

Driving Global Bakery Innovation

From Chile to China and from Malaysia to Mexico: industrial bakeries with Dutch bakery equipment can be found everywhere. The Netherlands has a relatively large number of key players that offer a full range of innovative, high quality and cost-efficient bakery equipment all over the world. HFI spoke to two of them: Rademaker and WP Haton.

The map of the world in one of the reception areas at WP Haton in Panningen is indicative of the important role the Netherlands plays in the global bakery equipment market: each circle with 'WP' in it, represents a production line or machine supplied. They abound on the map on all continents. "About 92 percent of our machines are exported and in the 65 years we exist, we have already manufactured about

19,000 of them," says Managing Director Henk-Jan Snellink.

And WP Haton, which specializes in processing dough for bread, is definitely not the only one in the Netherlands. The list of international players also includes family business Rademaker, established in 1977 and one of the world's largest manufacturers of industrial dough processing equipment. Rademaker supplies high quality pro-

duction lines all over the world. The company has seven sales offices abroad, production facilities in the Netherlands and Slovakia and a technology center in Culemborg, the Netherlands.

Other important Dutch suppliers are the Kaak Group, Tromp Bakery Equipment and BVT Bakery Services. The Dutch equipment manufacturers operate competitively and at a very high level of quality, says Jaap Molenaar, who, as a consultant for Molenaar & Partners, travels across the globe to advise entrepreneurs in the bakery industry. "Especially in terms of cost of ownership, the Dutch have reached a very high level; think about high quality switches and electrical components, for instance, or high durability and low power consumption. In



Cutting a sheet of dough on Rademaker's Crusto bread line.



From 'dirty' machine factory to modern production facility: WP Haton's assembly hall.

addition, our strength lies in the excellent reproducibility and verifiability of quality combined with a high production capacity," he adds.

Specialist in Laminated Dough

Both Rademaker and WP Haton provide complete bakery solutions, but dough processing is at the heart of their business. Still, the technical solution they have chosen, differs fundamentally. While Rademaker's equipment rolls out the dough in one large sheet, WP Haton's machines immediately divide the dough into small balls. "This means there are sheeters and dividers," explains Rademaker's Product Manager Henri in 't Veld.

Rademaker's choice of sheeting makes sense, considering that the company specializes in laminators for making laminated dough. This allows dough to be folded into hundreds of layers. "We are the market leader in croissant lines," says In 't Veld. Hardly any bakers still make their own laminated dough, the Product Manager adds. "Machines can divide all those layers of dough much better and much more accurately at a lower cost while retaining or even improving quality."

Since a number of years, Rademaker also offers bread lines with a similar sheeting technology. In 't Veld: "An important feature is working 'stress free'; we handle the dough as little as possible and only carry out the necessary actions. Everything is aimed at reducing the amount of tension in

'About 92 percent of our machines is exported'

the dough to a minimum. This allows us to create a homogeneous dough with a beautiful texture, the right balance between elasticity and extensibility and a high volume."

Flexible Production Lines

High production capacities with the lowest possible cost of ownership and flexibility are key customer needs. As In 't Veld notes: "Often, customers want to be able to make dozens of different products using a single production line. Moreover, they expect their range to have changed in ten years' time and expect their line to be able to change with it, albeit with an upgrade. A high level of hygiene, reducing waste and

being able to produce 24/7 including good customer service are the prerequisites." Rademaker's lines offer that flexibility, while the equipment's design is also hygiene-optimized and as easy to clean as possible. To reduce costs, high weight accuracy is essential. To achieve this, Rademaker has

developed an weighing system that determines and adjusts the product's weight in-line, assuring as little of the product is unnecessarily given away

as possible. The remaining dough that is cut off at the outer edges, returns to the dough bowl by way of a number of conveyor belts. In addition, Rademaker has ever more customers looking for turnkey production lines. "Customers come to us for our make-up lines – in which the dough is shaped and processed – but expect us to supply the rest of the factory as well, including for instance the mixers, ovens and freezers. The advantage of this is that this allows us to create a line that meets the desired quality," explains In 't Veld. It can, however, sometimes be quite a puzzle to fit the line, which can reach lengths of up to sixty meters, in an existing plant.





Rademaker's universal line is adjusted to making pastries.

That clients want to do tests before purchasing and again before delivery has now become a matter of course. For this purpose, Rademaker has a technology center housing the latest equipment and a large number of test bakers and engineers who perform tests together with the customers.

From Steel to Bread

Bread and dough processing are central to WP Haton, a member of the 135-year-old Werner & Pfleiderer (WP) Bakerygroup from Germany. "We can create the ideal dough processing method and the related equipment for any type of bread," says Snellink. That these are not empty words, becomes immediately clear upon entering the large central hall filled with every possible type of dough processing equipment and the smell of freshly baked bread. Just a little further, in the large assembly hall, this smell is mixed with the smell of steel. "When I started here sixteen years ago, this was still a traditional 'dirty' machine factory," says Snellink. "Since that time, we have gone through a huge transition from a supply-driven manufacturer to a demand-driven service provider. Deciding to build a bakery in the middle of the factory in 2003 really set us apart. We have optimized our machines,

defined our lines and created detailed models for the preparation of dough and bread. Back then, we also began setting up a digital bread library, which now holds an enormous amount of knowledge and data."

Innovating Together

Innovation is vital, stresses Snellink. Who thinks WP Haton has established a large R&D department for this purpose, is wrong. "We have closed our R&D department and invested that money in facilitating the ideas of our employees. By doing away with unimportant rules, we now have more time for each other and innovation. We constantly

'Bread is a very honest product'

ask ourselves what we have come up with today that will make it possible for us to still be here in ten years' time." Illustrative of the employees' commitment and their innovative input is the company's latest moulder. A wooden prototype was used as a model, built by one of the assembly workers because he was convinced it would work better. "We communicate with our clients about bread, but in doing so,

many technical innovations come into being," Snellink explains. "Our machines are filled with them. An example? Clients want a lot of water in the dough; the more water, the longer the shelf life and the better the taste and texture. But how do you achieve that? We have developed a continuous kneading process, Easy Toast, with which any type of flour gets the maximum amount of water in the dough. Atomizing the flour with water and injecting water into it with spray nozzles allows for this very high water absorption. Another example is our 0.5 percent weight accuracy."

The Blue Innovation Center in the heart of the factory, made of glass, is designed to be a place to exchange ideas, where clients and suppliers are also very welcome. According to Snellink, they come to WP Haton at a very early stage of product development. For instance, the company is now working on enriched bread for the elderly, while it was also at the cradle of gluten-free bread, which has allowed one of its customers to become the European market leader.

Slow Food

Like In 't Veld, Snellink feels hygiene and cleanliness are important features of the equipment. He adds to that, the trends of transparency and traceability. "Consumers want to know what they eat and can see through the marketing," observes Snellink.

"For process equipment, this means even more data has to be collected and exchanged. Automation will soon be the largest department in our

company. Fortunately, bread is a very honest product, a slow food. The slower the process, the better the result. We try to imitate this with our processes and equipment."

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