

Large equipment in action

800 KG PER BATCH IS THE VOLUME HANDLED BY THE NEW DIOSNA WENDEL KNEADING MACHINE WHICH PREPARES THE FILLINGS AT DE AVIAEUR BANKETBAKKERIJEN B.V. IN BROEK OP LANGEDIJK



++ figure 1
Dough, almond paste (Amandelspijs) and again dough stacked in a special slip-over frame are turned into a solid cake in the oven

++ figure 2
The kneading tools of the Wendel mixer are optimized for a mixing volume of 800 kg. Therefore, their shape differs slightly from the shape of other Wendel tools

++ figure 3
The WV 600 Wendel kneading machine (here shown with provisional water supply) supplements the Diosna range of Wendel kneading machines which start with WV 160 designed for handling 160 kg batches of dough. The WV 600 is recommended for a dough volume of 600 kg

++ figure 4
The ready mixed almond paste (Amandelspijs) is moved to the line in the bowl and then fed to the dosing unit via suction pump

++ figure 5
The finished almond paste (Amandelspijs) is a creamy product based on persipan

+ Dutch De Aviateur Banketbakkerijen B.V. is one company hardly known to the consumers despite the fact that its products are frequently consumed by the general public. The company's home is in the North West of the Netherlands where it has three production facilities in Broek op Langedijk, Alkmaar and Assen. It specializes in private label products such as cakes, biscuits, fruit filled pastries and pastries filled with an al-

mond or persipan filling (Dutch: Amandelspijs). The latter are traditional baked goods popular in the Benelux states. They are usually sold in multi-packs via the food retail channels or as single packs in the food service sectors. According to Directeur, Kees Komen, the price is slightly above average. About one third of the production quantity is exported. The shelf life of the filled products is between 10 to 12 weeks; the biscuits have a minimum shelf life





of up to nine months. The logistics are handled by a company owned vehicle fleet.

The staff at Broek op Landedijk number 125 including a small administration department. Here fruit and Amandelspijs filled cakes are produced. The daily output of the three lines is approximately 1 million pieces. The ratio of fruit filled to almond filled products is in general 1:2. The lines are flexible. The production operates with 1.5 shifts.

The majority of the Amandelspijs filled pastries are made from a dough sheet from which the desired shapes – fingers, squares and circles – are cut or punched out. Half of the dough pieces run along on the belt while the other half is steered via a switch to a second belt on top. The filling mass is fed via suction pump into the depositor which applies the mass generously onto the individual dough pieces on the bottom belt. The second dough piece is then applied on top of the mass from the top belt. Next, a special frame is lowered over six rows of dough pieces which are then egg washed or decorated with almonds. The dough stays in the frame during its travel through the oven. This ensures that the final baked goods turn out as solid cakes with a juicy filling.

Amandelspijs is similar to a marzipan filling and is based on apricot kernels instead of almonds. The mass is delivered in solid blocks and must be mixed with water to yield a pumpable mass. This is a heavy duty job and requires sturdy Wendel kneading machines which can cope with the almost unmanageable mass. They have been used at Broek op Landedijk for this purpose from the outset. Diosna has now expanded its range of Wendel kneading machines by introducing a new, extremely high capacity model in order to reduce the

number of batch changeovers. As the name WV 600 indicates, the batch volumes processed by this Wendel kneading machine are probably in the 600 kg range. However, the machine is also capable of processing 800 kg Amandelspijs in one batch. The basic construction of the machine is comparable to other Wendel mixers provided by the German company, but some parts have been reinforced and adjusted to the higher load, in particular the drive, the tools, the wheels and the bearings. When looking at the giant bowl, it seems impossible that one man is enough to operate it when it can hold 800 kg of filling mass. In order to prevent the mighty bowl from moving in an uncontrolled fashion, Diosna has installed additional brakes. The water required for the mixing of the mass is automatically dosed. A Siemens S7 control with touch screen stores the respective processing data.



++ Remco Komen
Plant manager Remco Komen continues his grandfather's tradition, who together with the father of Directeur Kees Komen founded the company

According to Remco Komen, grandson of one of the founders and today the plant manager, the use of the new kneading machine by Diosna is a reasonable expansion of the mixing capacities. "The interruption of production flow is clearly reduced because the bowl does not have to be changed that often. The suction pump can operate for much longer and the uniformity of the mass is improved." His uncle, Kees Komen who is in charge of the administrative part of the company as Directeur (comparable to a CEO), is satisfied with the reduced processing costs. In his opinion the future of the company is still the production of high quality mass products for the private label market. However, he reports, "The market is highly competitive and growth is indispensable. To achieve this, it is not necessary to be part of a large corporate group as long as one has achieved cost leadership." +++

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From silo to truck

