cutting stations and then reach the twin-deck conveyor oven. Only thus could the required capacity of 2.7 t/h round the clock on six days be brought about. The wire-

upstream and downstream processes. Control circuit 1 comprises the process steps from the placing of dough on trays to discharge from the proving cabinet. Control circuit 2 organises the multiplicity of surface cuts, control circuit 3 handles control of the oven and tray supply and removal, control circuit 4 handles stocking and storing of the trays. +++



++ figure 10



++ figure 11



++ figure 12